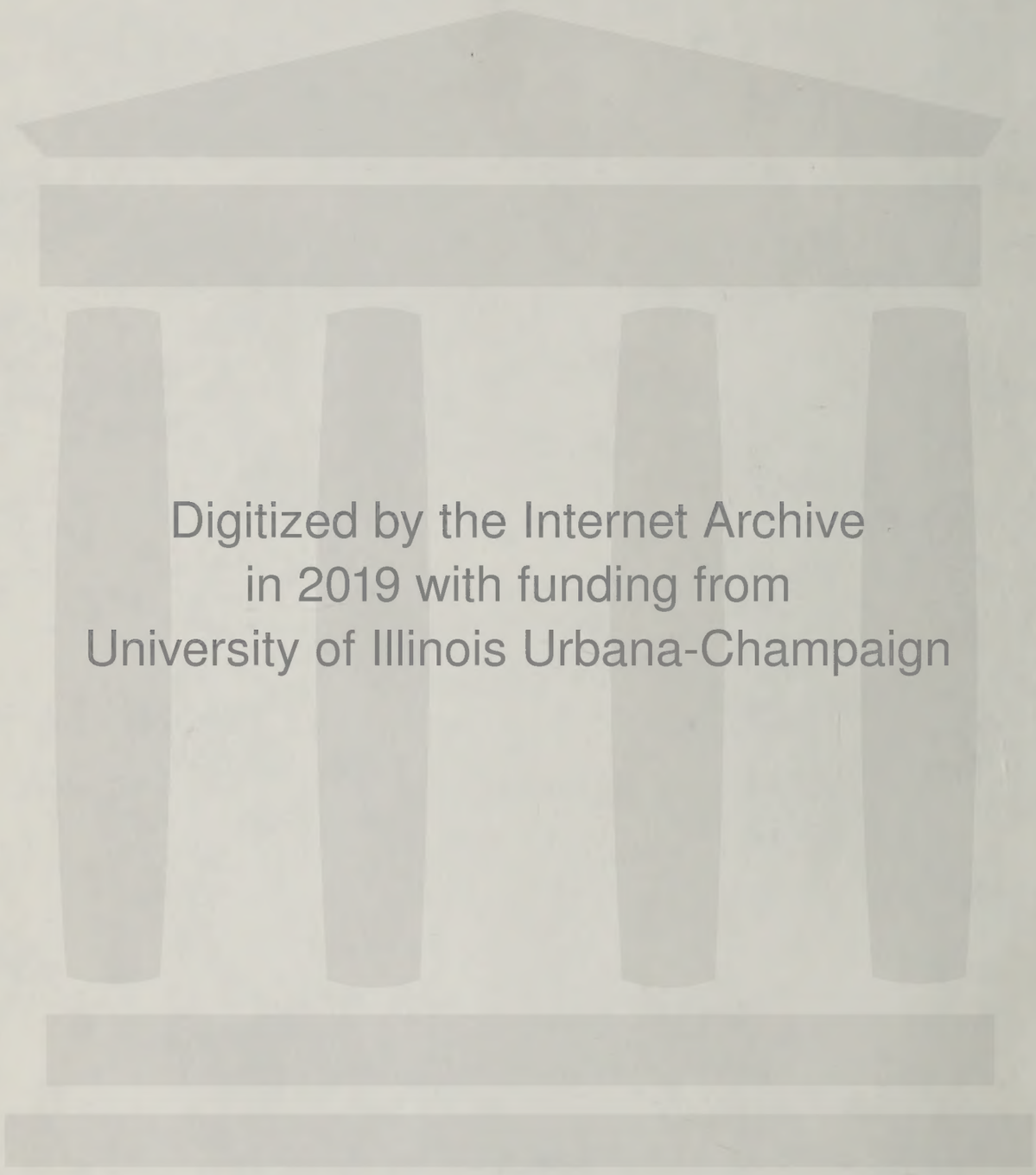

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A CLINICAL LECTURE
ON THE
OPERATIONS FOR GENU VALGUM CONTRASTED.

Delivered at University College Hospital.

By ARTHUR E. BARKER, F.R.C.S.I.,
Assistant-Surgeon and Assistant Professor of Clinical Surgery at University College Hospital; late Visiting Surgeon to the City of Dublin Hospital.

GENTLEMEN,—Having lately had occasion to operate on several cases of genu valgum, and having tried some of the various methods which have from time to time been practised for the relief of this troublesome deformity, it has occurred to me that it might be desirable, in alluding to the cases you have seen, to describe to you besides, briefly, all the other modes of operation on the femur designed for the same purpose, and contrast them as to their advantages, disadvantages, and results, as far as it is possible at present to judge of the latter. In doing this, we shall see that some important improvements have been made, both as regards the cure of the deformity and the elimination of danger from the operative procedure.

The number of methods for the *gradual* relief of this deformity by the use of surgical appliances is very large, and many of them have been in use for many years; but with these we are not concerned here, and will confine our attention entirely to those operations on the femur which have for their object the *immediate* straightening of limbs presenting the deformity in question.

Nor need we occupy ourselves now with the pathology of genu valgum; this question you have heard dealt with elsewhere. I shall only allude to it here so far as to say that, whatever may be the primary cause, its pathological expression is seen in the greater prominence downwards of the internal condyle of the femur than of the external. Owing to this, the long axis of the tibia inclines outwards from the middle line to an extent proportionate to this relatively increased length of the inner condyle.* Certain secondary changes in the bones of the leg and foot may subsequently take place; but to these we need not allude.

It was apparently the proper and full recognition generally of this relation of the condyles of the femur to one another in genu valgum which first led the minds of surgeons to the conception of those operative measures for its immediate cure, which are now coming into general use. Be that as it may, all the most recent of these are based upon this view of the cause of the deformity, and endeavour to remedy it.

Looking carefully into the matter, in the light of the home and foreign literature of many years past, I find that a few operations had been done for the deformity in question, or for genu varum, several years ago, but not on the principle of bringing the condyles of the femur into a proper relation to one another and to the long axis of the bone; and probably for this reason they never came into general use. The first of these that I can find recorded is one by Billroth, who on December 16th, 1872, for genu varum simply divided the tibia partly through with a chisel one inch below the spine, fracturing the rest by forcible straightening of the limb. (Langenbeck's *Archiv*, 1875.) On July 2nd, 1873, he performed a similar operation for genu valgum, the fibula being fractured in straightening the leg (*loc. cit.*) These two cases made a good recovery. Schede, too, operated successfully on February 23rd, 1876, for genu valgum, by cutting with a chisel a wedge-shaped piece out of the head of the tibia at the same point as in the last cases, and then dividing the fibula before finally bringing the limb straight. (*Berlin. Klinische Wochenschrift*, 1876, No. 52.)

Now, although the condition of the end of the femur alluded to as a cause of genu valgum was first noticed by Böttcher as long ago as 1792, it does not appear to have been brought prominently under the notice of surgeons as a ground for operation, until M. Delore of Lyons read a paper on the subject in February 1874 at the Société de Chirurgie, a digest of which appears in the *Gazette Hebdomadaire* for that month. In this, he described the deformity as resulting from the changes noticed above, and based his conclusions on dissections, especially on one of the knee of a child operated on by his method (presently to be alluded to), who died of measles about three weeks afterwards. (Fig. 1.)

FIG. 1.

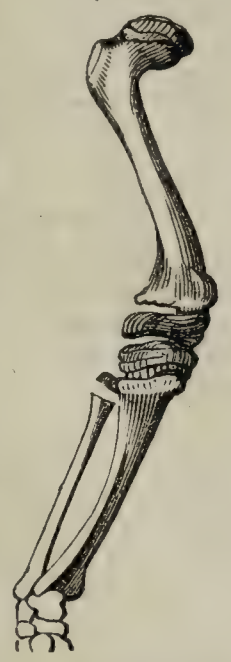


FIG. 2.

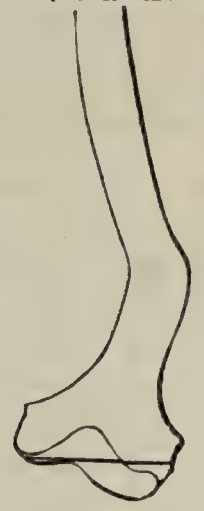
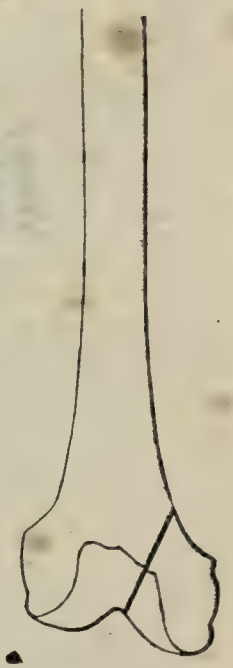


FIG. 3.



At the same time, he described a mode of procedure for immediately remedying the defect which may be regarded, so far as published records go, as the first which had in view, among other objects, the restoration of the lower end of the femur to a proper shape. And I think it probable that it was this operation which first suggested those now employed, which were invented not long afterwards. His method, known as "redressement brusque", was as follows. The patient being anæsthetised, the affected limb was extended and laid upon its outside on the operating-table. The ankle being now held firmly by an assistant, the operator pressed downwards upon the inner aspect of the knee, which stood up like a bridge from the table. At first, gentle pressure only was used, but was then gradually increased, until a tearing was heard in many cases, and the limb was straightened. The whole process sometimes lasted half an hour. When finished, the limb was put up straight in splints, and left so for about two months, when the patient was allowed to attempt walking with lateral supports. But it was not until after six months that the case could be said to be to any degree a complete one. Moreover, it was found that, even after this time had elapsed, there was a decided tendency to relapse.

The lesions produced by this forcible straightening of the limb, as verified by the dissection alluded to above, were as follows: a tearing asunder of the outer two-thirds of the epiphysary line of the femur; a stretching of the external lateral ligament; a tearing asunder of the epiphysary line of the fibula, and even partially of the tibia. (Fig. 1.) The author believed that one or more of these lesions were present in all cases. Now, the advantages of this method are, that there is no cutting; that the joint is not necessarily opened; that it is easy of performance; that it seems to involve no danger to life. Its disadvantages are, that the operator cannot be sure of tearing the epiphysary line alone, and may simply rend the external lateral ligament, so producing a

* Those interested in this point will find an admirable article by Mikulicz dealing with it, and illustrated by drawings of careful dissections, in Langenbeck's *Archiv*, Band 23, Heft 3, 1879.

weak joint; again, that it takes at least six months for the limb to become firm; and, lastly, that there is a tendency to a return of the deformity as the plastic material effused between the separated surfaces in the epiphysary line becomes condensed and shrinks. Now, as to the ultimate results: the deformity was reduced in all; but there was a tendency to return in many. But, out of nearly two hundred and fifty cases which made up the author's experience at the time of writing, he had seen no ill effects in any. A longer time, however, would have to elapse before it would be possible to say whether the forcible tearing asunder of the epiphyses might not result in more or less arrest of growth in the femur.

We now come to the first cutting operation on the femur for the relief of genu valgum, which appears to have been performed by Mr. Annandale on March 16th, 1875. This was recorded in the *Edinburgh Medical Journal*, vol. xxi, p. 18. It may be said to have been a very daring procedure, and one not to be repeated. In fact, it was only repeated once, so far as I can learn; namely, by Mr. Howse. (*Guy's Hospital Reports*, 1875.)

The operation was briefly as follows. A long incision was made over the inner side of the joint longitudinally; the internal lateral ligament was then cut, also the crucial ligaments, and finally the external lateral. The end of the femur was then turned, so that a saw could be laid across its lower surface, and the too prominent internal condyle, with a little of the encrusting cartilage of the external, was sawn off (Fig. 2). The tibia could now be adjusted to the straight sawn surface of the femur, and was held thus for several weeks. All this was done on strict antiseptic principles with free drainage. But the result could hardly be said to be a good one, so far as the record of the case went. The limb was straight, but almost quite stiff, and at the end of some months required to be forcibly flexed under an anæsthetic, with what ultimate result is not related.

Now, as to the advantages of this operation, hardly anything can be said in its favour, except that the limb was made straight in a ready if somewhat rough way. The disadvantages are obvious, in spite of antiseptics. The free opening of the joint and division of all its ligaments bring it as close to a resection of the part as possible, and the dangers to limb and life are considerable. Nor could the results as detailed be regarded as good. But, for want of a better operation, and where a limb was so deformed as to be quite useless, no doubt this procedure was justifiable as giving a straight though stiff limb. But out of it there soon developed a much better operation—namely, that of Dr. Ogston—which quickly made a place for itself among the recognised procedures of our art. This was performed for the first time on May 17th, 1876, and was recorded in the *Edinburgh Medical Journal* for March 1877. It consisted in making a puncture with a long tenotome in the skin above the inner condyle, and then thrusting the blade down in front of the bone into the joint in a direction towards the inner side of the crucial ligaments, and dividing all the soft structures quite down to the bone along this line. An Adams's saw was then introduced into the wound along the track of the knife, and the inner condyle was sawed off from before backwards. The limb could then be straightened, the internal condyle slipping up on the cut surface; in this position it united and left an useful and straight limb. Now, you will see by this diagram (Fig. 3), that the line of incision is far more vertical than that in Annandale's operation, and that all the ligaments are left intact, as well as the convex surfaces of the condyles; further, that the opening in the skin is but a puncture, as also the subcutaneous wound of the joint. In these points are found the chief advantages of this method over the last, and they are very important. Moreover, the three cases first recorded (*loc. cit.*) showed such excellent results as compared with the other operation, that a decided advance might be very justly claimed by Dr. Ogston. Theoretically, however, there are several objections which may still be raised to this operation. First of all, the joint is freely trespassed on, and the dangers incidental to such an event are well known, and without antiseptics would be held by most surgeons to forbid the operation. Then a ridge is left on the articular surface of the joint at the line of section, which *might* modify unfavourably its movements; besides which, the *débris* from the cut of the saw are left within it.

Again, there is the danger of non-union of the internal condyle, or of its necrosing. But experience has shown that the latter three objections do not hold; and, as regards the first, there is only one case recorded in which death followed the operation. This, I regret to say, occurred in my own practice. The case was operated on in this theatre with the strictest antiseptic precautions, but died exactly forty-eight hours afterwards of well-marked septicæmia. It is possible, as a German writer (Mikulicz, *loc. cit.*) remarks, in alluding to the record of this case, which I published in the *Transactions of the Clinical Society of London*, 1879, that others equally fatal may have occurred; but that this is the only one that has come to light. Since then, I have operated for the deformity six times without the smallest ill effect.

Not very long after Dr. Ogston's cases were published, an operation was designed and carried out, for which it was claimed that the overgrown condyle could be as effectually shortened without opening the joint at all. This, performed by Dr. Macewen for the first time on May 10th, 1878, consisted in removing a wedge-shaped portion of the internal condyle, the apex of which should not quite reach the encrusting cartilage of the joint, while its base lay at the upper part of the internal surface of the condyle (Fig. 4). On its removal with the chisel, the leg

FIG. 4.

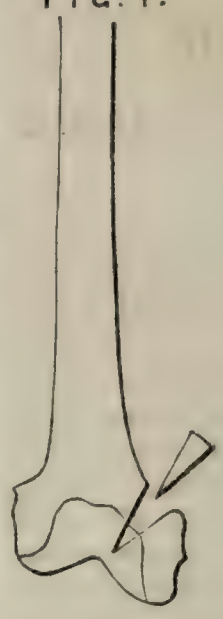


FIG 5.

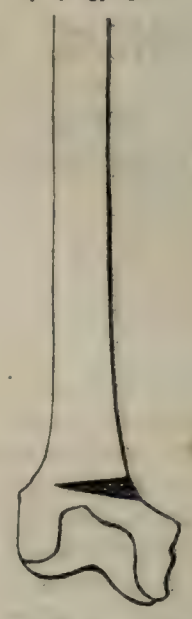
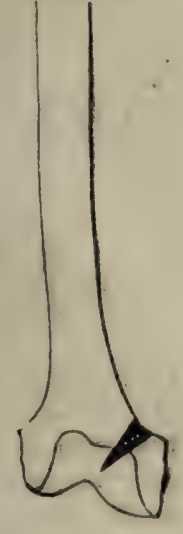


FIG. 6.



was forcibly brought into a straight line, when the two surfaces of the wedge-shaped gap were squeezed together and united so, the encrusting cartilage bending and yielding sufficiently to permit this. Now, in theory this had the great advantage claimed for it of not opening the joint; but it is questionable whether in practice it would not be found that in most cases the articulation had been entered. At all events, the author seemed to think that it was still open to that objection; for, at the same time, he tried another second plan, which certainly did not involve the joint, and to which he has for some time past given the preference in a large number of operations. He conceived, too, that by this there would be less risk of necrosis, which had occurred to a small extent in a case operated on by the first. This, Macewen's second method, which you saw me employ a few days ago, consists in simply dividing the femur with a thick chisel transversely for its inner two-thirds, in a line about half an inch above the epiphysary cartilage (Fig. 5). The limb is then forcibly straightened, and the remaining third thus undergoes either rupture or infraction, like a "green stick" fracture, after which the limb is put up in plaster until union has taken place. This operation, to which I feel inclined to give the preference myself, has the advantages of not opening the joint or interfering with its surfaces or ligaments in any way, of being easy of execution, and quite efficient in restoring the shape of the limb. It is still a question, however, whether the near proximity of the line of division to the epiphysary cartilage may not have a deleterious effect on the growth of the bone.

The last operation to which I wish to call your attention was performed a few days after Dr. Macewen's first, by Mr. Reeves of the London Hospital, and on the same principles as in the first method of the latter surgeon. Anxious to avoid opening the joint, he made a cut with a chisel in the internal condyle, in the same line as in Ogston's operation, but not quite down to the encrusting cartilage (Fig. 6). Having thus loosened the condyle, he found that it was possible, by forcibly straightening the limb, to force it up sufficiently to remove the deformity, and this without opening the joint at all. This proceeding, first practised on May 17th, 1878, had the advantage over Macewen's method of being more purely subcutaneous, and, as no wedge of bone was removed, of causing less danger of suppuration and necrosis. But I must say that, though there can be no doubt of the possibility of carrying it out without opening the joint, still I do not think that this often occurs; and I know that, in some of my own cases, although observing the greatest caution, the joint has been trespassed on considerably. However, this seems to be of little real importance, for in no case has the slightest ill effect followed; and the results, as regards the relief of the deformity, have been very good.

Another mode of operation combining to a great extent that of Billroth (*loc. cit.*), and Macewen's second method, has been pro-

posed and practised by Mr. Barwell, for the first time on February 4th, 1878. It consists in a double procedure with a considerable interval of time between. First, he divides the femur with a chisel a little above the epiphysal junction for about its external third. Macewen's line of division is on the inside of the femur to the same extent. He then straightens the limb, and allows the gap thus left in the end of the femur to fill up and consolidate. When this has taken place, he completes the second step of the operation by division of the fibula (obliquely) and the tibia (transversely) about one inch below the joint, and by then bringiug the limb into a perfectly straight line. No very great advantages have been generally recognised for this operation. Its disadvantages are apparent: a double osteotomy where one will suffice, and so increased danger and loss of time; a gap left at the lower end of the femur, to be filled up by material which may afterwards yield before quite solid to the weight of the body; and this, instead of a lesion (Macewen's operation), resembling more an impacted fracture than anything else. The operation is described in the BRITISH MEDICAL JOURNAL of May 25th, 1878.

You have now, gentlemen, had a brief sketch of the various operative procedures for the removal of the deformity of genu valgum which have been published; and you have seen the development out of what may be called rather rude beginnings of the more perfect operations of to-day. You have had, besides, an opportunity of judging of the results for yourselves on cases treated in this theatre by the different methods. There now only remains to glance at the statistics as regards mortality, etc. In doing this, it may be better to group, in the first place, the results of all four last methods together as tolerably similar. Now I think I have collected very nearly all, if not quite all, the cases of the kind recorded up to the present in this country and abroad in the various surgical periodicals. And without giving (for the sake of brevity) a list of the names of the operators which I have before me, I may say that I have collected fifty-five operations by Ogston's method, seventy-two by Macewen's, and fifty-seven by Reeves's, with allusions to others not actually published. But of course many others have been performed. Here, then, we have at least one hundred and eighty-four osteotomies of the femur for genu valgum. Now, admitting it to be possible that others ending fatally may have occurred and not have been recorded, I can only find one fatal case directly due to the operation: namely, that already alluded to. This was operated on by Ogston's method strictly. Another death is recorded by Thiersch (Langenbeck's *Archiv*, April 1879) as following six weeks after the same operation; but this cannot be regarded as the result of the latter. The patient was a sickly girl, and died with uræmic symptoms, her kidneys being found after death to be of the small contracted kind. A drawing of the condition of the joint in this case six weeks after the operation, which I now hand round, appears to me particularly interesting as showing the lesion of the bone produced by the saw-cut, the shifting upwards of the loose internal condyle (doubted hitherto by some), and the filling up of the irregularities so produced by plastic material. Now, supposing we were to admit (which I do not for a moment propose to do) that the fatal termination in this last case was due to the operation, we still have a percentage of deaths of only about one per cent.; a very small one, you will admit. And as to other unfavourable results of the procedures, we have very few to note; such as ankylosis after articular suppuration, useless limbs, etc. Stiffness lasting in the knee for some time has been noticed, but was soon overcome. And all this, in spite of the fact that some accidents have happened during the operation here and there, which would formerly have been regarded as very dangerous. Thus several surgeons at home and abroad have noticed the free entry of air into the joint with no subsequent troubles; this occurred in one of my own cases. Again, Kolaczek (*Centralblatt für Chirurgie*, No. 14, 1879) mentions that, in one of the operations in Breslau, the point of the saw broke off, and remained between the bony surfaces without producing any ill effect. The only other troubles that I can find attributed to the operation are recorded by the last observer; namely, that in two cases, paralysis of the bladder appeared, and lasted two days; and, in another, transient paralysis of the extensors of the leg.

In conclusion, gentlemen, I think you will agree with me that, however promising these methods of correcting the deformity of genu valgum may appear at present, we must still wait, observe, and collect facts in regard to them on a much larger scale, before deciding definitely what place the various procedures shall take among the regular operations of surgery.

PROFESSOR E. NEUBAUER, the celebrated chemist, died in Wiesbaden on the night of June 2nd. Dr. Neubauer was the author, together with Dr. Vogel, of a well known manual on the chemical examination of urine, a translation of which was published some years ago by the New Sydenham Society.

REMARKS

ON

FORCIPRESSURE AND THE USE OF PRESSURE-FORCEPS IN SURGERY.

BY T. SPENCER WELLS, F.R.C.S.,
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[*Concluded from vol. i, page 928.*]

THE use of forcipressure in surgery may be considered under three heads: first, as one way of carrying out the principle of Esmarch's "bloodless surgery" during an operation; secondly, as a mode of dispensing with either the cautery or the *écraseur* as alternatives for knife or scissors; and, thirdly, as a substitute both for torsion and the ligature for permanently closing bleeding vessels.

Few can estimate more highly than I do the great advantages gained by the use of Esmarch's elastic bands and bandages in amputations, excision of joints, or in any operation where they can be conveniently applied. But in the operations which of late years I have been most frequently called upon to perform—the removal of large ovarian and uterine tumours, and amputation of the breast, the cure of ruptured perinæum and vaginal fistulæ, or the removal of large tumours in various regions—Esmarch's proceedings are quite inapplicable. I have occasionally had Lister's tourniquet for compressing the aorta applied as a precautionary measure; but have only twice had to exert compression. In every other case, pressure-forceps have always been sufficient for the suppression of hæmorrhage, at least until the completion of the operation. Any vessel divided in the first incision through the skin and integuments, either of the abdominal wall or any other part of the body, may be seized almost as soon as divided, and the forceps left hanging on as long as necessary. Deeper vessels may be secured in the same way. I have removed very large mammary tumours, one weighing nine, and another thirteen pounds; sometimes putting the forceps on a large vessel before dividing it, sometimes directly after the division, until from twelve to twenty forceps had been used, and thus large vascular tumours were separated with scarcely any loss of blood. In ovariotomy, shreds of vascular omentum or mesentery may be thus secured before separating them from the cyst, or any vessels which bleed after separation from the cyst may be made safe until the pedicle has been secured and the tumour removed. If it be inconvenient to tie the pedicle before dividing it, then two or three pressure-forceps may be applied, one at each extremity of the pedicle, and one or two more towards the middle; and the tumour may be cut away without any fear of losing the end of the pedicle or its vessels. In Cæsarean section, splenotomy, nephrotomy, and the removal of a large undescended testicle in a man, forcipressure has proved quite as useful to me as in ovariotomy or hysterotomy. In operating for the cure of old ruptures of the perinæum, troublesome bleeding often occurs as the mucous membrane is denuded. If ligatures be used, they may interfere with union between the raw surfaces when they are brought together by suture; but, as a rule, pressure-forceps amply suffice for stopping all bleeding until the sutures have been passed and are ready for closing. A little pressure is then all that is needed. So in operating on vaginal fistulæ, very troublesome bleeding, which would interfere with accurate paring of the edges and passing of the sutures may be immediately and effectually controlled; and if the forceps be left on until it is time to fasten the sutures, it will almost always be found that bleeding has ceased.

I need now say very little as to the use of the *écraseur* or the cautery. There are cases where one or the other may be preferred to the knife or scissors. But, with a sufficient number of pressure-forceps at hand, the fear of hæmorrhage need not influence the decision.

The permanent closure of vessels divided during an operation, or by an accident, is a question of greater importance than the mere temporary stopping of bleeding. Acupressure, filopressure, and uncipressure have all failed to gain general acceptance by practical surgeons. Torsion, though deserving of far more general adoption than it has hitherto attained, has made but very slow progress. But I have never yet found anyone who has tried forcipressure who has not been immediately convinced of its convenience and the great advantages obtained, at least in the temporary suppression of hæmorrhage. Confidence in forcipressure as a substitute for the ligature, or as a mode of permanently closing considerable arteries, is attained more slowly, and requires much more observation and more extended trials before its real value can be accurately estimated. On this point, rather than rely on my own trials,

I prefer giving a short *résumé* of the experience of Kœberlé, Péan, and Verneuil.

M. Verneuil, in 1875, published several very interesting papers on Forcipressure in the *Bulletins et Mémoires de la Société de Chirurgie de Paris*. He explained how he had been led, in several cases where ordinary methods were inapplicable, simply to leave in the wound the forceps which he had used to seize the wounded vessel. His first case, about 1865, was an uterine polypus with a long pedicle. He cut the pedicle, and was surprised by free bleeding from a considerable artery. Cold injections proving useless, he seized the end of the pedicle by his polypus-forceps, tied the handles together, and left them in for two days without inconvenience to the patient. In 1869, he treated an artery deep in the palm of the hand in a similar manner, leaving the forceps for five days. In 1870, a wound of the internal mammary artery was also successfully treated, the forceps being removed after forty-eight hours. In 1873, in removing the coccyx, the lateral sacral artery was wounded and secured by forceps, which were left in for four days. In 1874, a very vascular naso-pharyngeal polypus was removed by a wire *écraseur;* and, very free bleeding not being stopped by plugging, the bleeding surface was seized by forceps, which were left in till the next morning and then removed without any recurrence of bleeding. Equally successful cases of wounds of the radial artery, of bleeding from the tonsils after removal, and from the interosseal artery after trephining, are also related. A large nævus was surrounded by ten forceps (which were left on till they fell off on the fifth and seventh days), and the growth was thus removed without the loss of one drop of blood. The remarks of M. Verneuil on these cases, on the varieties of forceps successively constructed, on the use of compressors of arteries by Assalini and others for the cure of aneurism, on the movable forceps of Nunneley and the "cannula artery-forceps" of Wolfe of Aberdeen (described in the BRITISH MEDICAL JOURNAL in 1867), the "self-acting wire compress" of Taylor (described in the same JOURNAL in 1868), and Richardson's tubular compress (in the *Medical Times* in 1869)—are all worthy of attentive perusal. He then analyses the results of forcipressure in 27 cases of forcipressure of large vessels—1 axillary, 1 subclavian, 17 femoral, 2 tibial, 2 brachial, 3 of the forearm, and 1 radial in the hand. In 22 of these cases, the success was complete. The forceps were left on for various periods from twenty-four hours to the fifth or sixth day, and four times until they came away spontaneously. In only one of the 27 cases was there secondary hæmorrhage. The inconvenience to the patient and the interference with the healing of the wound has been greatly exaggerated.

As a means of preventing or anticipating hæmorrhage, M. Verneuil also shows how forcipressure becomes useful before paring the edges of hare-lip, or removing epithelial growths of the lip or cheek, or portions of the tongue, in compressing the spermatic cord before castration, and in removing growths from the neck of the uterus.

The concluding portion of M. Verneuil's papers, on multiple and prolonged forcipressure as a mode of permanently stopping bleeding, is perhaps the most important of all. He shows that M. Péan has carried out this practice far beyond other surgeons. In comparing the relative advantages and disadvantages of leaving several forceps or several ligatures in a wound, it is thought that both are equally efficacious if the forceps be left on long enough. In rapidity of application, the advantage is altogether on the side of forcipressure. The sponging and irritation of the wound necessary for the ligature are spared, and the pain after recovering from anæsthesia is said to be less, if forceps are properly supported, than from ligatures. In quiet patients, forceps may be left in the mouth, vagina, or rectum; but with timid or restless persons the ligature should be preferred. But the main advantage of forcipressure is that the forceps need not be left on more than a day or two, perhaps not many hours; whereas ligatures separate slowly, and if not cut short retard the healing of wounds.

In the account of M. Péan's practice, given by Messrs. Deny and Exchaquet, a number of general observations on the different modes of suppressing hæmorrhage are followed by examples of the use of forcipressure, *before* operating, as a means of *preventing* hæmorrhage; and particular forms of forceps are described for the tongue, lips, and neck of the uterus. Then a number of cases are related, where forcipressure was not only of temporary utility, but as permanently stopping bleeding, "*moyen d'hémostasie définitive*":—amputation of the breast and limbs; resection of joints; operations on the scalp, mouth, tongue, neck, trachea, and rectum; castration, and gastrotomy; also on vessels not divided, as in aneurism and varices; the general conclusion being that the forceps may be removed in from two to thirty-six hours after the operation.

In M. Kœberlé's work, the same order is followed. Into the question of priority at issue with M. Péan I need not enter; nor into the difference between the instruments of Paris and Strassburg, as I think those of London far superior to both. But I join heartily in the concluding remarks of Kœberlé, to the effect that forcipressure is easy and rapid, enabling the surgeon to do without assistants—thus remarkably simplifying the practice of operative surgery. When divided vessels are small, the pressure exerted during the operation is quite long enough. When vessels are large, the forceps may be left in for some hours, for a day or more. Thus ligatures may be entirely suppressed, except in some few cases where forceps cannot be left; even then, they facilitate the application of ligatures. After the removal of the forceps, which may be looked upon as a ligature or compressor removable at will, no foreign body remains in the wound.

My own experience fully bears out the conclusions of the French surgeons; and I feel certain that, if good forceps are used, forcipressure will soon become very general in the practice of British surgeons.

[*To be continued.*]

ON A NEW ACOUSTIC APPARATUS; AND ON INTENSIFIED SOUND AS A CURATIVE AGENT.

BY WILLIAM A. McKEOWN, M.D.,
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I HAVE pleasure in bringing to the notice of the profession an acoustic apparatus, constructed with a view to aid the deaf in the most convenient and useful manner. Whilst this is the immediate object of the invention, I shall endeavour to show that its long continued use will exercise a curative influence over certain rebellious diseases of the ear, hitherto practically beyond the pale of medicine and surgery.

As the latter consideration is of even greater importance than the former, I will first deal with the grounds for my belief in the curative influence mentioned.

Toynbee's Pathological Researches show that Vibratory Motion ought to be a rational remedy for many cases of Deafness. To Toynbee the world is probably more indebted than to any other man, living or dead, for having put aural diseases on a scientific basis. From his tables, giving the results of his dissection of upwards of 1,000 diseased ears, it appears that a large proportion showed lesions in the conducting apparatus of the middle ear. I extract the following figures:

126 cases—membrani tympani thicker than natural.
59 cases—adhesions of membrana tympani to different parts.
202 cases—membranous bands between ossicles.
99 cases—ankylosis of stapes to fenestra ovalis.
66 cases—too rigid attachment of stapes to fenestra.

I am aware that doubts have been suggested by subsequent writers as to the pathological character of some of the bands described, and, also, that Hinton thinks that Toynbee's proportion of rigid and ankylosed joints is excessive, because the most of the subjects were old and more exposed than people in general to influences likely to disorganise the auditory apparatus. Still, that the condition of rigidity is one of most frequent occurrence in practice does not admit a doubt; indeed, it is highly probable that a large proportion of the cases described in books as "Chronic Inflammation of the Drum", and "Dry Catarrh of the Drum", are cases of simple rigidity of some of the parts induced by the advance of age or constitutional causes. These terms are often only a cloak for defective knowledge, and serve the same purpose as the term "Nervous Disease of the Ear" used to do. Besides, in cases in which there has been undoubtedly a chronic inflammation, this generally brings about a lasting deafness by the induction of rigidity. In any event it will be wiser, instead of trying to explain away Toynbee's results, to accept them as a fair index of the pathological condition in many cases of chronic deafness in old people, and as a guide to rational treatment. We have, I submit, clear grounds for dealing with stiff joints in the ear as we would with a stiff knee or ankle-joint, viz., by appropriate motion.

The Structure of the Ear points to Vibratory Motion as Curative.—The structure of the ear, constituted as it is of vibrating membranes, of ossicles with joints, of fluid, and of vibrating parts in connection with the nervous elements, points to it as a mechanical organ, and as one likely to require treatment on mechanical principles. For a stiff joint we prescribe exercise, for a rusty hinge we employ motion. If the muscles and joints of a pianist become impaired in their delicacy of movement, we prescribe much practice. By use, the hinge comes to work sweetly, and the muscles and joints often reacquire their lost powers; so it is reasonable to infer that the stiff membranes, joints, and other structures of the ear, being brought into exercise by vibratory motions sufficient to set them in play, may advance more and more to a condition of health.

Recorded Experience supporting these views.—The paucity of observations on this subject is somewhat remarkable. We find only scattered fragmentary remarks in different authors of the advantage of exercise of the ear, and a few instances of the influence of strong vibrations, but no author seems to have been impressed with the important lesson taught. Willis (1680) reports the case of a woman who could hear the voice only when a tambour was beaten near to her, and Fielitz notes the case of a shoemaker's son who heard conversation only whilst leather was beaten on a stone by a hammer; Toynbee mentions a case of sudden restoration of hearing by a loud shout, but the improvement only lasted for a few days. In Hinton's book on the *Questions of Aural Surgery*, another case of sudden restoration is recorded. We find in several authors casual remarks of the curative influence exercised by the sounds of the human voice intensified by tubes.

Inference from and explanation of the symptom "Hearing better in a Noise".—I will pass now from these rare and extraordinary cases to the consideration of a symptom very frequently stated by patients, viz., hearing better in a noise. The woman mentioned by Willis, and the shoemaker's son, heard better in a noise, but very many have a similar experience; they may mention the fact over and over again to successive professional advisers, but their statement is either regarded with incredulity, or as true but beyond comprehension, or is explained on some utterly insufficient hypothesis. One thing is laid down clearly enough, viz., that the symptom is of bad omen. I trust I may not be thought to value too lightly the views of many distinguished aural surgeons, when I state that not only is "hearing better in a noise" an absolute truth, but it is perfectly capable of explanation, and is a most important guide to treatment in many cases. If the hearing be better in a noise, why not let the patient have more noise? The deaf can usually bear a good deal without inconvenience. What would stun a healthy ear only brings many deaf persons to the hearing point.

I have at present a young gentleman under my care, who is so deaf that, whilst he is in a quiet room, I must speak distinctly and close to the ear to cause him to hear, but, whilst walking in the street or riding in a railway train, he can converse with me with facility. I recently asked a lady whether she heard better in a noise; she replied that she heard quite well in a noise. Her daughter, who accompanied her, and whose hearing was acute, assured me that her mother heard much better in a noisy street or in a railway train than she did herself; in fact, it was only in quietness that her mother was deaf. Do the laws of physics not explain this apparent anomaly? Is the improvement not owing to the fact that parts whose rigidity has been overcome to some extent by strong vibrations, more readily respond to the minor impulses of the human voice? It is well known that vibrations of varied degrees of intensity and pitch may all at the same time traverse the same media, each system preserving its individuality. We know that it is difficult to set a laden wagon in motion, but once the inertia has been overcome, small forces may afterwards materially contribute to its advance. So with the rigid structures of a diseased ear.

Remarkable improvement in cases of profound Deafness by intense Vibrations.—Whilst this paper was in course of preparation, it occurred to me to imitate the plan adopted by the woman two hundred years ago. I selected cases of very long standing in which the hearing was so bad that words uttered close to the ear were only heard as sound, or in which it was necessary to speak in a clear voice close to the ear to make the patient hear. As the cases are at present under observation, I will reserve details for a future paper. I may state here, however, that the results have been surprising, and quite beyond my most sanguine expectation. I adopted the simple plan of causing the patient to sit in the acoustic chair, to be afterwards described, and whilst so seated, with the nozzles of the tubes in the ears, I caused a large roll of sheet-tin, which chanced to be at hand, to fall violently and repeatedly on the floor. I found that, in some cases in which words spoken loudly close to the ear were not distinguished, the hearing became so far restored after this treatment that the words could be distinctly heard. In other cases, the voice heard before treatment only close to the ear, became audible afterwards at the distance of two or three feet. Recently, a man, 71 years old, very deaf for many years, able, when he entered my consulting rooms, to hear with each ear a loud voice close to the ear, came to hear, after a sitting of a few minutes, every word I said at the distance of two feet from one ear, and four feet from the other, without the aid of tubes. To-day, similar treatment was repeated with the result of improving the hearing distance of one ear to six feet and of the other to eight feet.

I can draw only one inference from my own limited experience of the influence of intense vibrations, viz., that very many cases hitherto regarded as hopeless will be restored to useful hearing by the simple method described.

Inference from the Continuous Exercise of the function of the Healthy Ear.—But whilst we may reason from the pathological conditions, the structure of the ear, recorded experience, and personal observation, we may take a lesson from the work daily performed by the healthy organ. Few have thought of the incessant exercise of the ear when in a state of health, or of the great evil of prolonged disuse in the case of the deaf. A normal ear during the whole of the waking hours is in a state of continual vibration; the human voice, the noise of the streets, the whistling of the winds, the rustling of the trees, and the innumerable noises pervading all nature, keep the ear in continual exercise. What a contrast for the persons who are deaf to a considerable degree! Excepting loud noises or the voice of a speaker close to them they hear nothing—the ordinary aerial vibrations are not strong enough to affect the delicate vibrating apparatus of the ear, prolonged rest is the result, and this rest makes the organ still less capable of responding in the future. A healthy ear has sixteen or eighteen hours of daily use, an impaired one has often not an hour. Should it not be our object to render it possible for deaf persons to use their organs for hours daily?

The ear is quite analogous to other parts of the body. The most perfect development of bones, muscles, and joints, can only be brought about by much work. Weak and atrophied muscles and stiff joints are the invariable result of want of exercise. To have a perfect organ we must have exercise and plenty of it. If this be necessary to maintain the functions of a healthy organ, how much more is it so to restore an impaired one!

Objections to the Ear-Trumpets and Tubes hitherto in use.—Now let us inquire whether any of the instruments for intensifying sounds hitherto in use are adapted for prolonged application, or are generally of sufficient magnifying power to enable deaf persons to hear distant sounds, or are so arranged as to be applied to both ears at the same time when desired. An acoustic apparatus which fails in the first two particulars cannot admit of that prolonged use which is essential, not only for the pleasure of the individual, but for the necessary exercise of the function of the ear.

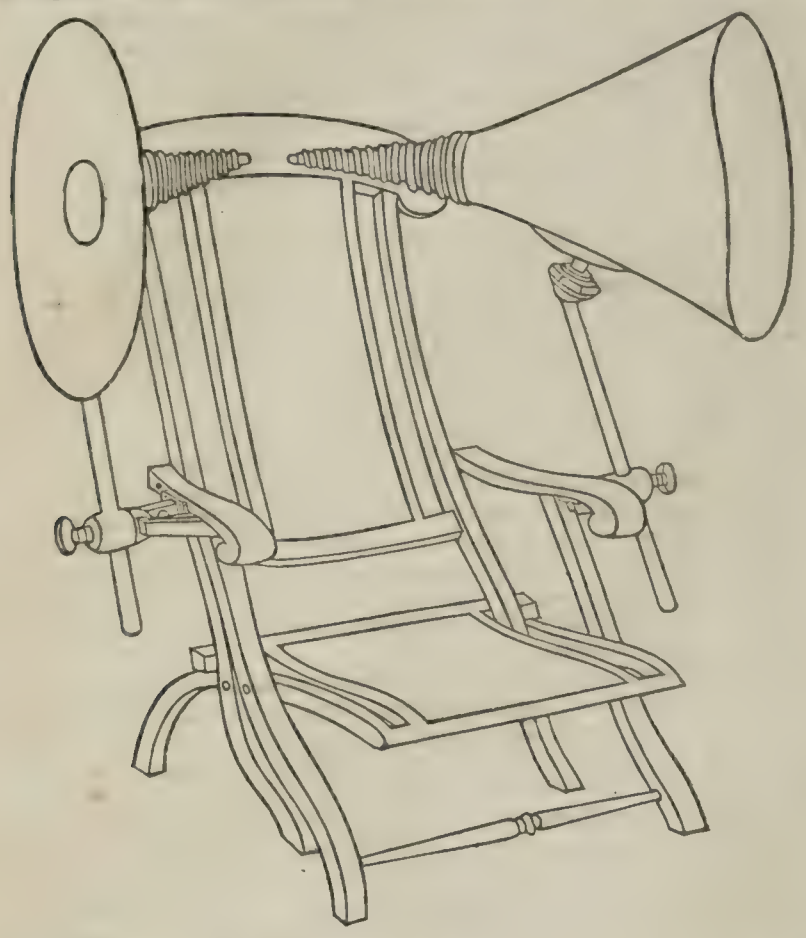
The acoustic cornets with a spring over the top of the head are mere toys, and are only useful in the slightest degrees of deafness. The stiff tubes of every variety of form to be held in the ear, are generally far too weak to enable persons deaf in a considerable degree to hear conversation, even at a short distance, and cause so much fatigue of the arm, that deaf persons would rather bear their infirmity than use them for a lengthened period; certainly I have never met a person who used such a tube to each ear. The large sound-collectors placed on stands, with long flexible tubes leading to the ear, are not well adapted for distant vibrations, and are also inconvenient. The long narrow tube impairs the sound very greatly. As to the long flexible tubes, having a nozzle at one end and a small receiving bell at the other, to which the speaker is to address himself, they are only of use for very short conversations and for very deaf persons.

The uselessness in general of all acoustic apparatus hitherto in use will be at once apparent to anyone who knows the history of deaf persons: they are practically debarred from social intercourse, their auditory organs lie fallow, and their mental powers become very much blunted from want of training in the great school of the world. They feel they are comparatively useless members of the community, and anything recommended as calculated to relieve them secures a patient trial. There is not an aurist or instrument-maker within reach who does not receive a share of their patronage. They are provided with a regular armamentarium of cornets, trumpets, and tubes, which they only use when absolutely obliged. If possessed of sufficient means, they go from watering-place to watering-place, and climates hot and cold are tried in succession. I have even heard of persons ascending the Alps, in the hope that the greater rarity of the atmosphere in these elevated regions would give relief. After trying everything, however, they usually come to regard their malady as incurable, and become the resigned victims of a gradually increasing deafness.

The Magnifying Power necessary.—It is little wonder that the tubes in common use have little effect in improving the hearing power for distance, when we bear in mind the law of acoustics, that the intensity of sound diminishes with the square of the distance. Suppose a person hear the voice at the distance of two feet from the ear, what is the magnifying power necessary to make the same voice heard at the distance of ten feet? According to the law stated, the tubes would require to magnify twenty-five times.

How I propose to obviate all the defects stated.—The idea occurred to me that I could accomplish this by making the furniture of home and office acoustic apparatus. Nine-tenths of a man's time is spent at home or business; and if during this period I could secure the easy exercise of the function of hearing, the advantage resulting to the deaf would be incalculable.

By this plan it is clear that very large tubes may be used; but it was essential not only to use the large tubes, but have them so arranged that the terminal nozzles should remain in the ears, when introduced, without requiring to be held in place, that they should not press on the ears injuriously, and that the head might be moved without hurting the ears. I will not weary the reader by the details of my numerous experiments, but will state that I finally succeeded in fulfilling these requirements in the following way. I attached to each side of a chair, as illustrated in the accompanying drawing, a large tube consisting of a rigid and flexible part in combination. The drawing suffi-



ciently illustrates the mechanism by which the tubes may be raised and lowered, shifted backwards and forwards, and revolved so as to admit of the most perfect adjustment. The flexible termination is, perhaps, the most important part of the apparatus, and requires some explanation. When conducting my experiments, I had very great trouble in finding a suitable flexible part. The India-rubber tubes met with in commerce had always some serious fault; they were either so rigid as to hurt, so flexible as not to keep their position, so small as to diminish the volume of sound, or they had obstructions inside to the passage of sound, or were liable to closure of the canal on being bent. I required a tube of sufficient rigidity to maintain its shape and position, so that it would not require the aid of the hand to keep it in place, of sufficient flexibility to permit of its being moved freely in every direction on very slight pressure, without materially diminishing the bore of the tube, and of sufficient diameter to admit of a large volume of sound. It should have a smooth internal surface so as to have as little irregular reflection of sound as possible. It should admit of being shortened on slight pressure on the nozzle, so that if the head were moved against it the tube would shorten, and the ear be thus saved. I was much puzzled for some time as to how I should obtain a tube having all these properties, some of which almost seemed to be antagonistic to the others. At last I took a lesson from nature. It occurred to me that the trachea possessed all the properties specified, and I therefore made a tube, taking it for a model. On a shape of the desired form, a thin layer of India-rubber was moulded, and on this a spiral of the same material was coiled externally; rings would also suit. These tubes may be made of many varieties, curved, straight, cylindrical or conical. The woodcut illustrates the form I think best. On trial, I found that the tubes fulfilled all my requirements and rendered a binaural apparatus capable of easy use.

It will be observed that the mouth of the tube figured in the drawing is oval. It may, however, be spherical, or its end may be truncated, or it may be bell-shaped. No doubt different forms will be selected by persons with different degrees and varieties of deafness.

Advantage of Binaural Hearing.—Few persons appreciate fully the value of two ears. Let a person who hears well close one ear whilst riding in a carriage or railway train, and he will observe a remarkable deadening of the sound; so when a person testing the tubes closes one ear, he will find that the increase of sound is not at all to be compared to the increase when both ears are used. I believe the intensity by binaural hearing is much more than doubled.

The Proper Power to be used.—The fundamental rule should be in all instances to use tubes of sufficient power to cause the patient to hear easily, if possible; and subsequently, if improvement take place, it may be desirable to diminish the power.

Prejudice against Tubes Irrational.—It is well known that many entertain an unreasonable prejudice against the use of tubes. What harm can there be, in case the conducting apparatus of the ear do not convey ordinary vibrations, to so increase the intensity of the sound as to enable the deaf to hear all the sounds to which the healthy ear is accustomed all day long? This prejudice is so totally at variance with reason and common sense, that I will not further refer to it.

Hearing-Tubes and Spectacles not entirely analogous.—This may seem a strange assertion, but is nevertheless true. Spectacles very rarely have any curative influence over defects of refraction. When spectacles are laid aside, the eyes are in the same condition as before they were put on. Tubes for the ear, on the contrary, by causing vibratory motion, render such motion on weaker impulses afterwards more easy, and are therefore curative. In the case of the eye, we have an irremediable defect of structure; in the case of the ear, a morbid condition, the stiffness of parts more or less remediable. It is an interesting question, which will probably ere long find an answer, whether the tendency to chronicity, so strongly marked in ear-affections, is not directly traceable in many instances to want of regular exercise of the function by intensified sounds.

Exercise of the Auditory Function will lead to the Cultivation of the Intellect.—Irrespectively of the mere pleasure of hearing and the prospect of improvement by exercise, efficient acoustic apparatus must be strongly advocated on this most important ground. The majority of the deaf suffer very much from impairment of the mental faculties. In the case of a person whose mind was untutored previous to the deafness, his conversation is confined to the immediate necessities of life. He may hear questions as to his home, his family, his church, or his business; but when we pass beyond these topics, though we may speak with the same force, a laborious mental process seems to be brought into operation before he can understand. There seems an appreciable interval between hearing and understanding. In most instances, the attention must be so put on the stretch, that the deaf person prefers to avoid conversation unless compelled by necessity. The training of a deaf person must really be pursued stage by stage, like the education of a child. We must bear in mind, in dealing with the deaf, that a practised ear and a cultivated mind mutually assist each other.

Cases in which Acoustic Apparatus should and should not be used.—
It should not be used

1. In nervous deafness generally (fortunately a rare disease):
2. In acute inflammatory attacks.

It should be used

1. In those numerous cases of deafness beginning without inflammation; no doubt owing, in most instances, to rigidity of parts resulting from advance in years or from constitutional peculiarities:
2. In those cases resulting from inflammation, but in which the inflammatory process has induced and left behind it changes in the conducting media which have resisted medical and surgical remedies.

Summary of Advantages of my Acoustic Apparatus.—1. By it large tubes may be used with the greatest ease and convenience, and for indefinite periods.

2. Both ears may be used at the same time.
3. Deaf persons, whilst the apparatus is in use, are put more nearly on a par with hearing persons as regards the exercise of the function.
4. Deaf persons are enabled to attend to business from which they would be otherwise precluded; for example, a judge on the bench, a lawyer in his chambers, a merchant in his office, may perform their respective duties by aid of an acoustic chair or acoustic writing-table.
5. The intellect is cultivated *pari passu* with the hearing power.
6. Improvement in the hearing is effected by the prolonged exercise of the vibrating and conveying structures of the ear by intensified sound; and there is reasonable ground for hope that persons hitherto regarded as afflicted with an incurable malady may be even so far restored as to dispense for the most part with the use of tubes.

I intend, in a future paper, to illustrate the powers of the apparatus by notes of cases.

A CASE OF HYSTERICAL HEMIANÆSTHESIA.

By H. RADCLIFFE CROCKER, M.D.,
Assistant-Physician and Pathologist to the East London Hospital for Women and Children.

L. P., AGED 19, a tall, well-made intelligent girl, was brought by her mother to the East London Hospital for Women and Children, on October 23rd, 1878, complaining that she frequently fainted, and had much pain in the right ovarian region. The mother said she had fainted four times on the 18th, twice on the 21st; she was generally drowsy, but not especially after the attacks, and did not know she had had an attack unless told of it. On the night previous, while sitting in a chair, she said, "Oh, mother, I feel so queer", and fell forwards quite insensible, and remained so five or six minutes, but was not drowsy afterwards. She menstruated regularly, but with a good deal of pain, and the catamenia for the last period had not quite ceased. The mother did not consider her hysterical, nor was her manner suggestive of that condition. On questioning the girl as to any difference of sensation, she denied anything of the kind; but when pricked on the back of the right hand with a needle, to her surprise, she did not feel it, and the needle could be passed deeply in without the smallest sign of pain, and, on withdrawal, no bleeding ensued. The slightest prick on the palmar surface made her draw away her hand immediately with an exclamation. Further investigation showed that the anæsthesia was limited to the right side in the following situations: the extensor surface of the arms, the outer part of the legs, and the right side of the face, except in the eyelid, ear, and forehead; in fact, over the area of distribution of the temporal branch of the fifth, some sensation was retained, but less than on the opposite side. There was marked hyperæsthesia over the right ovarian region. On the left side, sensation was quite normal; she could see and distinguish colours equally well with both eyes. Holding the finger in front of the face, and desiring her to fix her eyes upon it, and passing the other hand across the eyes, sent her to sleep with some difficulty, and sometimes failed from the patient laughing; but it was found that closing the eyes, and pressing gently on them with the thumbs, sent her to sleep at once, from which a noise or pricking the left hand or the palm of the right one would immediately wake her; pricking the back of the right hand had no effect. No mesmeric phenomena, except this apparently normal sleep, could be induced at that time.

A few small blisters over the right ovarian region, and the administration of bromide of potassium, soon removed the hyperæsthesia over the ovary, but no alteration of the other phenomena of sensation was induced.

The experiments on sensibility were in three series. In the first, the nature of the materials and the object of their application was concealed as much as possible. In the second, the patient was aware of the effect expected, and saw what was going to be applied. In the third, although she was aware of the object of the applications, sensibility was tested during sleep. They were spread over a period of nearly five months; between the second and third, there was an interval of two months.

A gold coin was bandaged on for a quarter of an hour without any effect. A thin piece of wood, a disc of Betts' capsule metal, a small magnet, wafers, and the constant current up to twenty-three cells of a Weiss's battery, were without effect. After half-a-crown had been put on for five minutes, the patient knowing what it was, some return of sensibility occurred.

The first of the next series of experiments was carried on under the superintendence of my colleague, Dr. Donkin, who saw her with Mr. Hutton, the clinical assistant, during my absence. After saying that the previous applications had been ineffectual from not being on long enough, two half-sovereigns were fastened on the forearm for half an hour; on then removing the bandage, gentle pinching, or even stroking, was felt clearly, though not so acutely, as on the opposite side; and, while the eyes were closed, the patient touched with the other hand the exact spot which had been stroked. The following week, I repeated this experiment, bandaging on two gold coins for three-quarters of an hour; but the back of the hand was still anæsthetic. I did not test over the site of application, which was, as subsequent events showed, an important omission, so that the failure may have been only apparent; for on another occasion, when the experiment was repeated in an exactly similar way for one hour, sensation was restored, though less completely than on the left side, from one inch below the part on which the coins were placed upwards over the whole arm and face, but not to the hand; the site of the coins was the most sensitive part; below the knee, on the outer side, she could just feel something on being pricked, but was sensitive above.

On another occasion, without any remark being made, a surface-thermometer was applied for fifteen minutes to the anæsthetic arm, and the temperature was found to be 93.6°, but sensation was completely restored over the part to which the thermometer had been applied, and partially over the rest of the limb. It was now predicted in the hearing of the patient that, when the instrument was applied to the sound side, sensation would be lost. The temperature of this side was 94.6°. Sensation was completely abolished over the place of application, and partially lost over the rest of the forearm. Two gold and silver medals were now bandaged alternately on the flexor surface of the left forearm, one of the gold being on the anæsthetic part where the thermometer had been applied; and it was remarked to the bystanders that, where gold was placed, sensation would return; where silver, there would be anæsthesia; in sixteen minutes, the effects were tested with the patient's eyes closed, and the prediction was fulfilled, the influence of each metal extending a little beyond its site. The top and bottom medals produced a more marked effect than the middle ones, which had been placed close together. Half an hour later, sensation was on the left side almost restored, the anæsthesia being nearly complete on the right, except on the place where the thermometer had been.

After this, the patient ceased attendance for two months. When she came again, she stated that she felt better in her general health, but there was still pain in the ovarian regions at periods which recurred every three weeks.

The sensational phenomena were unaltered. On inducing sleep by pressing the thumbs on the eyeballs and stroking the face, no consciousness was exhibited when a needle was thrust into the back of the right hand, but she awoke with a start when the left was pricked.

Three gold coins were now tied on the right forearm for a few minutes, and, sleep being again induced, there was no effect on pricking the left arm, but she awoke immediately on pricking the right.

Before the coins were applied, there was some sensation on the right side of the face, but less than on the left; after their application, this was reversed. On another visit, the patient having been blindfolded, a florin placed on a bit of paper was pressed for a moment on the right arm; and as the bandage was put on, the coin was removed, and the paper only left; after fifteen minutes, sensibility was restored, but with no alteration on the left side. A similar procedure was now adopted with the left arm, the patient hearing that sensation would be lost; and it was, but only over the part where the paper had been. Sleep having been induced, a needle could be thrust into the site of the paper without any sign of sensation, but a slight prick a little below this part immediately awoke her.

On the last occasion, the right arm was found to have some feeling in it, so the left was chosen for experiment; and it was predicted that sensation could be mesmerised out of it. Her arm was stroked with the hand from above down for two or three minutes; and on testing sensation five minutes later, the limb was totally anæsthetic. By stroking it upwards, sensation was restored while the right arm was quite anæsthetic after a few strokes downwards. In reply to a question, the patient said she felt sensation going, "the arm getting numb". During sleep, she could be made to perform any acts she was desired to do; *e.g.*, walk round the room, fetch anything, etc.; the eyes were closed, and she was evidently asleep, staggering as she walked, and feeling her way; and, when standing still, would have sunk down on the floor if not supported. While in this condition, she was told to thrust a needle into the right arm. She did so, without any sign of sensation; but, on doing it on the left side, awoke with a start directly.

REMARKS.—The above phenomena appear to me explicable only on two hypotheses: either that the patient pretended to experience these variations of sensibility, and to be asleep when she was not so; or that the effect of the applications was due to the mental impression they induced, and not to any physical effect upon the skin; for is it conceivable otherwise that such diverse applications as gold and silver, glass and paper, and a few gentle strokes of the hand, should all prove to be equally effectual?

With regard to the hypothesis that she was shamming, the objection is equally applicable to the other recorded cases, but no one who has really witnessed them ever entertains such an idea. In this case, the experiments were always carried on in the presence of witnesses, among whom I may mention particularly my colleagues, Drs. Donkin and Warner; but no one for a moment doubted the reality of the phenomena, nor of her being really asleep. The partial distribution of anæsthesia is a very unlikely phenomenon to be assumed. It is noticeable that silver had on one occasion some effect in restoring sensation, before it had been expressly stated in the presence of the patient what result was expected; but this was only after previous experiments had been made with other substances; and since sensation was of course tested after each, the patient would soon learn what was antici-

pated; and subsequently, in fulfilment of a prediction, the same metal had a directly contrary effect. I think this gradually acquired knowledge of what to expect, soon vitiates attempts to conceal the object of the applications. Take, for example, the case recently published by Dr. Cockle. Four metals had been applied without any result; and then, three days later, when gold was applied, sensation was restored. No doubt the believers in metallo-therapeutics would say that this was because gold was the metal to which the patient was sensitive. But can it be proved that the patient had not learned the object for which the metals were being applied? And how will metallo-therapists explain the opposite effects of the same metal at different times in my case? In the case of the thermometer, the patient had no reason, except the metallic appearance and the experience gained by previous applications, to think that any effect or sensation was looked for. It is observable, also, that no transference of the phenomena was obtained, except when either it was foretold or when applications were directly made to the sound side. The curious localisation of the results in some of the experiments to the part of the skin covered by the substance employed, and a short distance beyond only, is noteworthy, and suggests the necessity of always testing over the part covered by the applications. In Westphal's case, after the application of a sinapism, there was a similar localisation of transferred anæsthesia to the opposite limb. Westphal's case, Dr. Hughes Bennett's, and my own, all strongly point to a mental impression, however induced, being the real factor, at all events, in these cases, in the production of the phenomena; and although at present some cases are not so plainly ascribable to this, I am strongly inclined to believe that further carefully conducted experiments will show that it is in this direction that we must seek for their explanation.

TREATMENT OF ECZEMA OF THE PALM, MISCALLED PSORIASIS PALMARIS.

By ROBERT LIVEING, M.D., F.R.C.P.,
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DR. SPENDER of Bath has lately called attention to the common misapplication of the term *psoriasis palmaris* to certain forms of eczema of the palm; and he does me the honour to quote a remark of mine on the subject. I think there can be little doubt that simple psoriasis so rarely attacks the palm or sole, that practically we may say those parts are exempt from it. Even in the severest cases of general psoriasis, these regions escape; and, as Dr. Spender truly says, all the so-called cases of psoriasis palmaris are either modified forms of eczema rimosum or dermato-syphilis. It is true that we occasionally, though rarely, meet with mixed eruptions of eczema and psoriasis in gouty subjects, both eruptions being often associated with a gouty diathesis; and I have no doubt that those who hold that psoriasis of the palm exists, could find examples of this kind that might seem to justify the use of the term psoriasis palmaris; but even in these rare cases, the changes that occur in the palm are exactly the same as those that we commonly meet with in the hands of patients who suffer from ordinary eczema in other parts of the body; it is therefore, in my opinion, a misapplication of terms to call them psoriasis. With regard to the syphilitic eruption of the palm, which resembles psoriasis, I would say that I have always been an advocate for keeping the names we apply to syphilitic eruptions distinct from those applied to other diseases. Thus, for example, *in theory*, I object to the terms syphilitic lupus, syphilitic psoriasis. The disease is either lupus, or it is syphilis; the two are distinct; so that by syphilitic lupus we either mean a syphilitic eruption resembling lupus, or perhaps that we are not quite sure whether it is lupus or syphilis. On the other hand, there is undoubtedly a convenience in the old form of nomenclature, which to many outweighs all the theoretical objections to it—namely, that it is a short expressive way of describing to others the appearance of an eruption. If I say that such a person has syphilitic psoriasis, it conveys a more distinct idea of the appearance of the eruption than if I used the term squamous syphilide. Anyhow, I feel quite sure that the old nomenclature will never be superseded; and, under these circumstances, like Dr. Spender, I would limit the use of the term psoriasis palmaris to the well known syphilitic eruption of the palm, although I should prefer to see the term entirely dropped out of our nomenclature.

With regard to the treatment of chronic eczema rimosum of the palm, it is confessedly difficult. This arises from several different causes. 1. The position and mobility of the part affected is unfavourable to treatment; the hand is never at rest; the consequence is that, as fast as the skin heals, it is rebroken by flexion and extension. This of course applies especially to the class of domestic servants and others who have to live by the use of their hands; for although they may be cured for a time, the cracked condition is very apt to return as soon as they resume their usual occupation. 2. The hands are the parts of the body most frequently washed, or perhaps kept constantly wet by particular occupations; this makes the cuticle brittle, and is very unfavourable to the cure of eczema rimosum. Barmen, for example, are particularly liable to this affection, favoured, perhaps, by their mode of life, but excited by having their hands constantly wet with beer. The only way of dealing with them, after the eruption has been cured by rest and appropriate treatment, is to make them wear India-rubber gloves, which can now be obtained of any degree of thickness. I have permanently cured many obstinate cases in this way. 3. The most important element of difficulty is, however, the nature of the cuticle of the palm, which is very thick, and does not exfoliate readily; the consequence is that the eczema takes an unusual and abortive form; the products of the inflammation do not escape, and the outer cuticle becomes thickened, brittle, dry, and cracked. Instead of a free exit of fluid and rapid exfoliation, we have an almost horny condition to deal with; the principle of all successful treatment is to get rid of this (I am speaking only of the chronic form), and to promote a rapid removal of the hard, thickened, and imperfectly formed epidermis.

Acute or subacute eczema of the hand is best treated by the constant application of water-dressing, lead lotions, or linimentum calcis, according to circumstances; the gist of the treatment being never to allow the dressing to get dry. Pretty free purging is generally indicated.

The ordinary chronic forms are well treated in the way Dr. Spender has pointed out, by the application of the lead-ointment to which he refers. The compound lead-ointment of the old *London Pharmacopœia*, made rather soft by the addition of oil, is also a good remedy; so, also, is Hebra's unguentum lithargyri; but in all cases the hand must be rested, covered, washed little, and the ointment constantly applied. It is well to bear in mind that the constant use of lead-ointment stains the nails; this is not, however, of much importance.

I now come to those cases that are most obstinate: I mean where the cuticle is extremely hard, brittle, thick, and cracked across the natural flexures of the skin. In these extreme cases, ointments produce no effect, and other means must be adopted to get rid of the outer cuticle, which entirely prevents any chance of cure. This is best done by the constant application night and day of a lotion of liquor potassæ (from two to four drachms of liquor potassæ to eight ounces of water is usually strong enough). The hand must be enveloped in rags kept constantly wet with the lotion, and covered with thin gutta-percha, or something of the kind. This treatment must be continued until the cuticle is thoroughly white and macerated, when it will peel and rub off readily. The process may require to be repeated until the epidermis is reduced to its natural thickness, and is thoroughly soft; the skin may then be treated with ointments and glycerine in the usual way.

Lastly, chronic eczema rimosum of the hand is one of the few forms of eczema in adults that is often benefited by the internal use of arsenic.

A CASE OF SUPPOSED CARDIAC THROMBOSIS: USE OF LIQUOR AMMONIÆ AND DIGITALIS: RECOVERY.

By T. CHURTON, M.D.,
Physician to the Leeds Dispensary and Leeds Fever Hospital.

A MARRIED woman, aged 21, seen on February 21st, 1879, always healthy until this illness, of good constitution and family, was under the care of Mr. Todd, one of the resident medical officers of the dispensary. She had been confined of her second child four months previously. Soon after her confinement, the right breast inflamed; it suppurated, and was opened freely; but did not get well. It was now red and hard and swollen; pus also was escaping, though not freely, from the wound in it. Lately, albumen had been found in the urine, and she had begun to seem very ill altogether. I found her still fairly nourished, but with a pallid face, an eager, anxious, scared expression in her eyes; sitting upright in bed, unable to breathe in any other posture, and believing that the attempt to lie down would kill her. There was dropsy of the dependent parts (loins, lower abdomen, and thighs). There was scarcely any radial pulse. Upon inquiry, it was found that her legs had swollen much more during this second pregnancy than in her first; that, moreover, she had felt ailing the greater part of the time, and had had constant headache and vomiting—without, however, having asked for any advice or treatment. She was now purged several times a day; but passed a fair quantity of highly albuminous urine of specific gravity 1018. Though the breathing was rapid, there was no cough; there was free respiration

over all the lungs, except at the base posteriorly, where moist *râles* were easily audible. On examining the heart, it was found to be beating rather rapidly and forcibly, but with a short snapping impulse, while, as already stated, the pulse at the wrist was so small as to be scarcely perceptible at all; there were no murmurs, but a very distinct reduplication of the second sound—the heart-sounds exactly resembling those caused by a galloping horse. It was therefore supposed that, in consequence of the abnormal state of the patient's blood, coupled with debility and a languid circulation, a thrombus was forming in one (or more) of the cardiac chambers, stretching through the aortic or pulmonary valve, thus causing the blood to leave the ventricles at an uneven speed, and so delaying the closure of one set of valves. In consequence of the (naturally) large size of the left and uninjured breast, together with the very nervous and prostrate state of the patient, it was not possible to define the diagnosis more accurately. Acting, however, upon the fact, ascertained by Dr. B. W. Richardson, that (although it is not the physiological solvent of fibrin, yet) ammonia in the blood does prevent the formation of fibrinous clots, fifteen minims of liquor ammoniæ, *B.P.*, with five minims of tincture of digitalis, was given in an ounce of water, every three hours. She began to improve at once, and, continuing to take the medicine steadily until the fourth day, she could then lie down quite comfortably; the *râles* had disappeared from the bases of the lungs; her pulse was fairly full and regular; but the second heart-sound was still as distinctly doubled as before. There was less albumen in the urine; the diarrhœa persisted to the extent of six or seven loose offensive motions daily. During the pregnancy, she had suffered great constipation, occasionally going a week, and once even a whole fortnight (!), without any evacuation. However, nothing abnormal was now to be found in the abdomen beyond the dropsy already mentioned.

She continued to take ammonia and digitalis every three hours for fourteen days, when, as there had been no return of urgent symptoms and she seemed anæmic, fifteen minims of tincture of perchloride of iron and two drachms of liquor ammoniæ acetatis, in water, were ordered to be taken three times daily. There was still some, though much less, albumen; and the breast had not much improved. She was up and walking about. The heart-sounds, something to my disappointment, remained as before. But, upon reflection, it seemed unreasonable to expect a clot, such as is seen *post mortem* in many a heart, strongly interlaced in the muscular bundles of the auricular or the ventricular walls, to be either absorbed or to be washed away, particle by particle, even by the swiftly but smoothly rushing blood-stream, in so short a time as a fortnight. I accordingly waited a month longer (until April 7th), and upon visiting the patient then, found that the reduplication was entirely gone and the heart-sounds were perfectly normal. A repeated examination, some days afterwards, showed the same result. The inflamed breast had in the meantime been thoroughly explored and opened up, under ether, by my colleague Mr. McGill, and was healing fast. She was gaining flesh and strength very rapidly, and all trace of albuminuria had been lost, when she went into the country towards the end of April. She is now quite well.

THERAPEUTIC MEMORANDA.

IRIDIN AND EUONYMIN.

WITH reference to the letter of Mr. Barnes, in the JOURNAL of June 21st, I may as well observe that I have nowhere "classed iridin and euonymin amongst non-purgative cholagogues". At page 177 of this JOURNAL for 28th February last, I state that my experiments on dogs prove that euonymin and iridin, in their case, powerfully stimulate the liver, and that they also stimulate the intestines, but not so powerfully as podophyllin. At page 178, in referring to their action on man, I spoke of them as "feeble intestinal stimulants"; and, therefore, recommended that their administration at night should be followed in the morning by some saline aperient. It is important to know that, in Mr. Barnes's thirty cases, one grain of euonymin or four grains of iridin never—save in a case where iron had been given—failed to produce purgation; because I have several times myself taken one grain of euonymin without any purgative action, and I have found a like negative result after two grains, on one occasion, when I took it without Püllna water next morning. A medical friend informs me that he has taken four grains of euonymin at night without inducing a purgative effect. While allowing for individual peculiarities, I cannot but suspect that the substance found in the market is not always of the same strength. My own further experience, and that of some physicians who have tried both of these drugs on themselves, convince me that four grains of iridin are a more powerful remedy for biliousness than two grains of euonymin, taken at night, and followed in the morning by the same dose of the same saline aperient. In delicate constitutions, however, euonymyn is preferable. I find in my own case that four grains of iridin, taken two nights in succession, produced some depression, but have not found the same after two grains of euonymin, repeated on two successive days.

I wish Mr. Barnes and other physicians would test the effects of juglandin and hydrastin (see this JOURNAL for 11th January last), because there seems every reason for believing that these are valuable drugs.

W. RUTHERFORD, M.D., Edinburgh.

CLINICAL MEMORANDA.

PSORIASIS PALMARIS.

MY attention has been directed to an interesting paper, by Dr. John Kent Spender, on eczema of the hand, in which he expresses the wish that physicians would make "it plain beyond all cavil that there is no such thing as psoriasis palmaris, except as a syphilide". While agreeing with much that is contained in his article, I must take exception to the statement which I have quoted. In my younger days, I used to be taught that an eruption, limited to the palms or soles, is of necessity syphilitic. But subsequent experience has long ago taught me that eruptions, limited to these parts, may be one of three affections: viz., eczema (especially that form of it which I have described under the name of eczema rimosum), syphilis, or psoriasis; the first being, in my experience, more frequent than the syphilitic affection. That psoriasis is sometimes met with in the palms and soles I have not the slightest doubt; and that it is psoriasis is proved by the occasional discovery of one or two patches on the elbows or knees, and by its removal by treatment applicable to cases of that disease. But I quite agree with Dr. Spender that the appearance of eczema of the palms often bears a very close resemblance to psoriasis, owing to the thickness of the cuticle, and that soothing remedies are often beneficial; although I cannot agree with him when he says that any application of an irritating nature is certain to exasperate the disease, as I have sometimes cured such cases by painting the affected parts with Smith's blistering fluid.

T. MCCALL ANDERSON, M.D., Glasgow.

DR. SPENDER expresses an earnest wish "that our masters and teachers of dermatology would make it plain beyond all cavil that there is no such thing as psoriasis palmaris, except as a syphilide".

Can such a dictum be asserted? and, if asserted, even with the great weight of authority and by the *prestige* of a great name, can it be accepted as an axiom by the profession? The following case leads us rather to doubt if it could.

Mrs. P., aged 50, consulted me, on the 1st of last February, for an annoying and rather severe psoriasis palmaris of both hands and feet. The scabs and psoriasis were dry, and on the fingers and palms of the hands the rash appeared very much like dry scurf, and to a slight extent could be peeled and even rubbed off. On the feet, the disease was more extensive, more scaly, and in flakes; her hands were very rough and dry, looking wrinkled, more like the hands of an old lady. She told me that, until lately, she had always had a particularly soft and white hand. There was no skin-disease on any other part of the body. Mrs. P. was a widow, and had several grown-up healthy children. This lady was, as Cæsar would have his wife, beyond all suspicion; she had never suffered from sore-throat, nor could I, by pushing my questions as far as delicacy permitted, find any cause for thinking she had been infected by her husband; and yet, what was this eruption? I have no doubt it was psoriasis, but was it a syphilide? It could not have been eczema; for it was perfectly dry, and the dermal structures, although harsh, I could not term thick; and the treatment I adopted, and which was successful, would not have been suitable for eczema.

I cured this lady in about six weeks by applying locally an ointment of liquor acidi carbolici and vaseline, and gave internally biniodide of potassium and liquor potassæ arsenicitis. This treatment was similar to what was so hurtful to the patient whose case Dr. Spender mentions. From the first, Mrs. P. told me the ointment I prescribed did her good, and the treatment I have mentioned was persevered with until cured, with this exception, that, after the second week, the improvement being slower, I added ten minims of vinum colchici to each dose of the mixture during the six weeks. I also gave her an alterative pill occasionally, when an aperient was necessary.

I would like to ask Dr. Spender, and some of the readers of the JOURNAL interested in dermatology, whether the psoriasis palmaris that this lady was suffering from might not have been due to gout in a latent form, and not a syphilide. She had occasionally suffered from rheumatism, and her father much from gout. I was led to inquire for gout be-

cause at first she complained that her hands slightly itched, especially the palms, which at times were very irritable.

FREDK. H. ALDERSON, M.R.C.S., Hammersmith.

INFANTILE DIARRHŒA.

DURING an epidemic of diarrhœa in this town last summer, in the months of May and June, I noticed that the disease occurred almost exclusively among such children as were fed on milk, the suckled infants and older children generally escaping without an attack. In the surrounding villages, there is generally much difficulty in purchasing milk, so that there is little liability to diarrhœa from this cause. I inquired in most cases last summer from whom the milk was bought, and found that three dealers supplied the houses where the disease was. Now the cows of these dealers are (for the most part) pastured in contiguous fields, the ground being low, level, and damp. The land in this valley is described by the farmers as "quick"; that is, that during a wet spring and early summer, the herbage is such as disposes the cows to "scour", and their milk is liable to "scour" those who drink it. I hope to be able, at some future time, to give more exact data as to the kinds of herbage which have this quality. The dairy-farmers tell me that, when the soil is cold and damp, and the grass looks "blue"—from the admixture of some particular species of grass—this purgative action may be looked for. At the same time, my own opinion is that a wet season alone will not produce the noxious plants, without some other favourable conditions.

At a farmhouse, situated in a low-lying district near here, an infant was born in April, some years ago. In May, the child sickened; the mother was unable to suckle him; and, during the month of June, he was very ill with diarrhœa, which stopped as soon as his diet was changed from cows' milk to condensed milk, and his health steadily improved.

Again: an infant was born early in this year, and has been fed on cows' milk, with other foods; but diarrhœa having set in, could not be checked until condensed milk was used, and the improvement was maintained when the mother exchanged this latter for goat's milk. When the goat was fed (contrary to my wishes) on grass, the child's diarrhœa returned, but went away when the goat was fed on corn again, the infant improving.

In thus calling attention to one of the causes of infantile diarrhœa, and thereby to a source of large infant mortality, I do not forget that there are others—such as dirt and overcrowding—which operate on a larger scale.

C. P. COOMBS, M.D.Lond., Castle-Carey.

SURGICAL MEMORANDA.

MAMMARY INFLAMMATION TREATED BY THE APPLICATION OF ICE.

I THINK the following will be interesting to the readers of our JOURNAL.

Mrs. H., aged 38, was confined of her third child on May 31st, 1879, and did well for five days. On the morning of the sixth, she had a severe rigor, but was better the next day; and, on the eighth day, expressed herself as feeling so well that I did not see her again until the tenth, when I found her suffering great pain from inflammation of the left breast, which had commenced the day before. Nearly the whole breast was involved, but all below and to the left of the nipple was one hard mass. From past experience, I could expect nothing but a large abscess and four or five weeks' trouble, with certain loss of the breast now, and probably for the future also. Remembering Mr. Browne's suggestion in the JOURNAL of May 31st, I determined, with the patient's consent, to try his plan: using a large Chapman's spine-bag filled with ice, which encircled the lower half of the breast. It felt very cold indeed for a minute or two, then a considerable quantity of milk was shot out as from a syringe (no milk had flowed before), the pain abated, and in an hour was almost gone; I now renewed the ice in the bag, and the patient kept it closely applied with her arm, which was protected from the cold by a folded towel. Next morning, I found her hugging the ice-bag and loud in its praise. She continued suckling her infant; but she suggested that the baby should not be put to the breast oftener than two or three times in the twenty-four hours. On the fourth day after the commencement of the ice, the most careful examination failed to detect anything wrong in the breast, and she is now quite well and nursing her child. No other remedies were used; and I thank Mr. Browne for one of the most valuable hints I have ever got, and wonder why he has not told us before.

I am getting an ice-bag made for this purpose, as the ice-cap is not at all convenient, and a bladder is dirty and wet; both were tried for a few moments only, as the spine-bag fitted much more closely and comfortably.

D. M. WILLIAMS, L.K.Q.C.P.I., Liverpool.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

LIVERPOOL ROYAL INFIRMARY.

CASE OF LITHOTOMY WHERE A LARGE CYSTIC OXIDE CALCULUS WAS REMOVED.

By REGINALD HARRISON, F.R.C.S., Surgeon to the Infirmary.*

INSTANCES where cystic oxide (cystine) calculi have been removed from the bladder by operation are sufficiently rare as to require something more than a passing notice. In the case I am about to relate and to comment upon, I removed by lithotomy the largest calculus of this kind that has hitherto been described.

James D., aged 21, a dock-labourer, residing at Bootle, was admitted into the Infirmary on February 19th, 1879, suffering from symptoms of stone in the bladder. From his history, these symptoms had extended over four years, during which period, on several occasions, he had suffered from retention requiring catheterism, and at times he had passed blood. Two years ago, a small calculus was extracted from the urethra; this was followed by some relief, but more recently he had suffered from irritability of the bladder, with pain at the end of the penis and after micturition.

Upon sounding him with a lithotrite, I found that the bladder contained a large stone measuring 2 by 1¾ ins.; though I did not suspect that it was composed of cystine, it seemed much more flinty than any other calculus I had previously felt. The size and nature of the calculus determined me upon performing lithotomy. The accurate measurements I took with the lithotrite not only prepared me for meeting some difficulty in the extraction of the stone, but also with the appropriate means for overcoming it. There was nothing in the history or circumstances of the case which would appear to favour the formation of this variety of calculus.

On February 25th, 1879, I performed lateral lithotomy, Mr. Rushton Parker holding the staff for me. On seizing the stone, I found it, as I had anticipated, too large to extract by the ordinary prostatic incision. To avoid either tearing the prostate, which was healthy, or exercising too much dragging force on the neck of the bladder (two things which it is most important to avoid in performing lithotomy), I divided, by a straight probe-pointed knife, the prostate bilaterally; this gave me the required space, and the calculus was then readily extracted. After this free section of the prostate, there was very considerable hæmorrhage, not from one or two arteries which could be ligatured, but from numerous small vessels about the neck of the bladder. To meet this, I was provided with Mr. G. Buckston Browne's dilatable tampon, which answered admirably, effectually arresting all hæmorrhage. The operation was followed by considerable febrile excitement, on the day following the temperature reaching 104.6°. This was the highest point, from which it gradually declined, and by the seventh day a normal condition was attained. The tampon was retained in the wound for twenty-four hours. The patient made a good recovery.

The calculus weighed 1050 grains. I am indebted to Dr. Campbell Brown for the following analysis. "I find that it consists of cystine or cystic oxide, with a small quantity of ammonia, magnesium-phosphate, and only a trace of calcium-phosphate. The hard, waxy, crystalline granules are well marked, and belong to the hexagonal system of crystallisation: by solution and recrystallisation the hexagonal plates are obtained perfect." The urine has been examined several times since the operation, but no cystine has been detected.

On reference, I find that hitherto the largest cystine calculus is the one in University College Hospital Museum. It was removed by Liston, and described by Dr. Bence Jones in the *Medico-Chirurgical Transactions* for 1840. It weighed over 850 grains. The Museum of the Royal College of Surgeons, out of a total of about one thousand, I believe, contains only five specimens of cystine.

* Read before the Lancashire and Cheshire Branch.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 5TH, 1879.

NEW UNIVERSITIES.

As we lately anticipated, Ministers have announced their intention to advise Her Majesty to grant a charter to a northern University, to be called the Victoria University. Thus graduating facilities in the faculty of medicine of an university will be at once extended to the students of Owens College, and probably also to those of the Leeds and Liverpool Schools of Medicine. This will, as we pointed out from the first, advantageously affect the status of those provincial schools, and greatly enlarge the facilities which English students of medicine resident in the northern part of the kingdom will enjoy for obtaining an university status, the degree of M.D., and the "title of Doctor". It will, by reflection, probably damage to a like extent the status of the metropolitan schools, and add further point to the considerations which we have more than once lately urged upon the metropolitan teachers, of the disadvantages, in respect to the absence of due graduating facilities, under which metropolitan students labour. The excessively high standard which the University of London has chosen to adopt as its minimum is practically prohibitive—it is now trite to repeat—of all but a chosen few graduates, and those only of the highest cramming capacity, and frequently at the risk of mischievous strain of the brain-power. It is not a degree like that of Edinburgh, or of Dublin, or Glasgow, or Paris, fitted to test competency to practise, but is intended to be a sort of blue riband which who likes may fight for, if he think the game worth the candle. No doubt the Victoria University, taught by the failure of the University of London to realise the object of granting due facilities for the degree of M.D. to the educated rank and file, will conform more nearly to the ordinary pass-standard of other universities. The London schools will be thinned; and there will, we imagine, be a considerable gravitation of students towards the Victoria University, which will be an excellent pledge of its success.

At the same time, the Lord Chancellor has made an important announcement of the intentions of the Government in respect to the Universities of Ireland. A good summary of the proposal in the leading journal accurately says that, according to Lord Cairns's introductory statement in the House of Lords, a new University, in which the present Queen's University will be merged, is to be created. It will have no professors or lecturers or teaching body of any kind attached to it. Its business will be to appoint examiners; it will be able to confer degrees in all faculties except theology; and it will grant them on the strength of the results shown at examinations, without exacting residence in any particular college, or insisting upon any particular kind of tuition. Of course, any private endowments for the benefit of the present Queen's Colleges will not be diverted from their proper object; but the vote which is now taken for the benefit of the Queen's University will be applicable to the new University in which it is to be swallowed up. Nothing is said as to that which is uppermost in most minds—the subject of endowments. If the Roman Catholics desire to establish new colleges in which to prepare students who are to be examined by the new University, they must, for anything which appears in the Lord Chancellor's statement, find the necessary means. Nothing, too, is said of any proposal for aiding Roman Catholic educational institutions by a charge upon the Consolidated Fund or the Church Surplus Fund. No million and a half or any other funds are to be provided for the granting of result-fees to seminaries, the students of which pass certain examinations. The Ministerial Bill would leave to the Queen's Colleges their buildings and annual votes, and would let the Roman Catholics provide and support institutions of their own as they best could.

If this measure should be adopted by the legislature, it would be another move in the direction of increasing graduating facilities throughout Ireland, and would also react upon the English and Scottish graduating bodies. Many English students and practitioners have availed themselves of the examinations of the Queen's University in Ireland to obtain the degree of M.D.; but their tendency to do so has been restricted by the requirements of residence for a limited time at one of the affiliated colleges. The removal of this restriction would no doubt greatly increase the number of English students who would submit themselves to the examinations of the Irish University Board, and thus obtain a registrable British diploma as M.D. on terms on which it is not attainable elsewhere.

We do not desire to be understood as criticising at the present moment, either favourably or unfavourably, the propositions of Lord Cairns; but we wish to point out that the creation of the Victoria University, and the proposal to create a new University of Ireland on the terms proposed, will leave the inconveniences and inequalities of examination and graduation to metropolitan students still greater than they now are.

THE CYPRUS REPORT.

THIS report, issued on the 1st of May last, contains matter of great interest in a hygienic point of view. Complaints have been made against it, that it is deficient in medical details and in statistical tables; but it ought to be remembered that it was a document prepared for non-medical readers, who would probably have been but little enlightened had those details been furnished. What has been given, however, is plain enough to anyone, and affords but a sorry picture of the healthiness of our new station during the hottest months of the year. The document consists of the report by the principal medical officer, Surgeon-General Sir A. D. Home, K.C.B., V.C., and a covering letter by the High Commissioner, Lieutenant-General Sir G. Wolseley, G.C.M.G., etc. In the report, Sir A. D. Home gives a plain unvarnished tale of the sufferings of the force, whilst Sir G. Wolseley's letter is directed towards mitigating the impression which the report is likely to make upon its readers. The points worthy of notice are, the climate, the character of the soil, etc., the nature and extent of the sickness and mortality, and the quality of the rations issued to the troops. The total number of troops landed in the island amounted to 2,643 British, and 5,015 Indian, including in the latter one company of European artillery. These two portions were separately commanded, provided for, and medically attended, the Indian contingent remaining only a short time in the island before re-embarking for India. It is, therefore, with reference to the British portion that the report is made. The main body of the British portion consisted of the 101st, the 42nd, and the 71st regiments: all regiments which had been at least five years in the Mediterranean, and were so far acclimatised to heat. They embarked at Malta on July 18th, and landed at Larnaca on the 22nd, with a nearly clean bill of health. There was but little sickness during the remaining days of July; but, in August, malarious disease began to show itself. The temperature was 113° in the tents, even with a fresh breeze blowing all day. The camp chosen for the troops was at Cheflik Pasha, about five miles south-west of Larnaca; the ground, a sandy loam upon a soft marly rock, the soil being (apparently) dry to a depth of twelve feet. The sea was two miles distant, but there was a salt lagoon between it and the camp. The cases of illness increased in number and severity during August, so that in one week there were 372 admissions out of a strength of 2,366, the disease being of a distinctly paludal character. Change from the camp to a fresh station seemed at

first beneficial, but as long as the weather remained warm, it seemed to matter little where the site was—sooner or later the disease broke out again with virulence. It is evident that all the plains are saturated with malarious poison, and that as soon as a camp is pitched long enough to suck out the soil air, favoured both by the influence of tents and huts, and by the excavations and disturbances of the soil necessary for camp requirements, disease breaks out with fresh vigour. The character of the fever appears to be identical with that met with on the coast of Syria adjoining, to which Cyprus must be considered to belong climatically as well as geographically.

The rations issued to the troops appear to have been very indifferent; the bread bad and sour, the potatoes poor in quality and insufficient in quantity, and the meat "lean and insipid to a degree which could not be exceeded". Sir G. Wolseley in his letter says that this was not so, that it was at least as good as that issued in India (and that is not saying much), and that he and his staff ate it daily. It must be quite obvious, however, that no comparison can be made between the two conditions, even were the meat itself the same; in the one case, it was probably prepared under favourable circumstances by a good cook, and in the other, under the most adverse conditions, and with the most primitive and inadequate means.

The opinion of an officer of such experience as Sir A. D. Home is certainly not to be overborne so easily, substantiated as it is by the testimony of the men themselves. There seems, also, one thing pretty clear, and that is, that had it not been for the plenty and cheapness of the grapes, the unfortunate force would, in all likelihood, have added scurvy in an aggravated form to their other heavy ailments.

Sir G. Wolseley remarks in his letter that, "To those unused to analyse medical statistics, the death-rates given by Sir A. Home are likely to convey a very erroneous impression, as they are calculated (according to the regulations of the service) upon the assumption that, had the 42nd, 71st, and 101st regiments stayed here a whole year, the rate would have continued during the cool months to be the same as it had been during the unhealthy season. The fact that no man of the 1-20th regiment had died since his arrival in Cyprus is a sufficient evidence of how very misleading is any such assumption, and of how very unsatisfactory are all calculations based upon statistics derived from an experience extending only over a few months' residence in any military station." Now these remarks, although intended to prevent misunderstanding, are really wholly unnecessary, there being nothing in them that is not to be found in the report itself; indeed, they rather tend to mislead by drawing attention away from the really serious nature of affairs. It may be true that a station is healthy eight months out of the year, but if, in the remaining time, it crowds in an inordinate amount of sickness and mortality, no saying of smooth things can gloss over that fact. Let us see what the real facts are. The 101st regiment landed in Cyprus on July 22nd, and left it on October 8th; it was therefore seventy-nine days in the island. Its strength was 813, and during that period it had 841 admissions for disease and five deaths, or at the rate of 1,034 per 1,000 of admissions, and 6 per 1,000 of deaths. Here there is no ambiguity; this is the ratio, not *per annum*, but for the actual period of seventy-nine days. Again, the 42nd regiment landed on July 22nd, and departed on November 18th; total time in island 120 days; strength 727, admissions 1,258, deaths 12; ratio per 1,000 (for the actual period) 1,730 admissions and 16.5 deaths, or just twice the *annual* rates of Malta for 1877. Lastly, the 71st regiment was in the command from July 22nd to December 15th, or 147 days; strength 724, admissions 1083, deaths 5; ratio per 1,000 for the period, 1,496 admissions, 7 deaths. In reducing those rates to annual ones, Sir A. D. Home has been careful to point out their real meaning, viz., that they are on the supposition that the rates would continue as such for a whole year. The obvious reason for doing so is to get an uniform standard of comparison, so that whether a ratio be expanded into an annual, or contracted to a weekly or monthly one, the result is the same if both the elements of the comparison are stated in similar terms. If we take the latest published returns from Malta, those of 1877, for periods similar to those of the Cyprus regiments, deducing the numbers from the annual returns, we should find that the following would be obtained.

		Per 1000. Admissions.	Deaths.
For 79 days	Malta, 1877	184	1.79
	Cyprus, 1878 (101st Regiment)	1034	6.10
For 120 days	Malta, 1877	286	2.72
	Cyprus, 1878 (42nd Regiment)	1730	16.59
For 147 days	Malta, 1877	350	3.34
	Cyprus, 1878 (71st Regiment)	1496	6.90
For 147 days	Cyprus, 1878 Mean of the Infantry Brigade	1481	9.76

In the annual ratios given in the report, the only point to which objection might be taken is, that they are *understated* instead of being *overstated*. Worked out from the data, the following are the annual ratios, on the supposition that the Cyprus rates would continue for a whole year.

	Per 1000 per annum. Admissions.	Deaths.
101st Regiment	4779	28.4
42nd Regiment	5266	50.2
71st Regiment	3714	17.2
Mean of the whole for 147 days residence reduced to an annual ratio	3667	24.2

If, again, we take the ratios merely for the period of residence, and assume that the rest of the year was as healthy as in Malta in 1877, we shall have:

	Admissions per 1000 per annum.	Dths. per 1000 per ann.
101st Regiment	1737	12.6
42nd Regiment	2333	22.1
71st Regiment	2032	11.9
Mean of the force	2002	14.7

And if to these we add five deaths of invalids, which have occurred at home from malarious disease, the death-rate would reach 16.9. Now the Malta rates were, in 1877:

	per 1000 per annum
Admissions	869
Deaths	8.28

Sir Garnet Wolseley has tried to minimise the significance of these figures by asserting the exceptional unhealthiness of the summer of 1878, and by pointing out that one battalion at Malta had more deaths than the three above mentioned at Cyprus. It is true that there was, in 1878, much sickness in Malta, and that in one battalion as many as twenty-six deaths occurred; but, when we learn that no less than twenty-two of those were from enteric fever, the significance of the figures becomes greatly altered. Enteric fever may be a reproach on the sanitary arrangements, but it is in no sense a climatic disease. The deaths in Malta might have occurred in London, Edinburgh, or Dublin, but the Cyprus deaths could not possibly have done so; and this Sir Garnet Wolseley ought to have known before he attempted to discredit the report of the surgeon-general. However healthy Cyprus may prove in the cooler months of the year, the conclusion is unavoidable that, during the hotter months, there is an amount of malarious poison of so powerful a character as to prove highly detrimental to the efficiency of any troops quartered there. The establishment of stations in the hills, as suggested by Sir A. Home, at a height of not less than 1,500 feet from the plains, appears to be the best plan for avoiding those baneful influences.

THE RECENT DEBATE ON THE ARMY MEDICAL DEPARTMENT IN THE HOUSE OF COMMONS.

THERE were several features in the debate on the vote for the medical establishment, when the House of Commons went into Committee of Supply on the army estimates on June 16th, which could hardly be regarded as very satisfactory. A great deal of time was wasted in groundless accusations against the army medical officers, which seemed to be brought forward only to be explained away or overthrown with indignation. At one time, an attempt was made to show that no wounded Zulus had been admitted for treatment in the military hospitals—the inference being that they had all been slaughtered—and that the neglect of these disabled natives was chargeable to the medical officers. We need hardly say that not the slightest proof was given of any instance having occurred of a wounded man remaining uncared for, or being abused by a surgeon at the seat of war; although Colonel North, who observed how foreign it was to the character of the army medical officers to act cruelly towards wounded prisoners, and who stated

that many army surgeons had even lost their lives in assisting wounded enemies on fields of action, asked for some particular case of alleged ill-treatment to be substantiated. Dr. Lush also pointed out how ungenerous and unjust it was to make charges against medical officers which were not authenticated. The fact was that, no such cases having occurred, no proof of their occurrence could be brought to notice; and, indeed, those who had created the discussion subsequently admitted that there was no basis whatever for any imputation on the humanity or professional devotion of the army medical staff.

But although all charges against the medical officers were completely dispelled in the course of the debate, the charge against the medical department as an establishment—that it is not in the efficient state in which it ought to be—was not so easily upset. The Secretary for War, indeed, admitted that the Army Medical Department is not in a satisfactory condition; and, if he be correctly reported, stated that "he therefore proposed to have a new and improved warrant for the department". Considering that nearly sixteen months have passed since his predecessor in the office made a statement precisely to the same effect, it can scarcely be otherwise than a subject for surprise that the new warrant is still in the stage of proposal—that it has not been published long ago. Colonel Stanley informed the House that, when it appears, it will embody, "speaking generally", the recommendations of the War Office committee of investigation into the state of the Army Medical Department. He plainly indicated that an attempt is to be made to carry out the recommendation for a system of nomination of candidates for the medical service, instead of the plan of open competition, which has hitherto been the rule for admission into the department. Curiously enough, the Secretary for War informed the Committee that, so far from the Government abandoning competition, it was competition which had abandoned the Government; for competition ceased when there were more vacancies than candidates. It did not seem to have occurred to the gallant member that, if the object had been held to be worth competing for, there would have been many more competitors than vacancies; nor had he apparently thought it worth while to consider how it happened that vacancies in the Army Medical Department were the only vacancies in the army, or, indeed, in any other department of the public service, for which there are not plenty of competitors. Colonel Stanley remarked that the proposed plan of certain medical bodies having the power of nominating candidates for the medical service, subject to the approval of the Director-General of the Army Medical Department, had given him considerable trouble; and he mentioned that, in order to carry it out, it would be necessary to fix the precedence and proportion in which the several medical schools should be permitted to exercise the privilege. We can readily understand that it would be no easy matter to arrange the details of such a scheme; but whatever may have been the difficulties experienced in this respect, we are fully prepared to expect that they will prove to be light by comparison with the difficulties and discontent which will arise if the scheme be attempted to be put into practice. The Army Medical Department never had a more sincere friend and well-wisher than the late Dr. Parkes; and, after a very full consideration of the very recommendation made by the War Office Committee, which is now apparently adopted by Colonel Stanley, that sagacious and experienced physician and army teacher gave his deliberate judgment against it. We still hope that wiser counsels may prevail, and that there may be no interference, under any plea or disguise, with the system of open competition, in which, as the eminent member of our profession above named stated, "every man, no matter what his country, no matter what his religion, no matter what his degree, so long as he has a legal qualification for the practise of medicine and surgery in the United Kingdom, is admitted to serve his country, if he can prove that he is a better man than others who come up also to serve their country".

On one subject, the Secretary for War gave very positive assurance that will be received with general approval. Lord Elcho called attention to the prevailing impression that sufficient provision had not been made for the care of the sick and wounded in South Africa; that the amount of medical stores was inadequate, and the number of surgeons and attendants insufficient. Colonel Stanley, on the contrary, showed that all the hospitals had been fully equipped, and that there were no deficiencies in any respect as regards the requirements of the patients which had been admitted into them. He mentioned a circumstance which certainly seemed to prove the accuracy of these statements. The chairman of the National Aid Society had sent a large sum to be expended in the supply of any wants that might be apparent in the military hospitals; but so far from it having been found necessary to employ this resource, only a very small part of the money had been used, and that not in medical comforts or appliances, but in the purchase of tobacco and other articles not usually supplied by the Government. We are bound to accept these authoritative statements, and all the more that the appeals which have been urged by certain charitably disposed societies and individuals for funds in aid of the sick and wounded at the seat of war have not been supported by any authenticated statements of need in the instances for which the appeals have been made.

A COMMITTEE has been formed in Florence for the purpose of establishing a hospital for the sick of all nations and all religions.

A REMARKABLE improvement in the health of Professor Skoda is reported in the Vienna journals of this week.

PROFESSOR KLEBS has been appointed Dean of the Faculty of Medicine in the University of Prague.

A SEVERE outbreak of typhoid fever has occurred at Harmston and Metheringham, near Lincoln. In each village already more than twenty cases have been treated, and several deaths have occurred.

INSPECTOR-GENERAL HENRY JONES DOMVILLE, C.B., M.D., has been appointed Honorary Surgeon to Her Majesty, *vice* Dr. Mackay, deceased.

DURING the next and ensuing weeks, upwards of two hundred candidates will be undergoing their primary examination for the membership of the Royal College of Surgeons. Last year the number was one hundred and thirty.

AT the recent examination for the prizes in Botany annually given by the Society of Apothecaries, the successful candidates were: 1. Robert Henry Scanes Spicer, St. Mary's Hospital; 2. Sidney Harris Cox Martin, University College.

THE Local Government Board have sanctioned a loan of £6,000 to the metropolitan asylums managers for the erection of an additional pavilion, of which there seems to be great need, at the Stockwell Fever Hospital.

DR. L. P. BLACKBURN has been nominated by the dominant party for the next Governor of Kentucky. It is said that the cause of this move was his heroic service to the sufferers from yellow fever last year. No doubt is entertained of his election.

LADY JENNER has undertaken, with the approval of Her Majesty, the ceremony of investing the two nurses of University College Hospital, appointed by Her Majesty as "St. Katherine's Nurses", with the Order of St. Katherine, at University College, on July 8th; and the Duke of Westminster, K.G., has consented to preside on the occasion.

WE are officially informed that an examination of candidates for commissions in the British Army Medical Service will be held at the University of London, Burlington Gardens, in August next. The exact date will be announced hereafter. We presume that the Royal Warrant will be issued before the date of such examination is fixed.

DIPHTHERIA is reported to be very prevalent at Wrexham and in the neighbouring villages. In one house, five cases have occurred, one proving fatal. It will be remembered that there was a considerable epidemic of this disease last year, which was reported on by Dr. Hubert Airy for the Local Government Board (see vol. ii, 1878, p. 809), and this new outbreak is therefore not a little disappointing.

THE recent case of cruelty and neglect at the Gravesend Infants' Home has induced Mr. Cross to issue a circular to the mayors or other chief authorities of the various cities and towns in the kingdom, suggesting whether it might not be well that instructions should be given to the police that all advertisements in the local newspapers relating to establishments for taking in infants should be noted by the police; and that, in case of suspicion, a copy of the advertisement should be sent to the police authority of the locality in which the establishment is situated.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the election into the Council, held on Thursday, July 3rd, Messrs. Wells (re-elected), Wood, Hutchinson, and Power were elected to fill the four vacancies caused by the death of Mr. Hilton and by the retirement in rotation of Messrs. Le Gros Clark, Critchett, and Wells. There were six candidates, and the votes were recorded as follows:

Mr. Spencer Wells	139,	including	2	plumpers.
Mr. John Wood	129	,,	11	,,
Mr. Jonathan Hutchinson	129	,,	15	,,
Mr. Henry Power	126	,,	19	,,
Mr. Thomas Bryant	97	,,	9	,,
Mr. Richard Barwell	22	,,	3	,,

THE HUNTERIAN MUSEUM.

ONE of the most interesting features in connection with the annual election at the College of Surgeons is the fine display of preparations, etc., on view in the Theatre of the College on that day, and about to be added to the collection, which have been presented during the past year. In his interesting report, Professor Flower renders full justice to every one who has enriched the collection over which he presides. The two most remarkable osteological additions are the skeletons of a green turtle (*chelone viridis*), presented by the managers of the Westminster Aquarium, where it died, and of a very large Nilotic crocodile, presented by the Honourable C. P. F. Berkeley, and prepared by Mr. J. Marle, the articulator at the College. This crocodile forms one of the greatest ornaments of the collection, being one of the largest in any European museum. An important donation is a collection of thirty-seven skulls of Fijians, collected by Baron A. von Hugel, and generously presented to the museum by Mr. Erasmus Wilson. A novel feature is the exhibition of transverse and vertical sections of the human body, made by the freezing process by Dr. J. G. Garson. These sections throw quite a new light on the topographical relations of the various organs and structures of the body. There are also some beautiful dissections by Mr. W. Pearson, showing the attachments of the muscles of the face, eye, hyoid bone, leg, and foot. Mr. E. Carr Jackson has presented an interesting collection of lithotomy instruments, used by the late Sir W. Fergusson and Sir William Lawrence. There is also a collection of ovariotomy instruments presented by Mr. Spencer Wells.

A MEDICAL MAN CHARGED WITH GIVING A FALSE CERTIFICATE.

ON the 26th ultimo, Henry Blumberg, M.D. (Prague) and L.R.C.P. (London), was brought before the magistrates, at the Wigan Borough Police Court, charged with giving a false certificate of death. The summons was taken out by the Registrar of Births and Deaths for the Borough of Wigan. It appears that Dr. Blumberg resides at Southport; but, at the time the alleged offence was committed, he was acting as physician to a homœopathic dispensary at Wigan, and was in the habit of going thither three or four times a week to see patients. During his absence, a druggist named Abbott acted as his assistant and represented the dispensary. Amongst the patients was a poor woman named Margaret Carson, who was suffering from carcinoma uteri. She was never visited by Blumberg, only by his unqualified assistant Abbott. On the 21st of February last, she died; and a certificate, signed by Blumberg, was given in the usual manner. This certificate bore on the face of it that the signer had visited the deceased on the day of her death; whereas, he had never visited her at all. His assistant had mentioned that she was dead; he had signed a blank certificate, and left Abbott to fill in the particulars. For the defence, it was stated that Blumberg was a respectable man, who had practised in the neighbourhood for twenty years, and that he bore a good character. It was said that he had no intention of perpetrating a fraud, and that he only followed a practice which is not uncommon among medical men. The magistrates seem to have taken this view of the matter; for they declined to convict, and dismissed the case. The Registrar said he had no reason to think that medical men were in the habit of signing blank certificates, and leaving them to be filled up by their unqualified assistants. If there be such a practice, the case in question is an example of it, and the sooner it is discontinued the better.

CARDINAL NEWMAN.

THE many friends of Cardinal Newman will be glad to learn that the Cardinal has arrived in England restored to health, and without any traces of the attack of pneumonia from which he suffered in Rome. He is at present staying at Brighton; and it is thought advisable that he should not, for some weeks, have the fatigue and exertion incidental to his coming to London, and the official receptions which will follow his presence in the metropolis.

EPIDEMIC FEVER IN A PRISON.

AN inquest on the body of a domestic servant, who died of typhoid fever in Shrewsbury Gaol while awaiting her trial, has brought to light the fact that out of nine prisoners who have died in the gaol during the last three years, the deaths of no fewer than six have been caused by pronounced typhoid. The jury returned a verdict that the deceased died from natural causes, and made a presentment to the effect that an inquiry be made into the state of the prison. This inquiry it is to be hoped that Mr. Cross will grant, if only for the sake of the credit of the Prisons Department.

THE EFFECT OF SMOKING UPON THE TEETH.

AT a recent meeting of the Odontological Society of Great Britain, Mr. Hepburn read a paper on this subject; and the results of his investigations on the subject are contrary to what is, we believe, the popular notion. He considers that the direct action of nicotine upon the teeth is decidedly beneficial. The alkalinity of the smoke must necessarily neutralise any acid secretion which may be present in the oral cavity, and the antiseptic property of the nicotine tends to arrest putrefactive changes in carious cavities. In addition, he is inclined to believe that the dark deposit on the teeth of some habitual smokers is largely composed of the carbon with which tobacco-smoke is impregnated. It is this carbon which is deposited upon the back part of the throat and lining membrane of the bronchial tubes; and with whatever disastrous effect it may act in these situations, he thinks we are justified, from what we know of its antiseptic properties, in concluding that its action upon the teeth must be beneficial. Moreover, this deposit takes place exactly in those positions where caries is most likely to arise, and on those surfaces of the teeth which escape the ordinary cleansing action of the brush. It is found interstitially, in all minute depressions, and filling the fissures on the coronal surfaces. It may be removed with scaling instruments from the surface of the enamel, but where it is deposited on dentine, this structure becomes impregnated and stained. Indeed, it is only where the enamel is faulty, and there is access to the dentine, that any true discoloration of the tooth takes place; but it is remarkable, he says, how the stain will penetrate through even minute cracks, provided the necessary attention to cleanliness be not exercised. The staining power of tobacco-oil may be seen when a deposit has taken place on the porous surface of tartar collected on the posterior surface of the inferior incisors. In this situation a shiny ebony appearance is occasionally produced. That tobacco is capable of allaying, to some extent, the pain of toothache is, he thinks, true; its effect being due not only to its narcotising power, but also to its direct action upon the exposed nerve; and he is inclined to attribute the fact of the comparatively rare occurrence of toothache amongst sailors, in great measure to their habit of chewing. He has been struck, in the case of one or two confirmed smokers who have come under his notice, by the apparen

tendency which exists towards the gradual production of complete necrosis of carious teeth, and the various stages of death of the pulp, and death of the periosteum taking place without pain or discomfort to the patient. This condition may, of course, be brought about by a variety of influences; but in these special cases he is inclined to think that the presence of nicotine in the mouth has acted powerfully. The experience of other speakers in the subsequent discussion appeared to corroborate that of Mr. Hepburn, except that Mr. Oakley Coles thought the frequent changes of temperature probably injurious and tending to produce cracking of the enamel, and Mr. Arthur Underwood thought that smoking to the extent of injury to digestion tended to cause recession of the gums and otherwise to injure the nutrition of the teeth.

TREATMENT OF DISEASE WITHOUT ALCOHOL.

DR. WEBSTER, medical officer of the Union Infirmary of the parish of St. George's, Hanover Square, has issued a report, in which he states that in that Infirmary he has, at the request of the guardians, carried out his intention of limiting the consumption of alcohol in the Infirmary, and has, in fact, adopted the non-alcoholic treatment of disease. In a few cases, principally of emergency, a small amount of stimulant was administered; but he has brought down the expenditure for stimulants in one year to £8. During the same period, Chelsea Infirmary, with three hundred and nineteen fewer inmates, had spent on liquor no less than £341 more; and Poplar, with one hundred and nine less, had spent £617 more. The medical statistics which he gives tend to show that this has been carried out without any detriment to his patients. The following statistics, which he gives, and which he contrasts with those of other infirmaries where alcohol is freely used, show more favourable figures than those of the infirmaries in question:

	Average number of Patients.	Cost of Ale, Wine, and Spirits.	Death-rate per cent.
Poplar and Stepney Sick Asylum	450	£625	19
Central London Sick Asylum, Cleveland St.	226	£278	16
St. George's Union Infirmary	559	£8	12½
Chelsea Infirmary	240	£349	12⅓
Lambeth Infirmary	548	£364	10⅔
Central London Sick Asylum, Highgate	446	£612	10½

Dr. Webster adds that, if St. George's consumed relatively as much stimulants as Chelsea, the cost would be £800 *per annum*.

"One or two facts", he says, "in our year's experience may be deserving of mention. Prior to their removal to St. George's Infirmary, more than thirty old women had been bedridden for various spaces of time, ranging from one to seventeen years. They had all been supplied daily with brandy or beer, or both. The whole are now able to leave their beds. Many are able to walk about, some to work. Appetites have been developed for solid material; and an interest is once more taken in the 'surroundings'. I am compelled to ascribe this amelioration of condition to the altered moral state, greater physical energy, and improved food assimilation, brought about by the withdrawal of alcohol. As an evidence of this better digestion, it might be recorded that on the male side a demand arose for extra bread, although the dietary was slightly superior to the one used at the other institutions. Another interesting item is that, out of the fifty-nine nurses and female officers, no fewer than forty-eight commute their allowance of ale for an equivalent in coin, and this quite voluntarily."

WOUNDED AFGHANS.

A CORRESPONDENT, writing from Safed Sung, near Gundamuck, says: In the conflict on April 2nd, at Futteabad, near Jellalabad, between some of our forces of the 1st Division, under command of General Gough, and a large and determined body of Afghans, a large number of the latter were killed and wounded. Since the arrival of Sir Samuel Browne and Major Cavagnari at Safed Sung, it has been ascertained that the greater number of the men against whom we then fought came from the neighbouring villages, and that there are now many wounded suffering severely from their injuries. By showing a desire to be kind and a readiness to aid those who fought so gallantly in defence of their country, many of these unfortunate villagers have expressed a wish for the benefit of British surgical skill; in this they have been encouraged by Major Cavagnari, who has placed material at the disposal of Surgeon-Major Kelly of the Guides, under whom many are under treatment in a tent, near the Hospital of the Guides. Afghans, like Turks, as a rule, object to operative surgery as a means of relief, or of prolonging life; at the same time, some have been induced to submit to explorations for missiles and other operations. Lately, lateral lithotomy was performed on a young Afghan boy by Dr. Kelly, assisted by Surgeon-Major Chesney of the 4th Ghorkas, and Surgeon-Major Porter of the Field Hospital. The operating-table, on this latter occasion, would have afforded considerable interest to many ingenious inventors of operation-tables and other surgical appliances. Devoid of all bolts, screws, levers, straps, and double inclines, it consisted of a pair of kajawars (square frameworks, covered with cord, for the conveyance of cooking utensils on camels), placed on a foundation of stones. Had the table been one of Weiss's best, the operation could not have been more successful.

MR. CHARLES DARWIN.

THE Royal College of Physicians of London has done itself the honour of associating itself with the name of Charles Darwin, by conferring upon him the Baly medal for Physiology. The President of the College, in presenting the medal to Mr. Darwin, at the meeting on June 26th, said that he felt that there were occasions when silence constitutes the highest compliment. He should, therefore, only ask Mr. Darwin to accept the medal which had been awarded to him by the College. The award formed a fitting pendant to the Harveian Oration, which had just been delivered by Dr. Wilks, in which the orator had impressed upon the Fellows the necessity for the physician to follow Harvey's advice and "search out the secrets of nature". No one has followed this advice more fully than Charles Darwin.

AMALGAMATION OF THE BRITISH AND INDIAN ARMY MEDICAL DEPARTMENTS.

IT is rumoured that the principal difficulties in the way of the long projected amalgamation of the British and Indian Army Medical Departments have been overcome. The financial strain in India is pressing the subject toward a conclusion. One effect of the amalgamation will be the abolition of the existing double administrative medical staff, and an important pecuniary saving will be the result of this step. There already exists in India a very extensive and influential civil medical service, but it is so mixed up with the military medical service as to interfere materially both with efficiency and with economy of administration. It is understood that the new organisation will provide for a complete and thorough separation of these two services. The Indian civil medical service will be constituted entirely as a local establishment, and will afford an opening for a medical career to those natives who have qualified for the medical profession, but who are constitutionally unsuited for occupation in colder climates. The Indian Army Medical Department will cease to exist as a special department, and will be merged in the general army medical service. There will then be only one corps of army medical officers, and they will be available for duty in every quarter in which Her Majesty's troops are employed, whether India or elsewhere; while all that concerns the control and administration of this united body will be placed in the hands of the Director-General of the Army Medical Department in London and the War Office.

SANITATION IN ZULULAND.

A CORRESPONDENT of the *Cape Argus* writes from Fort Tenedos on May 7th that the authorities there seem to study assiduously the easiest manner of filling the hospitals. Dead oxen are left to rot about three hundred yards out of camp, filling the air with a poisonous odour, while the short services of a dozen men for a day would effect the burial of all the carcases in the immediate neighbourhood. Then, as a further demonstration of how not to do it, an order has been issued that all men are to bathe at a particular reach in the river, while all drinking-water is to be drawn below that spot. And, again, for four days a dead ox was lying in the river immediately at the bathing-place, and, of course, just above the drinking-water. Some hundreds of men must have seen the carcase; but it was left for a volunteer officer in the end to make a strong representation on the subject, and to finally superintend the removal of the body. Contrast with this a solemn meeting of

three officers as a "board" on a pair of soldiers' boots or broken unmentionables, and the consumption of stationery for the written report and "opinion" of the "board", and we have somewhat of an idea of the way "they do these things" at the Lower Tugela. To insure the repair of a pair of boots, or issue of a new pair, three gentlemen, who have as much idea of what is fair wear and tear to a boot as the fish in the sea, must assemble, formally constitute the board, call evidence, and on that evidence pronounce, "In the opinion of this board, the pair of boots stamped W. D. (broad arrow), No. —, have become unfit for service through fair wear and tear, and would recommend that a new pair be issued". Surely the certificate of the officer commanding a company should in these matters be sufficient. But no. He may be trusted with the lives of his men, but not with a pair of Government boots or imperial breeches!

ST. ANDREW'S GRADUATES' ASSOCIATION.

THE anniversary session of the Association was held at 11, Chandos Street, W., on Wednesday, the 25th ult.; and the dinner at the Langham Hotel, Dr. McIntyre of Odiham in the chair. The following were elected the executive for 1879-80. *President of Council:* Dr. Richardson. *Honorary Treasurer:* Dr. Paul. *Honorary Secretary:* Dr. L. W. Sedgwick. *Council:* Dr. Archibald, Dr. George Bird, Dr. Christie, Dr. Cleveland, Dr. Crisp, Dr. Cuolahan, Dr. Dale, Dr. Day, Dr. Dudfield, Dr. Falls, Dr. Gramshaw, Dr. Granville, Dr. Graves, Dr. Henry, Dr. Hetley, Dr. Samuel Hill, Dr. Holman, Dr. Iles, Dr. Kershaw, Dr. Kesteven, Dr. Macewen, Dr. McIntyre, Dr. Madge, Dr. Menzies, Dr. Mott, Dr. J. B. Pettigrew, Dr. Bransby Roberts, Dr. Cooper Rose, Dr. Royston, Dr. J. Seaton, Dr. Joseph Smith, Dr. Stocker, Dr. Temple, Dr. Tibbits, Dr. Weir, Dr. Whitmarsh, Dr. Wiltshire.

THE LATE MR. JOHN HILTON, F.R.S.

AN admirable and life-like portrait of this distinguished surgeon has just been presented to the Council of the Royal College of Surgeons by his widow. It has been executed by Mr. Herbert Barraud. By the permission of the President, it is now on view at the College.

THE DISCUSSION AT THE OBSTETRICAL SOCIETY.

THE adjourned debate on the use of the forceps was brought to a close by Dr. R. Barnes on Wednesday, July 2nd. The discussion had extended over three meetings. The speakers were Dr. George Roper, Dr. Braxton Hicks, Dr. Graily Hewitt, Dr. Cleveland, Dr. Daly, Dr. Swayne of Bristol, and the President (Dr. W. S. Playfair). This was the last meeting of the session, and the Society adjourned until the next meeting in October.

THE STATISTICAL SOCIETY.

AT the annual meeting this week, the President named Mr. F. Brassey, M.P., as his successor, auguring the happiest results from his election. He then announced as the subject of essays in competition for the Howard Medal in 1880 (with £20 added) "The Oriental Plague in its Social, Economical, Political, and International Relations, special reference being made to the labours of Howard on the subject". On the motion of Dr. W. A. Guy, F.R.S., thanks for his services were voted to the retiring President, who, having acknowledged the compliment, vacated the chair.

A MATRIMONIAL VETERAN.

WE have been favoured by Dr. F. J. Sandford with the following additional particulars as to the old lady to whom we alluded under this heading in our last issue. The woman's name was Malkin, and she was born in 1794. In 1813, she married a soldier, and, before the battle of Waterloo, accompanied him to Belgium, where he was wounded in the battle and died some months afterwards, having lost an arm. Her fifth husband was a cousin, from whom she obtained again her maiden name of Malkin. After living with him nearly twenty years, she was again five years a widow. She had only three children —one each by her first, second, and third husbands. Her first, fourth, and fifth husbands were widowers when she married them, the last husband having been twice previously married. The old dame was for many years a well-known midwife, and lived in the parish of Muccleston, near Market Drayton.

THE MEDICAL REFORM BILLS COMMITTEE.

THE meetings of the Select Committee of the House of Commons on Medical Reform have been continued. Mr. Simon's evidence has been extended to considerable length, so that the evidence of Dr. Waters has been postponed till Friday (this day). There still remains, it is believed, a considerable body of evidence to be taken from various quarters, including, of course, the Scottish and Irish bodies, which oppose or desire to modify the provisions of the Government Bill, and are especially adverse to "conjoint examination boards". It is indeed believed by some who are likely to be well informed that the examination of witnesses will not be concluded this session, and that the Committee will be unable to report this year, but will need to be reappointed. The attendance of leading members of the profession interested in the subject during the week has included Dr. Quain, Mr. Simon, Dr. Waters of Chester, Dr. Carpenter of Croydon, Dr. Holman of Reigate, Dr. Lyons of Dublin, Dr. Cholmeley, Dr. Glover, Mr. R. H. S. Carpenter, and others.

THE CONVERSAZIONE AT THE ROYAL COLLEGE OF PHYSICIANS.

THE annual *conversazione* of the College of Physicians took place on Wednesday, July 2nd. This is always one of the most pleasant of all medical *soirées*, and that on Wednesday was no exception to the rule. Among the works of art lent, those which excited most interest were busts of the late Prince Imperial and of Mr. Spottiswoode, President of the Royal Society, by Mr. R. Belt. Mr. Marcus Huish exhibited some paintings by Miss Pickering, H. Moore, Boughton, and some etchings by Mr. Whistler and Mr. Seymour Haden. Drs. Shepherd, Beale, Tilt, and Russell Reynolds also lent some interesting oil-paintings and water-colour drawings. The recent modifications of the sphygmograph, cardiograph, and hæmacytometer, attracted much interest. The chief novelty, however, was the series of transparent micro-photographs shown by Dr. Norris. By these, he endeavours to demonstrate the existence in the blood of a third corpuscular element. This third element, owing to its being of the same colour as the liquor sanguinis, and being possessed of the same refractive index, has escaped recognition whilst submerged in that fluid. Dr. Richardson exhibited Professor Hughes's audiometer, as well as some interesting photographs of Hampstead Church and of the remains of Harvey. The guests were received throughout the evening with unflagging courtesy by the President, Dr. Risdon Bennett, and the Censors, Drs. Barclay, R. Barnes, Martin, and Russell Reynolds. Among the many distinguished visitors were their Excellencies the Danish and Chinese Ambassadors, Lord Wentworth, Lord Forbes, Lord Justice Baggallay, Mr. Samuel Morley, M.P., Mr. Edgar Horne, Lord Crewe, Sir G. Bowyer, M.P., Mr. Charley, M.P., General Sir Henry Norman, and Mr. Hyde Clarke.

MEDICAL ARRANGEMENTS DURING THE AFGHAN WAR.

WE are informed by a correspondent who has been serving with the First Division of the Army in Afghanistan that the field-hospital system, which was organised under unusual difficulties and amid much passive opposition, has been carried out with success throughout the campaign. It seems to have been made sufficiently clear that the Commander of the Division, an officer of purely Indian experience, regarded it with anything but favour. There has consequently not been that hearty co-operation with the medical department which there would have been had the merits of the new hospital arrangements been felt and acknowledged. It has, on several occasions, been almost impracticable to make adequate provision for the medical wants of the troops, owing to timely intimation not being given to the principal medical officer of intended military movements. Great discomfort and inconvenience have also been inflicted on surgeons who have had to accompany troops at night, often with scarcely a moment for preparation. And with regard to the selection of sites for camps, and other similar sanitary matters, the medi-

cal authorities have not been consulted on numerous occasions when, according to regulations, it might have been expected their advice would have been asked for. This apparent want of consideration has produced an unpleasant feeling among the medical officers which is much to be regretted. It was increased by the fact of the heads of various departments and a number of officers being invited to meet the Ameer Yakoob Khan on his arrival in the British camp, and of the Principal Medical Officer of the Division not being included among them. The prevalence of cholera in the Peshawur Valley gives rise to a considerable amount of anxiety as to how the troops, who have been constitutionally a good deal tried by the extremes of cold and heat to which they have been exposed, as well as by harassing duties, may fare when they are brought into the vicinity of the disease on their return from Afghanistan.

CHARGE OF MALAPRAXIS.

A CHARGE against a medical man, for homicide by negligence, was investigated in Berlin on June 19th. The accused was called on September 20th of last year to see the wife of a railway official, a feeble woman aged 22, who, with her two children, was suffering from severe diarrhœa. The ordinary treatment having failed, he ordered, on September 27th, an enema containing three per cent. of carbolic acid. Soon after the injection of the fluid, a portion of which escaped, the patient complained of pain in the hypogastrium, and fell into a state of severe collapse. All the remedies for poisoning by carbolic acid were tried, but without effect; and the patient died on September 29th. The patient's husband, firmly imagining that she had been poisoned, gave information to the authorities, and caused a *post mortem* examination to be made. This revealed, besides the indications of severe diarrhœa, recent inflammation of the lungs, which had not been detected during life. Professor Liman, in his evidence, expressed the opinion that death, if not caused, was probably accelerated by the injection of carbolic acid. The accused was therefore charged with causing death by ordering an injection in which the medicinal dose of carbolic acid was exceeded, and by not removing it from the bowel when fainting set in. He indignantly repudiated the charge of neglect, and declared that no such results had hitherto in his experience followed the use of enemata of carbolic acid, which he had on many previous occasions used, of even much greater strength. He showed that the injection had no influence whatever in producing the death. Drs. Liman and Wolff said that it was indeed probable, but not positively proved, that the carbolic acid injection was the cause of death; and Dr. Liman said that perhaps the reputation which carbolic acid had acquired as a valuable remedy had perhaps led to its being too boldly used, and that there might be some reaction against its excessive employment. After some further evidence from experts, the public prosecutor withdrew the charge; the defendant's counsel accepted this, but added that not only had the charge of negligence not been proved, but the accused had shown that he had performed his duty to the fullest extent. The defendant was acquitted.

BRUSSELS UNIVERSITY ASSOCIATION.

AT a preliminary meeting, held on June 26th, it was resolved to form an association of Brussels graduates. The object of the association is to uphold the present status of the University, and at the same time to promote the interests of its members. Dr. J. Beresford Ryley was elected Peesident; Dr. F. E. Pocock, Secretary; and Dr. W. Gayton, Treasurer. The first ordinary meeting of members will take place on Thursday, July 17th.

INCONTINENCE OF THE PYLORUS.

AT the meeting of German naturalists and physicians in Cassel, Professor Ebstein spoke on incontinence of the pylorus, a condition in which there is a continuous communication between the stomach and intestines. In order to test whether the pylorus has retained its power of contraction, the stomach is filled with carbonic acid. This is done by giving the patient a drachm and a half of tartaric acid in a little water, and a short time afterwards the same quantity of bicarbonate of soda. If the pylorus be able to contract, the stomach alone is inflated, as can be easily ascertained by percussion; but if the pylorus be relaxed, the carbonic acid passes into the intestines. The latter then become tympanitic, thus rendering it impossible to trace the circumference of the stomach by percussion. The speaker had verified this by experiments on animals. Dr. Ebstein has twice had the opportunity of seeing his diagnosis of incontinence of the pylorus verified by the *post mortem* examination. In both cases, the patient had suffered from cancer of the pylorus; in the one, the incontinence had been complicated by stricture of the pylorus; in the other, the incontinence was owing to its destruction. He had also diagnosed incontinence of the pylorus in six other cases, five of which were probably cancers of the pylorus. Any other disease of the pylorus, *e.g.*, ulcer, would doubtlessly give rise to the same affection. A purely nervous cause, such as colic, gastric spasm, etc., might give rise to incontinence of the pylorus.

SCOTLAND.

MEDALS OF THE SOCIETY OF ARTS.

THE Albert Medal, instituted by the Society of Arts, and granted in recognition of "distinguished merit in promoting arts, manufactures, or commerce", has been awarded, with the approval of His Royal Highness the Prince of Wales, President of the Society, to Sir William Thomson, F.R.S., "on account of the signal services rendered to arts, manufactures, and commerce by his electrical researches, especially with reference to the transmission of telegraphic messages over ocean cables". A silver medal has also been awarded by the Society of Arts to Dr. William Wallace, F.R.S.E., city analyst of Glasgow, on account of the paper on "Gas Illumination", read by him before the Chemical Section of that Society some months ago.

THE ROYAL INFIRMARY, EDINBURGH.

IT is proposed that a ward in the new Royal Infirmary, Edinburgh, shall be furnished by medical men, and be called "The Practitioners' Ward". A committee has been formed to raise a fund for the purpose, and of the committee Sir R. Christison is chairman. Dr. Peel Ritchie, 14, Ainslie Place, Edinburgh, one of the treasurers, writes to us to request that we will call attention to it. The subscription is fixed at £2 2s., and should be sent to the treasurers as soon as possible.

FLOWER MISSION FOR DUNDEE INFIRMARY.

THE bedsides of the patients in the Dundee Infirmary have been brightened by the thoughtfulness of a number of ladies in providing bouquets of flowers for each of the patients. During last year, more than three thousand bouquets were distributed among the patients, and attached to many of them were floral text-cards. The flowers are all freshly cut, and are supplied from private residences in the surrounding towns and villages.

HEALTH OF EDINBURGH, LEITH, AND GLASGOW.

THE mortality in Edinburgh last week fell to 18 per 1,000; there were only six deaths from zymotic diseases, of which four were due to whooping-cough. In Leith, the mortality was 22 per 1,000. In Glasgow, the death-rate was 19 per 1,000, as compared with 27 in the same week last year.

SANITARY ASSOCIATION OF SCOTLAND.

THE annual meeting of this institution was held on Wednesday, 25th ultimo, in the Town Hall, Dundee. Mr. William Mackison, Burgh Surveyor of Dundee and President of the Association, occupied the chair. Mr. Mackison was re-elected President, and Mr. Thomas Fergusson, Stirling, was appointed Vice-president. The President delivered an address, in which he stated that he did not consider the annual meetings to be sufficient to maintain the interest in public health. He thought district committees should be organised, and these might hold quarterly meetings at convenient places. Mr. Kenneth M. Macleod, Sanitary Inspector, Glasgow, read a paper entitled "Neglected Powers of the Public Health Act". The greatest neglect of power, he said, was, that many local authorities had not yet moved in any way in

the adoption of the Act at all. Out of eight hundred and eighty-seven local authorities, only six hundred and forty-five had reported that they had expended any money on sanitary supervision, leaving two hundred and forty-two districts (exclusive of burghal districts) which had expended nothing. He had considered the matter very carefully, and the conclusion to which he had come was that the legislature should make the Act absolute. Mr. John Shaw, Sanitary Inspector, Kilbarchan, next read a paper on "A Plea for Sanitary Instruction in Schools"; and Mr. Macdonald, Public Analyst, Dundee, one on "Sanitary Science and Chemical Analysis". The next annual meeting will be held at Stirling in June 1880.

TREATMENT OF INFECTIOUS DISEASES, EDINBURGH.

At a recent meeting of the Town Council of Edinburgh, Dr. Littlejohn, medical officer of health, in a representation, pointed out that there was no accommodation in the new Royal Infirmary for the treatment of infectious diseases; and stated that it was of great importance that the subject should be considered by the Council, involving as it did the health of the city, the satisfactory state of which could not be maintained unless adequate accommodation were provided for the isolation and treatment of fevers and other infectious disorders. On Monday, June 23rd, the Public Health Committee of the Town Council appointed a subcommittee to confer with the Infirmary managers.

MORISON LECTURES ON INSANITY.

On Wednesday, June 18th, Dr. Gairdner delivered the fifth, and on Friday, the 20th, the closing lecture of this year's course of lectures. There was a large attendance. Referring to the views of the law and of medicine on insanity, he said that the legal mind had always viewed insanity as a condition disturbing the social organism, while the medical mind regarded insanity as a disease to be treated according to the ascertained laws of physiology and pathology. In answer to the request of a learned judge, who attended the lectures, he gave the following definition of insanity from the medical point of view: "An habitual aberration of the intellect or of the judgment, or an habitual and confirmed want of control over the conduct, such as to diminish or to destroy moral responsibility; or to affect the capacity of the individual for the management or disposition of affairs; or, finally, such as to render some degree of control over the person necessary, in the interests either of the individual affected or of society." At the close of the lecture, Lord Deas, one of the Senators of the College of Justice, referred in a complimentary manner to Professor Gairdner's lectures; and remarked that, if medical gentlemen would read all the charges given by judges in cases affecting the insane, there would be less of that "collision" to which reference had been made. The Rev. Dr. Lees, on behalf of the clergy, thanked Dr. Gairdner for the lectures. Sir Robert Christison also spoke.

IRELAND.

THE VACCINATION (IRELAND) ACT.

Considerable opposition exists in various Poor-law unions in Ireland in reference to increasing the fee to the medical officer for successful vaccination, as contemplated in the amendment of this Act. Dr. Oulton of Ballickmoyler has recently drawn attention to the matter, and has shown that the duties of the medical officers in Ireland are much greater than in England, and the payment less. For example, in Ireland, the medical officer is wholly responsible for infant vaccination; for if a child be not brought to him to be vaccinated within the specified period, he is obliged to report the case to the clerk of the union, which is apt to render him unpopular; but in England, the matter rests with the clerk of the union, who, if not receiving a certificate of vaccination in due course, sends a notice to the parents or guardians of the child, directing it to be vaccinated by a fixed date, otherwise legal proceedings will be taken. Moreover, in Ireland, the regulation fee is one shilling; but, in England, it varies sometimes between sixpence and three shillings, but is usually half-a-crown; and it must not be forgotten that, in addition to the fee, the Local Government Board in England make an award of one shilling per case if their inspector considers the vaccination successful, while no such award exists in Ireland. It is but just that Irish medical officers should not receive less remuneration for vaccination than their brethren in England, they being as well qualified, and their duties, as a rule, more arduous.

THE DEATH-RATE OF DUBLIN.

Notwithstanding the continued high rate of mortality in this city, the long promised inquiry into its causes seems to be as far off as ever. At a late meeting of the Executive Committee of the Dublin Sanitary Association, a letter was read from the Chief Secretary for Ireland, stating that he soon hoped to be able to give a definite reply to the queries of the Association on the subject of the forthcoming inquiry. From the Registrar-General's returns for the month of May, it appears that the mortality in Dublin during that month exceeded the average for the same period among twenty large English towns by 22.0 per 1,000.

ANTISEPTIC SURGERY.

During Mr. Lister's recent visit to Dublin, he gave a demonstration, in the theatre of the Richmond Surgical Hospital, of his method as applied to the opening and subsequent dressing—on a dummy subject—of a psoas abscess. The earnestness and ability with which Mr. Lister stated his well-known views made considerable impression upon his audience, which, besides a large number of students, included several hospital surgeons. Mr. Lister spoke for nearly two hours, and was listened to with most marked attention throughout.

MEATH HOSPITAL.

The Surgeoncy of this Hospital, which has been vacant since the death of Mr. Perssé White last April, was filled on the 1st instant by the election of Mr. William J. Hepburn. There were eight candidates. Mr. Hepburn is a F.R.C.S. of Edinburgh, and owes his appointment to the fact of his having been the medical adviser of the late Mr. Bury, a wealthy gentleman, who bequeathed all his large property (as previously mentioned in the Journal) for the purpose of founding a hospital in Dublin, or of adding to one or more existing Dublin hospitals to be selected by his trustees and executors. The will also desired that Mr. Hepburn might be engaged, and retained at such salary as might be agreed on, as medical attendant, or one of the medical attendants, in such hospital or hospitals. As a matter of fact, no special Dublin hospital has as yet been selected by the sole acting executor for the receipt of any or all of the moneys available by Mr. Bury's bequest. Nor does the present appointment of Mr. Hepburn to the Meath Hospital necessarily secure for that institution any legitimate claim under the will. We believe that it is the intention of the executor to submit any scheme for the distribution of the bequest to the Vice-Chancellor of Ireland for his approval. In the meantime, the thanks of the governors of the Meath Hospital and County Dublin Infirmary are due to their medical and surgical staff—by whom Mr. Hepburn was appointed—for their endeavour, by electing him as a colleague, to influence the bestowal of a large sum of money on a hospital always distinguished in the past by the reputation of the members of its staff.

TRINITY COLLEGE, DUBLIN.

At a meeting of the Provost and senior Fellows, held on June 28th, it was resolved to expend £2,600 upon a new histological laboratory, for the use of the medical students, to be placed in charge of Dr. J. M. Purser, the King's Professor of Institutes of Medicine. The following resolutions were also passed.

1. That the Board of Trinity College are in favour of direct representation of the profession upon the Medical Council.

2. That the Board are of opinion that the prosecution of persons assuming medical titles without right should be entrusted to a public officer.

SELECT COMMITTEE ON THE MEDICAL ACT (1858) AMENDMENT BILL (No. 3).

House of Commons, Friday, June 27th, 1879.

THE RIGHT HON. W. E. FORSTER in the Chair. Present: Lord G. Hamilton, Dr. Cameron, Dr. Lush, Mr. Maitland, Mr. Errington, Mr. Wheelhouse, Mr. A. Mills, Mr. Mitchell Henry, Dr. Lyon Playfair, Dr. Dalrymple, Sir Trevor Lawrence, and Mr. Plunket.

Mr. SIMON was again called, and further examined as follows.

By Mr. WHEELHOUSE: He could hardly speak to the provision for medical study at Oxford; it did not, however, appear to him to profess to do more than give scientific education. The question of what Oxford taught and the question of its examinations were two separate questions. He believed the teaching at Oxford did not include instruction in surgery, and that there was no complete identification of the Radcliffe Infirmary with the University. He thought it would be easy to get a statement of what was usually taught at each of the medical schools in the kingdom. What was called "the students' number" of one of the medical journals, published in October, would give all that information; and it would doubtless be possible to get a statement of the actual cost of the diplomas given by each of the nineteen examining bodies. When the legislation of 1858 was in embryo, in 1856-7, returns were presented to the House of Commons, by Mr. Cowper, from the different licensing bodies, in which such information was given. One of those returns was entitled "Medical Licences"; another "Medical Museums". The objections to the legislation were stated in two memorials—one on behalf of the universities and the other on behalf of the corporations of Scotland. The Faculty of Physicians of Glasgow gave degrees in the same way as the College of Physicians in London. He had no idea of the cost of a licence from the Glasgow Faculty. He believed it conferred the right to practise as a surgeon, and that it conferred its licence separately from as well as conjointly with other bodies; but he would not pretend to speak authoritatively. He supposed it was in consequence of the powers of the Medical Council not being mandatory that nothing had been done in regard to consolidation, and thought that, if the powers were made mandatory, there would be no difficulty at all in dealing with the question. He did not know there were any complaints of education being very much shortened with regard to the period during which students in Ireland were compelled to attend lectures. He had not heard any statement to the effect that an Irish student might pass all that was necessary in a period of a little over two years; but, if that were the case, it would be a very improper state of things. Supposing there were any truth in the allegation, he opined that the Medical Council, with its manifold powers, would endeavour to rectify it. He had not heard a suggestion that some of the places in Ireland which took students refrained from registering some of them, nor could he see what the effect of such *laches* would be. With regard to exceptional cases, where examinations were dispensed with, the Council issued a recommendation that the Irish College of Surgeons should accept the arbitration of the Branch Council as to their mode of dealing with such exceptions; but that College would not consent to resign into other hands the right of adjudication.

By Dr. CAMERON: It was a matter of history, that in 1870 the Medical Council was entirely at one with Lord Ripon in the application which his lordship made to Parliament for an amended system, which would have included a great increase in the powers of the Council. Clause 15 of the present Government Bill provided that the Medical Council should make the examination-rules in the United Kingdom. There was no difference of opinion in the Medical Council, so far as he knew, as to the necessity of the Council having control of the examinations; but, as regards the particular form, a good reason was urged why it would be more convenient that the rules should be locally formed in each division of the kingdom, and then submitted for approval, and if necessary alteration. A vast amount of time was required to be spent in the preparation of examination-rules for England, as the labour on small matters of detail was very great, though all that was wanted was that in essentials all examinations should be similar. He was a very strong advocate of the Council having ample powers, and using its powers; but he entirely concurred in the view that it would be more convenient that the examinations should be drafted on three patterns. He thought the Council had nothing worth calling a power to compel improvements. A practitioner was entitled to recover payment for services according to his qualifications, and the qualifications were distinguished under the Act as surgical or medical. The College of Surgeons of England had not admitted anyone to membership on an examination solely in surgery. If the candidate had not been the bearer of a medical qualification, they had submitted him to a medical examination of their own. He could not say whether that was the case with every surgical licensing body. As to surgical licensing bodies requiring examination in midwifery, he could say for the College of Surgeons in England that it would have done so within the last year or two, if it had not constantly been expecting an improvement in the law. It was in default there, and no member of the College was satisfied with its position as regards midwifery. He did not know that the Medical Council could have pushed on reform in that matter; and if it had urged the College on, the latter would probably have asked what was the use of organising a new system of examinations, and have said that if it could get Parliament to give attention to the matter for a day or two, a proper law would inevitably be made. Everybody was as desirous of legislation to put a stop to such an anomaly as the College of Surgeons licensing men to practise midwifery all over the kingdom and yet not examining them upon it; but he did not think a representation from the Medical Council to the College would have been productive of any material advantage. Instruction in vaccination had recently been introduced into the curriculum of the College of Surgeons, as the result of the Government addressing the Medical Council. The Privy Council represented to the Medical Council that there was not sufficient security for the qualifications of those who undertook the office of public vaccinators. The licensing bodies did not disregard the recommendation of the Council. The College of Surgeons acted in the matter because it had power to make regulations with respect to vaccination, and it said no man should be recognised as a public vaccinator who did not show that he was proficient in vaccination; but that did not necessitate every candidate for membership of the College receiving instruction in vaccination. He had been an advocate for many years of a conjoint scheme of examination for each division of the kingdom, but not an advocate for one board acting for the three divisions, because he believed the latter would not work. The constitution of the Medical Council had been no obstacle to the satisfactory settlement of this question. The British Medical Association were to blame for obstructing legislation, in 1870, on the question of direct representation. Mr. Forster could tell them that the stoppage of his Bill in 1870 was owing to the British Medical Association. The ground of that opposition might have been that the Council had not availed itself of its full powers, and that it was undesirable to vest such a body with more powers. On the question of the desirability of direct representation being submitted to the vote of the profession last year, 5,327 replies were obtained, of which all except 121 were in favour of it. That was not to be wondered at, when they remembered that the agitation had been going on for some years previously. When men had once voted in favour of direct representation, they would probably vote for it a second time. He did not at all doubt that the votes of the profession would be for direct representation; but he doubted whether it would be altogether fair to weigh them quite in proportion to their number. In the process of organisation of the British Medical Association, a certain touch on a spring in London would make the medical bells sound over a very large area, and one must make allowance for an organisation of that sort. There was a power of collecting votes; but, if the total number of men on the *Register* were about twenty-two thousand, the fact that five thousand votes were got for that particular matter was not all-important. A body like the British Medical Association could not act as a trade-union, unless it had authority to do so by Act of Parliament. He would not say that the Council could not be amended in its constitution; but he considered the principles on which it was established were fair and reasonable; viz., that there were certain bodies which the State recognised as its agents for the purposes of medical education. It recognised them in the constitution of the Medical Council, and opposite them it put certain members to represent the Crown in the Council. It was, perhaps, open to argument, that members elected by corporations would be less likely to view with favour any thoroughgoing scheme of medical reform likely to affect the pecuniary interests of such corporations, than men elected by the profession at large. The argument was, of course, incontestable, that the former were not likely to be willing agents in subordinating their institutions to a general system. To require that bodies which had been competitive should suddenly become co-operative was not to be attained by a vote in Council, but only by an Act of Parliament. Supposing the requisite legislation took place, the Medical Council would then become an Education Board. His object in promoting a conjoint scheme had always been to raise the minimum standard of examination. He did not think the standard required by the Edinburgh University at all too high. If the University of Edinburgh, passing the number of men into the medical profession that it had passed, found that it could examine up to a certain level, and believed that other bodies in its neighbourhood admitted men on a lower level, he should be inclined very strongly to the opinion that those

other bodies were below the proper level. If examinations could be supposed absolutely perfect, they would want nothing but examinations; they would want no regulations. But, as examinations could not be perfect, they must supplement them by regulations. As to the detail of the regulations, there might be great difference of opinion; but he was in favour of having as few regulations as possible. But all were agreed that, if there were to be any regulation at all, there must be a regulation as to the total amount of time to be spent in medical education. There was a general consensus of opinion now that it ought not to be less than four years; that was, allowing the last year to count as nine months, forty-five months were the minimum considered fit. That was the time fixed by the College of Surgeons. The representation made by the Privy Council on vaccination was to some such effect as this: "Those who are responsible for overlooking public vaccination in the country find they are obliged to make a special rule with regard to this class of officers, requiring them to produce a certificate of fitness to vaccinate. Ought it not to be the case, that the fact of their being members of the medical profession should in itself be conclusive on this point?" On that hint the Medical Council acted. The Privy Council could not take the initiative in bringing about a reform in the practice of midwifery, as it had no *locus standi* in the matter. In respect to vaccination, it had. The Local Government Board, however, had a *locus standi* in regard to midwifery; and the Local Government Board would undoubtedly be justified in interfering if it found a man practising midwifery who had not a legal title to do so. There was a standing order of the Local Government Board that no man could accept a Poor-law medical appointment unless he had qualifications all round.

By Dr. LUSH: He had had many opportunities of gathering the general opinion of the profession from his position as medical adviser of the Privy Council. In that capacity, he had laid down certain rules which should prevail both in the formation of the Council and in the recognised control of the education of medical men. He would not presume to say that he had himself influenced professional opinion, but he had tried to do so. He still held to the opinions he expressed in his Memorandum of 1858, where, in paragraph 2, on page 3, he stated: "It appears to be generally admitted that the principle of government by a professional Council is the only one that promises to fulfil the requisite condition"; and that "the constitution of the body should render it as completely and evidently as possible representative of all interests in the profession". He considered that a representative Council by nineteen nominees of the various corporations, and six nominees of the Crown, did represent all the interests of the profession. His opinion was in direct opposition to the representation of the profession apart from the representatives of the corporate bodies and the Crown. He must hesitate before he said that there was no one of the nominees of the corporate bodies who was not an independent member of the Council, though of course he was prepared to admit that each of them representing a particular institution was likely to have a bias for that institution. To that extent, perhaps, they were not unfettered. And he presumed the nominees of the Crown had their personal predilections and biases. It did not appear to him to be a necessary consequence that because a man had a bias for, say, Glasgow, Dublin should be a confederate with him. Identity of interest amongst corporations was not so conspicuous that their representatives would necessarily reciprocate each other's support—at any rate, he had not seen anything like that on the Council. Dr. Andrew Wood, for instance, represented a very strong opinion in opposition to many on the question; he was quite certain that gentleman would take a view which he believed was right, and would be quite incapable of lending his support to any party considerations. His recent change of opinion might be singular, but he had no reason to question the good faith of it. As to whether it was the opinion of the Council that its constitution at the present time was such that it did not require alteration, he believed that at the last meeting of the Council some one moved a resolution to that effect; but it was felt at once that a vote of that kind passed by the Council in relation to itself would not be a wise vote; if they had voted the other way, of course it would have been suicidal. He was still of opinion that there would not be much likelihood of a thorough reform being effected under the Act of 1858. He should think that the tendency of separate bodies outside the Council was to require check; and that the Act of 1858 did not give the power of applying that check; that the separate electoral bodies would be pretty sure not to act satisfactorily in the direction of reform. It would not be fair to look upon each of those bodies as wishing for a lower standard of competition; there were many of them which were aiming at a higher standard. He had already explained that the powers of the Council were insufficient; it could not do what it ought to do. As to direct representation, it seemed to him that every argument that had been advanced for it broke down as soon as it was examined. Whilst readily admitting that there had at times been expressed a wish for such an institution, he thought that had depended upon other circumstances than the merits of the case. The Apothecaries' Hall and the University of Durham having been recognised as medical authorities, and working as they were in the present day as medical authorities, he did not see how they were to avoid having them represented on the Council as a matter of principle, though he considered their recognition on the footing on which they stood in 1858 was wrong. Still he would not say the representation might not advantageously be altered. Assuming the Government Bill were passing, he undoubtedly thought that improvements in the constitution of the Council might be made; but he was particularly anxious not to be misunderstood on that point. He was very strongly of opinion that, although he could not recommend direct representation of the profession, yet that each institution which sent a representative to the Council ought itself to be quite liberal in its constitution. In his thirteenth report, he gave the system of election, the constitution of each of the bodies represented in the Council; and he thought some of those constitutions were vicious, and ought to be amended. A great deal of the desire for direct representation, if analysed, would mean this: the members would say, "We do not want to pledge ourselves to this particular mode of representation, but we are dissatisfied with having no share in the government of our profession"; and he quite agreed with that, though dissenting from the proposal for universal suffrage. Every man entering the medical profession ought either, *ipso facto*, to acquire a vote in the election of the governing body of the institution to which he attached himself, or ought at least to know that on condition of higher graduation in the body he would acquire that vote. That was the principle adopted by the College of Surgeons of England. His view was that the choice of the representation in the Medical Council required deliberation; and what could universal suffrage know of the business qualities of a Council of twelve or twenty people? Under the existing system, the medical graduate had a vote; and whether the vote should be restricted to medical graduates, was a separate question, about which there would be differences of opinion; but he was inclined to think it ought to be so restricted. He thought a reduction in the members of the Council would tend to facilitate business; but he could not see his way to such a reduction, except by adopting a system of conjoint boards. It was formerly the rule for men who tendered themselves for consulting practice, either as physicians or surgeons, not to take out a legal title in the other branch of the profession; but it did not follow that they were ignorant of it. That would account for the double qualification of many men not being given in the *Register*.

By Mr. MAITLAND: In the year 1870, Dr. Parkes called the attention of the Medical Council to the fact that some candidates who went up for examination to the Army and Navy Board were ignorant on matters as to which they had obtained qualifications; and the Medical Council ultimately proposed a scheme for uniform examination, and additional powers of control were asked for. The Bill of 1870, which was dropped, would have given them all the requisite powers of control. He did not think there had been difficulty in obtaining examination papers, which were included in the right of visitation.

By Mr. ERRINGTON: He had not said, and was not prepared to say, that abuses did not exist at the present time; he would not state authoritatively one way or the other. He spoke to the tendency of system. There was no doubt, however, that the system of half-qualification was an intolerable system. He did not consider the proposed conjoint scheme a "radical" measure, using the term as synonymous with revolutionary. It would effect a change that would go to the root of the evil, but not to sap the vitality of the plant. He saw no reason why the corporations should not continue to exist, even if they ceased to attach members to them. There could be no doubt of the desirability of there being a moral influence which the profession should exercise on men coming into it. There were two ways in which that was now exercised—by the striking-off power and the blackballing power. The former was exercised, so far as he know, by the Medical Council only, for offences against the laws of the country, and there was no particular advantage in its being exercised independently by corporations. The real moral influence of corporations probably was through their higher titles, at least it would be in the future. In the blackballing power, they had an influence which might be of great value in relation to what were known as professional offences. A man entering the medical profession, if he attached himself to a corporation and wished to rise into a higher title, would be subjected to the test of character—a much finer test than that exercised by the striking-off power, which could not be made to apply to questions of minor morals. He did not know of any moral influence that could be exercised by being a member of the Apothecaries' Company. He thought the "club system" an admirable one; but whether it should be regulated by statute or be arranged under the

scheme, was an open question. Under Lord Ripon's Bill, it was to be arranged under the scheme. If they looked critically at the present clause, they would see this great awkwardness in it, that it assumed to be of public importance that everyone should be affiliated with the corporations, and yet the corporations might refuse the applicants. Practically, the permission accorded to persons to register, without actually belonging to a medical corporation, was in the interests of women; but it was an inconsistent clause, and was perhaps inconvenient. It would, he thought, have been quite easy for a scheme, under the sanction of the law, to arrange conditions of affiliation which might be very different in the three divisions of the United Kingdom. The new standard, under the proposed conjoint scheme, would, he should hope and expect, be higher than the existing average. There was no authoritative scheme before the public laying down for England any course of curricula.

The Committee then adjourned.

Tuesday, July 1st.

The Committee met again on Tuesday, when there were present: Messrs. W. E. FORSTER (in the chair), Wheelhouse, Errington, Mitchell Henry, Lyon Playfair, A. Mills, D. Plunket, Maitland, Dalrymple, Sir Trevor Lawrence, and Dr. Cameron.

Mr. SIMON was again called, and his examination concluded as follows.

By Mr. ERRINGTON: With reference to the petition from Queen's College, Cork, to the effect that the signatories feared the advance of medical science would be largely retarded by the provisions of the present Bill, especially by reason of uniformity of examinations, and also to the effect that the tendency to centralisation of medical teaching was a serious defect of the proposed measure; not only did he disagree with the petition, but, with all respect to the authority from which it emanated, he considered the objection put forward was ridiculous. He had himself no knowledge as to whether certain Irish bodies gave licences after two years' study; but representations had been made to the Medical Council that examinations meant to be preliminary were in fact not preliminary. He believed, however, that in the University of Dublin, in the Queen's University, in the King's and Queen's College of Physicians, in the Royal College of Surgeons, and even in the Apothecaries' Company, the period of study was four years. If it were the case that, in certain medical schools in Dublin, registration had been notoriously neglected, it would be a reflection on the manner in which the Branch Council carried out its duties; although he observed, in the communications which had passed on that subject, that a resolution was passed by the Branch Council for Ireland to the effect that it was of opinion that the question raised lay between the council of the particular body referred to and the General Medical Council; and the Branch Council therefore declined to make any observations on the subject. It was not within his official knowledge that many medical schools wrongly gave certificates of attendance at certain lectures. The superintendence of teaching schools would doubtless afford a guarantee that the certificates issued by those schools were *bonâ fide*. Many of those who supported the scheme of 1870 had since altered their opinions in respect to it; and he thought second judgments were very often wiser than first judgments. He did not think that, if the Council had power of suspending any examining body, instead of reporting to the Privy Council, it would have rendered the present proposal unnecessary, as such a power would have met with insuperable difficulties. He was not of opinion that if Parliament, instead of passing the present Bill, were to pass one strengthening the Medical Council, and giving it extended powers, that would suffice to meet the demand for reform.

By Mr. MILLS: The nineteen examining bodies were undoubtedly more than were necessary; but he saw no objection to the continuance of them in a conjoint form, though they might not continue to enjoy the same status and income as heretofore. He could have wished that the examining bodies had not been so dependent upon fees for their income. Under the conjoint scheme proposed by the Bill, there was a provision requiring that the fees should be the same in the several divisions of the kingdom. He could not say that the principle of direct representation was contained in five out of the six Bills introduced into Parliament between 1848 and 1858. He would not ascribe selfish motives to the Liverpool, Sheffield, and Leeds Medical Schools, to the Lancashire and Cheshire Branch of the British Medical Association, nor to the two thousand registered medical practitioners who had severally sent more than one hundred and fifty petitions to Parliament during the present session for direct representation; he could form no opinion at all as to their motives. He had already expressed an opinion that great weight was not necessarily to be attached to individual signatures to memorials largely signed. He should suppose the constitution of the British Medical Association afforded very remarkable facilities for "wire-pulling". He desired to guard himself against expressing an opinion that those petitions were to be accounted as valuable as if every signature attached to them represented independent judgment. He believed it to be the case that the medical journals now in existence were almost unanimously in favour of direct representation.

By Dr. PLAYFAIR: It might be that, according to the last returns, there were 679 licentiates in 1878 passed in England, 582 in Scotland, and 290 in Ireland; but he was not aware there had ever been any pretence to apportion the constitution of the Medical Council to any such division of licentiates. He confessed he could not account for the view that Parliament took, and did not know the exact reasons for the proportions. It was not because a place was a great teaching establishment that it was represented in the Medical Council. St. Bartholomew's, Guy's, University College, and Queen's College were great medical schools, but they were not represented in the Council. The universities were in a very different position from the schools. The latter had no qualifying powers, which the teaching universities had.

In further examination by Dr. Lyon Playfair, the witness said the qualifications of the University of London were acknowledged to be very high. A person obtaining a qualifying degree of the University of London had passed what might be called a major examination. He did not know it was proposed by the conjoint scheme that such an one having undergone an examination in all, and more than all, the subjects embraced in the minimum examination, should be required to undergo a minor examination of the conjoint board. But the law had not defined a major examination. He did not see his way to any particular pattern of exception to the conjoint board.

By Mr. PLUNKET: It was his decided opinion that in any scheme great care should be taken not to interfere with the maintenance of museums and libraries by corporations.

Dr. QUAIN was then called and examined.

By the CHAIRMAN: He was a member of the Medical Council, and one of those nominated by the Queen. He had been a member since 1863, and acted as Treasurer during the whole period. He was Honorary Chairman and Treasurer of the Pharmacopœia Committee. The duties assigned to the Council by the Act of 1858, he thought, had been generally carried out. With regard to education, he believed it would have been impossible for the Council to have done more than it had. He produced a volume of reports on education for the year 1869, containing a curriculum for education and a curriculum for examinations. From that time to the present, the Council had continued to issue recommendations for carrying out those curricula. They had also visited examinations, and there was a correspondence with the several educational and examining bodies, and the result had been a very considerable advance in medical education and examination. It was recommended that there should be a conjoint board or a similar examining board in each division of the kingdom; and, in the following year, Lord Ripon brought forward a Bill which the Medical Council supported, but which met with considerable opposition, and fell through. From that time to the present, nothing had been done in the way of supporting a compulsory board. Had that Bill passed, the Council would have been in a much better position to perform their duties. He had been specially engaged with the English part of the examination. The scheme for an English conjoint board and the regulations for carrying out were quite complete. All the bodies in England had approved of it with the exception of the College of Surgeons, which had postponed its decision until the result of legislation was known. That approval also extended to the establishment of a conjoint board in Scotland and Ireland, because there was a feeling that the mode in which the English conjoint board would be constructed would render it more difficult for students to escape examinations, and they might then otherwise go where greater facilities were afforded for so doing. He was aware that the chief objection to the conjoint board came from Scotland, and that the objection was strongly stated by the Scotch universities. His idea of an English conjoint board was that it should conduct all examinations at one time and place, and by one series of examiners; and equal facilities would be given for men passing who wanted to become surgeons especially, as for those who wished to become physicians especially. With regard to Scotland, candidates were examined by their own institutions, and could be examined either in Edinburgh or in Glasgow in medicine, surgery, and midwifery. That examination should be sufficient to entitle a man to practise. They had agreed in Scotland, as had been agreed in England, to give a licence to confer the degree on those who passed the lower examinations; and he doubted whether the examination under the conjoint board would be lower than the Scotch M.B., which was equivalent to the general practitioner. He did not know that there would be any great objection to the Medical Council having power to visit in Scotland the universities combined, to see that they kept up a certain standard. If the Bill passed, a student—say, of the London

University—would not receive his M.B. degree until he had passed the conjoint board. He could not see why the Scotch universities should encourage their undergraduates to take the conjoint examination, and then go in for their own higher examination giving their degree. The argument as to the large number of graduates at Edinburgh would not affect the question. Under the English conjoint board, there would be forty-eight examiners. Twice the number required would be nominated, but only forty-eight would be selected; of whom ten would be employed at one time, ten at another, and twenty-eight at another. The examinations were to be divided into three distinct periods in different years—first, second, and fourth years. Those examinations would be supervised by a committee of reference and by the visitations of the Medical Council. Whilst the lower examinations would be improved, he had no fear that the higher examinations would be brought down; the higher examinations would be the honorary distinctions of the profession. The conjoint board would secure an uniform competence. He thought it was a very undignified position for the Medical Council to occupy, in having its power limited to possibly ineffectual appeals to the Privy Council. It would be better if the former were allowed to issue and enforce orders approved by the latter. It was beginning at the wrong end by making the executive body appeal to the superior body. He would, of course, be very sorry to see orders issued on trivial subjects, but not upon important matters, such as the Irish College of Surgeons refusing to accept a recommendation that the Branch Council should decide regarding faulty examinations. He did not think the Medical Council would be justified in issuing an order on the subject of midwifery examinations, on which such a vast difference of opinion existed. On the subject of midwifery, the Medical Council had never decided otherwise than for the longer course of study; and they had received a memorial from the Obstetrical Society of London asking them not to sanction a three months' course in midwifery, such as was proposed in the conjoint scheme. The Council did not come to a decision on the matter until they had appealed to the several licensing bodies. The result of that appeal showed a vast difference of opinion. With reference to the income of the Council, it had been, since its commencement, £137,000. The average for twenty years was £5,160; for eleven years, £5,474. The average expenditure of the last three years had been £6,300. The chief item of expenditure was in connection with the meetings of the Council. It was a difficult thing to say what had been got for it; but he should say that when the Bill was passed, certain privileges were given to the medical profession. For instance, they got recognition and a legal standing, which they did not have before; and they had got improvements in education, and so on. Comparing that legal standing with what the lawyers got, they had a great advantage. A solicitor paid £80 for his admission as an apprentice; another £25 when he was admitted as a solicitor; and, to practise, he paid £9 annually. Medical men, on the other hand, simply paid £5. He believed solicitors paid very nearly as much in one year as what medical men paid in twenty; and he thought the privileges of the latter were just as good as those of the former. The *Pharmacopœia* was regarded as a very successful and useful production, and 35,000 copies of it had been issued. A similar *Pharmacopœia* was published in France and other countries. Prior to the Medical Council being established, there were three *Pharmacopœias*, and great differences existed between them, so that many inconveniences resulted. He thought the Medical Council, as at present constituted, would be incompetent to perform other duties in relation to sanitary measures, poor-law boards, or the like. He thought it would be a lamentable thing to introduce direct representation of the profession. The only experience of it was in the election of the Council of the College of Surgeons, and there it was unsatisfactory. The constituency there was about 1,000.

By Dr. LYON PLAYFAIR: Ten thousand in the College of Surgeons: one thousand fellows and nine thousand members.

By the CHAIRMAN: He did not think that, supposing the difficulty of the mode of election were got over, there would be an advantage in having direct representation of the profession. He did not think the best men would come forward. There was no reason to suppose that the feeling of the younger members of the profession would be more fully represented; and he agreed with Mr. Simon that popular election would not afford the best means of determining the eligibility of candidates. As to Poor-law and other services which might be underpaid, such questions should be taken up by other bodies than the Colleges of Physicians or Surgeons; and certainly not by a body whose sole duty was to see education and examinations carried out. He thought that duty would be less likely to be fulfilled if other duties were imposed. He did not approve of every clause in the Bill. He considered Clause 5 was a very unsatisfactory one, as it would admit on the *Register* persons who were not under professional control, both men and women. It was framed in the interest of women; but, of course, it would admit men also, and he could conceive the possibility of a person desirous of practising secret remedies—perhaps a vendor of pills—obtaining a qualifying certificate from the examining board; and, when he intimated what his future practice was to be, the Corporation would then decline to admit him, and he would then be on the *Register*. Women could carry their way at either tide. There was some difficulty under the conjoint scheme as to the admission of women; for licensing bodies in England agreed that they would not admit anyone who had not passed the conjoint examination; then, if women applied to the conjoint board, they would be refused. There were, however, in England two bodies, the University of London, which had agreed to admit women, and the Apothecaries' Company, which was bound to do so; so that women could enter through those portals, and also through the College of Physicians in Ireland. It was a moot question whether, under the conjoint scheme, women should undergo exactly the same examination as men. He had a great objection to Clause 6 of the Bill, as foreigners would be placed in the same position as English members of Corporations without any examination at all. He would meet that difficulty by making the various licensing bodies responsible. The seventh clause was of a similar character. Then, the fifteenth clause said the General Medical Council should frame the examination laws and rules. He doubted whether the Council could do that; it would be better to allow the various bodies to frame those laws and submit them to the Council. The twenty-fourth clause referred to the question of the Council becoming prosecutors, which was a position they had always hesitated to accept, on the ground that, being a judicial body, it was not desirable they should assume the *rôle* of prosecutors. The prosecution of offending parties should be undertaken by the police. The concession made to the Universities in the Bill of 1870, and which Mr. Simon mentioned was chiefly demanded by the University of London, was this: the University of London and the other Universities consented that their degrees should be no more regarded as registrable qualifications, but they would not give up the right of conferring a degree, which would not be a qualification; and this was conceded to them.

By Dr. LYON PLAYFAIR: The conjoint scheme met with his entire approval. It provided that the universities might have all their scientific examinations by themselves, and that the further and final examinations should only be through the conjoint board. It further provided that, out of thirty guineas to be paid, five should only be paid by the universities for the final examination. He thought the Bill left the matter quite open. He had been told that the conjoint board, if approved by the Medical Council before the passing of the Act, would come into operation. But the approval of the conjoint scheme depended upon the condition that the universities should have the first two examinations belonging to themselves, and the final examination by the conjoint board. Scotland was very much afraid that, by fixing as much as £30 for a conjoint examination, it would to some extent diminish the inducement to men to go on to higher examinations. Dr. Quain thought the fees of those who passed the conjoint board should simply be sufficient to pay the expenses. It was intended that the final examination should partake largely of the character of clinical examination. He was in favour of including both systematic medicine and surgery, and clinical. It might be the case that only six and a half per cent. of the licentiates in England took university qualifications, whereas thirty-six per cent. of the licentiates in Scotland took university qualifications; but he believed that was very much owing to the difficulties in England and the facilities in Scotland. If more facilities were afforded in England for obtaining university degrees, he believed the numbers would be very much altered. He had visited with the Medical Council the Oxford examination, and it was a very complete and admirable examination. He considered the facilities for entering the profession at the present time in each division of the kingdom were too great. Some of the licences were given too readily, and were very unequal; for instance, at the London College of Surgeons, there was no examination in medicine or in midwifery. There was nothing to prevent the University of Edinburgh from still examining in scientific botany, natural history, and natural philosophy (which it did at present for the degree of bachelor), if a man had passed the conjoint board. Why those subjects were not considered necessary in London was, because they could not find minds capable of retaining them when they came to the practical treatment of the public. A man generally learned more himself than he was taught. He did not think there would be a tendency to teach down to the conjoint standard rather than upward. In the University of London, a vast number of persons went up from what was called private study, and did quite as well as those who went from the universities. He had no fear whatever of the operation of the conjoint scheme.

By Mr. MILLS: Nineteen licensing bodies were certainly too many.

They must answer for themselves whether they should all continue to exist in a combined form. He did not think it was a satisfactory position for licensing bodies to be dependent on their fees. Under the conjoint system, the fees in the various divisions of the kingdom might be made unequal, but there was no reason why they should be; that was a matter for arrangement. In the contemplated arrangements, he thought they would be equal. Direct representation, he believed, would cause the same unpleasant contentions, jealousies, and struggles which all contested elections caused everywhere. He did not think the same argument would lead to the abolition of the representative system altogether. It might be a very good thing for other people, but a bad thing for the medical profession. He could not see any object that would be gained by it. He thought the best men would not submit themselves to the ordeal of such an election. The questioner was probably a better judge whether that was the result of the representative system generally; but he (Dr. Quain) was sorry to say he did not think the representative system had improved by the ordeal it had gone through. His judgment as to the expediency of direct representation would not be affected by the fact that considerably more than two thousand medical men and several medical schools had memorialised Parliament in favour of it, and that the medical press strongly supported the demand. He thought Mr. Simon's proposal, that every man should have a vote in electing the governing body of his corporation, a reasonable one, as the members should have the right to manage their corporations; but the Medical Council was a body between the State and the public, in which the State and the public were chiefly concerned, and not the medical profession. It was a great mistake that there should be any such thing as an election at all. It would be infinitely better if the Crown nominated the Medical Council entirely. He hoped no measure would pass which recognised the principle of direct representation. If it were to be introduced for the reasons stated by Mr. Gamgee on page 9 of his paper on Medical Reform, it would not be advantageous. If the Medical Council were to exist for another purpose, let it be understood; but if its one single purpose was to look after medical education and examination, then direct representation should not be introduced. The ten thousand persons who signed the memorial looked for something beyond direct representation, and were led to do so, and it was not a well grounded expression of opinion.

By Mr. ERRINGTON: A conjoint board of examination was an essential feature in any improved system of medical education. As to giving the Medical Council increased scope, it was impossible for a class of men such as those of whom it was formed, and living away from London, to give useful aid in the accomplishment of other objects. And a body that sat and talked at the rate of fifteen shillings a minute ought not to be entrusted with too much work. It was an absolute necessity that affiliation should be made compulsory, otherwise it would open the door to all sorts of ill-practices, and give great facilities for free lances and quacks.

By Dr. CAMERON: It would be optional for a Scotch corporation to grant its degree or licence to any person who had passed the conjoint board of England or of Ireland.

By Mr. WHEELHOUSE: The total expenditure of the Medical Council had been £109,000. He believed that large numbers of men went to Scotland to get diplomas because they could be obtained more cheaply. The cost of diplomas at various places ranged from £20 in England to ten shillings and sixpence in Ireland.

By Sir TREVOR LAWRENCE: If there were in 1878 only eighteen hundred qualified practitioners in Scotland, and nearly as many persons got qualifications there as were obtained in England, where there were fifteen thousand registered practitioners, there must be some inducement held out to them to go to Scotland to qualify. If an Act were to be passed this session, he hoped it would be a very short one, but it was not desirable to force one.

By Mr. MITCHELL HENRY: He considered that three conjoint boards for the three kingdoms would be better than one.

By Mr. MILLS: The larger the number of the Council, the more, he believed, would be the waste of time.

By Mr. MITCHELL HENRY: He thought the conjoint scheme would meet the requirements of the public services.

Dr. LYONS attended from the King and Queen's College of Physicians in Ireland, and handed in a paper embodying some statistics with reference to the examining bodies in Ireland.

The Committee then adjourned.

MEDICAL MAGISTRATES.—Dr. John Wilson Elliott, R.N., has been placed on the Commission of the Peace for the County Tyrone. Mr. H. Lloyd Williams, surgeon, of Froheulog, Dolgelley, has qualified as magistrate for the county of Merioneth.

HARVEY: AND THE TRANSIT OF THE BLOOD FROM THE ARTERIES TO THE VEINS "PER POROSITATES".

THE recurrence on the 3rd June of the anniversary of the date of Harvey's death, and the delivery on the 26th of that month of the Harveian oration by Dr. Wilks, naturally recall attention at this time to the subject of Harvey and his claims as a discoverer. The question has recently been temperately, and with much ability, handled in the *Revue des Deux Mondes* by M. C. Richet, who shows afresh that the true honour of the discovery of the circulation is due to Harvey, although his predecessors had established certain scattered facts respecting it, which doubtless were known to Harvey, and which he utilised whilst experimenting and perfecting his great demonstration. Dr. W. S. Forbes of Philadelphia has also written two papers respecting Harvey's discovery, both of which he read before the College of Physicians of Philadelphia. The first *(g)* was the paper which Dr. Forbes read last year on the occasion of the tercentennial anniversary of Harvey's birth; and the second *(h)* was read, we are informed, in reply to Dr. Da Costa's statement that Harvey did not understand the capillary circulation. In connection with these two papers by Dr. Forbes, a long and important communication was some weeks since sent to this JOURNAL for publication, but pressure on space has hitherto prevented its appearance, and unfortunately compels now a considerable condensation of its contents.

The writer, after some prefatory remarks concerning the arterial, venous, and capillary portions of the circulation, speaks of the variations in the text of *De Motu cordis et Sanguinis* by Harvey, which Dr. Forbes observed in the editions of 1648, 1654, 1661, and the College edition of 1766, to which editions alone Dr. Forbes appears to have had access. A comparison of the first edition of 1628, the second edition of 1639, the edition of 1737, edited by Albinus, and the College edition of 1766, leads one to pronounce the latter a correct and consistent reprint of the first edition of 1628, though the Albinus edition of 1737 is the most exact reprint of the first edition, even to typographical particulars and faults. Many of these in the various early editions and in the first edition of the *Exercitationes duæ ad J. Riolanum, filium*, printed in Cambridge in 1649, were doubtless due to Harvey's bad penmanship, which was difficult to decipher. Typographical errors were mostly corrected by the editors of the College edition of 1766, Laurence and Akenside; and careful study of the text of that edition enables the writer to remark that its purity cannot justly be impugned, although Dr. Forbes speaks of "grave errors made by the learned editors".

It is remarkable that all writers upon and admirers of Harvey should have accepted and endorsed the extraordinary opinion that he knew nothing of the capillary circulation, or, to put it in Willis's words (*e*, page 41) that Harvey "had no notion of the one order of sanguiferous vessels, ending by uninterrupted continuity, or by an intermediate vascular network, in the other order". Dr. Forbes calls attention to the fact that a lens of greater power is required for any one to be enabled to observe the punctum saliens of the egg, which Harvey did perceive with his double convex lens, and which he has described (*d*, pages 249, 255, and 267), than to observe the capillary vessels. Consequently a compound microscope is not necessary in order to perceive them. Their discovery is usually attributed to Malpighi in the year 1661, when he was using the compound microscope, which had undergone recent improvements. He certainly by his fuller and more particular description of them made those vessels known, and in this respect Harvey failed. But the question by whom they were first discovered has yet to be settled. "A rose by any other name would smell as sweet." Harvey uses this expression regarding the very subject, "Recte quidem mones; modo quis rem teneat, vocet ut libet" (*d*, page 617). "You (Schlegel) indeed counsel well when you say, 'only make sure of the thing, call it what you will'" (*e*, page 601). Harvey made sure of the thing for himself, but his contemporaries and all writers down to the present day have neither known his "rose" by his description, nor yet in reality regarded the many names by which he called it — ductus, ramulos, capillares, porositates, admirabili artificio, nimirum arteriolæ. The term "capillaries" having since Harvey's day come to be universally applied to those vessels, the sequel shows that, had he adopted that term, instead of using in almost all instances the less known word "porositates", however precisely the latter expresses his real meaning, he would have ensured for himself the honour attached to this discovery.

In regard to the Latinised Greek word, "porositates", constantly used by Harvey when referring to the intercommunication between the arteries and veins, Dr. Forbes maintains with much force and ability that Harvey used it with the exact knowledge of its concrete signification, in the sense in which it was commonly understood by the

Greeks, as represented by Plato, and that it means "a passage in one direction *only*". In illustration, he quotes from the *Meno* of Plato. Thus it is important to sift this question, which touches what has been regarded as a flaw in Harvey's scientific character, and to prove what is the precise meaning of his language and what he meant to convey. Dr. Forbes maintains that Harvey meant ferry vessels, or walled passages in one direction only, and that he could not possibly have meant filtration through oblique spongy interstices or pores, as misunderstood and misconstrued by Laurence in *Vita* (*d*, pages xiii and xxix), as rendered in various places by Willis, and more recently confirmed by him *(i)*. Dr. Forbes further maintains that Harvey uses the word in preference to, and as more expressive than, the words ductus and capillares, which he also employs in other places.

It had been held, as taught by Galen—and all the world now recognises how fully the medical men of that time were under the influence of Galenic views—that the blood in the vessels flowed and reflowed, like the Euripus in Greece, until Harvey proved that it circulated, *i.e.*, moved on in one direction only; and his views soon exposed him to the attacks of energetic opponents in England and abroad. For, while it was believed by all medical men of the time that the blood flowed and reflowed, yet opinion was divided regarding the anastomoses of the arteries and veins. The inferior mind at and after Harvey's time argued it was by an immediate conjunction (inosculation); more experienced and advanced anatomists held that there was an interstitial division (areola) between inconspicuous bell-shaped orifices (meatus or foramen), and that the flow and reflow occurred by discharge and suction, or by mouth to mouth (*per copulam*). Though those who entertained these views were so close upon the discovery of the capillary vessels, yet they seem not to have possessed a Harveian lens, nor a Harveian mind, but allowed conjecture to fill up the deficient links in the Galenic trammels. Harvey not only proved the Galenic views of the reflow of the blood to be untrue, but also denied both theories of the anastomoses of arteries and veins, and promulgated his own views respecting the communication between them, and his opponents totally misrepresented these views without knowing what he meant. Though his advocates understood and accepted his teachings regarding the heart's action, yet they, and Schlegel even, did not understand his views regarding the communication between arteries and veins *(f)*, nor have they been understood, either at home or abroad, even to the present day, owing to the misinterpretation of the word "porositates". Thus Harvey's opponents, his advocates, and writers upon the subject generally, have for two hundred and fifty years helped each other to cloud and detract from the completeness of his discoveries.

Dr. Forbes maintains that Harvey did know and was the first to describe "one order of sanguiferous vessels ending in uninterrupted continuity", and it is the object of this essay also to show that Harvey was aware of the existence of the capillary vessels, that he made a complete sensible demonstration of them, and that his knowledge respecting them was not merely an inference or an induction, though it was not thoroughly comprehensive. Malpighi, in 1661, using a more powerful instrument than Harvey had employed in 1628, the year of birth of *De Motu Cordis*, further advanced and elaborated the knowledge respecting the capillaries which Harvey had originated. It was difficult in those early days, when the capillaries were totally unknown to exist, for references to them to be comprehended by either advocates or opponents. But, as Harvey learned anatomy from his many dissections, he deserted what he proved to be erroneous (though sanctioned by the highest authority) in the opinion of his predecessors regarding the arterio-venous anastomosis, and he boldly denied what he found to be untrue, whilst simply stating his own views upon the subject. He nowhere makes such a statement as this, "Now I describe minute vessels not hitherto known to or described by any one before me"; nor has he made such statements regarding any of his discoveries. Only twice does he placidly acknowledge himself a discoverer. He was so far it advance of his times, that the language in which he clothed his thoughts was misunderstood by the most illustrious of his advocates—Riverius, Rolfink, Schlegel, Pecquet, Bartholinus, Marchettis, Plempius, or Descartes.

In various places in his writings, Harvey makes use of the word "pori" when referring to the more superficial capillaries, and of "porositates" when noticing the direct passage of the blood from the arteries into the veins (Forbes). This distinction was always made by the anonymous writer of the first, the rebutting, translation into English, in 1653, of *De Motu Cordis et Sanguinis*, who translated "poros" pores, and "porositates" porosities. Willis usually translates both words alike. Forbes renders "poros" passages, and "porositates" ferry-vessels. The word poros occurs in Galen's writings. Thus he speaks of σπερματικοὶ πόροι, "meatus per quos semen defertur"; also θορικοὶ πόροι, seminal passages; and οὐρητικὸς πόρος, fistula urinaria; and in all these sentences πόρος has the signification which we now attach to the word passage, rather than that understood by the term pore.

The two following passages show Harvey's knowledge and use of the word "capillares", and also prove that he fully knew that in its onward course the blood was conveyed in continuous walled vessels, "Nec duos contrarios motus in omni capillari propagine (chyli sursum, sanguinis deorsum) inconvenienter fieri, improbabiliter existimare necesse est" (*d*, page 74). The translation by Willis is, "Nor, indeed, can we imagine two contrary motions in any capillary system, the chyle upwards, the blood downwards. This could scarcely take place, and must be held as altogether improbable" (*e*, page 72). The *rebutting* translation is, "In the stemme or branch of the capular veins" (*a*, page 88; *b*, page 88). The rendering by Forbes is, "Two contrary motions in the capillary set, chyle going one way and blood in the reverse way, cannot well exist" (*g*, page 4). In the first edition of 1628, capital letters are used in both "capillari" and "chyli", which are not so printed in the College edition of 1766 *(d)*. The second use of the word capillares occurs in *d*, page 86, "Adeo ut ultimæ divisiones capillares, arteriosæ, videantur venæ", etc., and the passage is thus rendered by Willis (*e*, page 84), "So that the ultimate capillary divisions of the arteries look like veins, and this not merely in constitution but in function, for they have either no perceptible pulse, or they rarely exhibit one, and never, save where the heart beats more violently than wont", etc. The rebutting translation is, "Insomuch that the last divisions of the capillares arteriosæ seem to be veins, not only in constitution but likewise in function" (*a*, page 108; *b*, page 105). The rendering by Forbes is, "So that the ultimate capillary divisions of the arteries appear like veins, not only in constitution but also in function, and emit no sensible beat, or not always, except when the heart beats more violently, or in some particular little artery, dilated or more open" (*h*, page 125). Forbes remarks that John Hunter, one hundred and fifty years afterwards, demonstrated the truth of Harvey's assertion regarding the capability of enlargement and pulsation of these little vessels when he had tied the femoral artery for popliteal aneurism.

The following passages show Harvey's use of the word porositates, in describing the pulmonary part of the circulation. One is thus rendered by Willis: "In the liver there is no forcing, no impelling power; in the lungs the blood is forced on by the pulse of the right ventricle, the necessary effect of whose impulse is the distension of the vessels and pores of the lungs (cujus impulsu distendi vasa et porositates pulmonum necesse est, *d*, page 43). And then the lungs, in respiration, are continually rising and falling, motions the effect of which must needs be to open and shut the pores and vessels (quo motu necesse est ut porositates et vasa aperiantur et claudantur), precisely as in the case of a sponge, and of parts having a spongy structure", etc. (*e*, page 41). In the rebutting translation each occurrence of the word "porositates" in this passage is rendered by the term porosities (*a*, page 36; *b*, page 43). Forbes' translation is, "By this impulse (of the right ventricle) the arteries and veins and ferry vessels of the lungs are distended. Moreover, the lungs expand and subside in breathing, by which motion it is necessary that the pulmonary arteries and veins and ferry vessels open and close", etc. (*k*, page 123).

The passage "per pulmonum porositates" (*d*, page 46) is rendered by Willis, "Through the porous structure of the lungs" (*e*, page 44); and in *a*, page 42, and *b*, page 47, it appears as "Through the porosities of the lungs". A third passage, "Per pulmonum cæcas porositates et vasorum eorum oscilla" (*d*, page 47), is translated by Willis, "By the obscure porosities of the lungs and the minute inosculations of vessels" (*e*, page 44). The rebutting translation is, "By the hidden porosities of the lungs" (*a*, page 42; *b*, 48).

Thus Harvey, the accurate observer, has been credited for upwards of two hundred years with having entertained the belief that the blood, forced into the lungs by the heart, could be loose in the lungs in pores, and porous structure, out of walled channels! Surely beings, if they could be so constituted, would be constantly liable to death from hæmorrhage or suffocation, and Harvey ought in the present day to be acquitted of the possibility even of having entertained such erroneous opinions.

The following passages show Harvey's use of the word "porositates" in describing the general circulation. "Ibi in venas et porositates carnis obrepat" (*d*, page 69; and the first edition of *De Motu Cordis*, 1628, page 58; but altered in other editions). It is rendered by Willis "where it makes its way into the veins and pores of the flesh" (*e*, page 68). The rebutting translation is, "and does creep into the veins and porosities of the flesh" (*a*, page 80; *b*, page 81). "Per carnis porositates" (*d*, page 57) in Willis (*e*, page 55) becomes "by the pores of the flesh", and in the "rebutting" translation is rendered "porosities" (*a*, page 60; *b*, page 63). "Porositatibus" (*d*, page 98) appears in Willis

(*e*, page 96) as "interstices", and in the "rebutting" translation as "porosities". "Porositates partium" (*d*, page 99) also appears in Willis (*e*, page 96) as "interstices of parts"; and in the "rebutting" translation as "pores of the parts" (*a*, page 15; *b*, page 118). Again, a passage in which occurs "de porositatibus in venulas" (*d*, page 99) is translated by Willis "the blood which is contained in the pores or interstices is urged into the smaller veins, from which it passes into larger vessels" (*e*, page 97). The "rebutting" translation here uses the word "pores" (*a*, page 15; *b*, page 119). "In porositatibus partium" (*d*, page 100) is in Willis's translation (*e*, page 97) "in the pores of the living tissues"; and in the "rebutting" translation is "pores of the parts" (*a*, page 16; *b*, page 120). "Partium porositates" (*d*, page 134) is rendered by Willis "interstices of the tissues" (*e*, page 134); and in the "rebutting" translation "porosities of the parts" (*a*, page 75; *b*, page 164). Lastly, "partium porositates" (*d*, page 138) is in Willis (*e*, page 138) "pores or interstices of the tissues", and in *a*, page 81, and *b*, page 169, is "porosities of the parts".

In Harvey's criticism of Riolan, he touches some subjects which do not appear in his original treatise *De Motu Cordis* (1628), "the first is that of the anastomoses of the one system of vessels with the other—of the aorta and its endings with the vena cava and its beginnings" (*i*, page 227), and he says (*e*, 103) "I have never succeeded in tracing any connection between the arteries and veins by a direct anastomosis of their orifices. I would gladly learn of those who give so much to Galen, how they dare swear to what he says. Neither in the liver, spleen, lungs, kidneys, nor any other viscus is such a thing as an anastomosis to be seen; and by boiling I have rendered the whole parenchyma of these organs so friable that it could be shaken like dust from the fibres, or picked away with a needle, until I could trace the fibres of every subdivision, and see every capillary filament (omnia capillamenta, *d*, page 105) distinctly. I can, therefore, boldly affirm that there is neither any anastomosis of the vena porta with the cava, of the arteries with the veins, or of the capillary ramification of the biliary duct, which can be traced through the entire liver, with the veins" (*e*, page 103). Respecting this passage, Willis remarks: "Here we find Harvey at fault. He did not see—possessed no means of seeing, and certainly had recourse to no procedure by which he could have traced—the transition, by continuity of their canals from arteries to veins, and so he boldly but erroneously concludes that nothing of the kind exists. Harvey's idea, as we gather from other parts of his works (where?), was this—that the arteries ended (by open mouths, we must presume) in the areolæ of the tissues they supplied, and that the veins, arising in the same manner, drank up the blood, having done its office, that had been shed for the nutrition and vital endowment of the parts. With the means of investigation at his disposal, we can readily understand how the great anatomist should have failed to discover the true mode of communication between the two orders of vessels" (*i*, page 227). In another place, Willis remarks: "That there must be ceaseless transfusion of blood from arteries to veins, Harvey demonstrated to be a physical necessity; but, as we have seen, he did not know precisely how it was accomplished, and he certainly erred when he affirmed (where?) that it was not by continuity of canal between the two orders of vessels, as shown by Malpighi, who had the good fortune first to see the capillary arteries pouring their tide into the capillary veins, and these in turn transferring it to the venous trunks" (*i*, page 241). In respect to this assertion of Willis, it must be remarked that Harvey, even though a vision of the stream of blood within the capillaries was denied to him, nevertheless saw the vessels themselves. But Willis makes a third assertion: "Harvey believed that the arteries ended in the interstices of the tissues, nourishing and vitalising them; and all that was not wanted for these ends, passing into the roots of the veins, returned to the heart to begin its course anew; the two orders of vessels, arteries and veins, having no anastomotic communications save by their endings in the interstices of the tissues" (*i*, page 350). But the previous quotations from Harvey's works are surely sufficient evidence to convince all reasonable minds of his knowledge of the vessels now called "capillaries", and the letter to Schlegel (though given in Willis's rendering) is further conclusive evidence of the fact. Once, again, it may be well to observe that these vessels were totally unknown to exist, save to Harvey himself.

In his second reply to Harvey, and on the *Exercitationes Duæ*, printed in 1649, Riolanus issued his *Responsio* in the same year. J. M. Schlegel, in his *De Sanguinis Motu Commentarius*, Hamb., 1650, controverted some of the statements made by Riolanus which were particularly satisfactory to Harvey. When his *De Generatione* was issued in 1651, Harvey sent a copy to Schlegel, with a long and important letter, dated, according to Willis, London, 26th March, 1651; and, according to Laurence and Akenside, "VII Calend. Aprilis, 1651". The burthen of the long and able letter is still the circulation (*e*, page 74). "The long and admirable letter.....is satisfactory evidence of the integrity of Harvey's faculties at the advanced age of seventy-three" (*i*, page 179). But Willis, although translating and praising this letter, does not seem to have quite perceived its meaning, nor even to have given it much critical study. In that letter, Harvey wishes that in his disquisition to Riolanus he had been so full and explicit on the subject of anastomosis, as to have left Schlegel with no doubts or scruples on the matter. He asserts that he had never found any visible anastomosis between the larger arteries and veins of the body, except in three places, viz., in the plexus of the brain, in the spermatic or preparing arteries and veins, and in the umbilical arteries and veins. But, whilst rejecting the vulgar (Galenic) notions of anastomoses of his day, he explains his own conjecture (conjectura) concerning the mode of transition of the blood from the minutest arteries into the finest veins. He shows that there had been down to his own day a common belief in a mutual transfusion, or accession and recession, of the blood between the arteries and veins through certain imagined inconspicuous openings or obscure foramina; the blood flowing out of one vessel and returning to it again indeterminately by a kind of accident. He then remarks that all the parts of the circulation have been contrived for the purpose with consummate forecast and most admirable art; that the motion of the blood from the veins to the arteries through the heart, as laid down by him, was a thing extremely clear, perfectly well arranged, and of approved verity; that it depended upon an admirable apparatus and valves; and that he imagined that the transference from the extremities of the arteries into those of the veins could not be effected without some other admirable artifice (!), at least, wherever there was no transudation through the pores (Latin 'poros', *i.e.*, passages) of the flesh. Harvey continues: "Since then, I find a transit from the arteries into the veins in the three places which I have above mentioned equivalent to the anastomoses of the ancients, and even affording the farther security against any regurgitation into the arteries of the blood once delivered to the veins, and as a mechanism of such a kind is more elaborate and better suited to the circulation of the blood, I have, therefore, thought that the anastomoses imagined by the ancients were to be rejected." He further continues: "But you will ask, what is this artifice? what these ducts? viz., the small arteries (nimirum arteriolæ), which are always much smaller—twice, even three times smaller—than the veins which they accompany, which they approach continually more and more, and within the tunics of which they are finally lost. I have been, therefore, led to conceive that the blood brought thus between the coats of the veins advanced for a certain way along them, and that the same thing took place here which we observe in the conjunction between the ureters and the bladder" (*e*, page 600). Forbes renders this as follows: "But you will ask what on earth is this contrivance? what on earth these ducts? Certainly, the little arteries,* which are always smaller, shall I not say twice or three times, than the veins (which they accompany, and to which they gradually approach), and at length are lost in the coats of the veins; so that I may believe that the blood borne forward by them (the little arteries) flows slowly between the coats of the veins; and the same happens here, which becomes usual at the junction of the ureters with the bladder" *(g)*.

Harvey continues, in Willis's rendering: "It seems to me that we are to take especial care not to employ any unusual words, or any common ones already familiarly used, in a sense which is not in accordance with the meaning we purpose to attach to them. You indeed counsel well when you say, 'only make sure of the thing, call it what you will'. But when we discover that a thing has hitherto been indifferently or incorrectly explained (as the sequel will show it to have been in the present case), I do not think that the old appellation can ever be well applied to the new fact; by using the old term, you are apt to mislead where you desire to instruct. I acknowledge, then, a transit of the blood from the arteries into the veins, and that occasionally immediate (inosculation), without any intervention of soft parts; but it does not take place in the manner hitherto believed, and as you yourself would have it, where you say that anastomoses, correctly speaking, rather than an anastomosis, were required—namely, that the vessels may be open on either hand, and give free passage (through areolæ) to the blood hither and thither. And hence it comes that you fail in the right solution of the question.....The passage of the blood into the veins is, indeed, effected by the impulse, and not by any dilatation in the manner of bellows, by which the blood is drawn towards them; but there are no anastomoses of the vessels by conjunction *(per copulam)* in the way you mention, none where two vessels meeting are conjoined by equal mouths. .....Lastly, these vessels (arteries and veins), having made a certain circuit, must, at their terminations, encounter one another; they would

* In using the word "arteriolæ" in this place, instead of the word "porositates", as heretofore, Harvey increases the strength of his position in pointing out the continuous channels in which the blood flows in passing the perip[illegible]e y.—(Forbes.)

not, as it happens, proceed straight to the extremities of the body. And the veins, on their part, if they were conjoined with the arteries by mutual inosculations, would necessarily, and by reason of the continuity of parts, pulsate like the arteries. And now.....I say, that whilst I think the industry of every one deserving of commendation, I do not remember that I have anywhere bepraised mine own." (*e*, pages 601 and 602.)

Harvey's exact and progressive knowledge of the circulatory system will not be fully appreciated until we have a revised translation of his works on the subject, with the letter to Schlegel, rendered according to a true and enlightened comprehension of the text and its meaning. Even the Latin text may require some notes. What is true ought to be precious throughout all civilised society. The question is: Have authorities sufficiently inquired into Harvey's knowledge of the capillary vessels? Have they not done the memory of Harvey a great injustice—the injustice of centuries—regarding the completeness of his discoveries? Plempius, professor in Louvain, the one time Harveian antagonistic writer of old, the antagonist of the Harveian advocate Renatus Descartes, was so convinced of the correctness of Harvey's views by the very pains he took to satisfy himself of their erroneousness, that he publicly proclaimed his conversion. He says: "Primum mihi hoc inventum non placuit.....but, by-and-by, when I gave myself up with firmer purpose to refute and expose it, lo! I refute and expose myself, so convincing, not to say merely persuasive, are the arguments of the author: I examine the whole thing anew and with greater care, and having at length made the dissection of a few live dogs, I find that all his (Harvey's) statements are most true." (*i*, page 253.) Thus should all "render unto Harvey the things that are Harvey's".

The statements here made may, it is hoped, tend to stimulate inquiry concerning that part of Harvey's discoveries which for two hundred and fifty years has remained a hidden secret, and has in later times come to be regarded as a flaw in his scientific character; and the writer of these lines hopes that a fuller *renaissance* of the greatness of Harvey's mastermind may in future dwell among us.

The following are the authorities quoted in this article, together with the letters by which they are severally designated in the text.

a. The Anatomical Exercises of Dr. W. Harvey. Translated into English. London: 1653.
b. The same. London: 1673.
c. Plempius' Fundamenta Medicinæ. Louvain: 1652.
d. Gulielmi Harveii Opera Omnia: a Collegio Medicorum Londinensi edita. 1766.
e. The works of W. Harvey, M.D. Translated from the Latin, with a Life of Harvey. By Robert Willis, M.D. Sydenham Society's publication: 1847.
f. Schegelius de Sanguinis Motu Commentarius. Hamb.: 1650.
g. Harvey, and the Transit of the Blood from the Arteries to the Veins "per porositates". By W. S. Forbes, M.D. (*The American Journal of the Medical Sciences* for July 1878).
h. Second paper with same title, by same author, in *Philadelphia Medical Times* for December 21st, 1878.
i. William Harvey: a History of the Discovery of the Circulation of the Blood. By R. Willis, M.D. London: 1878.

PARLIAMENTARY BILLS COMMITTEE.

AT a meeting of the Parliamentary Bills Committee, held at the offices of the Association, 161A, Strand, on Thursday, June 12th, 1879, there were present, Mr. Ernest Hart (in the chair), Dr. Fancourt Barnes, Dr. Bucknill, Dr. Alfred Carpenter, Mr. Curgenven, Mr. Rogers Harrison, Dr. Henry, Dr. Norman Kerr, Surgeon A. Myers, Mr. Rivington, Mr. Sibley, Dr. Stewart, and Dr. Vinen.

The minutes of the last meeting were read and found correct.

Coroners' Bill.—The Chairman read the correspondence which had passed between the Parliamentary Bills Committee and the Select Committee on the Coroners' Bill, and it was resolved that the same be received and entered on the minutes.

It was moved by Mr. ROGERS HARRISON, seconded by Mr. SIBLEY, and resolved: "That this Committee learns with regret, from the communication of Sir Matthew White Ridley, that the Select Committee of the House of Commons on the Coroners' Bill may probably close its inquiry without receiving the evidence which Professor A. S. Taylor, M.D., has tendered in behalf of the Committee, and trusts that the Select Committee may be willing to reconsider that decision."

The CHAIRMAN read a communication which he had received from the Council of the Lancashire and Cheshire Branch, a copy of which is as follows.

"At the last meeting of the Council of the Lancashire and Cheshire Branch, held at Liverpool, resolutions were passed protesting against that provision in the thirtieth clause of the Coroners' Bill, which requires medical practitioners in certain cases to give evidence in the Coroners' Court without remuneration, and requesting Government to take the present opportunity of legislating on a wider basis than that on which the Bill now before Parliament is founded."

It was resolved that the foregoing be received and entered on the minutes, and a copy sent to the Select Committee on the Coroners' Bill.

The CHAIRMAN read a communication which he had received from Dr. James Thompson of Leamington, Honorary Secretary of the Irish Graduates' Association. The communication contained the following resolutions, passed at the meeting of the Irish Graduates' Association on June 3rd.

1. "That the vaccination laws in Ireland are a great injustice to the profession there, and that they ought to be assimilated to those in force in England."

2. "That Clause 30 of the Coroners' Bill, now before the House of Commons, requires amendment, as in its present form it proposes to perpetuate the abuse of calling on medical men attached to public institutions to attend inquests and give evidence without any remuneration."

3. "That, while fully recognising the necessity for the registration of infectious diseases, they desire to record their opinion that in all such cases the nearest relative present, or the householder in whose house the case has occurred, should be responsible for the immediate information of the health authority of the existence of infectious disease; and that it would be a gross violation of the professional confidence existing between patients and their medical attendants to compel the latter to be informers under a £10 penalty."

It was resolved that this communication from the Irish Graduates' Association be received and entered on the minutes, and that a copy of the second resolution, relating to Clause 30 of the Coroners' Bill, be sent to the Select Committee.

Irish Infirmary Surgeons and Medical Officers of Gaols.—The CHAIRMAN described the action that had been taken upon the resolution passed at the previous meeting of the Parliamentary Bills Committee on the subject of the present position of infirmary surgeons who are also the medical officers of gaols, and laid upon the table two letters received from the Irish Office, in the latter of which it was stated that the matter was receiving the careful consideration of the Irish Government and that a further communication would be sent to the Committee.

Army Medical Department.—The CHAIRMAN laid upon the table a printed copy of the memorial which he had been authorised at the previous meeting to forward to the Secretary of State for War, together with two letters from the War Office acknowledging the memorial.

It was moved by Dr. BUCKNILL, seconded by Mr. RIVINGTON, and resolved: "That the memorial and letter of acknowledgment be received and entered on the minutes." The memorial was as follows.

The humble petition of ——— humbly showeth that the ——— are deeply impressed with the importance, on public grounds, of preventing further delay in the reorganisation of the Medical Department of the Army, and that your petitioners humbly pray that a warrant for this purpose may be drafted and issued as soon as possible. Your petitioners agree with many of the recommendations shown at pages 26 and 27 of the "Report of the Committee appointed by the Secretary of State to inquire into the causes which tend to prevent sufficient eligible candidates from coming forward for the Army Medical Department", but some of them your petitioners believe, if carried out, would be unsatisfactory to the medical officers, and likely to be injurious to the interests of the public service.

The following will explain the views of your petitioners on the points referred to.

1. Your petitioners agree with the committee in thinking that retirement should be optional after ten years' service, on gratuities or pensions according to length of service, as laid down at page 26 of the report of the committee.

2. Your petitioners think that all medical officers of field rank should be entitled to draw forage for a horse, if they keep one.

3. Your petitioners think that medical officers should be placed on the same footing as combatant officers in regard to leave of absence on account of sickness, in regard to half-pay in case of wounds or ill-health, and in regard to exchanges, when the interests of the public service are not interfered with by them.

4. Your petitioners are of opinion that it would add to the attractiveness of medical service in the army, if some designation, like that of the Royal Engineers and Royal Artillery, were given to the army medical body, such as Royal Army Medical Corps, or Royal Corps of Army Surgeons.

5. Your petitioners agree with the committee in thinking that honours and good service rewards should be bestowed on the medical officers on the scale applicable to combatants. At present the Army

Medical Service holds out no special rewards, as far as your petitioners are aware, for medical officers who display special professional abilities or energy.

6. Your petitioners agree with the committee in thinking that surgeon-majors should rank with lieutenant-colonels according to the date of completing twenty years' service.

7. Your petitioners agree with the committee in recommending that the conditions of Indian service for the rank of deputy surgeon-general should be promulgated. Your petitioners additionally recommend that no rules affecting the interests and welfare of medical officers of any grade should be applied without having been previously published for general information.

8. Your petitioners agree with the recommendations of the committee as regards medical officers who have already joined the service under the "ten years' rule".

9. Your petitioners altogether dissent from the recommendations of the committee marked (20) and (21), at page 27 of their report. Your petitioners hold that all commissions in the Army Medical Department should be open to public competition, as they have been during the last twenty years. Your petitioners are convinced that no system of admission into it which excludes fair and open competition will ever be satisfactory to the bulk of the profession or to the public.

10. We agree with the committee in thinking that probationers for the department should receive pay at the rate of eight shillings a-day.

11. We agree with the committee in thinking that the rates of pay and retirement of medical officers should be as shown in Section 93 of the report of the committee.

12. We agree with the committee in thinking that all medical officers retiring before the age of fifty-five, should be liable until that age to be called upon to serve in time of declared national emergency, their names being retained in the *Army List*, and they being allowed to wear their uniform.

13. With regard to the recommendation of the committee for a gradual reduction of the executive ranks to 796 in number, your petitioners, while admitting the propriety of not having a larger body of medical officers than is required for the service of the State, are strongly of opinion that no such reduction ought to take place as will be a bar to medical officers getting leave of absence, either on private affairs, according to service rules, or for the purpose of professional improvement.

14. Your petitioners think that allowances for messes should be granted at all large stations, so that medical officers may have the same benefits in this respect as other officers.

And your petitioners, etc.

This memorial was acknowledged in a letter from Colonel Stanley conveying his thanks for the same, and stating that the several points advanced should receive due consideration.

Oxford Memorial.—The CHAIRMAN stated that about two thousand signatures had been obtained for this memorial, and suggested that it would be preferable, with the approval of the Committee of Council, to send the memorial not only to Parliament, but also to the University authorities. He further stated that he had communicated the substance of the memorial, and the fact that it has been signed, to the Vice-Chancellor of Oxford University. He had received acknowledgments from the Vice-Chancellor and also from the Dean of Christchurch, and a further letter from the Vice-Chancellor stating that the memorial had been referred for report to a Committee of the Hebdomadal Council.

Leicester Corporation Bill.—A letter was read from Dr. W. E. Buck of Leicester, in which he said, "What we want to get altered in the Bill is either the penal clause, so far as it relates to the medical man, removed, or simply the medical man to give notice to the householder, and he to give notice to the corporation. Or we should not mind the penal clause if we were allowed some discretion, viz., that we were to give notice of cases when the sanitary authority, in our opinion, can do some good in the way of removal of a patient for isolation or disinfection, etc. . . . . We, of course, do not oppose the principle of giving information, but we object to be liable to a penalty of £10 for an act of omission and not for an act of default. We are also to have the burden of proving that we did not know about the Act."

A letter from Dr. Ransome, the Chairman of the Registration of Diseases Committee, was also read. He suggested, "1. That the reports should be treated as confidential, the names of persons affected being made known only to the medical officer of health; and, 2. That the form of certificate should be handed by the medical attendant to the occupier, or person in charge of the case, who alone should be compelled, under penalty, to countersign it or make his mark, and send it on to the medical officers of health. This would prevent the plea of ignorance, and would cause no breach of confidence on the part of the doctor, whose responsibility would cease so soon as he had done what is now morally his duty, namely, make the nature of the case known to his patient's friends."

It was resolved that the letters be received and entered on the minutes.

The CHAIRMAN read the resolution passed at the meeting of the Parliamentary Bills Committee on March 19th upon this subject.

It was resolved: "That the committee do adhere to the former resolution of this committee, passed at the meeting on March 19th, but that it might be further desirable to add that such notification be confidential."

It was moved by the CHAIRMAN, seconded by Dr. NORMAN KERR, and resolved: "That a copy of this resolution be forwarded to the Chairman of the Leicester Book Club, with the intimation that this committee hopes that the Leicester committee will accept a modification of the fourth and fifth clauses of the Leicester Corporation Bill, in accordance with the above, and that in such case this committee will be prepared to give assistance to further the cause."

The resolution having been put from the chair, the same was declared to be carried.

The CHAIRMAN placed on the table a communication from Dr. Grimshaw and the Council of the Irish Medical Association, respecting a Bill to amend the Acts relating to vaccination in Ireland, and also a communication with regard to sanitation in Ireland.

THE METROPOLITAN PROVIDENT DISPENSARY MOVEMENT.

A LARGE representative meeting was held on June 21st, in the Great Hall of the Cannon Street Terminus—the Right Hon. James Stansfeld, M.P., presiding—to consider the proposal, placed before the representative working men of the metropolis by the Medical Committee of the Charity Organisation Society, to form a "Metropolitan Medical Association", whereby members of the working classes and their families might be insured in health for medical attendance and medicine in sickness and disease. Among those present were Sir Charles Trevelyan, Bart., K.C.B., Sir Rutherford Alcock, K.C.B., Mr. Timothy Holmes, Dr. A. P. Stewart, Dr. Pinder, Mr. Hamilton H. Hoare, Dr. Hardwicke (Coroner for Central Middlesex), Mr. Alsager A. Hill, Mr. J. Brown of York, Mr. John Bush of Leicester, Mr. S. M. Caffyn, Mr. Jabez Hogg, the Rev. H. F. Mallet, the Rev. R. J. Simpson, Mr. W. Bousfield, Mr. Byne (Hospital Saturday Fund), Mr. W. Stratford Dugdale, Mr. Nelson Hardy, Mr. A. W. Mackenzie (Honorary Secretary of the Hospital Saturday Fund), Mr. Parr (Secretary of the Hospital Saturday Fund), Mr. H. Hill, the Rev. Canon Erskine Clarke, Dr. W. Fairlie Clarke, Dr. Joseph Rogers, etc.

The CHAIRMAN said he was informed by Sir Charles Trevelyan that letters had been received from many gentlemen unable to be present, approving of the object and writing in its support; but, looking at the numbers and representative character of those present, he thought that meeting might well be content with the muster. This conference had been called by gentlemen representing, in the first place, the Charity Organisation Society; secondly, by the representatives of the Hospital Saturday Fund; thirdly, by the associations of working men—those great Friendly Societies of the metropolis—and provident dispensaries; and by gentlemen connected with the great hospitals of London. Hence it was that the purposes of the meeting had been fully considered, not only by men of all ranks of life, of exceptional intelligence and knowledge, but who were also men taking a peculiar interest in all that related to the social wellbeing of the working classes. It was purposed that the business of the conference should be confined to the discussion, and he hoped to the adoption, of two resolutions. The first would be the declaration in favour of the establishment of a Metropolitan Association for the purpose of providing for the ordinary medical treatment of the industrial classes on self-supporting principles, in due relation to the hospitals; and the second would be a consequence, agreeing, if the meeting adopted it, that a representative Committee should be appointed to prepare rules, to be submitted to a subsequent meeting to be called in relation to the same subject. The proposal which would be embodied in these two resolutions appeared to his mind fitting and necessary reforms from two points of view. In the first place, the movement was justified upon the ground of metropolitan hospital reform; and it would be shown to be necessary in order to prevent the breaking down of our London hospital system. In the next place, they were necessary in the interest of society outside the organisation of hospitals or other medical institutions, in the interest of the self-reliance and independence of the working population of the metropolis. The hospital system of London was breaking down because, as at present carried out, it was costly and wasteful. People were beginning to doubt, and funds were falling off; and a remedy must be found. It was

perfectly clear that one remedy which ought to be provided was that of provident dispensaries. There were, say, a couple of dozen of hospitals; and to these should be added two hundred dispensaries scattered all over London and planted near the homes of the people. In those dispensaries, there should be a certain number of competent persons to attend the cases, and, if necessary, to visit the persons under treatment; and serious cases should be referred to the hospital with which the dispensary was affiliated, so that the patients might be treated by specialists, if necessary. What they should do was, by the power of an association, give to the industrial classes in the metropolis precisely the advantages which the wealthy and the middle classes of the country—in London and elsewhere—had provided for themselves; and that was a family doctor, a man of fair medical education and common sense, who was not so much driven about as to prevent him from giving his time and attention to the cases which came before him. The advantage of possessing a family doctor was, that a medical man knew the medical history of the family he was attending. He knew their constitutions and the constitutions of the members of the family; and, with such a man at their call, the working classes and their families could be kept right, and, indeed, they were the more likely to be kept right when they paid the doctor in health to keep them right.

Sir CHARLES TREVELYAN, K.C.B., said this meeting was entitled to public respect, if only on the ground that it was the culminating point of twelve years' hard continuous labour. The honour of having initiated it belonged to the medical profession. It commenced in a large meeting of medical men held under the late Sir William Fergusson in 1867. Many disinterested public-spirited men had been preparing the ground for that meeting of 1867; and, when the meeting was held and reports were drawn up, the work was theoretically accomplished, then and there. About that time was born the Charity Organisation Society; and one of the first conclusions to which the founders of that Society came was, that it was perfectly idle to attempt any improvement of the habits or condition of those who, without any disparagement, might be called the lower classes of this great metropolis, until the crying evils of the imperfection and abuses of medical relief were remedied. There were held three conferences: one in 1871, which was attended by Mr. W. H. Smith, M.P., and by Mr. Stansfeld; the second under the presidency of Dr. Acland, the President of the General Medical Council; and the third under Lord Frederick Cavendish. Lord Frederick Cavendish made one good suggestion. He said: "You had best go to the Friendly Societies, for they are acquainted with the principle of association and the principle of self-help." Last year, circulars were sent out to the Friendly Societies. Hundreds of answers to these circulars were received; and the prevailing tenour of the answers was not only favourable at first, but it had become increasingly favourable; and it was evident that the more the societies thought of the proposal to form a Metropolitan Medical Association, the better they thought of it. The plan was a great advance upon the previous position of the working classes in respect to medical aid. Medical treatment was provided for the working classes in London chiefly in two ways. The one way was by means of the club-doctor plan, which was open to several objections. It was only available for the members of the clubs, and it gave no choice of medical men. The upper classes considered it a great privilege to choose their own medical men, and the working classes knew the difference between one medical man and another. Then, too, the club-doctor plan left wives and children out in the cold; and it was as necessary to provide for the wives and children when ill as for the bread-winners. The other plan by which the working classes were provided with medical attendance and medicine was by means of the out-patient department of hospitals: a totally artificial and abusing extension of the hospital system. Hospitals were founded for acoidents; they were for cases known as "consultation" cases, and for "clinical" cases, which were of those needing to be put to bed, nursed, watched medically, and treated either by a surgeon or by a physician. But it was not intended that the hospital should be responsible for the thousand and one ailments to which humanity was subject—ailments as certain to come as hunger and thirst, and requiring hardly any more attention. The result of this forced extension of the hospital system had been that the whole of the lower class population of London had been encouraged to throw themselves upon the out-patient department of the hospitals, which now felt that they were unable to bear the burden, and had broken down, or were on the point of breaking down, in respect to providing suitable treatment of the cases which presented themselves. Those who thus depended upon the hospitals for their medical provision, after wasting half a day of their time, crowded with others, each got, on the average, perhaps a minute of time of the medical man, whom they never saw before and might never see again; and perhaps a bottle of medicine, which most likely they never took. The resolution which he had to move was in favour of the establishment of a Metropolitan Association for the purpose of providing for the ordinary medical treatment of the industrial classes on self-supporting principles, in due relation to the hospitals.

Mr. BYNE, of the Hospital Saturday Fund, seconded the resolution.

An interruption here occurred, caused by a knot of three or four persons, one of whom gave the name of Brewin Grant; and they made remarks antagonistic to the Charity Organisation Society.

Mr. HAMILTON HOARE, the Treasurer of the Hospital Saturday Fund, supported the resolution.

Mr. STEPHEN ALFORD moved that the word "provident" should take the place of "self-supporting" in the resolution, on the ground that the working classes did not want to have the management of the dispensaries; that the words self-supporting would cut off from the dispensaries the honorary members who subscribed and managed the institutions, and whose aid, too, was necessary, and without whom he questioned if the working classes could manage and work dispensaries.

Dr. H. KNOWLES having spoken shortly,

Mr. NELSON HARDY seconded the amendment, saying that the mover had had great experience in provident dispensaries; and the main point was, that the bastard provident dispensaries now springing up called themselves "self-supporting"; so that to adopt this word would be to give a fillip to these speculations, which, to those who knew anything about them, were regarded with the reverse of favour, as not having the most laudable objects.

Sir C. TREVELYAN accepted the amendment.

Dr. JOSEPH ROGERS regarded the discussion about "self-supporting" and "provident" as really splitting hairs. The speaker went into the statistics of hospital out-patient attendance, and said that system had so thoroughly demoralised the people that they considered themselves entitled to free relief from any medical man at any time. Once the working classes were encouraged to make this provision for their health, they would make provision to meet other rainy days.

Mr. GRANT proposed as an amendment, "That more definite information on the subject of this proposed movement should be given to the public before such a proposed association should be recognised by this meeting". On this being ruled to be no amendment, Mr. Grant elected to speak against the resolution. He wanted to know if the proposal amounted to a plan to float a commercial company or a new charitable institution. He characterised the supporters as endeavouring to injure the hospitals, demanded to know what right the Hospital Saturday Fund had in this movement, and contended that this fund was endeavouring to deprive the hospitals of support.

Mr. MACKENZIE gave Mr. Grant information on the points he had asked; and he proceeded to explain that the Hospital Saturday Fund Committee, seeing the necessity, in the course of their labours, of supporting the provident principle in regard to medical attendance, had set about the work, and had come into contact with the Charity Organisation Committee. He frankly owned that some prejudices had existed against the Society; but these were found to be directed against agents, and to have no foundation against the principles of the Society, which had started a proposal which the Hospital Saturday Fund could heartily support.

Mr. RADLEY, one of the chief members of the Ancient Order of Foresters, suggested, in speaking of the details of the scheme, that it would be as well, perhaps, not to build dispensaries, but to have an organisation whereby the working classes, members of provident societies and their families, could, by an extension of existing machinery, have the advantage of medical aid in any district, by certain medical men in each district being appointed the medical officers of the organisation. The whole system, he said, could be done at once, and without waiting for buildings.

The CHAIRMAN remarked that Mr. Radley's contribution to the discussion was most useful; and, in regard to his suggestion, it was no part of the proposal of the gentleman who proposed the resolution to lay down the law in any way; so that, when the resolution was passed, there would be plenty of time to work out the details.

The resolution was then put and carried unanimously.

Mr. TIMOTHY HOLMES moved: "That a representative committee be appointed to prepare rules to be submitted to a subsequent meeting." He congratulated the meeting upon having accepted the first resolution. It was now necessary to have men of business to act upon that most important resolution, and it was a mistake to suppose that those who desired to found such an institution would desire to dictate the rules or the means by which it could be carried out. The meeting would name the committee, or the way in which it should be appointed, and he should suggest the way in which it should be composed; but before he made this suggestion, he desired to say a word or two in order to remove some misunderstandings. Mr. Grant had said that the purpose of those on the platform was to abuse the hospitals and to dry up

the sources of the charities. Now for the last twenty-five years—in fact, all his working life—it had been his pride to be connected with a London hospital, and he should be acting most unnaturally and most absurdly if he were to join in any action to injure and abuse hospitals. But he should be acting wrongly if he were to say that hospitals could not be improved, and his action was directed to withdraw from them an incubus—in the crowd of persons in the out-patient departments—which had been thrown upon them, and which they could not bear. To crowd the out-patient departments of the hospitals with persons who could not be dealt with in that way was not the means of doing good to any person whatever, but a great injury to many. With a lessened number of patients the hospital could give efficient aid and do its other work as well; for the hospitals were not only founded for the treatment of disease but for the teaching of future medical practitioners. That was a point in which the public generally were interested, and any one who saw the crowded out-patient departments must say that the teaching of surgery or medicine under such circumstances was an impossibility. To discharge all these functions there must be a limitation upon the members now attending. The leading physicians and surgeons in London were in favour of the views set forth, and how any one could charge them with desiring to "abuse" and to injure the hospitals by withdrawing support from them was beyond comprehension. As a faithful servant of the hospital system of London, he must say that there was a most important function connected with medical relief of the poor to which very little attention was paid. The mere treatment of disease was but a fraction as compared with the importance of preventing disease. The hospitals could do little in undertaking this function, and any institution to do this must treat disease in the homes of the people; for it was in the homes that the great epidemics were nursed, and it was only in the homes where many complaints could be treated, that the medical man could give advice as to the manners of living. A medical man must know how a man lived before he could treat a case, and in seeing a man for a minute in the out-patient department of a hospital and giving him a bottle of medicine no assistance was given to help the general standard of health. The hospitals performed great functions; but this out-patient system as now carried on did not permit of the standard of health being raised. Then a man or a woman needed at times treatment in the night. The hospitals made no provision for that. There was a necessity for a central association besides the local dispensaries or organisations, in order that, if a man and his family had to leave one part, he could without any difficulty have the advantages of his subscription in the new place where he might have to take up his abode. At present it was proposed to deal only with London; but in course of time he hoped to see it extend further, so that if a man left Notting Hill for Nottingham he might still be a member. Then it was to be remembered that this work would meet the wants of hospitals on the outskirts of London. There would be great difficulties in the way of providing new hospitals, and the system was necessary in that point of view. The rules would no doubt provide amply for the independent action of the working classes, and if the working classes chose to take upon themselves the whole pecuniary work, there was not, that he could see, the slightest objection, and he for one would put the control into their hands; but that was a matter which would arise when the scheme was completed. He proposed that the resolution should include representatives from the Metropolitan Friendly Societies, the Saturday Hospital Fund, the Charity Organisation Society, the Boards of Management of hospitals, and Metropolitan medical men. It was not proposed that these should have the management of the institution, but simply that they should draw up the rules.

Sir CHARLES TREVELYAN said it would be well to form an executive committee of a strictly representative character, asking the chairman of the evening to be chairman. He also suggested that the committee should consist of fifteen members; three from the Friendly Societies; three from the Saturday Hospital Fund; three from the Charity Organisation Society; three from the managers of the Metropolitan Hospitals: and three medical men. The latter he named as Mr. Timothy Holmes, Mr. Ernest Hart, and Dr. Joseph Rogers; and, as representing the hospitals, Sir Rutherford Alcock, K.C.B., Mr. T. F. Buxton, and Mr. Lushington, representing Westminster, London, and Guy's Hospitals.

Mr. BOUSFIELD seconded the proposal and the adoption of these names.

There was a general wish that the number of friendly society delegates should be increased to six. Mr. A. H. Hill supported this proposition, which, after a discussion, in which Mr. Jabez Hogg and others took part, was assented to.

The Rev. Mr. MALLET of Hampstead proposed a vote of thanks to the Chairman.

A working man (several having risen) seconded the motion, and said that his class was grateful for the proposals.

The motion was carried amid cheers, and the CHAIRMAN, in acknowledging it, said the meeting had been a most useful one, and he had no doubt it would prove in its result most important.

The proceedings, which had lasted for nearly four hours, then came to an end.

HOSPITAL OUT-PATIENT REFORM.

WESTMINSTER HOSPITAL.

THE Committee of the British Medical Association on Out-patient Reform had an interview on June 17th with the House Committee of the Westminster Hospital; Sir Rutherford Alcock, K.C.B., presiding at the conference. There were present at the House Committee, Mr. George Cowell, Dr. Dupré, Mr. H. D. Erskine, Dr. Fincham, Colonel Forester, Mr. W. Gilbert, Mr. G. Helmore, Mr. Charles Hood, Sir Henry Hunt, C.B., the Rev. C. A. Jones, the Rev. J. Troutbeck, Mr. H. Maude, Mr. G. S. Kempson, Mr. F. C. Sheppard, Dr. Tebay, Mr. Lewis Winkworth, and Mr. R. Davy. The deputation from the Association was headed by Mr. Timothy Holmes of St. George's Hospital, and there were also Dr. A. P. Stewart, Dr. Rogers, Dr. Robert Lee, Dr. Joseph Rogers, Mr. Septimus Sibley, Mr. Macnamara, Mr. Wickham Barnes, and Mr. Francis Fowke, the General Secretary of the British Medical Association.

Sir RUTHERFORD ALCOCK informed the deputation that the authorities of the hospital had had under consideration the question, how far it was practicable to make all those out-patients who did not come with governors' letters (and those who came without letters numbered about 16,000 annually) pay something for their medicine. There had been nothing as yet decided, but he thought it as well to tell the deputation. He thought the adoption of some such plan would be just in itself, and would correct in some degree the excessive overcrowding of the out-patients' department.

Mr. HOLMES thanked Sir Rutherford Alcock for this information. An interesting inquiry was made in 1870 by a committee of eminent medical men of London, over which Sir William Fergusson presided. This committee drew up an elaborate report, pointing out the abuses of the out-patient departments of hospitals in London, and the abuses therein recognised had been generally admitted. The committee had reported very strongly, and yet the facts they had elicited and the recommendations they made had as yet led to nothing, or next to nothing. Since that time, indeed, the out-patients of the London hospitals had increased year by year, not only in absolute numbers, but in relative numbers. The out-patient department of this hospital was crowded to an extent which overtaxed the powers of the medical officers, who would, he believed, be delighted to see the numbers restricted. The reason why this evil of overcrowded out-patients' department had grown up was, that there had been no selection of cases, and, in point of fact, the hospital had been trying to do an impossibility—to treat all the ailments of the neighbourhood. He believed that nearly every one of the out-patients to this hospital who could not get an order for treatment at the Poor-law dispensary, might provide himself or herself by becoming a member of a provident dispensary. The Hospital Out-patient Reform Committee had considered the scheme proposed by the out-patient staff of the Westminster Hospital to exact payment from all those patients who came without governors' letters; and the committee had agreed that, provided the payment exacted was adequate and made upon a sound principle, they would not be indisposed to see the plan tried as an experiment. But the adoption of this principle would be contrary to all that which had hitherto prevailed in hospital management, and it was not without hesitation that the Hospital Out-patient Reform Committee came so far to agree to the proposal. They were pressed by this consideration, that the time had come when there was need of something being done. The committee, however, desired to point out to the hospital authorities that, before they acted upon their principle, they must decide upon the question as to who should be permitted to go through the out-patients' department, and not leave it to be supposed that the doors were to be thrown wide open to everybody, whatever their pecuniary circumstances might be; and that the governors of the hospital undertook, by carrying out this experiment, to treat everybody, no matter what might be their maladies, at a certain definite price. Of course, the authorities of the hospital anticipated that, by taking this step, they would limit to some extent the number of applicants, and he submitted that they might adopt the rules or prin-

ciples which the committee had drawn up. Mr. Holmes then laid before the Hospital Committee the four proposals which had been brought forward on previous similar occasions.

Dr. JOSEPH ROGERS pointed out that Gathorne Hardy's Act, by instituting Poor-law dispensaries in all parts of the metropolis, had rendered the overcrowding of the hospital out-patient departments unnecessary. The effect, however, of offering charity was so demoralising, that he knew of a Board of Guardians in the City of Westminster who instructed their relieving officer to send as many of the poor as he could to the general hospitals, so as to save the rates at the cost of the charitable public. The fact that the Westminster Hospital had 30,000 out-patients last year was sufficient of itself to show the necessity for modification of the principles upon which the hospital authorities acted.

Dr. A. P. STEWART had been very much struck by the enormous improvement made in the treatment of the sick poor under the Poor-law during the last ten years. He had seen several of the Poor-law dispensaries, and there were no better dispensaries in London than these, both as regarded medicines and treatment, so that now there was cleared away one of the difficulties which stood in the way of dealing with this question when there were no Poor-law dispensaries for the necessitous poor. There were now not only proper dispensaries for the outdoor poor, but excellent dispensaries for indoor treatment.

Mr. WICKHAM BARNES said that so much of the work of the Poor-law dispensaries was done by the hospitals that, in some places, only one or two patients a-day came to the out-patient departments of the dispensaries.

Mr. MACNAMARA pointed out that the out-patient department of hospitals on this system was a growth of modern usage, and was not intended to be more than a means of the medical men seeing those who had been in-patients, the enormous increase in the numbers being quite the work of this generation. One of the reasons why the numbers had increased was owing to the fact that some hospital authorities desired to come before the public as doing the greatest amount of work.

Dr. ROBERT LEE stated that the cost of each out-patient of the Westminster Hospital was between threepence and fivepence a visit, and with the great numbers attending, the cost was very great.

Mr. H. H. MAUDE said it was proposed that there should be more medical men for the out-patient department; but he held that the only way over the difficulty was to limit the numbers of those not recommended by governors. Many of the out-patients had no sickness but what they could themselves find the means of dealing with, many were mere gossips, and others were *malades imaginaires*. He suggested that each of those not provided with governors' letters should pay threepence a visit, the medicine being only for three days. With regard to the Poor-law dispensaries, he thought the reason the poor preferred the hospitals was that, in the latter, their independence was untouched.

Dr. A. P. STEWART considered that it would be a dangerous experiment to make to put the payment as low as threepence.

Mr. W. GILBERT wished to see investigation into the cases which came to the hospital, if there were to be payments, otherwise people would think, if they paid a few pence, they would be entitled to save the guineas they would have to pay their own medical men for consultation.

Mr. HOLMES replied that the proposal to have payments for out-patient treatment came from the Westminster Hospital authorities, and those authorities, therefore, must settle the details of the plan; but he suggested that the scale of payments should at least be much higher for a first visit than was proposed in the sketch drawn up by the out-patient staff, as, in a provident dispensary, to a person who had not subscribed in health, a charge of 2s. 6d. was made in illness.

Dr. TEBAY said the staff could say the work had increased enormously through the great increase of out-patients; and on behalf of the staff, he could say that they would welcome any support which came to the staff in fighting the battle against this increased work, and would lead the poor to become members of provident dispensaries. To do this would benefit that portion of the poor, and save the abuse of a charity.

Sir R. ALCOCK said the House Committee had listened with great interest to all that had been said, and they regarded this as one of the most interesting and important questions which could have occupied their attention. He suggested that the Hospital Sunday Fund should find how many of the million applicants a-year at the out-patients' departments were individual cases, and he acknowledged that there were many abuses of hospital charitable relief. But, he said, it was easier to point out the evil than to suggest means of remedying it; and the House Committee of the Westminster Hospital were quite ready to consider most seriously how to remedy the evils brought to their notice. He touched upon the various suggestions made, and stated, in conclusion, that the committee of the hospital had every desire to co-operate with the British Medical Association, or any other body, in remedying evils and great abuses of the medical charities—abuses which, he said, were seriously detrimental to the poor themselves.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS.

THE specimens added, during the last twelve months, to the Museum of the Royal College of Surgeons were exhibited, in the Theatre of the College, on Thursday, and on the two days immediately preceding and succeeding it, so that the Fellows of the College assembled for the election had full opportunities of inspecting them. The pathological series has received some additions of great interest and value. The remarkable case (read before the Clinical Society during the past session by Sir James Paget) of a middle-aged lady, who had been for eighteen months subject to a watery discharge from the nostril, has terminated fatally. On examining the nares, a pair of mucoid polypi were found in the antrum on the affected side. The maxilla, containing the polypi, is now added to the College collection. A beautiful dissection of the suprarenal capsules, and the neighbouring viscera, vessels, and sympathetic nerves, from a case of Addison's disease, displays the visible changes which may take place in abdominal organs during the course of that strange disorder. The specimen was presented by Dr. Goodhart, and dissected by Mr. W. Pearson. Members of the Pathological Society recognised at this show several examples of disease brought forward last winter at Berners Street. Diseases of the female pelvic viscera are well represented by a large number of specimens presented by Mr. Spencer Wells, Dr. Bantock, and Mr. Knowsley Thornton. Most conspicuous of all, in this category, is an enormous purely fibrous tumour of the ovary, removed successfully by Mr. Spencer Wells. Mr. Thornton also contributes a great omentum infested with hydatids, from a case related partly in these pages last year and also partly in those of a contemporary journal. Pregnancy coexisted, but the patient recovered. The College is rich in what may be termed "the pathology of fame"—a department which, without entering into questions of its utility, we may say has been reinforced this year by a rib, removed by the late Dr. W. Mackenzie, from the body of King Robert the Bruce of Scotland, when the monarch's remains were disinterred by order of King George IV. This bone shows traces of an old fracture, received at a tournament many years before death. It is most satisfactory to learn that Sir James Paget has undertaken, together with Dr. Goodhart and Mr. Alban Doran, to prepare a new and complete catalogue of the pathological series, which will obviate the inconveniences of the supplement now in use. The work has already made considerable progress, but will probably take several years to complete.

PROXY VOTING FOR FELLOWS OF COLLEGES.

WE are requested to publish the following:

"Committee Office, House of Commons, June 23rd.

"Sir,—I am directed to acknowledge the receipt of your letter of the 20th instant, addressed to the Right Honourable W. E. Forster; and, in reply, to say that the request contained in it will be considered by the Committee.—I am, sir, your obedient servant,

"W. M. R. MOLYNEUX.

"To T. H. McGusty, F.R.C.S.I., Slane."

MURCHISON MEMORIAL.

THE following additional contributions have been made towards the proposed memorial of Dr. Murchison, in connection with the universities of London and Edinburgh: Sir Thomas Watson, £10 10s.; Dr. Moxon, £10 10s.; Dr. Ralfe, £5 5s.; Dr. J. B. Allan, £5 5s.; Dr. Matthews Duncan, £5 5s.; Dr. Dobie (Chester) £5 5s.; Dr. G. Harley, F.R.S., £3 3s.; Dr. Armitage, £3 3s.; Sir Joseph Fayrer, £2 2s.; Dr. Lycett (Wolverhampton), £2 2s.; Dr. Cobbold, F.R.S., £2 2s.; Dr. Philipson (Newcastle-on-Tyne), £2 2s.; Dr. Wilks, F.R.S., £2 2s.; Dr. H. Barnes (Carlisle), £1 1s.; Dr. H. Leach, £1 1s.; Mr. R. H. Woodhouse, £1 1s.; Dr. Alfred Pullar, £1 1s.; Dr. Malcolm Simpson (Highgate), £1 1s.; Dr. Fairlie Clarke (Southborough), £1 1s.

Subscriptions may be paid to the treasurer, Dr. J. B. Potter, 20, George Street, Hanover Square, W.; or to either of the secretaries, Dr. Dyce Duckworth, 11, Grafton Street, Piccadilly, W., or Dr. W. S. Greenfield, 15, Palace Road, Albert Embankment, S.E.

At a meeting of the General Committee, held at Mr. Lister's house on the 24th June, Sir Joseph Fayrer, K.C.S.I., in the chair, the fol-

lowing members were nominated to act as an Executive Committee: Sir Joseph Fayrer, Dr. Burdon Sanderson, Mr. Lister, Dr. Russell Reynolds, Dr. A. P. Stewart, Dr. Quain, Dr. Bristowe, Mr. Hyde Hills, Dr. Van der Byl, Dr. Ralfe, Dr. Farquharson, and Mr. Clutton; the Honorary Secretaries and Treasurer (Drs. Duckworth, Greenfield, and Potter) being members *ex officio*. This Committee was authorised to take any steps necessary for carrying out the purposes of the memorial. It was decided to summon a general meeting of the subscribers on Monday next, at 5 P.M., at Dr. Duckworth's house, 11, Grafton Street, Piccadilly, to discuss certain proposals that have been laid before the Committee. A communication was read from the Edinburgh Secretary, relative to the progress of the movement in Scotland.

A general meeting of subscribers to the above was held at 11, Grafton Street, Piccadilly, on the 30th ultimo, when Dr. Risdon Bennett, F.R.S., President of the Royal College of Physicians, occupied the chair.

On the motion of Dr. BURNEY YEO, seconded by Professor LISTER, it was carried: "That this meeting resolves that the award of the Murchison Memorial Scholarship in London shall be open to students in all the London medical schools, without reference to graduation in any university."

Dr. BRISTOWE proposed and Dr. FARQUHARSON seconded: "That the Committee be empowered to request the Royal College of Physicians to administer the London scholarship." This was carried unanimously.

Professor LISTER moved and Dr. BRISTOWE seconded: "That, in order that there be not two separate appeals to the public, the promoters of the London and Edinburgh Memorial are willing to guarantee to the St. Thomas's Hospital Memorial Committee the sum of £300 for a bust or other memorial, in connection with St. Thomas's Hospital, on condition that all subscriptions received by the latter be added to the common memorial fund."

The Executive Committee was formed, consisting of the following gentlemen: Mr. Lister, Dr. Ralfe, Dr. Quain, Dr. Farquharson, Mr. Sibley, Sir Joseph Fayrer, Dr. Burdon Sanderson, Mr. Hyde Hills, Dr. A. P. Stewart, Mr. Clutton, Dr. Van der Byl, Dr. Bristowe, Mr. T. D. Acland, Dr. Russell Reynolds, the honorary secretaries, and treasurer, and it was empowered to take all steps needful for the carrying out the purposes of the memorial.

NEW WING AT NORMANSFIELD.

ON Saturday, June 21st, the new wing and recreation-hall of the Normansfield Training College for the Feeble in Mind was opened by the Earl of Devon. In spite of the inclemency of the weather, there was a large gathering in response to Dr. Down's hospitable invitation.

Among the assembled guests were Grant Duff, Esq., M.P., the President of the Royal College of Physicians, Drs. Bucknill, F.R.S., Hack Tuke, Harrington Tuke, Crichton Browne, Ferrier, F.R.S., Orange, Graily Hewitt, Braxton Hicks, F.R.S., W. B. Carpenter, F.R.S., Lalor, Gray (Superintendent of the New York State Asylum), Mr. Spencer Wells, many of Dr. Down's colleagues at the London Hospital, and others. The assembly met in the *Kindersaal*, after which the party proceeded to inspect the building, which could accommodate one hundred patients before the new wing was added. The new buildings furnish space for fifty more patients, so that the institution has lost the characteristics of a private house. After inspecting the bed-rooms and other rooms, under the guidance of Dr. Down and Mr. Plumb, the architect, the company gathered together in the recreation-hall, which is a large private theatre intended for readings, etc. The whole building is creditable in the highest degree, alike to architect and to proprietor. A profusely generous luncheon was spread in this hall, the appearance of which was very appetising; while Dr. Down gave some account of how this magnificent institution had been brought about. Thirty-one years ago, he was one of a party who were waited upon, in a country inn in Devonshire, by a girl of feeble mind. At the sight of her, an impulse sprang up in his mind to do something for such unfortunates. This dream of his life, as he termed it, continued to guide him all along his career through his experiences at Earlswood, until his hopes had culminated in the present buildings at Normansfield. This position was selected by Dr. Down in consequence of his acquaintance with the fact that imbeciles and idiots require a high temperature; and Normansfield, situated at Hampton Wick, a few miles higher up the Thames than Kew Gardens, offered a peculiarly suitable site within an easy reach of town. The bed-rooms of these patients are kept up to 60° Fahrenheit throughout the winter, and the necessity for a high temperature presents considerable difficulties in the way of efficient ventilation, which, however, have been very successfully overcome.

The Earl of Devon addressed the company, expressing his great satisfaction with the institution, and the completeness of the arrangements; after which the company sat down and evidently enjoyed their repast, amidst the strains of the band of the Grenadier Guards. The usual loyal speeches followed, General Cavanagh responding for the Army; but the programme was cut short by the time arriving for the departure of the return train. A special train with free passes had been provided for the party; and, as the different members of it returned to town, each felt that he had taken part in a good work, and wished Dr. and Mrs. Down all success in their efforts—so admirably carried out—for the further education of the feeble in mind.

THE ARMY IN AFGHANISTAN.

WE have received the following notes from a correspondent with the First Division of the Peshawur Valley Field Force, dated Safed Sung, near Gundamuck, May 22nd, 1879.

The troops are still suffering a good deal from fever and diarrhœa; the former of a remittent type, especially severe in young soldiers, and doubtless induced by malarial poison.

Expeditions are frequently made by brigades into the neighbouring hills (Safed Rho), to an elevation of 8,000 or 9,000 feet, from which the men derive much benefit and pleasure, freeing them from the monotony of camp-life, where the dust is sometimes intolerable, and giving them advantage of shade under the magnificent forest-trees with which the lower ranges of the Safed Rho are thickly covered; the higher ranges having still a thick coating of snow. It is contemplated to send a portion of the division to occupy some of these heights, should the troops remain at Safed Sung during the summer.

The divisional field-hospital system has done good work and held its ground in this division since the commencement of the campaign, notwithstanding the opposition and want of sympathy shown to it by some military authorities. Each regiment has a medical officer attached to it, who administers to the immediate wants of the men, and daily selects certain sick to be sent to the field-hospital, where the organisation is now so far complete that everything works smoothly. There is an experienced staff of seven or eight medical officers with the field-hospital, some of whom have duties detailed of a perfectly non-professional character, such as the supervision of camp-equipage, transport-animals, building of lavatories and latrines, etc., but which have been undertaken with an activity and zeal highly creditable to the officers of the Army Medical Department. The building of grass huts for the sick in the field-hospital continues. Three have already been completed by the Madras and Bengal Sappers and Miners, with the aid of those uncommonly handy little fellows the 4th Ghoorkas. These huts afford great relief, by their comparative coolness, to the fever-stricken cases. Nor is loyalty forgotten on the heights above Gundamuck, as we observe one tent bears the title in large letters of the "Victoria Ward"; another, the "Alexandra"; and the third, the "Alice". Bedside tables have been extemporised out of old tea-chests supplied by the commissariat, and tumblers from bottles cut in two.

Though cholera has been reported at Ali Musjid, Lundi Rhotal, and Jelallabad, fortunately no cases have as yet occurred among the advanced troops. The medical authorities have, however, made all necessary arrangements for its approach.

The nights are becoming warm. The thermometer during the day in the tents is 97° Fahr. Snow is still brought in large quantities from the Safed Rho, and is one of the greatest comforts to the sick for cooling other drinks.

The Director of the Medical Department of Yakoob Khan's Army is, we are informed, in camp with him at Gundamuck. It is to be hoped he may be induced to visit our British and native hospitals.

HYDROPHOBIA.

THE *Medical Press and Circular* gives some extremely interesting, though painful, details of some cases of hydrophobia traced to a mad dog in Preston, which bit five children, two men, three donkeys, and ten dogs. Two of the children have died. The evidence given at the inquest appears to have been unsatisfactory; and we regret to say that, notwithstanding the repeated intimations which have been made that the Hydrophobia Committee of the British Medical Association are investigating the etiology, pathology, and treatment of rabies and hydrophobia, and that the services of Dr. Sanderson, F.R.S., Dr. Lauder Brunton, F.R.S., Mr. Callender, F.R.S., Dr. Gowers, and now we are glad to be able to add of Dr. Greenfield, are at the disposal of those who have occasion to see cases either of hydrophobia or of rabies, in neither of these cases have those services been availed of, nor have any particulars been furnished by the practitioners in charge. We would venture to suggest that—seeing the tragic social interest and great scientific importance of cases of rabies and hydrophobia, considering how

powerless we are at the present moment to contribute by any adequate certain knowledge to the cure of this terrible malady—it may be considered a duty on the part of individual medical men who meet with such cases to do their part in aiding the investigation, for the expenses of which the Association has granted funds. Such assistance can be given in the first instance by informing the Honorary Secretary, Mr. Ernest Hart, by telegram, whenever a case of hydrophobia or of rabies comes under notice; secondly, by obtaining permission for the examination of any rabid living or dead animals, or of living animals suspected of rabies by the veterinary officer of the Brown Institute, whose services are available for the purpose; thirdly, by availing of the generous willingness of Dr. Sanderson, Dr. Brunton, or Mr. Callender personally to visit patients suffering from the disease in consultation with the medical man—an offer which they make with the object of collecting into one focus all the available accurate clinical knowledge which can be obtained, and of putting their knowledge and their services at the disposal of the practitioners in charge, as well as collecting information valuable to science and to humanity. Finally, pathological materials in fatal cases should be forwarded for study by Dr. Gowers or Dr. Greenfield, who have already with much labour prosecuted a part of the necessary examination by the delicate methods which modern science requires.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-SEVENTH ANNUAL MEETING.

THE Forty-Seventh Annual Meeting of the British Medical Association will be held at Cork, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1879.

President: R. W. FALCONER, M.D., F.R.C.P., D.C.L., Consulting Physician to the Royal United Hospital, Bath.

President-Elect: DENIS C. O'CONNOR, A.B., M.B., Professor of the Practice of Medicine in Queen's College, Cork.

An Address in Medicine will be delivered by ALFRED HUDSON, M.D., M.R.I.A., Regius Professor of Physic in the University of Dublin.

An Address in Surgery will be delivered by WILLIAM S. SAVORY, M.B., F.R.C.S., F.R.S., Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.

An Address in Public Medicine will be given by ANDREW FERGUS, M.D., President of the Faculty of Physicians and Surgeons of Glasgow.

The business of the Association will be transacted in Six Sections.

SECTION A.: MEDICINE.—*President:* Andrew Clark, M.D., F.R.C.P. *Vice-Presidents:* James Little, M.D.; William Townsend, M.D. *Secretaries:* George F. Duffey, M.D., 30, Fitzwilliam Place, Dublin; Benjamin Spedding, L.R.C.P.Edin., 17, Cherry Mount, Belfast.

SECTION B.: SURGERY.—*President:* Professor W. K. Tanner, M.D. *Vice-Presidents:* W. Mac Cormac, F.R.C.S.Eng.; J. Cooper Forster, F.R.C.S.Eng. *Secretaries:* J. G. Curtis, F.R.C.S.I., 7, Camden Place, Cork; N. J. Hobart, M.D., 33, South Mall, Cork; Stephen O'Sullivan, M.D., 6, Camden Place, Cork.

SECTION C.: OBSTETRIC MEDICINE.—*President:* George H. Kidd, M.D. *Vice-Presidents:* W. J. Cummins, M.D.; Alfred Wiltshire, M.D. *Secretaries:* Professor R. J. Kinkead, M.D., Galway; Fancourt Barnes, M.D., 39, Weymouth Street, London.

SECTION D.: PUBLIC MEDICINE.—*President:* T. W. Grimshaw, M.D. *Vice-Presidents:* H. J. Littlejohn, M.D.; C. Meymott Tidy, M.B. *Secretaries:* J. L. Notter, M.D., Netley; James Martin, L.K.Q.C.P., Portlaw, County Waterford.

SECTION E.: PSYCHOLOGY.—*President:* J. A. Eames, M.D. *Vice-Presidents:* Henry Rayner, M.D.; Herbert C. Major, M.D. *Secretaries:* Oscar T. Woods, M.D., Killarney; Ringrose Atkins, M.D., Waterford.

SECTION F.: PHYSIOLOGY.—*President:* Henry Power, F.R.C.S. *Vice-Presidents:* Professor John J. Charles, M.D.; Reuben J. Harvey, M.D. *Secretary:* W. H. Allchin, M.B., 34, Wimpole Street, London.

Secretary to the Physiological Museum: C. Y. Pearson, M.D., Cork.

Secretaries to Museum Committee: T. Gelston Atkins, M.D.; C. Harvey, M.D.

Honorary Local Secretary: Professor H. MACNAUGHTON JONES, M.D., St. Patrick's Place, Cork.

Honorary Assistant Local Secretaries: RINGROSE ATKINS, M.D. Waterford; D. C. O'CONNOR, jun., L.R.C.P. & S.Ed., 2, Camden Place, Cork.

TUESDAY, AUGUST 5TH, 1879.

10 A.M.—Meeting of Committee of Council.
11 A.M.—Meeting of the Council of 1878-79.
3 P.M.—General Meeting. President's Address; Annual Report of Council, and other business.
8 P.M.—Reception by the President of the Association and the Local Reception Committee at Queen's College.

WEDNESDAY, AUGUST 6TH.

9.30 A.M.—Meeting of Council of 1879-80.
11 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—Reception by the Mayor, Corporation, and Citizens of Cork.

THURSDAY, AUGUST 7TH.

9 A.M.—Meeting of the Committee of Council.
10 A.M.—Third General Meeting. Reports of Committees.
11 A.M.—Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 8TH.

10 A.M.—Address in Public Health.
11 A.M.—Sectional Meetings.
1.30 P.M.—Concluding General Meeting.
4 P.M.—Garden Party by Reception Committee at Queen's College.
8 P.M.—Concert by the Reception Committee.

Arrangements have been made for providing a Subsection of Ophthalmology and Otology in the Surgical Section. Mr. Jonathan Hutchinson, F.R.C.S., has consented to take the Chair. Dr. James Patterson Cassells, of Glasgow, will act as Honorary Secretary for Otology; and Mr. H. R. Swanzy, of 23, Merrion Square North, Dublin, and Mr. Edward Nettleship, of 4, Wimpole Street, London, will act as Secretaries for Ophthalmology.

There will also be a Subsection of Dermatology in the Section of Medicine. Professor McCall Anderson has consented to take the Chair, and Mr. Malcolm A. Morris, 63, Montagu Square, Hyde Park, W., London, and Dr. Walter Smith, 34, Lower Baggot Street, Dublin, will act as Honorary Secretaries.

SECTIONAL ARRANGEMENTS.

SECTION A.—MEDICINE.

The following subjects have been selected for discussion in the section.

1. "On the Value of Mountain Air in the Treatment of Phthisis." Drs. H. Bennet, Clifford Allbutt, Berkart, Cuming, and Roberts have notified their intention of taking part in the discussion.

2. "Alcohol in Fever." Drs. James Little, Macnaughton Jones, Tibbits, Balthazar Foster, Norman Kerr, Gairdner, Wade, and Cuming will read papers and take part in the discussion on this subject.

3. "Tracheotomy in Croup." Drs. Wm. Squire and Corley, Mr. R. W. Parker, Drs. William Thomson, Cuming, John Moore, and Mr. William Stokes will read papers and take part in the discussion on this subject.

The following papers are also promised for this section.

ALLBUTT, T. Clifford, M.D., and JACOB, E. H., M.B. Simple Dilatation of the Stomach, and its Treatment.
BEARD, George, M.D. (New York). Inebriety, and allied Nervous Diseases in America.
COLLIE, Alexander, M.D. The Cold Bath in the Treatment of Enteric Fever.
CUMING, James, M.D. A Case of Diplegia.
DONKIN, Horatio, M.B. Some cases of Abnormally High Temperature.
DRYSDALE, Charles R., M.D. Syphilitic Albuminuria.
ELLIOT, Robert, M.D. Some rare and inexplicable Nervous Affections.
FOTHERGILL, J. Milner, M.D. Diagnostic Ceremonial.
HAYDEN, Thomas, F.K.Q.C.P.I. Certain Varieties of Cardiac Neurosis.
HOWIE, James M., M.B. The Power of Alcohol to Prolong Life in Wasting Disease.
MAC CORMAC, Henry, M.D. Tubercle and Tubercular Disease: their Genesis and Origin.
MACKENZIE, Morell, M.D. Laryngeal Phthisis.
SAUNDBY, Robert, M.D. Albuminuria.
SMITH, Walter, M.D. The Bismuth-test for Grape-Sugar.
SQUIRE, William, M.D. The Influence of Treatment in the Cure of Rheumatic Fever before and since the employment of Salicylic Acid.
TIBBITS, Edward T., M.D. 1. The Modern Theory of the Action of Digitalis.

Subsection of Dermatology.

A discussion on "Lupus, its Varieties and Treatment", will be opened by Mr. Jonathan Hutchinson. Mr. Cottle, Mr. Johnson, Mr. Malcolm Morris, Mr. Balmanno Squire, Mr. Startin, Dr. Stowers, and Dr. Thin will take part in the debate. The following papers will be read in connection with this subject.

ANDERSON, T. McCall, M.D. The Use of Iodide of Starch in the Treatment of Lupus Erythematodes.
SQUIRE, Balmanno, M.B. The Treatment of Lupus by Linear Scarification.
STOWERS, J. HERBERT, M.D. On Lupus.

The following papers will also be read in this subsection.

FARQUHARSON, Robert, M.D. The Use of Arsenic in Skin-Diseases.
MOORE, Charles F., M.D. Notes on Erythema Nodosum.
MORRIS, Malcolm A., Esq. 1. On Scarification as a New Remedy in Skin-Diseases. 2. Some Remarks on Molluscum Contagiosum.

SANGSTER, Alfred, M.B. On so-called Hydroa.
SMITH, Walter G., M.D. 1. On a peculiar Moniliform or Varicose Condition of the Hair. 2. On Favus: a Case of Infection traced to a Cat, with Specimen.
THIN, George, M.D. On Cancerous Ulcers of the Skin.

SECTION B.—SURGERY.

The special subjects for discussion in this section are:

1. "Subcutaneous Osteotomy." The discussion will be opened by Mr. William Adams. The following gentlemen will take part in the discussion: E. H. Bennett, M.D.; John Fagan, Esq.; Rushton Parker, Esq.; and Dr. A. Ogston; and papers in connection with this subject are promised by the following members.

BRODHURST, Bernard E., Esq. On an Operation for Genu Valgum, with some Remarks on Osteotomy.
GANT, F. J., Esq. Subcutaneous Osteotomy below the Trochanter.
MACEWEN, William, M.D. Antiseptic Osteotomy.
PARKER, Robert W., Esq. Subcutaneous Osteotomy in Young Children.

2. "The Diagnosis and Treatment of Joint-Diseases in their various stages." Dr. Lewis A. Sayre of New York will open the discussion. The following gentlemen have promised to take part in the discussion on the subject: E. H. Bennett, M.D.; E. D. Mapother, M.D.; and Rushton Parker, Esq.

Papers are also promised by:

FAGAN, John, Esq. Notes on the Treatment of Disease of the Wrist-Joint, with Report of a Successful Case of Excision in a Child Six Years Old.
GANT, F. J., Esq. On Excision of the Knee-Joint under special circumstances.
JOHNSON, Z., Esq. On the Free Opening of Joints.
JONES, H. Macnaughton, M.D. Exhibition of Cases illustrative of Operative Interference in Diseases of the Hip, Knee, and Ankle-Joints.
STOKES, William, M.D. On Resection in Joint-Disease.
TEALE, T. Pridgin, Esq.

3. "Treatment of Aneurism by Electrolysis." A paper on this subject will be read by Dr. Herbert Tibbits. The following gentlemen have promised to take part in the discussion: Joliffe Tufnell, Esq.; T. Clifford Allbutt, M.D.; and Balthazar Foster, M.D.

The following communications on various subjects are also promised.

ANDREW, Edwyn, M.D. On a New Method of Using Ice, especially in cases of Operation.
BENNETT, E. H., M.D. 1. On Comminuted Fractures of the Upper Third of the Femur. 2. On Colles' Fracture. 3. An Analysis of the Varieties of Compound Fractures.
FAGAN, John, Esq. 1. Will exhibit some Splints, which he thinks are novel, and believes to be good. 2. Morbid Specimens.
HILL, Berkeley, Esq. On the Effect of Stricture near the Meatus in causing Subpubic Contraction of the Urethra.
JOHNSON, Z., Esq. 1. On a Special and Peculiar Treatment of Varus (to be illustrated on a living example, if possible). 2. On a Special Treatment of Nævus. 3. On a Splint and Foot-piece (original), to be exhibited.
MCDONNELL, Robert, M.D. The Intravenous Injection of Blood and other Fluids.
MELDON, Austen S., Esq. The Intravenous Injection of Milk.
OWEN, Edmund, Esq. Remarks on the Cause of Eversion of the Limb after Fracture of the Neck of the Femur.
PARKER, Rushton, Esq. On Amputation through the Femoral Condyles by the Methods of Lister and Stokes.
STEELE, Charles, Esq. On Chair-supports for Spinal Curvatures (chair to be exhibited).
TEEVAN, W. F., Esq. One Hundred Cases of Operation for Stone in the Bladder.
THOMSON, William, M.D. On Dupuytren's Fracture.

Subsection of Ophthalmology and Otology.

Ophthalmology.—The following are the subjects for discussion.

1. "The Treatment of Glaucoma." The discussion will be opened by Mr. Power of London. The following papers will be read in connection with this subject.

COWELL, G., Esq. On Glaucoma.
TAYLOR, C. Bell, M.D. Sclerotomy and Iridectomy in Glaucoma.
DE WECKER, Dr. Sclerotomy for Chronic Simple Glaucoma.

2. "Examination for Colour-Blindness." The discussion will be opened by Mr. R. Swanzy of Dublin. A paper on the subject is promised by Professor Cohn of Breslau.

3. "The Use of Eserine, Pilocarpine, Gelsemine, Duboisin, etc." The discussion will be opened by Professor Macnaughton Jones. The following paper is promised.

DE WECKER, Dr. The Use of Mandragorin.

4. "Treatment of Detached Retina." The discussion will be opened by Mr. T. Shadford Walker of Liverpool.

5. "Tobacco and Alcoholic Amblyopia." The discussion will be opened by Dr. Hirschberg of Berlin.

6. "Diphtheritic Ophthalmia." The discussion will be opened by Mr. Nettleship.

Dr. Loring (New York) and others have expressed their willingness to take part in the discussions on the above subjects.

The following gentlemen have intimated their intention of reading communications.

BROWNE, Edgar A., Esq. Some Clinical Aspects of Optic Neuritis.
FITZGERALD, C. E., M.D. On Knapp's Peripheral Division of the Capsule in Cataract-Extraction.
GLASCOTT, C. E., M.D. Report on the Results of the last Two Hundred Cases of Cataract Extraction by the modified Linear Operation.
JONES, H. Macnaughton, M.D. Eye-Dressings after Operations.
TAYLOR, C. Bell, M.D. 1. Synopsis of several hundred Cases of Cataract Extraction. 2. Therapeutic Use of Electricity in certain cases of (so-called) Amaurosis.

Otology.—The following subjects will be discussed in this department:

1. "The Therapeutic Value of Intratympanic Injections of Medicated Fluids in the Catarrhal Affections of the Middle-Ear." Dr. Cassells will open the discussion on this question, and the following gentlemen have promised to take part in it: Dr. Weber-Liel of Berlin; Dr. Schuster of Aix-la-Chapelle; Dr. Bonnafont of Paris; Professor Macnaughton Jones of Cork; Mr. Lennox Browne of London; Dr. Kirk Duncanson of Edinburgh; Mr. W. Douglas Hemming. Dr. Weber-Liel will also give a practical demonstration of the use of his "Koniontron" for intratympanic fluid injections.

2. "On Tinnitus Aurium." Dr. Laurence Turnbull of Philadelphia, U.S.A., has promised to open the discussion on this question, and the following gentlemen will take part in it: Professor Macnaughton Jones of Cork; Mr. Lennox Browne of London; Dr. Kirk Duncanson of Edinburgh; Dr. Alexander Ogston of Aberdeen; Mr. W. Douglas Hemming of Bournemouth; Dr. Weber-Liel of Berlin; Dr. Bonnafont of Paris; Dr. Schuster of Aix-la-Chapelle; and Dr. Woakes of London. Dr. Weber-Liel will demonstrate practically his method of operating in tenotomy of the tensor tympani muscle. He will also demonstrate the use of his ear-microscope on the cases of patients. The following papers on the subject are promised.

HEMMING, W. D., Esq. On the Forms, Causes, and Treatment of Tinnitus Aurium.
SEXTON, Samuel, M.D. (New York). On Tinnitus Aurium.
TURNBULL, Lawrence, M.D. (Philadelphia). A Table of 164 cases of Tinnitus Aurium, and Remarks thereon.

The following papers are also promised for this department.

CASSELLS, James Patterson, M.D. 1. On the production of Artificial Deafness, and its bearing on a theory of the Etiology and Evolution of Ear-Diseases (illustrated). 2. Ear-Disease and Life Assurance. 3. On Aural Exostoses; and on a new Operation for their Removal (illustrated).
MCKEOWN, William A., M.D. 1. On the Treatment of Relaxed Membrana Tympani. 2. On Aural Gymnastics.
TURNBULL, Charles S., M.D. (Philadelphia). 1. Inflation of the Middle Ear in cases of Cleft Palate, both before and after Staphyloraphy. 2. Chloroform-Vapour in Inflation of the Middle Ear.
WOAKES, Edward, M.D. Throat-Deafness associated with Paresis of the Palato-Tubal Muscles.

SECTION C.—OBSTETRIC MEDICINE.

The subjects for discussion in this section are:

1. "Hæmorrhage from the Genital Organs during Pregnancy and Parturition." The discussion will be opened by Dr. Macan, and the following gentlemen have signified their intention of taking part therein: Professor Macnaughton Jones, Dr. Robert Barnes, Mr. Lawson Tait, Dr. Lombe Atthill, Dr. Malins, and Dr. Edis.

2. "Intra-uterine Medication." The discussion will be opened by Dr. W. S. Playfair. Dr. Tilt, Dr. Cordes, Professor Dill, and Dr. Byford will join in the discussion. The following papers will be read in connection with this subject.

BATTEY, Robert F., M.D. Intra-uterine Medication by Iodised Phenol.
DILL, R. T., M.D. Intra-uterine Medication.
PLAYFAIR, W. S., M.D. Intra-uterine Medication.
TILT, Edward J., M.D. Remarks on Intra-uterine Surgery.

The following papers are also promised for the Section of Obstetric Medicine.

ATTHILL, Lombe, M.D. Inversion of the Uterus.
BARNES, Fancourt, M.D. A case in which Phlegmasia Dolens simultaneously attacked both legs and the left arm.
BARNES, Robert, M.D., F.R.C.P. A Case of Inversion of the Uterus.
BATTEY, Robert F., M.D. A *résumé* of the Results of a series of Operations for the artificial production of the Change of Life in Women.
BYFORD, W. H., M.D. The Treatment of Fibroid Tumours of the Uterus by Ergot.
COPEMAN, E., M.D. The Treatment of Severe Sickness during Pregnancy.
EDIS, Arthur W., M.D., F.R.C.P. Acquired Sterility: its Cause and Treatment.
HAYES, J. R., M.D. A Case of Extra-Fœtation.
KERR, Norman, M.D. Warm Water Injections in *Post Partum* Hæmorrhage.
LYSTER, C. E. M.D. The Treatment of Subinvolution of the Uterus.
MADDEN, Thomas More, M.D. On the Judicious Use and Selection of Embryospastic Operations.
MALINS, Edward, M.D. Treatment of Conical Cervix of the Uterus.
WILTSHIRE, Alfred, M.D., F.R.C.P. A Case of Tetanus during Pregnancy: Recovery.

SECTION D.—PUBLIC MEDICINE.

The special subjects selected for discussion are:

1. "The Influence of Drinking-Water in originating or propagating Enteric Fever, Diarrhœa, Diphtheria, and Scarlatina; to be illustrated, as far as possible, by instances which have come under the personal observation of the speaker." The discussion will be opened by Andrew Fergus, M.D., and the following members have promised to read papers and take part in the discussion: Edward Ballard, M.D.; Alfred Carpenter, M.D.; and C. Meymott Tidy, M.B., F.C.S.

Papers in connection with this subject will also be read by:

HUDSON, Robert S., M.D. Facts illustrative of the Spread of Enteric Fever and Diarrhœa by the Agency of Polluted Drinking-Water.

KERR, Norman S., M.D. Typical Cases of Enteric Fever, Diarrhœa, Scarlatina, and Diphtheria, from Drinking-Water.
NOTTER, J. Lane, B.A., M.D. On the Value of Chemical and Microscopic Analysis in its relation to this question.

2. "How are we to deal, by isolation or otherwise, with Convalescents from Acute Infective Diseases, so as to limit the spread of Disease?" The discussion on this question will be opened by John W. Moore, M.A., M.D. The following members have promised to read papers and take part in the discussion: Francis Vacher, L.R.C.P., and Arthur Ransome, M.A., M.D.

Notice of papers to be read are given by the following members.

BERNARD, A., M.B. Reasons why the Contagious Diseases Acts ought to be extended to all Seaports.
BONNAFONT, Dr. (Paris). Hygiene.
CHAPMAN, John H., L.K. & Q.C.P.I. On the Sanitary Arrangements of Dwellings.
DRYSDALE, Charles R., M.D. The Mortality of the Rich and Poor.
HART, Ernest, Esq. Sanitary Districts and Sanitary Administration under the Public Health Acts, with Maps and Tabular Statements.
NOTTER, J. Lane, M.D., The Experimental Study of Disinfectants.
ROGERS, Joseph, M.D. The Grievances of the Poor-law Medical Officers in the United Kingdom, with Suggestions for their Removal.

SECTION E.—PSYCHOLOGY.

The following papers are promised.

ATKINS, Ringrose, M.D. 1. The Treatment of Hysterical Hemianæsthesia by Metals. 2. Softening of the Bones amongst the Insane.
SEGUIN, E., M.D. The Psycho-Physiological Training of an Idiot Hand.
TUKE, D. Hack, M.D. Intemperance in Study.

SECTION F.—PHYSIOLOGY.

The following papers are promised.

CHARLES, J. J., M.A., M.D. 1. The propagation of Nervous Impulses. 2. The Circulation of Blood through the Lungs.

EXCURSIONS.

His Grace the Duke of Devonshire has generously intimated his intention to entertain the members of the Association who visit Lismore and the Blackwater, and to open the Castle grounds for the visitors.

On Saturday, August 9th, there will be excursions to the Lakes of Killarney, the Blackwater Valley, and the River and Harbour.

Sir George Colthurst, Bart., has generously intimated his intention to entertain the members of the Association at Blarney during the intended visit.

There will be an excursion in the North of Ireland arranged for the Wednesday following the meeting, under the direction of Dr. Walter Bernard, of Londonderry, including Lough Swilly, Muckish, and Errigat Mountains, Donegal, Derry, Giants' Causeway, and Belfast.

Special arrangements are being completed for the excursions of the Association and the carriage of specimens, etc.

All the steam-packet companies will convey goods to the Museum and for the Sanitary Exhibition free of charge.

Any persons requiring description of tours in South of Ireland can have same on application to the Honorary Local Secretary.

Special arrangements are being made for Cook's tourist tickets, and special trains to meet steamers, etc.

Intending visitors are requested to communicate with Professor Macnaughton Jones as soon as possible, stating whether they will bring ladies with them.

Information regarding the journey to Cork, lodgings, etc., will be given in a future number of the JOURNAL.

FRANCIS FOWKE,
General Secretary of the British Medical Association.
161a, Strand, London, May 22nd, 1879.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, on Wednesday, the 9th day of July next, at 2 o'clock in the afternoon.

FRANCIS FOWKE,
161A, Strand, London, June 12th, 1879. *General Secretary.*

NORTHERN COUNTIES OF SCOTLAND BRANCH.

THE annual meeting of this Branch will be held at Elgin, on Thursday, the 10th July next, at Twelve noon; Dr. NORRIS MACKAY, Elgin, President,

Discussion on Croup and Diphtheria.

Gentlemen who are desirous to read papers, or to bring any subject before the meeting, are requested to give notice to the Secretary not later than July 7th.

WILLIAM BRUCE, *Honorary Secretary.*
Dingwall, June 24th, 1879.

METROPOLITAN COUNTIES BRANCH.

AN adjourned general meeting of this Branch will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Wednesday, July 16th, at 8 P.M. precisely; when the discussion on Medical Education will be resumed.

ALEXANDER HENRY, M.D.
W. CHAPMAN GRIGG, M.D. } *Hon. Secs.*
57, Doughty Street, W.C., June 26th, 1879.

METROPOLITAN COUNTIES BRANCH.

THE twenty-seventh annual meeting of this Branch will be held at the Ship Hotel, Greenwich, on Friday, July 25th, 1879, at 4 P.M.

At 6 P.M., the members will dine together; JOHN WOOD, Esq., F.R.S., in the Chair. Tickets, 14s. each (inclusive of attendance, and exclusive of wine). Members intending to be present at the dinner are specially requested to give notice to the Secretaries on or before July 22nd.

ALEXANDER HENRY, M.D.,
WM. CHAPMAN GRIGG, M.D., } *Honorary Secretaries.*
57, Doughty Street, W.C., July 1st, 1879.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of this Branch will be held in Aberdeen, on Saturday, July 19th, at half-past One o'clock.

Further particulars will be given by circular.

A. OGSTON,
J. URQUHART, } *Honorary Secretaries.*
Union Street, Aberdeen, June 26th, 1879.

BORDER COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the County Hotel, Carlisle, on Friday, July 25th, at One o'clock.

Gentlemen intending to read papers are requested to give early notice thereof to one or other of the Secretaries.

RODERICK MACLAREN,
JOHN SMITH, } *Honorary Secretaries.*
Carlisle, June 24th, 1879.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Luttrell Arms Hotel, Dunster, on Thursday, July 24th, at 5 o'clock.

Dinner at 6 o'clock: THOMAS CLARK, Esq., President.

The President invites the members of the Branch to lunch at One o'clock, and afterwards to visit with him Dunster Castle, the Church, and Minehead.

W. M. KELLY, M.D., *Honorary Secretary.*
Taunton, July 1st, 1879.

NORTH WALES BRANCH.

GENTLEMEN intending to read papers at the next annual meeting of the above Branch, are requested to forward the titles to the Honorary Secretary by the 8th instant, that they may be included in the usual circular.

Unpaid subscriptions will be acknowledged by the Honorary Treasurer, Mr. Wm. Williams, the Asylum, Denbigh.

J. LLOYD ROBERTS, *Honorary Secretary.*
Denbigh, July 1st, 1879.

SOUTH OF IRELAND BRANCH: QUARTERLY MEETING.

THE quarterly meeting of the above Branch was held in the Royal Cork Institution, on June 4th, and then merged into a meeting of the Local Reception Committee of the approaching annual meeting of the Association.

In the evening, twenty members and friends dined at Lloyd's Hotel.

REPLANTATION OF TEETH.—We are informed that Dr. Thompson (of San Francisco), who is staying for a time in London, will perform the operation of replantation of a tooth at the National Dental Hospital, Great Portland Street, at 9.30 A.M., on Thursday next, July 10th. Dr. Thompson has introduced one or two novel features into the operation that we believe will make the demonstration specially interesting. It is, of course, open to any member of the profession to attend.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Monday, June 30th.

A New University.—Lord WINMARLEIGH asked the Lord President of the Council whether the Government had decided on the advice which should be given to Her Majesty with regard to the institution of a new University in accordance with a petition which had recently been presented to Her Majesty.—The Duke of RICHMOND and GORDON replied that a petition had been presented to the Queen in Council praying Her Majesty graciously to grant a charter to a northern University to be called the Victoria University, and that the Government had thought it right to advise Her Majesty to grant the prayer of the petitioners.

HOUSE OF COMMONS.—Monday, June 30th.

Infant Mortality.—Mr. A. MILLS asked the Secretary of State for the Home Department whether he had received a memorial from the guardians of the poor in the city of Exeter, calling his attention to the increase of infant mortality there; and whether it would be possible to amend the Infant Life Protection Act, 1872, and the Registration Act, 1874, so as to bring foster-mothers who had charge of one infant only, and all persons who may procure the burial of stillborn children without obtaining a medical certificate, within the provisions of these statutes.—Mr. CROSS said that the memorial had been received, and he had consulted the Local Government Board on the subject. He was told that, in their opinion, neither of the suggestions of the guardians was practicable. Each of those suggestions had been considered and rejected at the time when the Bills relating to them respectively were passing through Parliament. He might, however, add that he had issued a circular to the different local authorities and members of the police force requesting that the provisions of the Act for the Protection of Infant Life should be properly put in force.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE POOR-LAW MEDICAL SERVICE.

SIR,—Would you kindly allow me to inform Poor-law medical officers that I propose to read a paper, in the Public Medicine Section of the British Medical Association meeting, at Cork, in August next, on the Grievances of the Poor-law Medical Service in the United Kingdom, with suggestions for their removal? Would you further permit me to state that I shall be obliged if gentlemen aggrieved will write and inform me of their troubles?—I am, sir, your obedient servant,

33, Dean Street, W. JOSEPH ROGERS.

NOTIFICATION OF INFECTIOUS DISEASE.

As a necessary complement to their order of the 12th February last (see p. 374), the Local Government Board have now imposed upon every medical officer appointed by the Board of Management of a District School after the 24th instant, the duty of giving notice to the Clerk or to the Medical Officer of Health of the Sanitary District within which the building is situated, of the occurrence of contagious, infectious, or epidemic disease of a dangerous character amongst the pauper patients under his care, and of furnishing to the Medical Officer of Health, from time to time, information with respect to sickness and deaths amongst such patients. He will also be required to observe any regulations which the Local Government Board may make under the exceptional powers conferred upon them by Section 134 of the Public Health Act. It is significant as well as hopeful that the Local Government Board are using every opportunity in their power to secure this notification to sanitary authorities of the occurrence of cases of preventable sickness.

THE SANITARY STATE OF LYMINGTON.

A REPORT recently presented to the Local Government Board by Dr. Hubert Airy on the sanitary state of Lymington, possesses more than a local interest, since it is a valuable contribution to the question whether the germ theory of disease is correct or not. Dr. Airy shows that not only is the general sanitary administration lax, but the system of excrement disposal (garden privies) is both offensive and dangerous, the sewerage is defective and leaky, and the water-supply (derived from wells in porous gravel) is obviously exposed to pollution. Yet zymotic diseases have been for the last eight years conspicuous by their absence, and the average general death-rate is only 17.5 per 1,000. It will be a nut to crack for the supporters of the pythogenic hypothesis, how, notwithstanding these manifold noxious nfluences, Lymington has managed during all this time to escape a visitation of infectious disease.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, June 26th, 1879.

Scale, Thomas William, Aberdare
Sutcliffe, Joseph, 154, Larkhall Lane, S.W.

The following gentlemen also on the same day passed their primary professional examination.

Morris, William, King's College
Wheeler, Frederick John, King's College

UNIVERSITY OF DURHAM.—In the final examination for degrees in Medicine and Surgery, held at the College of Medicine on June 16th, 17th, 18th, and 19th, 1879, the following satisfied the examiners.—For the Degree of Bachelor of Medicine.

Bowman, Hugh Torrington, College of Medicine and St. Bartholomew's Hospital
Crick, Samuel Arthur, College of Medicine and St. Thomas's Hospital
Dodd, John R., College of Medicine and St. Bartholomew's Hospital
Green, —, College of Medicine
Ryan, Joseph, College of Medicine and Dublin Medical School
Trewman, George Turner, College of Medicine and Westminster Hospital
Tyson, William Joseph, College of Medicine and Guy's Hospital
Willis, Charles Fancourt, College of Medicine and St. Thomas's Hospital
Woodman, William Edwin, College of Medicine and St. Thomas's Hospital

For the Degree of Master in Surgery.

Bowman, Hugh Torrington, College of Medicine and St. Bartholomew's Hospital
Crick, Samuel Arthur, College of Medicine and St. Thomas's Hospital

UNIVERSITY OF DUBLIN: SCHOOL OF PHYSIC IN IRELAND.—At the Trinity Term Examination for the Degree of Bachelor of Medicine, held on Monday, Tuesday, and Wednesday, June 9th, 10th, and 11th, the following candidates were successful.

Darling, John S.
Edwards, Henry Grey
MacMunn, John
Blood, Fitzgerald
Lecky, William S.
Richardson, Gilbert
Battersby, John
Exham, Arthur
Hogan, John C.
Williams, John A. De C.
Murray, Andrew

The foregoing names are arranged in the order of merit.

The following candidates also satisfied the examiners.

Moutray, Charles, L.R.C.S.I., L.K.Q.C.P.
Warren, Frederick W., F.R.C.S.I., L.K.Q.C.P.

At the examination for the Degree of Bachelor in Surgery (B.Ch.), held on Monday and Tuesday, June 16th and 17th, the following candidates were successful. The names are arranged in the order of merit.

Edwards, Henry Gray
Blood, Fitzgerald N.
Battersby, John
McCreery, Benjamin T.
Berry, Frederick C.
MacMunn, John A.
Lecky, William Stuart
Moore, Thomas T.
Exham, Arthur R. F.
Malley, Abraham
Smith, Thomas Orde
Hogan, John C.
Murray, Andrew

The following candidate also satisfied the examiners,

Wheeler, William Ireland, M.D. and M.B.Univ. Dubl., F.R.C.S.I., Surgeon to the City of Dublin Hospital

After a special examination, held on Thursday and Friday, June 12th and 13th, the Medical Travelling Prize of £100 sterling, open to all candidates who have passed the M.B. Examination since the Summer Commencements in 1877, was unanimously awarded to

Darling, John S.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the ordinary monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, June 9th, 10th, 11th, and 12th, the following candidates were successful.—For the Licence to practise Medicine.

Cooper, William Reginald
Folkes, Charles William
Jenkins, Stuart
Ker, Alice Jane Shannan
O'Donnell, William
Poirotte, Benjamin
Ryan, Thomas Emile

For the Licence to Practise Midwifery.

Cooper, William Reginald
Cowen, Edward James
Folkes, Charles William
Jenkins, Stuart
Ker, Alice Jane Shannan
O'Donnell, William
Poirotte, Benjamin
Ryan, Thomas Emile

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

BALLYCASTLE UNION—Medical Officer for Croagh Dispensary District, at a salary of £100 per annum; £20 a year as Sanitary Officer; with Registration and Vaccination Fees. Election on the 11th instant.

*BRECON INFIRMARY—Resident House-Surgeon. Salary, £120 per annum, with furnished apartments, etc. Applications on or before July 10th.

*BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon at the Western Branch. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Diplomas and testimonials to be sent to the Chairman on or before Monday, August 4th.

*CHILDREN'S HOSPITAL, Manchester—Assistant Non-resident Surgeon and Registrar. Salary, £60 per annum.

DORCHESTER COUNTY ASYLUM—Second Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

DUNDALK UNION—Medical Officer for Carlingford Dispensary District, at a salary of £100 per annum, £25 as Sanitary Officer, with Registration and Vaccination Fees. Election on the 10th instant.

DUNFANAGHY UNION—Medical Officer for Gweedore portion of the Cross Roads Dispensary District, at a salary of £100 per annum, and £10 as Sanitary Officer, with Registration and Vaccination Fees. Election on the 16th instant.

*INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, Margaret Street, W.—Visiting Physician. Applications to the Secretary.

HOSPITAL FOR WOMEN, Soho Square—House-Physician. Applications to be made on or before July 8th.

*HOSPITAL FOR WOMEN, Soho Square—Assistant-Physician. Applications to the Secretary on or before July 8th.

*KING'S COLLEGE—Professor of Comparative Anatomy.—Demonstrator in Physiology. For particulars, apply to the Secretary.

*MIDDLESEX HOSPITAL—Physician and Surgeon; Assistant-Physician and Assistant-Surgeon.

*PLYMOUTH PUBLIC DISPENSARY.—Second Honorary Physician. Applications and testimonials to be sent to the Secretary on or before July 12th.

*SALOP FORESTERS' MEDICAL AID ASSOCIATION—Surgeon. Salary, £160 per annum.

SHILLELAGH UNION—Medical Officer for Coollatin and Clonegal Dispensary District, at a salary of £100 per annum, and £15 as Sanitary Officer, with Registration and Vaccination Fees. Election on the 11th instant.

SHILLELAGH UNION—Medical Officer for the Workhouse and Fever Hospital, at a salary of £90 per annum, together with £10 as Consulting Sanitary Officer. Election on the 11th instant.

*TRURO UNION—Medical Officer and Public Vaccinator for St. Agnes District. Salary, £35 per annum, exclusive of the fees as allowed by the Local Government Board.

*WESTMINSTER HOSPITAL—Medical Registrar. Salary, £40 per annum.

*WILTS COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £110 per annum, increasing £10 a year up to £150 with board (save beer), residence, attendance, and washing. Applications to Dr. Cooke, at the Asylum, on or before July 23rd.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BRANFOOT, H. Stephen, M.B., appointed Demonstrator of Anatomy in Owens College, Manchester.

*EMRYS-JONES, A., M.D., appointed Assistant-Surgeon to the Royal Eye Hospital, Manchester.

EWBANK, Francis, M.R.C.S., appointed Assistant Dental Surgeon to St. Bartholomew's Hospital.

FRASER, Alexander, M.B., appointed Demonstrator of Anatomy in Owens College, Manchester.

GRIFFITH, A. H., M.B., appointed House-Surgeon and Secretary to the Royal Eye Hospital, Manchester, *vice* A. Emrys-Jones, M.D.

HOPE, E. W., M.B., C.M., appointed Physician's Assistant to the Bristol General Hospital, *vice* A. C. Brock, L.R.C.P., resigned.

LUMSDEN, James P., M.B., appointed Resident Medical Officer to the Kilburn, Maida Vale, and St. John's Wood Dispensary, *vice* G. P. Best, M.D., resigned.

*LYONS, Isidor I., M.R.C.S., L.D.S., appointed Assistant Dental Surgeon to St. Bartholomew's Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

HAYNES.—On June 17th, at Leamington, the wife of F. H. Haynes, M.D.Lond., of a daughter.

THE will of Mr. John Simm, late of Ovington Square, Surgeon, formerly of the Honourable East India Company's Service, Madras Establishment, who died on March 5th last, was proved on June 13th by Henry Snowdon and John Calvert Crosley, the surviving executors, the personal estate being sworn under £40,000. The testator bequeaths to the London Aged Christians' Society, with which he had been connected for many years, £500; to the Society for the Relief of Asiatics at Limehouse, £100 and the proceeds of the sale of the vase and stand given him by the natives of Nellore. There are numerous other legacies.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 19 in every 1,000 persons living. It was 18 in London, 18 in Edinburgh, 19 in Glasgow, and 43 in Dublin. Small-pox caused 11 more deaths in Dublin. The highest rates of mortality in the twenty English towns were as follows: Leeds, 20; Salford, 21; Liverpool, 22; Wolverhampton, 24; Sunderland, 25; and Newcastle-upon-Tyne, 25. The highest zymotic death-rates were 33 both in Manchester and Bradford. Small-pox caused 10 more deaths in London, but not one in any of the nineteen large provincial towns. In London, 1,272 deaths were registered, being 103 below the average of the week, and giving an annual death-rate of 18.3, the lowest since the middle of September last. The 1,272 deaths included 8 from small-pox, 76 from measles, 45 from scarlet fever, 16 from diphtheria, 40 from whooping-cough, 19 from different forms of fever, and 21 from diarrhœa—or 225 deaths in all from these diseases, being 42 below the average, and equal to an annual rate of 3.2 per 1,000. The 21 deaths from diarrhœa were 52 below the average of the week; this unprecedently low rate for the last week in June was due to the recent low temperature and abundant rain. The deaths referred to diseases of the respiratory organs were 175, or 3 below the average. Seven cases of suicide were registered. At Greenwich, the mean temperature of the air was 56.5°, or 5.2° below the average. The air was of its average dryness; the direction of the wind was south-west; rain fell on three days of the week to the aggregate amount of 1.42 inches; and the duration of registered bright sunshine in the week was equal to 24 per cent. of its possible duration.

THE TEMPERANCE MOVEMENT.—The annual meeting of the Coffee Public-house Association was held at Grosvenor House on Saturday, the Duke of Westminster presiding. Mr. Gore, the Secretary, read the report, stating that the progress of the movement in the past year in every direction had been very great. They might hope that, at no distant day, the coffee public-house would also be firmly established in Switzerland, Holland, the United States, and the Australian colonies. The great moral results achieved by the movement had not been less real or satisfactory than the financial results. The Hon. W. Cowper-Temple, in moving the adoption of the report, said experience had proved that, if these houses were placed in positions which were naturally the resort of a sufficiently large number of the working classes, they were found crowded. Mr. Tritton seconded the motion, and spoke of the great good done by the Association in the past year. The spread of the movement had been something marvellous. Mr. Arthur Mills, M.P., Mr. Ernest Hart, Mr. Ernest Noel, M.P., Sir C. Trevelyan, and Sir U. K. Shuttleworth, subsequently addressed the meeting, stating that the movement had met an important want; and a resolution, moved by Mr. Hart and seconded by Mr. Ernest Noel, M.P., was passed, requesting the committee to summon a conference of the existing tavern companies.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—The seventeenth annual meeting of this Society was held on June 10th, in the Infirmary. The report recorded a large increase in the communications to the Society, in the number and attendance of members, and in the use of the now important medical library. During the session, a museum and pathological room had been added to the Infirmary, available to members. Dr. E. T. Tibbits was elected President for the ensuing year, *vice* Dr. Burnie, who retires. The Treasurer, Dr. Whalley, was re-elected, with Mr. T. C. Denby to assist. Dr. Goyder was re-elected Secretary. For Committee, Drs. Craig, Dunlop, Burnie, and Rabagliati were elected; for Pathologists, Mr. T. C. Denby and Mr. J. Appleyard, M.B.; and for Auditors, Mr. Hirst and Dr. Dunlop. A vote of condolence with the relatives of the late Mr. W. H. G. Buckley, who had been ten years Treasurer of the Society and one of its first members, was unanimously passed.

THE MEDICAL DEFENCE ASSOCIATION.—At the annual meeting of the members of the Medical Defence Association, held at the rooms of the Medical Society of London on Monday last, the following officers were elected for the ensuing twelve months:—*President:* Benjamin W. Richardson, M.D., F.R.S. *Honorary Treasurer:* W. Spencer Watson, F.R.C.S. *Honorary Secretary:* Mr. George Brown, M.R.C.S. *Solicitors:* Messrs. Green and Pridham. *Members of Council:* H. Adcock, L.R.C.P.; F. Alderson, M.R.C.S.; John Borland, M.B.; H. Cuolahan, M.D.; Thomas Cooke, F.R.C.S.; D. H. Dyte, L.R.C.P.; J. Dixon, M.D.; R. T. Daniell, M.B.; W. B. Hemming, M.R.C.S.; Douglas Hemming, M.R.C.S.; B. Kelly, M.D.; W. Beech Johnston, M.D.; C. R. Langford, M.R.C.S.; T. Wood Hill, M.R.C.S.; J. Wallis Mason, M.R.C.S.; Charles Royston, M.D.; Walter Smith, L.R.C.P.; James Stevenson, M.D.; G. Danford Thomas, M.D.; and H. W. Williams, M.D.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

PAPERS AT THE CORK MEETING.

DR. J. M. HOWIE'S letter has been referred to the Honorary Local Secretary of the Cork meeting, to whom (or to the Honorary Secretaries of the respective Sections) all communications relating to proposals to read papers at the meeting should be addressed.

NOTICE OF REMOVAL.

SIR,—I should be glad if you would inform me if it be usual for a surgeon, when removing, to insert a notice to that effect in the papers. I enclose my card, and remain, yours truly, M.B., M.A.

*** To his patients and friends, but not to others.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

AMONG MSS. in hand, and for which early insertion has been promised, are the following: Lectures by Professor Macleod on Colles's Fracture of the Radius; by Dr. F. T. Roberts on Materia Media; by Dr. Brakenridge on Locomotor Ataxia; by Mr. Berkeley Hill on Stricture of the Urethra; by the late Dr. Tilbury Fox on Hydroa; also papers by Dr. W. Roberts on the Digestive Ferments and their Therapeutic Appliances; by Dr. Marcet on the Weather and Health at Cannes during 1878–79; by Dr. Brandt on the Thermal Springs of Royat, La Bourboule, and Chatel Guyon; and by Dr. Macewen on Respiration through Tubes introduced by the Mouth into the Trachea. We intend also to publish in early numbers several papers on Intestinal Obstruction, Ovariotomy, and Medical Education.

As the annual meeting of the Association, with its attendant demands on space, is now barely a month distant, it will be seen that we have special reason for requesting our correspondents who desire early insertions for their communications at this season, to observe the most rigorous limits of brevity.

MR. EDISON AND THE STETHOSCOPE.

SIR,—In a letter just received by me from Mr. Edison of Menlo Park, New Jersey, U.S., he says: "I am at present experimenting on a stethoscope with every prospect of success; but the instrument will be very expensive, and for this reason cannot come into general use. The microphone, so called, cannot be used for this purpose, as it translates extraneous sounds, and is no way reliable."—Yours obediently, J. J. WEDGWOOD, M.D.

15, George Street, Hanover Square, June 24th, 1879.

THE REPORT ON MEMBRANOUS CROUP AND DIPHTHERIA.

SIR,—The letters written by Dr. Semple on croup and diphtheria since the inquiry throw no additional light upon the subject. It is difficult to understand for what purpose they were penned. Although it cannot be with the object of discrediting the labours of the committee, of which he was a member, they seriously tend to that end. In his last letter, one can only infer that this committee came to certain conclusions solely from a natural wish, as he expresses it, to show respect to those who had contributed cases in support of that view, as he admits that it is well known that many of the attributed cases were incorrectly reported.

The following plan has occurred to me, which I think would, if it could be carried out, solve the vexed question whether croup and diphtheria are the same or different diseases—namely, to form a small committee out of the one above mentioned, who should issue a circular to medical men in London and its neighbourhood, requesting them to kindly give immediate notice of cases of croup and diphtheria, so that one or two of this committee might meet the practitioner in charge and discuss with him the nature of the case. By sending in reports of such cases to their president, a most valuable collection would at the end of a year (for which time the committee might be appointed) be made, and then the original committee might meet and very probably be enabled to draw up a report which would satisfactorily terminate the whole question. The operations of the committee might fairly be enlarged, by drawing up a number of questions, based on the late inquiries, and issuing copies of them to members of the profession who reside at a distance. I would have this visiting committee paid for its labours. Perhaps government would assist with a grant towards an object whose importance has been shown by the earnest and searching consideration given to it by leading members of the profession.—Yours faithfully, W. PUGIN THORNTON.

Devonshire Street, Portland Place, June 17th, 1879.

M.B., Ch.M.Edin.—Smith's *Dental Surgery* (J. and A. Churchill); Oakley Coles's *Dental Notes* (Baillière, Tindall, and Cox); Sewill's *Dental Anatomy and Surgery*, (J. and A. Churchill).

DOCTORS AND PHYSICIANS.

SIR,—If, as you have stated in answer to "Inquisitor", an M.D. has a right to style himself a physician because he is "a person certified by an university to be learned in the science and art of physic", can you tell me any reason why a Licentiate of the Society of Apothecaries should not also claim to be a physician, as the standard of knowledge required at the Hall is at least equal to that of some universities at one time, if not now.

I should be glad of your opinion as to what a Licentiate of the Society of Apothecaries holding no other diploma could put upon his door-plate that would not look singular. Some put Surgeon-accoucheur, which appears to me absurd, as it ignores his qualification to practise medicine; he certainly cannot call himself surgeon, as surgery is not even in his curriculum. I think it would be a very good thing if M.D. were the only qualification to practise; it would not be confounding superior men with inferior more than at present, because there is quite as much difference between the best M.D. examination and the worst, as between the best M.D. and the Licentiate of the Society of Apothecaries examinations.—Yours faithfully, MARTIN LUTHER.

*** A Licentiate of a Society of Apothecaries is just as clearly an Apothecary, and not a Physician, in virtue of his diploma, as a Licentiate of a College of Physicians is a Physician and not an Apothecary.

DR. J. T. PEARSE (Bramshot).—The county of Hants is beyond the limits of the Metropolitan Counties Branch. Our correspondent should apply to the Southern Branch (Secretary, Dr. J. Ward Cousins, Kent Road, Southsea), or the Reading Branch (Secretary, Dr. Shettle, Reading).

THE PROVISIONS OF THE CONTAGIOUS DISEASES ACTS.

SIR,—Can you or any of your readers inform me whether, in towns not under the provisions of the Contagious Diseases Acts, any legal steps can be taken for the detention and cure of prostitutes who are known to infect soldiers? and also what steps can be taken against houses known to harbour women for prostitution?—Yours, etc., MILES.

*** In towns not protected by the Contagious Diseases Acts, no such steps can be taken. Any person keeping a brothel can be proceeded against at common law, and if the charge be clearly proved, may be convicted and severely punished. This, however, is quite irrespective of the question of disease, and practically is seldom or never done unless the case presents some exceptionally flagrant features, such as the presence of very young girls, illegal sale of liquors, suspected robberies, etc.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

ADMISSION TO THE BRITISH MEDICAL ASSOCIATION.

SIR,—Each year since I have been in practice, I have been presented through the post with a number of your JOURNAL, accompanied with a prospectus showing forth the advantages of the Association, and giving the conditions upon which members are received. I have long felt that such an association, with a thoroughly representative journal, is most desirable, and many years ago should have joined it, but for the conditions. I have to get the names of three members, and no list is supplied of those members. I have many friends in the profession, but none yet ever gave me any sign by which I might have recognised him as a member of the British Medical Association; and even if some did, I would hesitate before I asked such a favour as a testimonial from three friends. I am, therefore, outside the British Medical Association *cum multis aliis*.—Yours faithfully, M.D.

*** We cannot hold out to M.D. any prospect that the conditions of admission to which he objects will be relaxed. The JOURNAL has now for the last ten years been sent out in this way; and each such issue brings in applications from numerous members of the profession, who, after receiving the JOURNAL, desire to join the Association. Our correspondent can obtain a list of members on application at the office, and among the 7,500 members of the Association can hardly fail to find three friends to countersign his application.

THE CASE OF THOMAS MILLERCHIP.

SIR,—The under-mentioned amounts have been received up to date; the donors have requested an acknowledgment in the medical journals.

	£	s.	d.
A Friend	5	0	0
Mrs. Garrett Anderson, M.D.	1	1	0
Dr. Grenfell Baker, Birkenhead	0	10	6
E. N. T.	1	1	0

Other subscriptions have been promised.

Would you also state that I have forwarded a first instalment of £30 to the Rev. F. N. Beaumont, Holy Trinity Vicarage, Coventry, who has kindly assented to my request that he should use the same, and all subsequent amounts sent by me for Millerchip's benefit.—Yours obediently, JOSEPH ROGERS.

33, Dean Street, Soho, July 2nd, 1879.

IN MEMORIAM.

THE following lines, with the note accompanying them, were written upon the death of Mr. Brietzcke in March last, by a convict in Portsea prison. We are pleased to give them the wider publicity which a permanent place in these pages will ensure.

"Gone so early! and a shadow seems to rest on every brow,
And the gloom that haunts the prison has a denser darkness now;
And we sad ones, looking sadder, to each other whispering say—
'He was kind and thoughtful ever: what a friend has passed away'.
Passed away! but as the sunset leaves behind an after-glow,
And as the roses breathe a perfume when the winds have laid them low;
So his goodness here reflected shall a radiant glory give;
And his memory, green and fragrant, in our bosoms long shall live.

From his loved ones torn so early! yet he is not dead to love,
For he knoweth now, as knoweth all the angel host above,
That the outcasts he has tended with a constant tender care
In their hearts have human feelings, and can shrine affection there.
If his spirit now should hover near the bed where long has lain
Some sufferer, health-forsaken, whom his skill has soothed in pain,
And his sympathy has strengthened, not in vain it there would seek
For the sigh within the bosom, for the tear upon the cheek.

In the world beyond the prison there are many glad and free
Who once here were held in bondage, sick and sad as men could be;
And they owe their health and freedom to his kindness and his care,
And their eyes shall now be weeping and their lips shall breathe a prayer.
From the earth are some departed whom his science could not save,
But whose miseries he lightened in their passage to the grave;
These have read the angel-record of his worth in realms above,
And their songs shall hail his coming to the land of perfect love.

To his grave we cannot follow, but beside the sacred sod
There shall stand a host of mourners who have seen the path he trod;
Who have known themselves his kindness, and their eyes with tears shall dim,
And their voices blend together in the last sad solemn hymn.
Though *we* cannot raise the marble which his resting-place shall tell,
Nor inscribe his virtues on it, which we sad ones know so well;
Still the name of Dr. Brietzcke in our hearts is graven deep,
And the memory of his goodness as a hallowed thing we'll keep.

He is gone and he is happy—for the good must happy be—
But I hear a widow's wailing, and two weeping babes I see.
He needs no supplications; he is now the Saviour's care,
But the dear ones left behind him, these shall have an outcast's prayer—
'Oh, my God, sustain the mother; make her strong to bear the blow;
Give her heavenly consolations: find her friends to soothe her woe:
Be a father to the children, and protect them with thy love,
Till the lost one meets his darlings in a tearless home above.'"

March 14th, 1879.

"During an imprisonment of eleven years, the writer of the above lines has known no event which has caused in the sad world in which he moves so profound a sensation of sorrow as the death of Dr. Brietzcke. He is deeply lamented by all here—free and bond—and each seems to feel he has lost a friend; and every voice speaks of his goodness and breathes sympathy for his bereaved family, and invokes for them God's protecting care. If the prison authorities would only permit it, how gladly would every prisoner here give something out of his prison gratuity to raise a monument to his memory."

SEVERE PAIN FOLLOWING HERPES.

MR. A. DE WATTEVILLE writes:—The correspondent who requires suggestions for the treatment of post-herpetic neuralgia will probably find electricity most useful. The faradic (or induced) current should be tried first: if speedy relief be not obtained, recourse must be had to the continuous current, special attention being paid to the central origin of the diseased nerve. As a rule, the pain of herpes in the acute stage is readily amenable to electrical treatment.

URINARY SPECTRE.

SIR,—I examined some urine from patients, and my own, a few days ago, and found them all loaded with albumen; that is, they gave a dense white precipitate with nitric acid, insoluble on boiling. The urines were acid, of good specific gravity, and gave no precipitate on boiling alone. My nitric acid being all gone, I sent to a chemist for some more, and this fresh acid gave no precipitate whatever, showing that there must have been some impurity in the first acid, thus relieving me of a load of anxiety. I do not find any caution about this in any book, and therefore ask your readers if any of them can tell me what the impurity is, and what the precipitate was. Had not my supply of nitric acid fallen short, I should have gone on dreading Bright's disease for myself and patients; and I dare say many a poor fellow has been needlessly alarmed before this in the same way.—I enclose my card, and am, yours, T. D.

ENGLISH PRACTITIONERS IN FRANCE.

SIR,—Will you kindly say whether an English M.D., etc., wishing to practise amongst the English in France, or a French colony, must first take out a French degree in Paris, or whether he has only to show his English qualifications to the Préfet to gain the required permission.—Your obedient servant, "EMIGRANT."

*** He must now pass the final clinical examinations of the French University. In some cases, limited permission to practise with the grade of *officier de santé* is, we believe, accorded.

MR. G. GASKOIN.—The communication has been duly received.

GALACTORRHŒA.

SIR,—In last week's JOURNAL, a request is made by M.D. for information regarding treatment in galactorrhœa. To attempt to reproduce the various suggestions that have appeared in the JOURNAL from time to time would fill too large a space, but the value of belladonna, internally and externally, combined with iodide of potassium, quinine, iron, and other tonics, with strapping and support to the breast, is well established. If these means have failed, many useful hints may be gathered from sections 1,599: 1 and 1,606: 3 of the *Medical Digest*, published by the New Sydenham Society in 1877.—I am, etc., M.D.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. W. Rutherford, Edinburgh; Mr. T. Spencer Wells, London; Dr. S. Wilks, London; Mr. Hayes, Dublin; Dr. E. Waters, Chester; Dr. Carpenter, Croydon; Dr. H. Macnaughton Jones, Cork; Mr. W. Needham, London; Mr. G. Jackson, Plymouth; Dr. C. Cameron, M.P., London; A Helper of Nature; M.B.C.P., Bourn; Mr. J. Evans, Neath; Our Dublin Correspondent; Dr. Coombs, Castle Carey; Our Glasgow Correspondent; Dr. J. H. Stowers, London; Dr. Ritchie, Edinburgh; Mr. F. A. Maciver, Edinburgh; Mr. F. H. Alderson, London: Mr. J. J. Wedgwood, London; Dr. Sawyer, Birmingham; Mr. H. Burdett, Greenwich; Mr. S. Macvie, Chirnside; Dr. A. McC. Weir, Leicester; Dr. O'Neill, Lincoln; Mr. E. D. McNicoll, Southport; Dr. Burns, London; The Secretary of the Society of Arts; Dr. L. H. Tosswill, Exeter; Dr. J. J. Charles, Belfast; Miles; Dr. W. Taylor, Cardiff; Mr. B. T. Lowne, London; Mr. J. Cochrane, Edinburgh; Mr. J. Garner, Birmingham; Mr. F. E. Manby, Wolverhampton; Our Edinburgh Correspondent; Dr. Tolerton, Malmesbury; Mr. S. Gamgee, Birmingham; Mr. Cuthbertson, Droitwich; Messrs. Maw, Son, and Thompson, London; The Registrar-General of Ireland; Dr. E. Malins, Birmingham; Mr. Joseph Boult, Liverpool; The Registrar-General of England; Dr. A. Rabagliati, Bradford; Dr. P. Macpherson, London; Mr. Berkeley Hill, London; Dr. D. Leech, Manchester; Dr. B. Bramwell, Edinburgh; Dr. R. Liveing, London; The Secretary of Apothecaries' Hall; Messrs. Newman and Sons, Barnsley; Mr. W. Barrett, Wallingford; Mr. E. Carr Jackson, London; Mr. C. R. Straton, Wilton; M. E. C.; Dr. E. Wigglesworth, Boston; Mr. N. Sykes, Sheffield; Mr. R. S. F. Henderson, Ardrishaig; Mr. R. J. Lewis, Philadelphia, U.S.; Mr. S. Wilson Hope, Petworth; Dr. F. Warner, London; Dr. D. W. Williams, Liverpool; Dr. R. Farquharson, London; Mr. J. Farrar, Morecambe; Mr. G. R. Fraser, Wark-on-Tyne; Mr. C. Johnson, Lancaster; Dr. Kinkead, Galway; Dr. Bolleau, Netley; Dr. F. H. Haynes, Leamington; Mr. C. J. Warden, Bhagalpur, India; Dr. E. Haughton, London; Dr. A. Sheen, Cardiff; Mr. G. Gaskoin, London; Mr. J. G. French, London; Dr. J. M. Howie, Liverpool; Mr. Enfield, London; Mr. Richard Paramore, London; Dr. W. A. Satchell, Groombridge; Mr. F. Vacher, Birkenhead; M.D.; Dr. T. McClure, Worle; Mr. E. C. Baber, Brighton; Dr. J. S. Scriven, Derby; Dr. D. Drummond, Newcastle-upon-Tyne; Dr. Fairlie Clarke, Southborough; Mr. W. Legge, Derby; Dr. Berkart, London; Dr. J. G. Glover, London; Mrs. Weldon, London; Dr. J. D. Gillespie, London; Mr. J. D. Dunlop, Edinburgh; Mr. J. M. Dudgeon, Cowrie; Dr. Procter, York; Dr. J. Garner, Birmingham; Dr. Joseph Rogers, London; etc.

BOOKS, ETC., RECEIVED.

The Student's Guide to the Diseases of Women. By A. L. Galabin, M.A., M.D. London: J. and A. Churchill. 1879.

Manual and Atlas of Medical Ophthalmoscopy. By W. R. Gowers, M.D., F.R.C.P. London: J. and A. Churchill. 1879.

Lectures on Practical Surgery. By H. H. Toland, M.D. Second Edition, Illustrated. Philadelphia: Lindsay and Blakiston. London: Trübner and Co. 1879.

A Manual of Physical Diagnosis. By F. Delafield, M.D., and C. F. Silliman, M.D. New York: W. Wood and Co. 1878.

CLINICAL LECTURE
ON
COLLES'S FRACTURE OF THE RADIUS.

DELIVERED AT

The Western Infirmary of Glasgow during the Winter Session.

BY GEORGE H. B. MACLEOD, F.R.C.S.E.,
Regius Professor of Surgery in the University of Glasgow, and Surgeon in Ordinary to Her Majesty the Queen in Scotland.

GENTLEMEN,—Here is an elderly female who has just been admitted into my clinical wards, and who has sustained an injury of the left forearm. She tells us that her feet slipped on "a slide", and that she fell backwards and towards the left side, putting her hand down obliquely behind her. She fell with violence, the "hilt" of her hand coming into contact with the ground; and her hand was violently extended and bent backwards on the forearm. She was much shaken. She was conscious that something had snapped in her forearm, and she found that she had lost the use of it. She also suffered much pain.

You will observe how she nurses the injured arm with her right one, and holds it across her body; how she inclines her body to the left side; how her pained limb is held between pronation and supination; and how, when I ask her to supinate it, she turns the whole extremity from the shoulder, and that evidently with pain. We will make her sit down and place her arm on her knee, so as to examine it more carefully and with less inconvenience to her. The fingers are bent; the wrist-joint is round (as you see by comparing it with its fellow); the back of the hand and wrist rise up unnaturally in a rounded mass, and no longer retain, as on the other hand, the level of the back of the forearm. This projection passes higher than the level of the carpus, and then suddenly subsides into a hollow, which is manifestly more marked towards the radial margin of the forearm. Then, again, at a level with the joint, but on the anterior surface of the limb, there is a deep and well-marked sulcus with a projection on its proximal side; which projection, however, shades off insensibly into the anterior surface of the forearm. Then the styloid process of the ulna is very prominent. If we turn the forearm on its ulnar side and hold it up, you see how there is a concavity on the radial margin, and the projection of the styloid process of the ulna on the other side becomes also very evident. Observe, too, the curious twist of the hand, which seems to be made up by a drawing of the carpus towards the radial side, and of the bent fingers in the opposite direction. She tells us the pain is very acute, and that chiefly at a limited spot near the wrist on the shaft of the radius, and also below the styloid process of the ulna.

Now, looking at the whole picture here before you, I am sure your impression would have been, if I had not before pointed out the meaning of the signs, that we were dealing with a dislocation of the carpus. The great deformity, the kind of violence, the fixity of the parts, all irresistibly suggest dislocation; and this is the common error into which practitioners fall regarding this injury.

This is the fifth accident of this nature that has lately presented itself in my wards, and that has arisen from the slippery state of the streets during the last few weeks. The local newspapers mentioned the other day that a bone-setter in the neighbourhood had occasion to treat between twenty and thirty "dislocations" and fractures of the forearm during the same period. Is it not curious that here we have never seen a dislocation of the carpus?

In one of our other patients, you remember there was no deformity at all. It was only by manipulation that the existence of a fracture of the radius was made out. In that case, the injury was occasioned by direct violence; which, however, very rarely gives rise to a fracture of the radius alone—the ulna escaping.

Let us, however, "set" the fragments which have been displaced in the fracture before us, and apply what apparatus is required; and I will afterwards tell you something more about the nature of the injury.

(The patient was then put under chloroform, the exact seat of fracture defined, and the fragments replaced in their normal relationship by traction over the surgeon's knee, while the forearm was steadied by an assistant. The patient's hand was, in the first place, held between supination and pronation; the wrist-joint flexed; and the thumb of the surgeon's right hand pressed steadily on the displaced lower fragment, so as to push it downwards and forwards. The patient's hand was sometimes drawn towards the ulnar side; and the forearm was also for a time supinated, so as to assist the replacement of the lower fragment. No crepitation was felt; but the removal of deformity showed that the end aimed at had been accomplished. The patient was now allowed to recover from the chloroform; the surgeon, however, firmly holding the fragments of the radius in place till he had applied the poroplastic splints afterwards described. The arm was then placed in a sling, and the patient, after resting in the ward for a few hours, was made an outdoor attendant. When she was seen before leaving, she expressed herself as quite relieved from the pain she had before suffered.)

The fracture with which we have been dealing, as you know, is commonly known in this country as "Colles's fracture"; and about it probably more has been written than any other fracture in the body. This is due to its great frequency and to the difficulties which have surrounded its successful treatment. Many an anxious moment has it occasioned to surgeons, and much unmerited blame has it caused. We have ample proof in the cases admitted here that it is very far from being well understood even now, and that errors of diagnosis and treatment often occur regarding it.

It is said—and I do not deny the statement—to occur chiefly to elderly females. Of the last thirty-two cases which have been treated in my wards (and these are the only ones of which I have at the moment careful records), only ten were females, and only nine of the whole number were over fifty years of age. Nine were below twenty years of age. Five patients suffered from a similar fracture in both arms. No conclusions can, of course, be drawn from so small a number. The usual explanation given for the fracture occurring at that part and in the old, is the interstitial changes which take place in the bones in advanced life; the preponderance of cancellous bone; and the existence of a slight bend in the radius at the place—about an inch or a little more from its lower end—where this bone gives way. It takes no great violence, applied in the special manner I will directly describe, to break the radius in an elderly person; but it also gives way in strong adults when the force is adequate to overcome the resistance.

Further, the violence which commonly occasions this accident is, as I have said, usually applied indirectly; *i.e.*, to the hand when, in falling, the "hilt", as this woman called it, comes into contact with the ground. The hand is then strongly extended, and the weight and momentum of the body come down on the arm. In most of the cases I have seen, the hand is put obliquely backwards and to the side, as this woman did. It is said that occasionally the hand is bent forwards, and then that the displacement of the lower fragment is in the opposite direction to that usually found. I will show you at college a dissection by the demonstrator, Dr. Allan, in which that displacement is well seen.

The usual explanation of the fracture is that it occurs by *contre-coup*, as Goyrand called it. The hand rests on the ground, while the radius is crushed between its resistance and the weight of the body in falling. The radius, being the only bone which directly articulates with the carpus, of course receives the whole shock. I will show you at college an arm in which this fracture was produced artificially by a method described by Nélaton. After separating the forearm at the elbow-joint, and sawing off the head of the ulna, so as to make it and the radius of the same length, it was held almost upright; the hand being extended, and the first row of carpal bones firmly pressed on a table. A heavy mallet was applied twice with considerable force to the head of the bones of the forearm, however, before the radius gave way, which it then did at the exact place where we usually meet with Colles's fracture.

Several years ago, a young man was brought to me at the infirmary suffering from this fracture, which had been very shortly before produced by an older and stronger man, with whom he had been trying to contend in a common test of strength by placing the elbows on a table, interlocking the fingers, and then trying to press back each other's forearm. The younger lad would not confess his discomfiture till his hand was very violently extended. He then felt something give way, a sharp pain arose in his radius, and his forearm assumed a deformed appearance, and he found he could not use it. He had a well marked Colles's fracture. This case caused me to try some experiments on the dead, and I have now in my class-room a well defined "Colles's fracture" produced lately at the City parish mortuary by imitating this mode of applying the violence. With the aid of my friends Drs. Robertson, Moffat, and others, I had the cadaver of an elderly woman placed standing by the side of a table, while the right hand was held firmly, so that the hilt rested on the edge of the table and the fingers projected. I interlocked my fingers into those of the subject, and bent its hand backwards on the forearm, *i.e.*, extended the hand quickly. The radius broke very easily and with but little force applied, just an inch below its lower end, and the characteristic deformity of Colles's fracture appeared.

I next repeated an experiment which, I think, was suggested by Bonnet. Separating and placing the forearm as in the first experiment, but cutting the radius at its upper end considerably shorter than the ulna, so that the mallet could not strike it, I found that, after several violent blows on the ulna, the radius broke as before. Neither in this nor in Nélaton's experiment was the bone easily broken, and in neither was the hand extended to the same degree as in the experiment I have before described by extension alone.

Now the apparent explanation of the mechanism of the fracture we are considering is that it is produced by the sudden and violent wrench on the strong anterior radio-carpal ligament, and that it is the extreme extension of the hand which causes this wrench. The case I mentioned to you, which presented itself to me some years ago, would seem to confirm that explanation. That it can be produced easily by violent extension of the hand, there is no reason to doubt. If the arm of a strong adult be so treated, I am, however, far from sure that the same effect would follow. In that case, the anterior carpo-radial ligament is torn; but it is, in my experience, almost impossible to cause Colles's fracture experimentally in such subjects by any method we can adopt. But if you try it on the arm of an elderly subject, you will be surprised how easily it is accomplished.

In Colles's fracture, the lower fragment is displaced upwards and backwards, and it makes a sort of rotation on its long axis, so that the articulating surface is inclined backwards. The oblique direction thus assumed by this fragment allows the lower end of the shaft to penetrate and occasionally become impacted or fixed in the posterior surface of that lower fragment. The lower fragment, too, is occasionally split into pieces (as in a specimen in my possession) by this wedge-like action of the shaft, and then the implication of the articulation is such as to give but a faint chance of restoring its function. The epiphysis is very rarely separated without carrying a portion of the shaft with it, and there are no distinctive signs by which a separation of it can be differentiated from an ordinary "Colles". There can be no doubt that the styloid process of the ulna is often separated when the radius is broken, and that by the wrench which it receives from the triangular ligament; but its frequency has been, I think, exaggerated by Nélaton and others. When Colles's fracture is compound, the ulnar styloid process is often exposed. If there be no wound, it is not always easy to be sure of the condition of that apophysis.

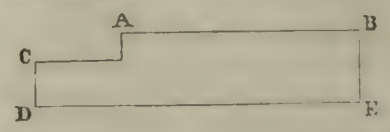
The degree of deformity present in any case is, I think, chiefly determined by the amount of violence applied, and not by muscular contraction. It was at one time supposed that the interosseous membrane influenced the displacement; but no such structure exists where this fracture is situated, and its fibres, where it does exist, run downwards from the radius towards the ulna—an arrangement which serves in a very essential way to deaden impressions coming from the carpus. It has been to the extensors of the wrist and thumb that most activity has been ascribed in producing displacement; but it has always appeared to me impossible so to explain the result. The upper fragment is, however, strongly pronated by the rotators after the continuity of the bone is broken; that is, if the pronator quadratus retain a connection with the upper fragment alone, and do not (from the position of the fracture) have a hold on the lower fragment also.

To overcome these displacements, then, when they are considerable, we require to use manipulation under chloroform. In not a few cases, as was before said, no displacement exists at all. The periosteum is probably not torn, and all we require for the treatment is such apparatus as will keep the fragments in juxtaposition till they unite. To replace the lower fragment in other cases like our present patient, various movements must be employed. The surgeon's knee makes a capital fulcrum on which to rest the ulnar side of the wrist. Taking good hold of the patient's hand, and alternately flexing, extending, and drawing it to the ulnar side, while the thumb of the surgeon's disengaged hand (the patient's forearm above the seat of fracture being fixed by an assistant) is made to press the lower fragment directly into its place and proper axis, is the manœuvre which is usually required. Sédillot, from his dissections and observations, holds that it is in supination alone that the fragments are properly adjusted, and he has shown us the advantage of so placing the forearm, at least during "setting".

Having reduced the fracture, we next wish to apply such apparatus as may retain the normal relationship of the fragments; and this should be done at once, care being taken to adjust the splints before we let go the part, as displacement readily recurs. As to position during treatment, on the whole, that between pronation and supination suits best. It is the most comfortable and least inconvenient; and if the other points in the management of the case to which I am going to allude are carried out, there need be no anxiety as to that position causing any complication. Dr. Gordon of Belfast, whose splint is here, places the hand in a prone position; while Sédillot advocates supination as the only one which should be employed. Both of these methods demand special and expensive apparatus, and it is always desirable to avoid all appliances which are not easily procured and cheap. This splint ("the pistol") was introduced by Dupuytren to carry out the lateral traction by which he supposed the displacement was best overcome; and it is an apparatus still in much use. Its weight and clumsiness are serious objections to it; and the pressure it exerts, as well as the fixing of the fingers, are still more open to cavil. For some years, I used this splint, in which



there is a ledge on which the ulna rests, and a hollowed out portion (C), which allowed the hand to be well drawn downwards. It gave better results than the common "pistol"; but it is so heavy, expensive, and inconvenient, that I have abandoned it. The traction, also, to the ulnar side, which it effects, I believe to be both unnecessary and often hurtful. Here, again, are Gordon's splints for each hand (shown). They are very ingenious, and are good in practice; but they are expensive, and very difficult to procure. A different splint, also, is required for each hand, which is a serious objection; and various sizes, also, are needed to fit accurately different sized arms. I will not take up your time by showing you the appliances of Nélaton and others, but draw your attention to the very simple apparatus you saw me apply to our present patient's arm. It is made of poroplastic, but of course any material which possesses strength and is capable of being accurately moulded to the part might be employed. Two pieces are used. The anterior splint is rather less in breadth than the forearm, and is long enough to extend from the cushion of muscle at the base of the hand (on which its lower end must rest) to half way up the forearm. The posterior splint of this shape (see figure) is applied, so that C D rests on the knuckles, D E



on the ulnar edge of the forearm, while A B is folded (while the poroplastic is soft) over the radial margin of the arm, and meets the edge of the anterior splint. The projection at A lies above (higher up the arm than) the part where the muscles of the thumb begin to rise, *i.e.*, at the lower end of the styloid process of the radius. As the folding edge (A B) can be bent either way, this little splint can be applied to either arm. When it is to be employed, the hand (not the fingers) should be bandaged with a common roller (figure-of-8 of the carpus); and, after the "setting" has been carefully accomplished in the way before described, the splints, softened by being held to the fire or by being soaked in boiling water, are applied before and behind, and firmly held in place by the surgeon till they become hard, when of course they will retain an accurate mould of the part. The edge A B is adjusted at this time over the margin of the radius. The moulds are then removed (the surgeon the while holding the bone in place), and a thin layer of cotton-wool is put within each splint. When replaced, the lower part of the forearm is all enclosed, except the ulnar margin, where no pressure should be applied to the styloid process. A roller is next put outside of the splints, as far as they reach (half way) up the forearm. It will be observed that no bandage is applied next the skin above the wrist. The patient is told to begin at once to move the fingers freely, and to return in a week to have the apparatus looked to. These splints are small, light, easily concealed in the coat or muff, cause very little annoyance at night, and are very effective, as you have had opportunities of seeing in cases already treated. They cost a mere trifle, are prepared in a moment, fit anyone, are adapted for either arm, and allow motion in the fingers from the outset. This matter of early movement I consider a very important one. The fingers and wrist stiffen very quickly, and require early and decided looking after. I examine all my patients in a week. I remove the splints, and, holding the fragments of the radius firmly at rest with one hand, I communicate movements with my other hand to the patient's wrist and fingers; and, if much pain be thereby produced, and the patient be nervous and weak, I do not hesitate to employ chloroform, so as to enable me to do this effectively. The splints are reapplied, and in another week I myself repeat the movement of the wrist, and now cut off the part of the posterior splint which extends from the wrist-joint to the knuckles, and inculcate movement of the wrist-joint as well as of the fingers; and I see that this is done. In three weeks from the accident, under ordinary circumstances, and four weeks at most, I dispense with splints altogether, and apply only a light flannel bandage. Now, you will be able to observe for yourselves how successful this is

in restoring the shape, firmness, and function of the part, and how satisfactory a mode of treatment it is. I quite admit that in the case of delicate feeble women, who recover badly from any accident, and who have suffered, probably seriously, from the shock of the fall, and who do nothing to help themselves or carry out your instructions, the results are not always so rapid or so satisfactory as I have shown you in the patients with whom we have had to do lately; but these bad cases are the exception, and will, I think, if you strenuously carry out the early and effective setting and passive motion, become very rare in practice. The loss of their patient's confidence, which surgeons frequently sustain in dealing with Colles's fracture, is due chiefly to hesitation in recognising its true nature, the failure to reduce the fragments properly, and the too long fixture and consequent rigidity of fingers and wrist, which result from the commonly followed mode of treatment.

I do not find that starch, paraffin, or plaster bandages are desirable in managing this fracture, seeing that they require both time and trouble to remove them. As the poroplastic moulds itself very accurately to the part, no undue pressure is caused, and so no pain.

Many surgeons would object to the application of such manipulation as that which I employ when there is any impaction of the fragments, fearing the evil effects of the disjunction of the fragments. I have never found any harm to result, and I cannot recall at present any case in which replacement was impossible. I am aware that such cases have, however, been recorded. I have heard of instances in which, even after the soft parts were removed, the lower fragment could not be got into place; and in one specimen to be seen in the Royal Infirmary Museum, a detached fragment is said to have occasioned this. If I found a tendon so placed and so tense as to appear the cause of the difficulty, I would consider the propriety of dividing it subcutaneously. Without complete replacement of the fragments, deformity cannot be removed, and function quickly and satisfactorily restored.

But, to draw these remarks to a close, I may say that the three injuries with which Colles's fracture may be confounded are sprain and dislocation of the carpus, and transverse fracture low down of the bones of the forearm, with displacement backwards of the carpus and lower fragments.

As to the confusion with sprain, it is when neither deformity, crepitation, nor unnatural mobility are apparent, and a certain amount of power remains, that fracture is supposed not to have occurred. As, too, in such cases, the head of the radius may rotate when the hand is acted on, it is concluded that the continuity of that bone remains intact. If the pain be concentrated near the lower end of the radius, and below the styloid process of the ulna, and be not diffused over the articulation; and if on making decided extension of the hand, we find unnatural mobility—a hollow and a motion—a little way above the lower end of the radius, then it is fracture, and not sprain. It is, however, to be remembered that indirect violence does not readily break the bone of a strong adult; and that in such persons the ligament of the joint may be thus seriously stretched or ruptured. Still, the test by extension will clear up the question of fracture. In no case can we depend on detecting crepitation—in fact, it is the rare exception to find it, unless much and unjustifiable force is used.

As regards dislocation, you may dismiss it altogether from your minds. If such an accident ever occur (and it is extremely doubtful if it does without a wound, and, in fact, without complete disorganisation of the articulation), it is so seldom, that many of the most experienced hospital surgeons have never met with it. Men of limited experience see it, as they suppose, frequently; and most practitioners in the early part of their career constantly come across it. I have myself seen three cases within the last month which were said by medical men of considerable experience to have been dislocations. They were all well-marked examples of Colles's fracture, with great displacement. It is mainly to Dupuytren that we owe the recognition of this important clinical fact. Up to a certain period of his career, he believed in dislocation of the carpus like others; and, at the end of his unique experience, he denied its occurrence altogether. Malgaigne, an authority hardly, if at all, less weighty, almost goes the same length. What Dupuytren never saw, you are not likely to meet with; so do not suppose that, because there are projections and hollows before and behind, and fixture and distortion, therefore it is a dislocation. I cannot describe to you the appearances of dislocation of the carpus from personal observation, as I never saw it; but I would imagine that the shape and size and relative position of the projections (the articular surfaces) behind and in front would be very different, and occasion a very much more marked deformity in dislocation than we ever have it in Colles's fracture, and the styloid process of the radius would continue to project lower than that of the ulna, in place of being shortened so as to become of the same length, or even lie higher up the arm than the styloid process of the ulna, as it is in fracture. In fracture, moreover, the margins of the arm are deformed as well as the anterior and posterior surfaces, as they cannot be in dislocation, and the radius can be shown by measurement to be shortened along its posterior surface. The twist of the hand, the unnatural mobility at a point of the radius when the hand is much extended and the chief seat of pain, will all conjoin to show you what is the real nature of the injury. In dislocation, there must be considerable shortening of the whole forearm (both bones), if we measure from the knuckle of the middle finger to the olecranon.

Transverse fracture of both bones low down, with displacement of the carpus and lower fragments, might have (and I believe has) been mistaken for dislocation; but it could hardly be taken for Colles's fracture or Colles for it. The lost relationship of the styloid processes to the carpus, the measurement from the knuckle to the upper part of the posterior projection and to the olecranon, the ease of reduction and redisplacement, the crepitation, and also in most cases the kind of violence applied, will readily distinguish them.

Finally, it may be put thus for practical purposes: that if a person—especially an elderly individual—fall with violence on the hilt of the hand, and pain low down in the radius come on and continue—if the function be embarrassed, and if, on extending the hand and placing the finger over the radius about an inch from its lower end, we find the bone notably sink and the pain augmented—we may conclude it is a Colles's fracture we have to deal with, even though there should be no marked deformity and no crepitation. In any case of insuperable doubt between fracture and sprain, treat it as a fracture.

SUCCESSFUL CASE OF BATTEY'S OPERATION, OR OÖPHORECTOMY.

By HEYWOOD SMITH, M.A., M.D.,
Physician to the Hospital for Women and to the British Lying-in Hospital.

In the case of a young operation such as Battey's, it is due to him whose enterprise initiated its performance, as well as to the profession, and to those whose suffering we hope to relieve, that each case should be fully and accurately reported, in order that we may arrive at a right conclusion as to its indications, its safety, and its justifiability.

In the following case I will give, as briefly as possible, a sketch of the former history and treatment; then, more fully, an account of the operation, with a description of the ovaries themselves; and afterwards will conclude with such remarks as the case and the operation suggest.

A. B., aged 40, was admitted into the Hospital for Women, February 10th, 1879. She first became an in-patient on March 20th, 1874. The catamenia began at the age of thirteen, and were regular till three years before her admission; they were scanty and painful. For one year, she had suffered from constant retching, with a dull aching pain in the right groin; there had been profuse leucorrhœa for the past three months. On vaginal examination, the uterus was found to be natural in direction; the uterine sound passed two and a half inches, with pain at the fundus. There was hyperæmia of the cervical canal. A seton was inserted above the pubes; the general treatment consisted of tonics, morphia, Indian hemp, iodine externally, and as a vaginal plug. She left the hospital on June 6th, slightly relieved, but the dysmenorrhœa still persistent.

In Dec. 1874, she became an out-patient, and had a galvanic stem introduced with some temporary relief.

In 1875, A. B. was again admitted to the Hospital on March 4th, and remained in till May 1st. She suffered from severe pain in the right inguinal region, which was much increased at the periods, and especially for one week before each appearance; there was also severe pain during defæcation. There was tenderness on deep pressure over the ovary, and the pain was increased on the least exertion. During her stay in the hospital, a fissure of the rectum was operated upon by Mr. Reeves. The chief treatment was liniment of belladonna and chloroform, which gave some relief, tonics, pulsatilla, belladonna, and arsenic. The cervix uteri was scarified and leeched, and Graily Hewitt's cradle-pessary was worn for a time with benefit.

In 1877, she was admitted on Oct. 22nd, under the care of Mr. Reeves, for a fissure of the right anterior aspect of the anus, which he divided. A vaginal examination was made on Nov. 13th. The os uteri was directed towards the perinæum. The uterine sound passed two inches and three quarters. The right ovary could be got between the fingers in the conjoined examination; pressure on it produced pain, which was referred to the upper part of the sacro-iliac synchrondrosis.

Nov. 27th. The cervix was incised high up with the hysterotome, and Dr. Wynn Williams' stem and shield were inserted. She was discharged Nov. 28th.

In 1878, I had her re-admitted under the care of Dr. Protheroe Smith, April 11th; there were pain and vomiting after food and exercise. Abdominal palpation gave no indication. On vaginal examination, the uterus was normal in size and position. To the left and behind the cervix, there was a hard irregular nodulated body (ovary), tender to the touch; there was sacral pain.

April 22nd. The indurated nodule in the left *cul-de-sac* was less.

April 25th. The pain on the right side was worse than on the left, especially on walking. On vaginal examination, the swelling on the left was smaller, with two cherry-like tumours, movable, hard, and tender.

May 15th. She was bled to sixteen ounces, with some relief. The blood contained five ounces of serum; no buff nor cupping.

May 17th. The venesection was repeated: nevertheless the catamenia were painful.

June 6th. The ovary was not felt.

June 13th. She was not free from old pain. The general treatment consisted of antimony and morphia.

She was again admitted under my care Feb. 10th, 1879. Her countenance was pale, easily flushed. There was general emaciation. Her face was pinched. Tongue nearly clean. Pulse 84, steady. The abdomen was flat and soft. There was slight elevation of the percussion note in the right inguinal region. On vaginal examination, the uterus was found in the natural position. There was slight fulness in the neighbourhood of the right broad ligament, just behind which a small body (the ovary), was felt.

Feb. 18th. By vaginal and rectal examination, the right ovary was scarcely felt at all; it was not enlarged, nor hard, easily slipping from the finger; it was tender; the pain was chiefly referred to the right groin.

Feb. 20th. The catamenia were present, with much pain. Indian hemp was given with some relief; afterwards mercury to slight salivation, and valerian.

March 10th. A small phantom tumour made its appearance to the right of the umbilicus; it seemed continuous with the rectus muscle. Under chloroform, this tumour disappeared temporarily: only on very deep pressure could the right ovary be reached.

March 19th. A blister was applied over the right ovary.

March 24th. The galvanic current was applied: the positive pole was placed in the posterior *cul-de-sac* and the negative over the painful spot on the abdomen near the umbilicus; but it caused so much pain that it was stopped. The poles were reversed with the same result. After all this varied treatment, the patient's condition was in no way improved, except that the ovaries were less large, and she became very desirous that something should be done to relieve her, if possible. As I was quite convinced that her suffering was due to some diseased condition of the ovaries, I proposed to her that they should be removed: and, after putting before her the very serious nature of the operation, and its great risk to life, but at the same time telling her that, if successful, I fully believed it would hold out to her the best prospect of a cure, she urgently requested that I should perform the operation.

And here I would remark that some difference of opinion should guide us in dealing with the rich and the poor. Where a patient is able to afford to lie up and have every appliance for the relief of pain, when, at the same time, her general health is not suffering much, she might be advised to wait and tide over the time till the menopause. But when a patient is poor and dependent upon others who are equally poor, when her sufferings extend over at least three weeks out of every four, when she is quite unable to earn her living, and when she prefers running a certain amount of risk to continuing in her wretched and useless state, then we are bound to listen to her pleading, and do what improved science places in our power to do to relieve pain. I, therefore, trusting to my diagnosis, determined to operate and so give her the best chance I could.

I think it right to state that some of my colleagues opposed the operation, and the rest, while unwilling to advise it, left it to my own responsibility, which I willingly incurred.

The operation was performed under carbolic spray on Thursday, April 24th, at 2 P.M., Mr. T. Bird administered the bichloride of methylene, and Dr. Richard T. Smith assisted me. Most of my colleagues and some visitors were present.

An incision about four inches in length was made through the abdominal parietes in the median line, to within about one inch of the pubes. The abdominal walls were thin and bled rather freely. The recti were separated with the handle of the scalpel, and, after some little difficulty, owing to the intestines lying so closely to the peritoneum, the latter was divided on a director. The incision was then slightly extended, as the recti were very rigid, and the fingers of the left hand were passed into the pelvis until the fundus uteri was felt; the oviduct was traced out and the right ovary found; it was then drawn up, but could not be lifted higher than the lower angle of the wound. The mesovarium was then transfixed with a curved needle, with a handle carrying a fine double carbolised silk ligature. The pedicle was tied in halves, and one ligature brought round the whole: the ligature, however, broke as the last knot was being tied, so a stouter one was passed round the pedicle and the ovary cut away with curved scissors. The ligatures were cut short, and the pedicle dropped in. The left ovary was then searched for, but was not so easily found; it was lying low down, and quite to the left boundary of the pelvis. This was treated in the same way; the ligature, however, being of the stouter silk. Neither oviduct was included in the ligature. A small cyst on its surface containing bloody fluid ruptured as it was being held during the tying of the ligature, the pelvis was therefore sponged out carefully and the wound brought together with nine silkworm sutures passed through the peritoneum, but not through the muscles. The wound was dressed with three small bags of lint filled with carbolised disinfecting powder, over them four folds of thymol gauze, then eight folds of carbolic gauze with waterproof, cotton-wool, a dry cloth, and strapping; a flannel binder was then applied, a morphia suppository (half a grain) was introduced, and the patient put to bed. The operation lasted forty minutes.

For the following valuable description of the ovaries and their microscopical appearances, together with the drawings, I am indebted to Dr. Gabbett, the Pathologist and Curator of the Museum to the Hospital.

The right ovary was small, irregularly oval in shape, length, three quarters of an inch. The surface was corrugated, and furrowed by deep sulci, presenting an appearance much resembling the cerebral convolutions. Its weight was fifty-seven grains (Fig. 1).

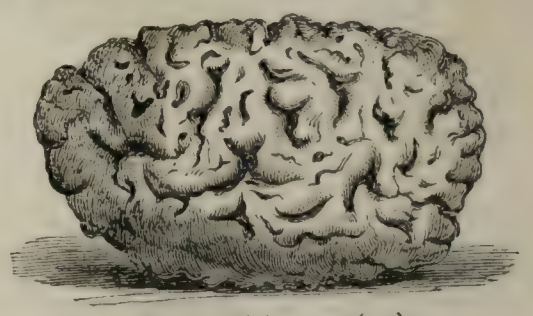


Fig. 1.—Right ovary (×2).

External examination showed no trace of cyst-formation, and the consistence of the organ was firm; but a section through it showed a great part of the interior to be hollowed out into numerous spaces (easily visible to the naked eye), filled with a transparent viscid fluid which coagulated in the process of preparation (Fig. 2). Under the

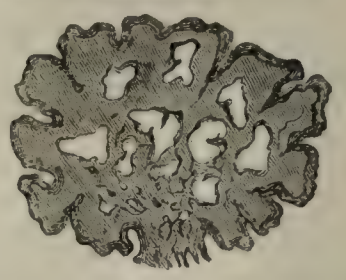


Fig. 2.—Transverse Section of Right Ovary, showing Alveolar Degeneration.

microscope, these spaces presented the following appearances. They were most numerous in the neighbourhood of the large blood-vessels near the hilus, but occupied nearly the whole of some transverse sections of the ovary; their shape was irregular, generally somewhat oval in outline. None of them had any distinct cyst-wall. They were bounded by the ovarian stroma, which was not in any appreciable degree condensed in their vicinity, but seemed on the contrary loose and retiform in many cases. Branching processes of the stroma, fine fibres, and blood-vessels of various sizes, passed into the interior of the spaces, and oval nucleated cells were imbedded in the contained homogeneous substance. In several instances there were masses of extravasated blood, either among the fibres traversing the cysts, or free in the cavities. In no case did a cyst present any appearance of being produced by the dilatation of a Graafian follicle: all were evidently new "alveolar" formations in the stroma of connective tissue (Figs 3 and 4). From an observation of a number of sections, it was easy to trace the successive steps in this process of alveolar degeneration. The smallest (latest formed) of the cysts—many of them of microscopic size—were entirely composed of a loose fibro-cellular network having all the characters of the normal ovarian stroma with its elements widely separated. In other cases, the interstices had become much larger and

the interstitial fluid greatly increased. Lastly, in the oldest cysts the fibres and cells scarcely existed at all, except in the form of isolated prolongations from the walls, and extensive hæmorrhages had occurred

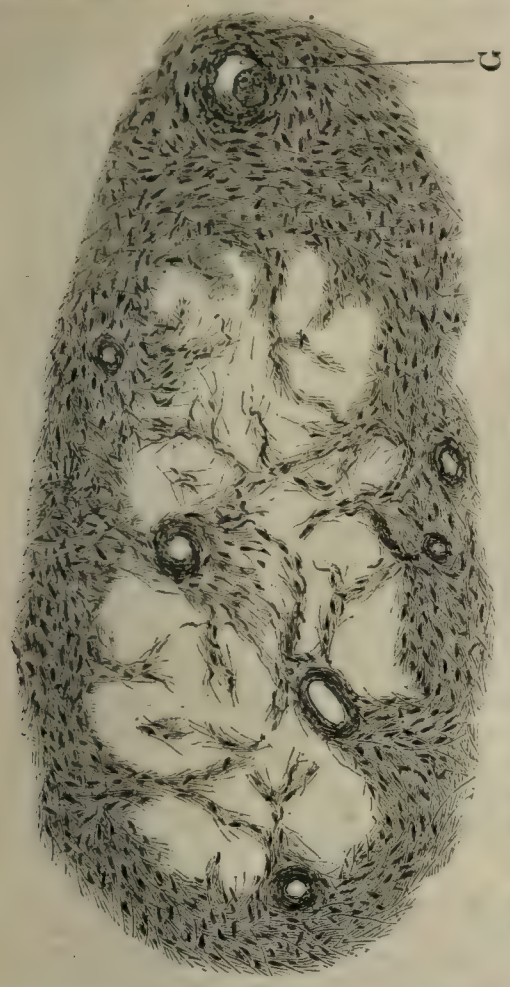


Fig. 3.—Early stage of Alveolar Degeneration, with neighbouring Stroma containing Graafian Follicle (×60).

from the unsupported vessels. With the exception of these alveolar structures, the stroma of the ovary appeared to be normal. There were but few distinct Graafian follicles recognised, and in but two or three

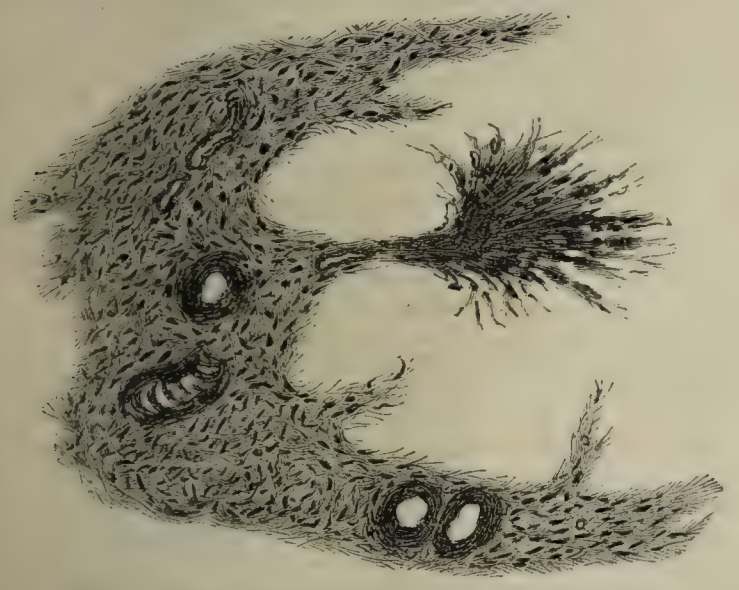


Fig. 4.— Larger Cyst, with Hæmorrhage in Interior (×60).

instances was one found of fair size containing liquor folliculi and ovum (Fig. 3). The blood-vessels were very large and numerous, giving an absolutely spongy appearance to the central parts of the ovary (Fig. 5). There were some structures near the surface which appeared to be corpora lutea of menstruation in various stages of degeneration.

The left ovary was larger than the right; length rather more than an inch; weight eighty-five grains. The surface was corrugated, but wanting the deep sulci of the right organ. This ovary was considerably flattened, so as to present almost plane instead of convex surfaces between its free and attached borders. A cyst projected near the free border: it had been accidentally ruptured before examination, and contained blood-stained fluid; its wall was moderately thick, and its cavity capable of containing a large pea. Another cyst of nearly equal size, situated at the attached margin, had apparently been opened in the course of removal of the organ, and a longitudinal section through the ovary showed two more similar blood-cysts in the interior (Figs. 6 and

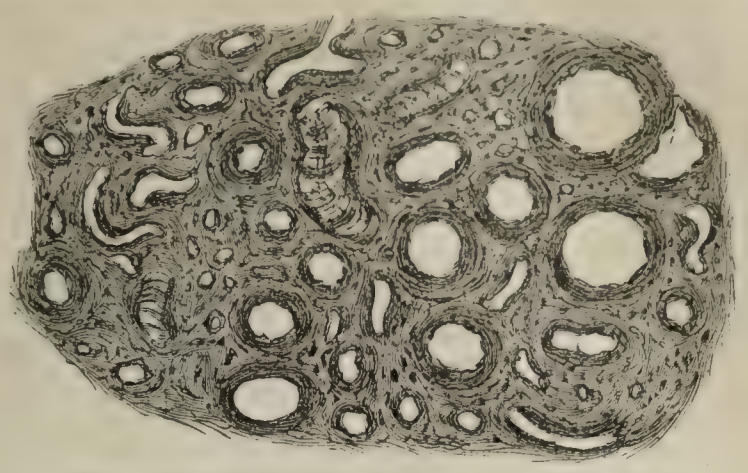


Fig. 5.—Blood-Vessels of Central Part; from Right Ovary.

7). In other respects, the left ovary appeared to the naked eye identical in structure with the right. The microscope, however, showed certain differences. (1) The blood-vessels were rather more numerous. Some sections indeed presented an appearance exactly like that of a vascular tumour:— innumerable arteries and veins, coiled and tortuous, were



Fig. 6.—Left Ovary (×2).

found cut across in every direction, and where no large vessels could be distinguished, the tissue was channeled by dilated capillaries. This condition was not confined to the central parts of the organ, but networks of vessels approached almost to the surface. That the vascularity was not dependent on functional activity, is rendered probable

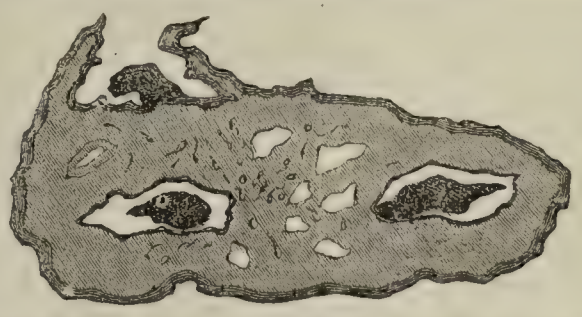


Fig. 7.—Section of Left Ovary, showing flattened condition, and Large Cysts containing Clots.

by the fact that not a single Graafian follicle approaching maturity was found in this ovary. (2) The structure was somewhat more fibrous and less cellular; the normal richly nucleated stroma being in many parts replaced by tracts of dense fibrous tissue. (3) In this ovary the cysts were more numerous and (with the exception of the large ones already mentioned) smaller than those in the right, and several spots where the tissue was only just beginning to degenerate, afforded still better opportunities for tracing the stages of the process. Where the stroma was thus as it were teased out by the accumulation of fluid in its meshes, it was easy to see small blood-vessels running unsupported in the interior of the embryo-cysts; thus accounting for the occurrence of the large hæmorrhages seen with the naked eye.

Progress of the Case.—The subsequent history may be summed up in a few words. The temperature after the operation was 100° Fahr.; at 7.30 P.M. it was 101.6°; the next day it fell to 98.8°, and did not at

any time again rise higher than 99.6°. She suffered occasionally for a few days from some pain, the first day in the right inguinal region, and afterwards with a sharp pain across the abdomen; this, however, soon passed away. Two days after the operation, a coloured discharge came from the vagina, which continued for five days; this was followed by leucorrhœa for three days more. As the patient had menstruated nine days before the operation, this discharge may be counted analogous to that which is not unfrequently observed in patients a few days after ovariotomy. In Professor Simpson's case, it is noted that the patient "menstruated" from the second to the sixth day after the operation. The wound was dressed for the first time and the sutures removed on the ninth day, when it was found to have united perfectly. The patient was allowed to get up for an hour on May 16th, and in a day or two was able to walk about the ward without pain. She left the hospital cured on May 23rd.

On May 30th, she went out to visit some friends in London, entailing a drive in three omnibuses, and a walk of over a mile, without experiencing any pain or inconvenience; whereas, for one or two years previously, she could take no exertion without violent retching. When seen on May 31st, she was well and free from pain. Vaginal examination showed the uterus to be somewhat to the right of the median line, and movable. There was no tenderness. There was some slight feeling of thickening in the region of the right broad ligament.

REMARKS.—*Pathology*. The chief interest of this and similar cases lies in their pathology, and in the question as to how far the manifested symptoms depend upon organic changes in the ovaries, and if so, whether, other remedies having failed, there is any contraindication to their removal. In the present case, the ovaries were never very large, and their tenderness varied from time to time, though the subjective pain was nearly constant. The chief changes seem to have taken place in the ovaries themselves, unaccompanied with any periovarian inflammation, which might have resulted in adhesion. I think we may dismiss the left ovary with but few remarks, as, although it was slightly the larger and contained two small cysts containing bloody fluid, yet it seemed to produce but little ill effect on the patient. It was felt and its cystic enlargement was recognised during the patient's stay in the hospital in 1878. Though its disease, differing slightly in kind from that of the right ovary, was, we might say, nearly as grave, it is remarkable that so little pain and discomfort were referable to its locality.

The right ovary, which was all along apparently the seat of the disease and the cause of the dysmenorrhœa (I take this expression in its widest sense, as including all the suffering both before and after the period), seems to have become subject to periodic congestion, *i.e.*, prior to each catamenial nisus, and under this intermittent distensive congestion to have become somewhat enlarged and tender. Treatment or rest gave from time to time temporary relief, but did not prevent the recurrent attacks of pain.

After a time, another change came on: the vascular area, probably in consequence of the vascular distension, encroached on the tissue of the ovary, that tissue about the same time undergoing such a change as rendered distension difficult and painful. For the ovary, as will be seen by the description above, was even smaller than the healthy organ, and was so much the subject of disease analogous to that of cirrhosis in other organs, that its surface was puckered in, and it presented the appearance as of cerebral convolutions. This ovary also exhibits, as a point of great interest, that the cystic degeneration was in the stroma, and apparently unconnected with any morbid degeneration of Graafian follicles.

The dysmenorrhœa appears to me to admit of the following explanation. First stage, congestive, but we know not from what cause, physical or mental; second stage, vascular, the vessels becoming almost varicose, their walls thickened by some slight inflammation; the periodic hyperæmia producing pressure on the stroma of the ovary and its nerves, this stage accompanied by degeneration of and cyst formation in the stroma; and lastly, third stage, that of "cirrhosis", when the fibrous nature of the degeneration produced irregular contraction, drawing in the stroma (especially marked on the surface of the ovary), and so maintaining, if not increasing, the periodic pain by the hyperæmia acting on the contracted organ not having free scope for that enlargement that would have lessened the eccentric pressure.

In confirmation of my remarks as to the diseased condition of the stroma of the right ovary, together with its vascular distension being the cause of the severe pain, I quote a sentence from Marion Sims's pamphlet on *Battey's Operation*, 1877. "The peculiar pain of these cases must depend upon some radical organic change in the nerves and stroma of the ovaries, and not upon the mere development of cysts." Also, specially with regard to the condition of the ovaries in my case, and their "cirrhosed" appearance, the following, from Emmet's *Principles and Practice of Gynæcology*, 1879, is noteworthy. "We are unable to explain the fact that the extent of disease may be limited to what may be termed a congestive enlargement due to obstruction in the venous circulation. The enlargement is evidently not from arterial congestion, for that would tend to inflammation, which, if continued, leads to the breaking down of tissue and the formation of abscess. This venous congestion may last for years, and, from some unknown cause, the ovary may be prolapsed, but only as an exception to the rule; for an ovary equally large and as free from adhesions will more frequently remain in place. Under this congestive influence, the organ undergoes cystic degeneration, and remains stationary at nearly the same degree of enlargement for years. *A rarer change is an early atrophy, which presents the appearance of cirrhosis;* but this has been already referred to. Ovulation in an ovary, in either of these conditions, is generally imperfect, and is attended with dysmenorrhœa and other menstrual disorders."

Indications for the Operation.—The reasons which led me to operate in this case were (1) the duration and severity of the ovarian dysmenorrhœa. The pain lasted for three weeks out of every four, the fourth not even bringing entire freedom from pain; *i.e.*, for a week preceding the period, for a week during the flow, and for the subsequent week. The severity was such that, from the testimony of her sister, for nine months previously, the patient used often to roll on the floor with pain. (2) Her condition, in consequence, was extreme prostration, emaciation, with severe retching on any exertion; and so (3) she was unable to do any work or in any way get her living. (4) The case had been carefully watched for several years, and treatment of various kinds had failed to bring relief. (5) I had ascertained that there were probably no adhesions; that otherwise, though weak, the patient's general health was good; and my diagnosis was that the disease, specially of the right ovary, was the cause of all the suffering.

A few weeks before the operation, Professor Simpson was in town, and kindly saw the patient with me at the hospital, when he said that the case appeared to him one of those in which the operation seemed justifiable.

Marion Sims, in the pamphlet already quoted from, says (page 27): "Battey's operation may be resorted to under the following conditions: ...2. In cases of prolonged physical and mental suffering attended with great nervous and vascular excitement produced by perturbed menstrual molimen, whether menstruation be absent, scanty, or otherwise, this operation is justifiable after all the usual remedies fail to relieve."

Engelmann, of St. Louis, in a pamphlet on *Battey's Operation: Three Fatal Cases, with Remarks*, says, page 22, "the operation is indicated...(11) To remove the offending organs when they are the seat of constant pain, independent of the monthly flow, although generally increased by it; these are cases of chronic ovaritis, ovaralgia with pelvic pain, which are marked by the most fearful and continued suffering, which is only intensified during the catamenia; the ovary itself is always diseased, generally in a state of cystic degeneration; and the object of the operation is not mainly to establish the menopause, but to remove those organs which, by their affection, are causing local suffering, and are involving in disturbance the entire nervous system".

Operation.—With regard to the operation itself, I entirely agree with the remarks of Dr. Engelmann put forward in a pamphlet on *The Difficulties and Dangers of Battey's Operation*, 1878. It is more difficult than ordinary ovariotomy; for (1), the abdominal walls not having been stretched, the recti, by their rigidity, greatly hinder the introduction of the hand to feel for the ovaries; (2) the ovaries themselves are small, and not at once always easily discoverable; (3) even if there be no adhesions, it is very difficult to draw them higher up than just into the lower angle of the wound. Though the greatest success does not seem hitherto to have attended the operation by abdominal section, yet, with care, I think it is to be preferred to that by the vagina; for, in the case of the pedicle slipping, or otherwise hæmorrhage occurring, the difficulty of restraining it becomes infinitely greater in the confined space of the vagina. The danger is greater in Battey's operation, as the peritoneum is unaltered by the presence of a tumour, and therefore more likely to take on inflammation. The argument that animals are spayed with impunity is fallacious, as the young of animals and children bear operations, as a rule, better than adults.

I will not add to the length of this paper further than to remark, with regard to a favourite objection brought forward against this operation by non-professional persons as well as by some medical men—viz., that it unsexes a woman—that we have still to learn that woman is unsexed by the menopause; and that we have yet to learn what part, if any, the ovaries play in the maintenance of sexual sensations.

I venture to express the hope that this account of what is, I believe, the first Battey's operation performed in England for dysmenorrhœa will lead gynæcologists seriously to weigh the matter; and, undeterred

by some disheartening results which not unfrequently accompany a new operation, consider well whether we have not in it, even though it be as a last resource, a final and permanent relief from much misery and suffering.

ON OVARIAN MENORRHAGIA.

By ALFRED MEADOWS, M.D.Lond., F.R.C.P.,
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IT may be well, perhaps, before I speak on the subject of my paper, that I should explain briefly what I mean by the term "ovarian menorrhagia", because, so far as I know, it is not one which is in common use, nor indeed is it, I believe, to be met with in works devoted to the subject of diseases of women; and yet, as I hope to be able to show you, it is a term peculiarly applicable to the class of cases we shall have to consider—a term, also, of much practical value, inasmuch as it not only indicates distinct physiological teaching, but also defines a particular pathological condition; and, moreover, it serves to point out the special line of treatment which ought in the main to be pursued in the cases to which it refers.

Let us pause for a moment to look at the conditions and circumstances of ordinary natural menstruation; for without this we shall not understand or realise the fitness of the term here employed as the title of my paper. First, then, on the one hand, we see certain changes going on in the ovary *precedent* to certain other changes which take place in the uterus. The former are characterised by great vascular excitement; the vessels are turgid and swollen, and the organ itself is much increased in size, especially at the point of chief functional activity. All these changes are preliminary to, or coincident with, the maturation and escape of an ovum from a given point on the surface of the ovary; and they all precede in the order of occurrence the changes which take place in the Fallopian tube and uterus. These latter changes are also characterised by great vascular activity. Here, also, the vessels increase in size; the mucous membrane, both of the Fallopian tubes and uterus, becomes greatly swollen, and a kind of erection takes place, to which, if I may venture to hazard the opinion, is due the application of the fimbriated extremity of the Fallopian tube to the surface of the ovary, in order that it may receive and conduct to the uterine cavity the ovum which is to escape from the ovary, for the purpose either of impregnation, or that it may be cast off as "the untimely fruit of the woman". Now, the prominent feature characteristic of, and resulting from, the changes which take place in the Fallopian tube and uterus, which changes are evidently due to the fact that these latter are lined by a highly vascular mucous membrane, with all that that fact implies, is the escape and discharge of a variable quantity of mucus and blood, accompanying which there are also the minute disintegration, death, and shedding of the mucous membrane itself.

Such, in very brief terms, are the leading phenomena attendant upon ordinary menstruation; and it will be admitted, I think, upon a review of them, that the ovary is, as it were, "master of the situation"—that it is, in fact, as I have often insisted, highest in physiological dignity and importance, and that the uterus, so far as menstruation is concerned, merely obeys the physiological behests of the ovary. How, or in what way exactly, that is done; what the minutely intimate process by which the special functional activity of the ovary, which we call ovulation, produces or eventuates in menstruation, is a problem which yet remains to be solved. The fact, however, is indisputable; for without ovulation there is no menstruation. We may, I think, go one step further, and say that, whatever be the exact nature of the process, it is, in all probability, wrought through the instrumentality of the local nervous system; and that this is so, another fact, to which I shall call your attention presently, testifies; namely, that the medicines which possess most therapeutical value in the treatment of the special class of cases which we have to consider to-night are known to exercise their influence chiefly, if not entirely, through the nervous system.

In the practice of medicine, as in some other concerns of life, we are very apt unconsciously to be influenced by the terms we use to denote ideas; and hence the employment of the term "uterus and its appendages" has led us to regard the former as the most important part of the female generative system, both as regards physiology and pathology; whereas in reality the ovary, which is one of these so-called appendages, is from both points of view superior in importance and interest, as dominating, if I may so say, the functions, as well as influencing the diseases of the uterus.

Admitting all this, then, if it be true that the ovary is so important a factor—nay, is *the* factor, in the physiological occurrence of menstruation—does it not follow that, at least in some cases, and probably in many, the ovary is *the* factor, also, in the various derangements to which that function is liable? We know that it is so in regard to one derangement—namely, pain; for we speak constantly of ovarian dysmenorrhœa, meaning thereby menstruation made painful by reason of ovarian disease of one kind or another. But if the periodical discharge of mucus and of blood from the uterus, which we call menstruation, be the direct result of ovarian action, is it not reasonable also to suppose that the *amount* of that discharge may in like manner be governed entirely by the character of that ovarian action; in other words, that just as scanty menstruation, amounting in some cases to a mere show, lasting only for a few minutes, and being sufficient merely to stain a small piece of linen, is the direct consequence of feeble ovarian activity, due possibly to an almost infantile, and certainly to a very undeveloped, form of ovary; so, on the other hand, excessive menstrual discharge—menorrhagia, in fact, and amounting, it may be, to a positive hæmorrhage—may in like manner result simply from ovarian activity of quite another kind, and be the direct consequence of morbid and, may I not add, excessive ovarian action? Nay, further, does not the physiology of menstruation seem to show, also, that cases of menorrhagia in regard, not to the amount of menstrual discharge in any given "period", but to its frequent periodicity, its too frequent occurrence, in fact, are also the direct results of too frequent ovarian action—in other words, of too frequent ovulation? All this, I submit, is fair reasoning; and, moreover, it is borne out by careful study of clinically observed facts; for the cases are many and of frequent occurrence in which the most careful examination of the uterus fails entirely to demonstrate any morbid condition of that organ, while minute inquiry equally fails to bring out any tendency to the so-called hæmorrhagic diathesis; and yet menorrhagia, either in time or in quantity, is the prominent feature in the menstrual act of these persons.

Furthermore, be it observed that, if attention be directed away from the uterus, and towards that other organ which we are specially considering to-night—namely, the ovary—we shall find, on inquiry, that symptoms clearly referable to that part exist to a marked degree. For instance, as a general rule, pain, to a greater or less extent, is a constant feature in these cases, and it presents the following characteristics. It is situate in one or other ovarian region, much more frequently in the left than in the right side; why this is so, I cannot tell; but, in my experience, morbid conditions of the ovary in which the blood-vessels are chiefly involved are far more common in the left than the right side. It is the same, I believe, in the male subject; varicocele is more frequent in the left than the right testis. I am not sure whether the same rule obtains in regard to orchitis. You will remember the difference which exists in the anatomical arrangement of the blood-vessels—the spermatic artery and vein—of the two sides. Whether this is related to the fact just referred to I am unable to state, though it seems not unlikely. Again, this ovarian pain extends upwards to the renal region, and, above that, under the ribs of the corresponding side, to the mamma of that side, which often becomes very painful, and even tender to touch. In these respects, it differs from the pain which originates in one or other broad ligament; for this goes through the sciatic notch, and down the thigh, both back and front of the affected side; it does not extend upwards at all. In the case of the ovary, the pain is referred upwards along the spermatic plexus, which, as you know, is formed from branches of the renal and aortic plexuses; and it is by reference to these anatomical facts, of the relation of the spermatic to the renal plexuses, that I would venture to explain another symptom, common not only to the cases we are considering, but met with frequently also in other ovarian affections—I refer to the existence of the so-called hysterical urine. I believe there is a very close analogy in the mode of production of the so-called hysterical urine, which is an excessive secretion of the kidney, and these cases of ovarian menorrhagia, which is an excessive secretion of the uterus. At all events, the coincidence is often very remarkable.

Again: women who suffer from ovarian menorrhagia are frequently subject to loss of voice, to difficult deglutition, and other throat-affections. I need not mention the *globus hystericus* with which you are all familiar. It would be an interesting subject for discussion, if I had time to consider it, which I have not—namely, the relation of the parts about the throat, the larynx, etc., and the generative apparatus, but especially the ovaries, in women. Not that the human animal is the only one, or the female the only sex, in which this relation exists; for at this period of the year, when the birds are coming into song, we are audibly and pleasantly reminded of this relationship.

Lastly, and this is the climax in the clinical study of these cases, when we institute a vaginal examination for the purpose of discovering the cause of the menorrhagia, which is frequently very excessive, amounting, as I have said, in some cases to a positive hæmorrhage, while in others the amount discharged at any given time is perhaps not very, or not at

all, excessive, but is far too frequent; it may be fortnightly, or more rarely weekly, or even almost constant, to a greater or less extent, as is the case in one now under my care; when, I say, an examination is made, in the expectation, it may be, that either a polypus or some other organic disease of the uterus exists, or that the cervix uteri is the seat of the so-called granular ulceration, or that the uterus is abnormally large, the os patulous, and other conditions existing to indicate the state of subinvolution, we may be surprised to find, if we have not inquired carefully and minutely into the clinical history of the case, that none of these conditions exist—that, in fact, the uterus is perfectly healthy, that only negative evidence is furnished by examination of that organ, and that we must look elsewhere if we are to discover the real cause of the mischief, and if we are therefore to apply our remedies intelligently and successfully in the treatment and cure of the case.

How frequently are we asked by practitioners to examine cases about which, as they say, they are greatly puzzled, because they cannot find any disease of the uterus, or anything wrong with that organ, forgetting all the while that there is another organ quite as much concerned with menstruation and its derangements as is the uterus itself—nay, far more so in the cases now under consideration.

Where, then, are we to look for the *fons et origo mali?* Most certainly and surely to the ovary; and, in the great majority of cases, to that of the left side. Here we shall discover, on deep and firm pressure—internally *per vaginam* behind the broad ligament, on one or other side of the uterus, and externally over the inguinal region—that the ovary is swollen, very tender to touch, probably distinctly prolapsed, and any manipulation of that organ is at once recognised by the patient as causing an aggravation of the pain and distress which she so constantly experiences, *et voilà tout*. That is the whole gist of the case. There is nothing else to discover, or at least nothing else that we can discover. We have literally put our finger upon the seat of the mischief; and if now we study carefully all the clinical features of the case, we shall find that it needs no forcible twisting of the facts to make them square with our preconceived ideas; each will fall into its proper place, and the whole will make up a picture complete to our mental vision, and needing only from us the application of the proper remedy.

Happily, here also experience comes to our aid, not only to point out what reason would suggest as the most appropriate kind of remedy; but experience itself, the very result of our treatment, tends to prove the correctness of the diagnosis and the soundness of our pathology.

Let me give a case in illustration, with remarks by the way on the points I am specially anxious to enforce.

L. F., aged 23, had been married four years, but was never pregnant. Her catamenia began at thirteen, and at once continued every three weeks, being very profuse, and lasting for seven or eight days. Since marriage, they had been even more profuse, and had also been accompanied by a good deal of pain.

I would here remark that such a history as this at once suggests to my mind ovarian troubles. From the very commencement of what I may term the ovular life of this woman, there was an abnormal element about it. Her menstrual periods, in other words, her ovulation, occurred much too frequently, and the effect upon the uterus was shown by an exaggeration of the menstrual discharge. Then again, when, by reason of her marriage, her sexual functions were stimulated, ovarian activity was yet further increased; and now, for the first time, pain was added to the history, and the uterine discharge was still further increased. Thus far, then, clinical history and physiological and pathological teaching went hand in hand. Now let us see what the physical examination revealed.

The cervix uteri was situated rather posteriorly in the pelvis, and somewhat more to the left side. This latter displacement seemed to be caused by a swelling of the size of a hen's egg, situate in the region of the right ovary. On the left of the uterus, a similar but smaller swelling was felt. Both these swellings were extremely tender to touch, and they presented a kind of cystic feel. In fact, they were evidently enlarged and inflamed, or at least swollen and congested ovaries; so that here again the facts corroborated the theory contended for, especially as the uterus itself was perfectly healthy.

Lastly, as to treatment. Thirty grains of the bromide of potassium and one drachm of the syrupus ferri bromidi were given three times a day. Locally, a pessary containing one grain of the alkaloid conia, and one-twelfth of a grain of atropine was ordered to be inserted into the vagina every night. Under this treatment, steadily persevered with for three months, with occasional slight modification, and sometimes suspending it altogether when constitutional symptoms supervened, the patient vastly improved; the ovaries assumed nearly their normal size, the catamenial discharge greatly diminished, and, instead of menstruation recurring every three weeks, the intervals became fully three and a half weeks, while all pain disappeared. Thus, also, in treatment, unmistakable proof was afforded of the soundness of the pathology; and where this is the case, if it be also based on an accurate appreciation of physiological action, success in treatment is, I would almost venture to say, a moral certainty.

Let me now say a few words as to the treatment of these cases of ovarian menorrhagia, as exemplified in the foregoing illustration. I do not think I at all exaggerate when I say that, in ninety-nine out of every hundred cases of menorrhagia which come before the practitioner for treatment, his first thought is, what form of astringent shall I give? And the answer probably in most cases will be, an astringent chalybeate—either the perchloride or the pernitrate, or some similar preparation of iron, will be almost certainly prescribed. No wonder that such routine practice frequently fails; for, as I stated at the beginning of my paper, a very considerable number of cases of menorrhagia which come up for treatment are of the kind we have been considering to-night, and for such as these, the persalts of iron are worse than useless; their only effect will probably be to still further force on ovulation, and thus to aggravate the complaint. Indeed, if the pathology which I have sought to enforce in this paper has any basis in reason and fact, then to administer astringents in any form is surely unscientific; it is, as it were, beginning at the wrong end; it seeks to curtail capillary action at the uterine end of the pole as it were, whereas in reality, the mischief is being wrought at the ovarian end; and our treatment, therefore, ought to be directed to this point. In other words, we should disregard the result—the menorrhagia, and we should concentrate our attention upon the cause—the ovulation. Hence the remedies ordered in the above mentioned case, and hence the successful issue.

Of all drugs in the *Pharmacopœia*, I know of none which possesses such great power as the bromide of potassium in controlling this particular form of menorrhagia. I ought rather to say, for that better expresses my meaning, that no other drug possesses in a like degree the power of limiting ovulation. I believe, indeed, that we may absolutely suspend the function altogether, and produce in time an atrophy of the ovary by the prolonged administration of this drug in large doses. I have seen cases again and again in which menstruation, and therefore ovulation, has been delayed for weeks from apparently no other cause than this; and I have successfully arrested and cured scores of cases of this form of menorrhagia without ever giving any kind of astringent, but merely administering the bromide of potassium. Occasionally, but by no means always, I combine with it the bromide of iron. This drug seems to me to possess a somewhat similar action; certainly it does not act in any way as the other salts of iron. It seems to favour the absorption of certain glandular swellings, which cannot be said at least of any persalt of iron. Sometimes I give the iodide of potassium, and sometimes the iodide of iron, in conjunction with the bromides. I believe that they all act very much in the same manner; but certainly none are so efficacious as the bromide of potassium. Indeed, I may say it is my sheet-anchor in these cases, and I regard it as almost, if not quite, a specific in ovarian menorrhagia. What its special mode of action may be, I fear I cannot with certainty divine; there is, indeed, nothing more difficult to define than the exact *modus operandi* of drugs; but I would at least venture to state my conviction that this drug acts directly through the nervous system, and especially upon the nerves of the blood-vessels. In this way it is, I believe, that it exerts so beneficial an influence in cases of epilepsy; and it seems to me not unlikely that the good results wrought in those cases of epilepsy in women, which occur so frequently in connection with menstruation, are due directly to the influence of the bromide in controlling ovulation, and so diminishing this form of reflex irritation.

In connection with the hypothesis here stated as to the *modus operandi* of bromide of potassium upon the nerves of the ovaries, let me refer to the other part of the prescription given in the case above detailed. The two alkaloids—conia and atropia—were ordered to be used *per vaginam*. You will remember that pain became a prominent symptom in this case after the patient married; and I have just stated my belief that the bromide acts beneficially upon the local nervous system. It would seem, then, if this be therapeutically sound, that we ought to seek to influence nervous action in order to control ovulation. And this would appear to be specially necessary where pain was also a prominent feature. Now, of all the anodynes we possess, none, I think, can compare with conium as an anodyne to the generative or sexual organs; and its influence upon the ovarian nerves is quite remarkable. I have even thought, from observations I have made, that it not only allays pain, but that it also calms vascular excitement, and so exercises a controlling and moderating influence even upon ovulation itself. Nor does this seem unreasonable or unscientific, when we consider how much vascular activity is influenced by nervous excitement. At all events, I am satisfied that it does exercise a most bene-

ficial effect in the class of cases we are considering. Atropia or belladonna seems also to possess similar powers, but by no means to the same extent; and it has the disadvantage of causing sometimes serious constitutional disturbance even in small doses. Moreover, with an agent so efficacious, and I may add so uniform, in its results as conium, we need not multiply our resources. I may say that I always use the alkaloid *conia* in one-grain doses for a pessary, just as I prefer atropia to belladonna, because the alkaloids are cleaner in use, do not create any dirty-coloured discharge, are smaller in bulk, and are certainly not less effective.

In placing these views before this Society, I would invite the experience of the members present, apologising for the very imperfect way in which my task has been performed. I feel that much more is needed to make the subject clear; and, indeed, this contribution must only be regarded as a fragment of a great inquiry. My principal object has been to suggest thoughts for future workers, and in this respect at least I hope my effort will not be unsuccessful.

REMARKS ON OPERATIONS FOR GENU VALGUM CONTRASTED.

By RICHARD BARWELL, F.R.C.S.,
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A CLINICAL lecture by Mr. Arthur Barker (BRITISH MEDICAL JOURNAL, July 5th, 1879) contrasts all the different forms of osteotomy for genu valgum, and, among others, he mentions my procedure. Upon his observations, some remarks are necessary; but they shall be compressed into as small a space as possible, since I intend to read a paper on the subject at the next Association meeting in Cork.

Of my operation, Mr. Barker says: "Its disadvantages are apparent: a double osteotomy where one would suffice, and so increased danger and loss of time; a gap left at the lower end of the femur, to be filled up by material which may afterwards yield, before being quite solid, to the weight of the body."

I must deny that what Mr. Barker calls disadvantages are in any way disadvantageous, unless one may take an additional three weeks of treatment at a period of life when time is not usually of great importance to be of more value than the choice of an operation which succeeds, not by producing a compensating deviation, but by removing the deformity itself. Any supposed increase of danger is, as my numerous cases show, a chimera. I have in no one instance encountered a bad or even a minatory symptom. Surely a subcutaneous, antiseptic, and simple section of a bone must be, even though repeated, safer and less complex than the removal of a wedge. Mr. Barker's last objection, that the material filling my gap may afterwards yield, is a theory contradicted by facts. Such yielding has never taken place.

I contend that my operation, unlike those based on section of the internal condyle, is founded on real physiological and pathological conditions. In 1878, I wrote in this JOURNAL: "I conceive the malady (genu valgum) not as a mere lengthening of the inner condyles, but as an obliquity of the whole lower epiphysis." In support of this view, I will quote from the paper to which Mr. Barker refers.*

"When the femur is concerned in genu valgum, the deformity lies above the condyles, which cannot be materially involved. The bend must be in the epiphysal line" (p. 597). "The epiphysis is not materially affected, and the obliquity lies only in the lower part of the shaft" (p. 298). "We perceive, then, that in genu valgum the deviation of the femur is thus caused; that the unaltered epiphysis lies obliquely on the diaphysis" (p. 599). "In all the specimens of tibiæ which I examined, it was demonstrable that the aberration affected only the upper extremity of the diaphysis, and was produced partly by a bend in the upper part of the shaft, partly by an uneven growth of the epiphysal junction" (p. 600). "Genu valgum adolescentium is a distortion situated in the contiguous extremities of the shafts, both of the femur and of the tibia, caused in part by oblique growth of the epiphysal junction, partly by a deviation of the whole end (upper and lower respectively) of the diaphyses. The epiphyses themselves do not materially participate" (p. 600).

Can anything be clearer? The malady lies not in the epiphysis, nor at the inner condyle. If, therefore, a genu valgum, whose causation lies both above and below the knee, be attacked by an operation on the femur only, especially if that operation be directed to the inner condyle or to some other part of the epiphysis, the surgeon does but substitute one deviation for another. The procedure I advocate is the only one that takes into account the tibia; my osteotomy is performed on the seat of distortion—the shafts of the bones—and corrects their deviation.

* Langenbeck's *Archiv*, vol. xxiii, 3 Heft. The thesis is founded on a most careful mensuration of thirteen specimens. The table, though headed 17, contains only thirteen examples of genu valgum. For some weeks past I have, as far as my opportunities permit, endeavoured to verify or control Dr. Mikulicz's statements. I find them at present quite indubitable.

OBSTETRIC MEMORANDA.

HÆMATEMESIS IN AN INFANT.

As this condition in infants is of very rare occurrence, it may prove both interesting and instructive to place on record the particulars of a case which occurred recently. On June 17th, I was summoned in great haste to attend an infant, five days old, who had vomited milk mixed with blood, sufficient to stain markedly the dress and sheet. The mother was considerably alarmed, having recently returned from India, and suffered much from fever and ague, almost up to the time of her confinement. She feared the hæmorrhage must be due to some disease of the child's liver or spleen; and, on my arrival, was in a state of intense anxiety at the prospect of losing her infant. The blood was of a bright arterial colour, and gave the impression of having been slowly and thoroughly mixed with the milk. It must have continued flowing during a greater part of the time that the child was sucking, judging by the tint of the vomit. My first thought was to examine the mother's nipples; and there undoubted evidence of blood having been drawn from the left nipple was apparent, the apex being coated over with recently coagulated blood. The explanation was sufficient to allay the mother's anxiety. The employment of an astringent lotion, the use of a nipple-shield, and a little extra care in nursing, prevented any further bleeding. The infant is thriving and healthy, and presents no indications whatever of there having been any internal disorder to account for the hæmatemesis. The mouth was examined at the time, but no trace of any scratch or wound could be detected.

A somewhat similar case occurred a few weeks since at the Lying-in Hospital, which for the time caused much unnecessary alarm, and was also due to an excoriated nipple. ARTHUR W. EDIS, M.D.

CASE OF EARLY WOMANHOOD.

ANNIE D., aged 4 years, was brought to me as an out-patient at the Children's Hospital here, by her mother, who stated that, since the child was two weeks old, she had suffered from a discharge from the genitals, lasting from two to three days, and returning as nearly as possible every month; the character of the discharge being, to use the words of the mother, "exactly the same as from herself, when she was unwell". The child was a fat plethoric little creature, with well developed breasts, as large as are usually found in young women at the age of 16 or 17, after menstruation has become established; at times, according to the mother, they became quite hard and prominent; the nipples were dark, and rather large, over a *centimètre* long, and standing prominently out in the centre of dark areolæ, two *centimètres* in diameter.

The external genital organs were well developed, the labia minora being especially prominent. With the greatest ease, I passed my index-finger two inches and a half up the vagina, without causing the child the slightest pain. The cervix uteri was large; and, indeed, the whole organ seemed fully as big as the average virgin uterus at puberty. The front of the abdomen and the back were covered with patches of ephelis. The child was evidently rickety, genu valgum being marked.

The case seemed to me an interesting one, and worth recording; for, excepting the absence of pubic hair, the child was a perfect little woman. Strangely enough, her precocity was confined alone in a sexual direction; for whilst of her own accord her mother had seen her frequently "offer her breast to the baby", yet mentally she did not exceed the capacity of her age. The presence of the ephelis, or *taches hépatiques*, is undoubtedly rare in infants; and in this case, being most likely connected with the advanced stage of sexual development of the child, they enhance the interest of the case.

DAVID DRUMMOND, Physician to the Children's Hospital, and to the Infirmary, Newcastle-on-Tyne.

BLEEDING IN PUERPERAL CONVULSIONS.

MRS. E., aged 24, a stout thick-set woman (primipara), was taken in labour on June 25th, 10 P.M., and continued having pains all night. I was sent for at 8 A.M. the following morning. Before my arrival at 8.30, a messenger came to meet me, saying that she had just had a fit. I found her recovering from a strong convulsion. I therefore immediately got her under the influence of chloroform; and, on making an examination,

found the head low down on the perinæum. I at once applied the short forceps (Simpson's), and delivered her of a living male child. The convulsions returned during the operation with great severity. The chloroform was kept up for about an hour; then, finding she was quiet, I left her, and ordered her a mixture with chloral and bromide of potassium. The first dose was given at 10 A.M., when she had another strong convulsion. At 12, she had been very restless since my last visit, with muscular twitchings; her pulse was very quick, hard, and jerky. I gave her another dose of the mixture, when she immediately had another convulsion, even stronger than the last. Fortunately having a lancet in my pocket, I bled her to thirty ounces, after which she slept calmly until 6 P.M., when she had another convulsion, but not quite so strong as the last; her pulse was 120, soft, and compressible. The pupils were dilated. At 9 P.M., she was much the same. I gave her an enema of two drachms of chloral. At 10 P.M., she became restless; and, at 11 P.M., she had another convulsion, though slighter. At 1 A.M., the chloral injection was repeated. She then became quieter, and remained sleeping all night.

On June 27th, at 9 A.M., I found her sleeping quietly. When roused, she answered questions, and said she was better. She drank a little milk. Pulse 100, soft; skin hot and dry. Temperature 100. I drew off about three pints of clear rather high-coloured urine, of specific gravity 1020, containing a large quantity of albumen, and ordered her a turpentine enema. At 12, she was still sleeping, I repeated the enema, as the other had not acted. At 8 P.M., the bowels acted freely. She had been sleeping heavily all the afternoon, except when roused to take nourishment. The skin was inclined to be moist. She knew every one, and said she was better.

June 28th, 9 A.M. She was rather restless the first part of the night; then slept for three or four hours. She woke up much refreshed, and took some beef-tea. From this time, she went on well.

I have been induced to send this case for publication, as I consider the very satisfactory results are entirely due to the large bleeding. I hope that others will relate their experience as to the advantage of free bleeding in severe puerperal convulsions. I believe, however, that chloroform and chloral will, in the majority of cases, be most beneficial.

JAMES POLLARD, Surgeon, Torquay.

THERAPEUTIC MEMORANDA.

A NEW DIGESTIVE.

IN the BRITISH MEDICAL JOURNAL of the 19th April last, under the heading of a "New Digestive", some remarks are inserted regarding the value of papaya juice. In the *Bengal Dispensatory*, by W. B. O'Shaughnessy, M.D., published in 1843, some particulars of the natural order *Papayaceæ* are given. As the work may not be accessible in England, I venture to send the following transcript.

"A milky juice exudes on incision from the rind. It is deemed a powerful vermifuge in the Mauritius, and the powder of the seeds—which taste like watercress—is said to possess like virtue. The milky juice very closely resembles white of egg in its chemical composition. It is alkaline; contains albumen in such quantities that it coagulates when heated to 170°; and it putrefies readily, evolving a very unpleasant odour.

"It is stated, in several works of high authority, that tough meat rubbed with this juice becomes very tender, and fit for the table, without any injurious property being communicated to it. The flesh of animals fed on the leaves and seeds is said also to be remarkably tender. It is even asserted that dead animals hung from the branches of the tree undergo this alteration. These ideas prevail also in Bengal, where the Mahommedan table-servants frequently use the juice with the view of softening beefsteaks and old fowls. In numerous experiments which we instituted, we could not trace any well-marked decisive effect of this kind. Putrefaction appeared to us to be accelerated by contact with this as well as other albuminous fluids. Just before putrefaction commences, muscular fibre is doubtless less rigid than at any previous time. It is thus possible that we may best explain the effect, if any, produced by the practice in question. As to the alleged efficacy of suspending meat from the tree, we are disposed to regard it as a mere popular delusion.

"We cannot speak from our own experience of the anthelmintic virtue of the juice. We have given it in doses of from twenty to sixty drops without observing any marked effects."*

C. J. H. WARDEN, Off. Civil Surgeon, Bhagalpore.

* *Vide* also *Botan. Magaz.*, No. 2998 and 2999; Dr. Wright, (*Illustrations*, vol. ii, p. 34); Dr. John Davy (*Edin. Med. Phil. Mag.*, October 1855); and *Pharmacopœia of India*, 1868, page 98, from which the above notices have been taken.

ACTION OF EUONYMIN.

REFERRING to the letters of Mr. Barnes and Professor Rutherford in the last two numbers of the JOURNAL, on the action of iridin and euonymin, I wish to add my experience.

I have administered euonymin extensively during the last few months, both in hospital out-patient and in private practice, and have been enabled to note its action in over fifty cases. In many instances, I gave it alone as a two-grain pill at bedtime, and invariably found it to act as a purgative, though tardy in its action and apt to cause griping. My usual plan now is to give two grains at bedtime for two nights running, following it each morning with a saline purge. I found that in most cases one dose was not sufficient. The saline purge entirely does away with the unpleasant symptom of griping.

I consider euonymin a most valuable remedy in all cases of biliary derangement, sick headache, etc. I like it better than any drug I have before given for these disorders, and I think we owe a debt of gratitude to Dr. Rutherford for bringing it before our notice. I have not in a single instance noticed that depression which was said to follow its action.

Iridin I have not yet tried, but intend doing so.

CHAS. E. HARDYMAN, Cardiff.

THE APPLICATION OF JUNOD'S BOOT.

BEING desirous of seeing Dr. Junod apply his boot, I visited him one day by appointment in Paris, in January 1877; he having previously informed me that the apparatus should not be applied for at least three hours after a meal. I was shown into a very small room, which served him as a bedroom, study, and consultation room. After a few minutes, he produced a bag containing the well known brass boot, some India-rubber circular bands, from eight to ten inches deep, and some long narrow strips of the same material, about two inches wide. Dr. Junod proposed to apply the boot to my leg; first covering the foot with the corner of a towel previously warmed, he wrapped the rest of it round the limb to above the knee. I then put my leg and foot into the metallic boot, which had been also warmed before the fire; a band of muslin folded six or eight times, with a little cotton-wool interposed, was applied two or three times round the leg, on a level with the mouth of the boot, which reached to just below the knee; and over the muslin he wound a strip of the narrow India-rubber band. He had previously stretched a wide India-rubber circular band over the mouth of the apparatus, and now slipped its free margin over my knee, and flattened it out so that it reached several inches up the thigh. The India-rubber bands are very thin; and, as an additional precaution, one of the narrow strips was wound two or three times round the limb, overlapping the edge of the circular band.

Dr. Junod then screwed the tube of a small air-pump, six or seven inches long and an inch and a half in diameter, to the boot, giving me the pump to work. After about a dozen strokes, a very good vacuum was produced. I felt the pressure chiefly above the upper rim of the foot, but nothing in the foot. The limb was bare, with the exception of my sock, which was left on. Dr. Junod now took the air-pump, and gave a few strokes from time to time, which I felt at once by the increased pressure. He usually continues the application for an hour, at the end of which time the limb, in ordinary cases, is found much swollen in size, with all its soft parts considerably harder to the touch; and twenty-four hours generally elapse before the swelling and hardness entirely disappear. In my case, the boot was only kept on a quarter of an hour; and, notwithstanding this, the leg was decidedly increased in bulk, and felt harder from the ankle upwards, the circumference of the calf being two *centimètres* greater than that of the other leg. I could see no change in the foot. The leg was uncomfortable, and felt as if it had been bruised all over, or as if I had greatly overwalked myself with that leg.

Dr. Junod's attention was first attracted to this subject when, while still a student, he was called to see a young woman suffering from severe cerebral congestion; and the thought struck him that, by means of atmospheric pressure, blood might be drawn to the extremities to relieve the congestion of the head; he devised the requisite apparatus, and the patient was cured.

If pain be felt at any moment, the tube of the air-pump must at once be disconnected, and the pressure removed. Dr. Junod felt my pulse from time to time, as syncope is sometimes apt to occur. As it was, I felt extremely tired the rest of the day, and also next morning. When I called on Dr. Junod, a few days afterwards, he explained that a spare individual like myself was more influenced by an application of the exhausting boot than a plethoric person, who had more blood, and whose circulation was therefore less affected when a certain quantity was de-

tained in one limb. Dr. Junod has an appointment to the Paris hospitals, with an almost nominal salary, and has hardly any private practice, except when he is called in consultation as a last resource. He has succeeded sufficiently often in saving life to justify his faith in his invention. According to him, in regular treatment, an hour's daily application of the boot is essential.

BERNARD ROTH, F.R.C.S., Grand Parade, Brighton.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. GEORGE'S HOSPITAL.

CASES OF ANTISEPTIC OVARIOTOMY.

(Under the care of Dr. BARNES.)

CASE I.—M. A., aged 60, married, with seven children, was admitted into the Burton Ward, under Dr. Barnes, on February 28th, 1878. The tumour had been noticed to be growing about eight months before admission. On March 23rd, she was tapped, and four quarts of dark syrupy fluid removed. She was much relieved, and went to Wimbledon for a month. On June 12th, she was readmitted, and was again tapped, with result as before. On July 30th, Dr. Barnes performed ovariotomy under the carbolic spray and the usual Listerian precautions. Narcosis was produced by ether. The incision was six inches long. There were firm adhesions of the intestines to the tumour, which bled freely when broken down. They were ligatured with fine whipcord. Eight pints of fluid were drawn from the cyst. The pedicle was transfixed with whipcord and dropped into the pelvis. The abdomen was sewn up with silver sutures. The subsequent dressings of the wound were done antiseptically. The stitches were removed on August 12th; there was little or no discharge. This patient, both before and after the operation, had a systolic murmur at the apex of the heart. Recovery was uninterrupted. She was discharged cured on September 7th.

CASE II.—E. L., aged 18, was admitted on August 21st, 1878. She had never menstruated. The tumour began to grow four months before admission. The abdomen measured 38½ inches round at the umbilicus. Ovariotomy was performed by Dr. Barnes on September 23rd, under the carbolic spray and with complete antiseptic precautions. Narcosis was produced by ether. An abdominal incision about six inches long was made, and the trocar inserted into the tumour. A few ounces of thick fluid escaped. The trocar was removed and the puncture in the cyst enlarged, when several pints of the thick fluid escaped. Dr. Barnes then introduced his hand and broke down the softer parts inside the cyst. There were no adhesions. There was a large quantity of ascitic fluid. The solid part of the cyst was drawn out, the pedicle secured by a Chambers's clamp, the cyst severed, and the pedicle transfixed with whipcord and returned into the pelvis. The abdomen was sewn up with silver sutures. The patient, who appeared nearly asphyxiated early in the operation, breathed more easily as the cyst became evacuated. Before the operation, the heart's apex-beat was in the second intercostal space; after the operation, it gradually descended to the fourth intercostal space. Recovery was uninterrupted. She left the hospital in good health on November 7th.

CASE III.—E. W., aged 47, mother of thirteen children, had been tapped by Dr. Barnes in 1877. She was admitted on April 3rd, 1878. On June 25th, Dr. Barnes performed ovariotomy antiseptically. The incision was about seven inches long. The cyst was adherent in two places to the abdominal walls, one on each side: the adhesion on the right side was broken down by the hand; that on the left was secured by a clamp and divided. The cyst contained colloid matter, which was evacuated through the trocar. The pedicle was transfixed with whipcord, and returned into the pelvis. The abdominal wound was sewn with silver sutures. The patient was discharged cured on September 10th.

CASE IV.—M. H., aged 36, married, with nine children, was admitted on October 2nd, 1878. She nursed her last baby till it was six months old (*i. e.*, March 1878), then noticed that she was getting thinner and her milk stopped. Her circumference was forty-five inches. The cyst was tapped on November 21st, and four pints of colloid fluid of specific gravity 1047, containing ovarian corpuscles, were drawn off. She had lost ground, the feet swelled; dyspnœa; pulse 100; a little albumen in urine. On November 25th, ovariotomy was performed by Dr. Barnes under the usual antiseptic precautions. An incision three inches in length was made, when about eight pints of ascitic fluid escaped. The omentum was adherent in many places; these adhesions were either tied or cauterised. There were extensive adhesions to the transverse colon and appendices epiploicæ. The cyst was multilocular, and contained colloid fluid. The various cysts were evacuated. There were adhesions to the left kidney. The pedicle was transfixed with whipcord and returned. The abdomen was sewn up with silver sutures. She died four days after the operation, haying been comatose for three days preceding her death. At the necropsy, the lungs were found congested. The liver was yellow and very soft from fatty degeneration. The kidneys were in an advanced state of cirrhosis; the tubes being blocked with colloid casts. The peritoneum was glued together by yellow lymph. The mucous membrane of the uterus was lined with grumous bloody fluid; at the fundus, there was a little pus.

CASE V.—M. M., aged 36, married, with six children, was admitted on October 14th, 1878. The abdomen was tapped on October 16th, and seven pints of fœtid whitish-green fluid drawn off. There was a systolic murmur at the apex of the heart. She had œdema of the legs, a little albumen in the urine; her circumference was forty-three inches. On October 23rd, she was suffering from orthopnœa; lips cyanosed. Pulse 140. On October 24th, she had two alarming attacks of dyspnœa. Her condition was so critical that, after consultation with Mr. Pollock, it was determined to operate early on Sunday morning. Mr. Clover kindly undertook to give ether. Dr. Barnes performed the operation under the antiseptic method. On October 27th, an incision of four inches was made. A piece of omentum stretched across the cyst was cut across, and part removed. A small amount of ascitic fluid escaped. No fluid escaped through the trocar; the puncture in the cyst was therefore enlarged, and a quantity of semipurulent fluid ran off. The tumour was still too large to be drawn through the abdominal wound; so another opening was made in it, from which twenty pints of clearer and less fœtid fluid escaped. A few slight adhesions were broken down. The tumour was drawn out, and the pedicle was transfixed with whipcord and dropped into the pelvis. The abdomen was sewn up with silver sutures. The tumour weighed 10 lbs.; it consisted of two large cysts and several smaller ones; the largest sac was lined with a thick and distinct pyogenic membrane. The stitches were removed on November 1st. She was discharged cured on December 10th.

All Dr. Barnes's cases were treated in a separate ward, admirably adapted for the purpose, at the top of the hospital.

(Under the care of Mr. HAWARD.)

CASE VI.—Caroline P., aged 29, married nine years; no children. Her family history was good. She menstruated regularly since the age of twelve. There was abdominal enlargement, of eight months' duration, commencing on the right side. Two months before the operation, the abdominal tumour was tapped, and eleven pints of viscid brown fluid withdrawn, with diminution of the lower part only of the tumour. The tumour soon refilled. Right ovariotomy was performed on August 3rd, 1878, by Mr. Haward. The patient occupied a separate ward. The operation and after-treatment were managed antiseptically by means of a spray of sulphurous acid solution. There were numerous parietal and omental adhesions. The pedicle was tied with silk and returned. She recovered in one month; and remains well.

NORFOLK AND NORWICH HOSPITAL.

TEN CASES OF OVARIOTOMY.

(Reported by CHARLES FIRTH, M.B.Lond., F.R.C.S., late House-Surgeon to the Hospital.)

CASE I. (Under the care of the late Mr. FIRTH).—B. T., aged 30, married; a thin but healthy woman. Paracentesis abdominis was performed one month before the operation, thirty-six pints being evacuated. Ovariotomy was performed under chloroform on May 29th, 1877. Four cysts of the left ovary were removed. There were firm adhesions to the omentum, small intestine, and right ovary. The pedicle was small; it was secured by a steel clamp externally. She was sick in the evening and several times in the next twenty-four hours. Nutrient enemata were administered every two hours; morphia, hypodermically, at intervals. She was sick four times on the second day, and was relieved by calomel and opium. Pulse 120; temperature 100 deg. She was sick again on the fourth day. Nutrient enemata were given every hour and half. The bowels were open on the eighth day, and she was sick again. From this time, she continued to improve; her tongue cleaned, and she could take liquid food well. Half the stitches were removed on the sixth day and the clamp on the twelfth day, and some slough of the

pedicle was cut away. On the sixteenth day, she was up, and, on the fortieth, was discharged cured.

CASE II. (Under the care of the late Mr. FIRTH).—E. D., aged 24, married; fairly nourished. Ovariotomy was performed under ether on September 14th, 1877. The cyst was multilocular. The pedicle was secured by the clamp. She was sick slightly after the operation, and once during the first day. Morphia was administered hypodermically at intervals; nutrient enemata were given on the second day. She had occasional abdominal pain. On the third day, she took a little liquid food. Pulse 72; temperature 98 deg. The clamp was removed on the ninth day; she got up on the eighteenth, and was discharged on the thirty-seventh day.

CASE III. (Under the care of Mr. CADGE).—H. M. N., aged 16, single and healthy. Paracentesis abdominis was performed three weeks before the operation, six pints being evacuated. Ovariotomy was performed under ether on January 11th, 1878. The cyst was multilocular and contained a good deal of solid matter. The pedicle was clamped. She vomited during and after the operation, and once during the first day. Nutrient enemata were given every three hours. She had occasional sharp pain in the abdomen. She took some milk on the third day. The clamp was removed on the ninth day. The bowels were open on the thirteenth day, after croton-oil; but she had incontinence of urine. On the sixteenth day, she had headache and felt ill, and her temperature rose to 102 deg. On the eighteenth day, she was menstruating slightly, and the pulse and temperature remained high, but no further evil followed. On the twenty-fourth day, the wound was nearly closed, and, on the fortieth day, she was discharged cured.

CASE IV. (Under the care of Mr. CADGE).—M. A. L., aged 44, married; thin but healthy. Ovariotomy was performed under ether on February 1st, 1878. There was a multilocular cyst of the right ovary. The pedicle was short and wide, and was secured by a silk ligature, in three portions, cut short, and returned into the abdomen. There were several adhesions to the abdominal wall and to the uterus. The stitches were removed on the seventh day. The bowels were open on the eighth day. The wound gaped a little on the tenth day, but afterwards healed up soundly. On the twenty-fifth day, she was up; and on the thirty-seventh, she went out, never having been sick once.

CASE V. (under the care of Mr. CADGE) was a most melancholy one, not only because this was the first death after a run of four successful cases, but because a young, fair, and useful life succumbed to sudden peritonitis after nine days of most favourable course, when we thought almost all danger past.—C. M. G., a German, aged 26, single, healthy, and well-nourished. Paracentesis abdominis was performed eighteen days previously. Ovariotomy was done under ether on April 18th, 1878. There was a multilocular cyst of the right ovary; no adhesions. The pedicle, which was fairly long, was clamped. She was sick during and after the operation, not later. The bowels were open on the eighth day, when she was going on well in every way. The clamp and all stitches were removed on the ninth day at 11 A.M. At 4.30 A.M., next day, she was seized with sudden throbbing pain in the lower abdomen. The bowels were open one hour afterwards. She was sick. Pulse 124; temperature 103 deg. She had more pain and sickness on the twelfth day, and slight appearance of catamenia. On the thirteenth day, she was sick several times and had more pain, also sharp pain through the left chest, where a friction *râle* was audible. She was worse next day, and died on the morning of the fifteenth day after the operation. The *post mortem* examination showed evidence of acute peritoneal inflammation. The remains of the pedicle were adherent to the right margin of the wound, but there was scarcely any adhesion to the other side. The left ovary, which was bathed in pus, contained a small cyst. The lungs were congested at the base, with evidence of recent pleurisy there.

CASE VI. (Under the care of the late Mr. FIRTH).—H. K., aged 40, thin but healthy. Ovariotomy was performed under ether on May 2nd, 1878. There was a large single cyst of the left ovary; a good many old adhesions to the omentum and broad ligament. She was sick slightly after the operation, not later. There was some appearance of catamenia on the third day. The stitches were removed on the sixth day and the clamp on the seventh. A small abscess formed in the substance of the abdominal wall. The bowels in this case were unusually obstinate, and were open on the fifteenth day after two injections, two pills, and an ounce of castor-oil; from this time, she made a good recovery, and left the hospital on the forty-fifth day.

CASE VII (under the care of Mr. WILLIAMS) was unquestionably the most remarkable of all the cases, not only on account of the difficulty of diagnosis in the first instance, the length and difficulty of the operation, and the fact that both ovaries were affected, but because for many days afterwards her life was trembling in the balance, and at length she came securely through her dangers.—A. A., aged 55, married, a spare but wiry woman, was tapped twice before admission. Double ovariotomy was performed under ether on May 10th, 1878. There were multilocular cysts of both ovaries, the right tumour being sessile on the uterus. The pedicle of the left was treated with the clamp; that of the right with silk ligature, cut short, and returned into the abdomen. The uterus was enlarged and fluctuating. There was great collapse during and after the operation. She was sick several times during the first day. Nutrient enemata were given every two hours. The sickness continued on the third and fourth days, but was checked by calomel and opium, and morphia given hypodermically. On the eleventh day, she was sick again; on the twelfth, the clamp came away; on the thirteenth, the bowels were well open. After this, she made a slow convalescence, and was discharged on the fifty-first day.

CASE VIII. (Under the care of Mr. CADGE).—M. A. H., aged 41, married, a fat but anæmic and flabby woman, was subject to attacks of pain and tenderness in the abdomen, with sickness and rise of temperature, thought to be connected with her menstrual periods. Ovariotomy was done under ether on June 7th, 1878. The pedicle was clamped, and a silver tube was introduced into the pelvis and projected through the wound. The cyst was multilocular and had begun to suppurate in parts. She suffered much pain a few hours after the operation. At 5 P.M., the dressings were removed, and half an ounce of red fluid was sucked from the tube. On the second day, a very little clear serous fluid came through the tube, which was removed on the third day. She had very severe pain and sickness the same evening, and some bulging could be felt in the posterior vaginal wall. She became worse, and died on the fourth day. At the *post mortem* examination, three pints of yellowish-brown offensive sero-purulent fluid were found in the peritoneal cavity, Douglas's space being distended with the same. The peritoneum was injected and black; the intestines were also blackened and inflamed, and adherent with purulent lymph.

CASE IX. (Under the care of Mr. CROSSE.)—A. B., aged 33, a blind woman, unmarried, thin, but fairly healthy. Ovariotomy was performed under ether on August 30th, 1878. There was a large multilocular cyst of the right ovary. The pedicle, which was fairly long, was clamped externally. There were some adhesions to the omentum. She was sick during and after the operation, not later. Morphia was given hypodermically at intervals. She had occasional sharp abdominal pain. She took a little gruel on the second day. On the fifteenth day, the bowels were open after an injection. On the sixteenth day, the stitches were removed. On the eighteenth day, the clamp was cut away. On the twenty-eighth day, she got up. On the thirty-fourth day, a small granulating tumour of the pedicle was removed by the *écraseur*. On the thirty-eighth day, the catamenia commenced; and on the forty-ninth day she was discharged cured.

CASE X (under the care of Mr. CADGE) was an anxious and eventful one. The patient was M. A., aged 32, married, thin, and deaf. Paracentesis abdominis had been performed before admission, thirty-six pints being evacuated. Ovariotomy was done under ether on October 11th, 1878. There was a large single cyst. There were dense adhesions to the abdominal wall. The pedicle was broad and fairly long, and was clamped externally. During the first twenty-four hours, she passed nine pints and a quarter of pale urine, of specific gravity 1015, containing no sugar. During the next day, she only passed two pints. On the fifth day, she had a good deal of abdominal pain. On the eighth day, she had hæmaturia, which lasted three days. On the eleventh day, the bowels were opened after an injection. On the twelfth day, she had more pain; her pulse was 116, and temperature 104° Fahr. On the thirteenth day, she was sick three times. On the fourteenth day, diarrhœa set in, with tympanites. On the fifteenth day, she vomited three times, and had more pain, which was relieved by four leeches to the abdomen. The urine at this time contained much pus, and her mouth became covered with aphthæ. On the sixteenth day, the clamp came away, and she was sick once. On the seventeenth day, the patient was extremely low, with clammy skin, pinched features, thready pulse of 112, and temperature of 100.6° Fahr. On the twentieth day, there was a large excoriation of the abdominal wall (caused by the strapping which held the dressings). On the twenty-fifth day, she was still in the same state of low vitality. On the twenty-seventh day, diarrhœa set in again. On the thirty-first day, there was some improvement. On the thirty-sixth day, she was progressing favourably; and on the sixty-fifth day she was discharged cured.

REMARKS.—Among these ten cases, it was interesting to notice how different was the effect of this grave operation upon the different systems; for, while some suffered no more than if some trivial operation had been performed, others were brought so near to death's door that it seemed almost incredible they should escape with life. And, if there be one moral more than another which they may point, it is the importance of attention to every trivial thing in their after-treatment; and

first in importance stands their diet. I believe that for the first twenty-four, even thirty-six or forty-eight hours, absolutely *no* food should be given by the mouth—nothing but ice to relieve the thirst, which is inevitable and urgent. If the patient be low, or if sickness continue, then nutrient enemata are invaluable; and here I would remark that a mistake is often made in injecting too much. An ounce and a half or two ounces every two hours is usually sufficient; more is apt to be rejected. The best fluid to inject is strong beef-tea, with or without brandy, or milk. Eggs, I believe, do more harm than good, owing to their proneness to decomposition there; for I need not point out that no true "digestion" takes place in the rectum.

Of drugs, morphia is our sheet-anchor; and in the hypodermic injection we have a rapid, certain, easily controllable, and altogether invaluable method of administration.

Alcohol is usually necessary in the form of brandy or champagne; but one case recovered without alcohol, another without morphia, and a third without either. Calomel and opium will often allay sickness, and this is the greatest foe we have to contend with. Of the ten cases, only *one* was never sick. And here I would draw attention to the two kinds of sickness met with, the early and the late, the unimportant and the serious; that caused by the anæsthetic, following the operation, and rarely lasting twelve hours; and that coming on about the end of the first day, or on the second, and the later its onset the more dangerous is it.

Of the total number of cases, two died and eight recovered; and it is noticeable that the thin and wiry patients made a better fight than the stout and flabby ones.

With regard to the operation itself, the treatment of the pedicle is of primary importance. Of the ten cases, the steel clamp was used in nine, of which two died (but the fatal termination was not, probably, in either case, due to the presence of the clamp). The silk ligature was used in two cases (being returned into the abdomen), both of which recovered. In every case, the hæmorrhage was arrested by catgut ligatures. In one case only was drainage of the peritoneal cavity tried. This patient died on the fourth day of peritonitis; and it was noticeable that the tube did not answer the purpose for which it was introduced, for less than an ounce of fluid came through it during life, while the *post mortem* examination revealed some pints of fluid in the abdomen. That it contributed towards the rapidly fatal termination may admit of argument; but to my mind it seems to be rather a dangerous proceeding. The other fatal case also died of peritonitis, but under very different circumstances. She was going on most favourably for nine days; the clamp was then cut away, and seventeen hours afterwards she was seized with sudden peritoneal pain. Probably some recent adhesion had given way in the wound, and the whole train of inflammation lighted up; whether dependent on the removal of the clamp may be open to doubt, but the sequence was certainly striking. In five other successful cases, the clamp was removed on the seventh, ninth, ninth, twelfth, and eighteenth day; in two others, it was allowed to come away on the twelfth and sixteenth day. I do not think any rule can be laid down for the time of removal of the clamp; but I think we may take a hint from the above fatal case, and not be too anxious to remove it early, unless it is producing undue pressure on the wound, or obstructing the discharge from around the pedicle.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

THE MATLOCK INVALID COUCH AND MATLOCK BED-REST.

THESE excellent contrivances promise to add largely to the comfort of the acutely sick, the invalid, and the convalescent. They include an adaptation of the Excelsior flattened spiral springs, which long experience has shown to be the perfection of comfort and ease when applied to beds; and thus applied, in suitable framework, they form an invalid-couch which is unexceptionable as an article of furniture, whether as couch or settee, and which affords to the invalid a seat or lounge adjustable at a variety of angles and in a multiplicity of positions—light, easy, yielding, but perfectly elastic. As a bed-rest, it has similar advantages; and, whether for hospital use or in private houses, it is easy to predict an enduring popularity for these inventions. The Matlock Invalid Couch and the Matlock Bed-rest are manufactured by Chorlton and Dugdale, 19, Blackfriars Street, Manchester, who are the proprietors of the Excelsior spring mattress.

SELECTIONS FROM JOURNALS.

GYNÆCOLOGY.

OOPHORECTOMY IN A CASE OF CONGENITAL VAGINAL DEFECT.—At the eighth Congress of German Surgeons, held in Berlin last April, Professor von Langenbeck exhibited a woman, aged 23, on whom he had performed Battey's operation. She had been married three years. The catamenia commenced at the age of 14; and, as was afterwards discovered, the discharge took place *per urethram*, the vagina being entirely absent. The discharge was scanty, but was always attended with severe pain. Coitus was also effected by the urethra. As the menstrual troubles had lately increased to such an extent as to produce epileptiform attacks, Dr. von Langenbeck decided on extirpating the right ovary by Battey's method. He had ascertained by careful examination that the left ovary was wanting, and that the uterus was rudimentary. An incision about two inches long was made in the flank; the pedicle of the ovary was tied with catgut, and sewn to the abdominal wound. The process of healing was uninterrupted; the ligatured remains of the pedicle fell off on the fourteenth day. Menstruation took place on the fifth day after the operation, although one ovary was removed, and the absence of the other had been ascertained both before and during the operation. Dr. von Langenbeck expressed his satisfaction with the result obtained, and recommended the proceeding for adoption in similar cases.—*Wiener Medizin. Wochenschrift.*

LACERATION OF THE CERVIX UTERI.—Dr. Spiegelberg, who has had occasion to operate in ten cases of this affection, gives preference to Emmet's method. (*Bresl. Aerztl. Zeitschr.*, 1879; and *Centralblatt für die Med. Wissen.*, No. 18.) He thinks that chronic endometritis and a disturbance in the progress of involution of the uterus are often due to eversion of the os uteri and to lacerations of the cervix; and that the latter often is the direct cause of endometritis of the neck, and the indirect cause of leucorrhœa and more serious affections of the mucous membrane of the cervix, so as to cause, under certain conditions, sterility and abortion, and perhaps even prove a great impediment to a successful treatment of retroflexion and retroversion of the womb. In some cases, a cure would be effected by healing the lacerations; while in other cases the patient recovered by being kept very quiet and treated antiphlogistically. He does not agree with Emmet in insisting on a preliminary treatment of the affection in every case; he thinks that this is only indicated in cases where the mucous membrane has undergone intense follicular changes. The operation must be performed with antiseptic precautions; but there is hardly any need for anæsthetics. The patient is laid on her back, if the uterus can be easily drawn down; if not, she must be placed either on the right or the left side, according to the lacerations. Spiegelberg uses metal wire. The wire is generally removed on the tenth day, and the patient is allowed to leave her bed on the eighth day. Little must be done in the way of treatment, except keeping her quiet. Out of the author's ten cases, the wound healed by first intention in six; in three, by second intention; and in one case, one side did not heal at all.

TREATMENT OF THE PEDICLE IN OVARIOTOMY.—In an article in the *Finska Läkarasällskapets Handlingar*, Band xix, Dr. F. Saltzman relates the histo ries of seven cases of ovariotomy recently performed by him, and makes some remarks on questions bearing on the operation. In six of the cases, as in all the similar operations previously described by him, he used the actual cautery in the treatment of the pedicle. The most important objection against this method, namely, that it does not afford a sure protection against secondary hæmorrhage, may, in his opinion, be obviated by taking the precaution to tie each vessel in the pedicle with catgut. If it be desired to again ligature the pedicle, he regards catgut as the most suitable material. From his own observations and from those of others, the author has come to the conclusion that the fear lest the catgut ligature should fail to afford security against secondary hæmorrhage, in consequence of its ready absorption, has been exaggerated. The author points out some inconveniences of the extraperitoneal method of management of the pedicle, among which he especially directs attention to the occurrence of tetanus in some of the cases treated in this way, and sums up by declaring his preference for the intraperitoneal method. This method is applicable in all cases, and the only important point is the choice between the ligature and the actual cautery. He decidedly prefers the cautery when one has to deal with a thick pedicle, especially when no large arteries can be detected in it. The ligature is indicated, in the first place, when the pedicle is comparatively thin, and contains arteries of large calibre; and it is absolutely required in cases where the pedicle

is so short that the cautery-clamp cannot be applied, and where the tumour cannot be shelled out so as to form a pedicle. With regard to the use of the drainage-tube, especially in Douglas's pouch, Dr. Saltzman regards it as applicable only in some very rare exceptional cases. Of his seven operations, two were followed by death. He gives reasons for the use of antiseptics in the operation.—*Nordiskt Medicinskt Arkiv*, Band xi.

OVARIOTOMY.—J. Boye gives in the *Gynäkolog. og Obstetr. Meddelelser*, Band II, an account of twenty-three cases of ovariotomy performed by him in 1876-78, five of which were followed by death. Among the recoveries were several especially difficult operations, and cases in which the patients' condition was very miserable: but the author has become more and more convinced that, so long as the patient is not nearly or actually moribund, neither her condition nor the operative difficulties of the case present any certain contraindications to ovariotomy. Among the five deaths, three occurred from tetanus, in patients operated on in different places and at intervals of several months. In seeking for the cause of the tetanus, the author directed his attention especially to the management of the pedicle. In the first case of tetanus he used the clamp: he then left off the extraperitoneal treatment of the pedicle, and used the catgut ligature: the cautery, he says, requires too long a time, and is unsafe. In the next eight cases the catgut ligature was used: but one of these died of tetanus. In this case, which was believed to be one of double ovarian tumour, one of the tumours was found to be a gravid uterus, much distended with hydramnios: it was punctured, and the operation was completed. A drainage-tube was placed between the edges of the abdominal wound. Abortion at the third month took place four days afterwards; the patient went on well till the tenth day, when she was seized with tetanus, and died five days later. This mishap led Boye to desist from applying the drainage-tube immediately after the completion of the operation. In the third case of tetanus, the author was obliged to apply the clamp quickly to end the operation, as the needle-punctures in the pedicle, which was thick and vascular, continued to bleed after the ligatures were tied. The patient made very favourable progress for some days: but tetanus then set in. The author has endeavoured to discover a method of ligature which will not disappoint, so that the pedicle can be returned into the abdomen with safety, and the operation ended as rapidly as with the clamp. In the next five cases, he used silver thread: the course of the cases was favourable, but the application required too long a time, and two of the patients had pelvic abscess. He then used, in the next six operations, a caoutchouc drainage-tube: one of these cases ended fatally, but the patient was already in a hopeless state before the operation. A caoutchouc tube dipped in a solution of carbolic acid was introduced by means of a strong curette, by which, in order to prevent it from slipping, it was brought through a fold of peritoneum, along the two opposite sides of the pedicle. The ends of the tube lay parallel with each other beyond the pedicle, and were drawn as tight as possible with the fingers, while an assistant tied them together with silk thread. If the pedicle were very thick, or absent, the tube was carried across through the pedicle or the base of the tumour, and was tied on both sides. In one of these cases, peritoneal abscess occurred; but the author thinks that this may have been due to other circumstances. The advantages of this method are these. 1. It can be carried out quickly, nearly as quickly as the application of the clamp. 2. It is very secure. 3. In the cases in which it was used, it was generally not followed by reaction. The first seven cases were operated on without antiseptics; and one died of tetanus; the other sixteen cases were operated on under the spray. Regarding the insertion of a drainage-tube immediately after operation, the author thinks that it is not of any use, as it quickly becomes encapsuled with exudation, so that large quantities of fluid may remain in the abdomen without being able to escape through the tube. The author attaches much importance to bandaging the abdomen as firmly as possible. He treats pelvic abscesses by opening them as early as possible, either by means of a trocar through the rectum, or, if the pus again collect, by making an opening from the vagina and inserting a drainage-tube.—*Nordiskt Medicinskt Arkiv*, Band xi, 1sta Häftet, 1879.

BIRMINGHAM.—The chief feature of the vital statistics of Birmingham for the first quarter of this year is the number of deaths (162) from scarlatina, which is now happily declining all over the town. Whooping-cough was also very fatal, causing 91 deaths. Altogether, zymotic diseases were accountable for 331 deaths, against 405 in the winter quarter of last year. The total number of deaths was 2,545, as compared with 2,592 in the first quarter of 1878, and representing an annual rate of 26.18 per 1,000. No fewer than 220 deaths occurred from phthisis, and 730 from diseases of the respiratory organs.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 2ND, 1879.

W. S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

THE USE OF THE FORCEPS AND ITS ALTERNATIVES IN LINGERING LABOUR.

[*Continued from page 972 of previous volume.*]

THE discussion was resumed.

Dr. ROPER said that the labours to which he had been called to use forceps had been of two kinds. The first kind was a lingering, feeble labour, mostly occurring in women who had had many children, in whom the uterine force was very feeble from the beginning to the end of labour. The pains were very slight, and occurred only at long intervals, and the labour was protracted simply through uterine atony. The soft parts were very lax, and offered but little or no resistance; the child's head lay loosely in the pelvic cavity, and could easily be moved about in any direction; there was no pressure on the maternal soft parts, and no constant contraction of the uterus to arrest the fœtal circulation. Such a labour, however long it might last, would almost always terminate naturally by expectancy. If, in such a case, it were decided to deliver with forceps, he had never regarded it as good practice to do so without using ergotine by subcutaneous injection, as an adjuvant. Frequently, however, the manipulation necessary in applying the forceps stimulated both the uterus and the reflex and voluntary expulsive efforts of the patient. Ergot did not always succeed in expelling the child. The uterus under the influence of ergot seemed at times to contract on the child, and thus would speedily destroy its life if it were not quickly liberated. He would not wait longer than ten minutes after the uterus had become ergotised, before applying the forceps. If there were any efficacy in pressure on the fundus uteri to expel the child, this was the kind of case in which it ought to be useful; but he placed no reliance on it as an operation *per se*. While it was a mere mechanical proceeding, yet the manipulation of the fundus uteri to effect this would frequently act as a stimulant to the atonic uterus. In many patients with lax uterine tissue and a flabby state of the soft parts of the outlet, the child was ready to drop out without giving the patient much warning. The second kind of labour, for the most part, occurred in primiparous women who were young and robust, with a powerfully acting uterus, pains of a forcibly expulsive kind occurring frequently, and the expulsion of the fœtus being resisted by rigidity or tonicity of the soft parts of the outlet. In such a case, the head was forcibly thrust down with each pain on the floor of the pelvis, distending the perinæum to the thinness of parchment, and yet it did not come through. On cessation of the pain, the head retreated into the pelvic cavity, all tension was relieved, the maternal soft parts were freed from pressure, and the placental circulation was restored during the interval between the pains. Many pains might occur and a long time elapse before the head was protruded; but, so long as the uterus continued to act thus forcibly and rhythmically, the use of the forceps was contraindicated. During all this time, relaxation of the rigid soft parts and moulding of the fœtal head were being gradually brought about. If a greater force were applied at one time, as in delivery by the forceps, severe stretching, bruising, and tearing might reasonably be expected. It might, however, happen that the powerfully acting uterus in the end was unable to overcome the rigidity at the outlet. In such cases, the pains became less forcible and occurred at longer intervals; there was less movement or progress of the head with each pain; the uterus, as felt through the abdominal wall, was becoming persistently hard from tonic contraction; on making a vaginal examination, the head would be found immovably arrested or impacted; the labour finally had to come to a standstill. Sound judgment directed how to supplement the failing power of nature by the use of the forceps before the breakdown took place; or when not to do this. Perinæa were sometimes ruptured through into the rectum by the premature use of the forceps, which, he believed, would not have occurred if the cases had been left to expectancy. He then spoke of the application of the forceps in the first stage of a labour where the factor of difficulty was a tedious lingering dilatation of the os uteri, accompanied by pressure on it of the bag of membranes, or of the presenting head itself, when the liquor amnii was discharged. He had never seen a single case of death of either child or mother, nor of damage to the maternal structures, from a protracted first stage of labour; *i. e.*, in a labour otherwise natural, excepting a rigid state of the os uteri—meaning thereby mere physiological rigidity, as in the tonicity of the soft parts of young and robust primiparæ. Structural diseases of the os and trismus of the

uterus being excluded, and all other causes which really belonged to the domain of complex labour being omitted, he would take a simple case of rigid or slowly dilating os uteri, such as was most commonly seen in first labours—say two-fifths dilated. Let the membrane be ruptured, and then the head would be itself pressing on the os with each pain, and receding from it when the pain ceased. The discharge of the liquor amnii would necessarily cause the first stage of labour to be protracted and somewhat more painful than when the membranes were entire. But in such a case there was no continuous pressure. The uterus did not, in the first stage of labour, take on a persistent contraction. No impaction of the head could happen in connection with the first stage of labour, where the head was above the brim. When the head was pressed down on the os, this was gradually expanded; the long axis of the uterus was shortened; and, as the os was drawn up over the head, the head was forced through the brim into the cavity of the pelvis. If the whole pelvis were normally formed, the head would always be driven down on the os; if, however, the head did not descend on the os, but lodged on the brim during a pain, then some disproportion or other cause of complex labour must be sought for. He thought it of the highest importance to keep up a wide distinction between a head above the brim which did not come down because it was obstructed, in the one case by the brim itself—a bony obstruction—and in the other by the rigid os and lower segment of the uterus. By the time the first stage of labour was completed in a perfectly natural labour, it might be taken as a certain rule that the head would be down in the cavity of the pelvis. If, when the os was nearly fully dilated, the head remained above the brim, some complex form of labour might reasonably be expected. To apply the forceps because the head did not speedily or readily dilate the os, seemed to be not simply assisting labour, but anticipating it, converting a physiological process into a mere mechanical proceeding. It was actually a forced kind of delivery, such as was required in certain complex labours attended with imminent danger to the life of the mother. In such cases, he had frequently seen the os uteri and head dragged down together, so that the rim of the os had been seen at the vulva. Dr. Collins, in his *Practical Midwifery*, had made an observation which was in accordance with Dr. Roper's experience—namely, that the death of the child as a rule preceded injury to the maternal structures, so that, whenever a child by stethoscopic examination was found to be alive, there was presumptive evidence of the safety of the maternal structures. In twelve thousand cases in the Royal Maternity Charity, though he had seen several cases of children still-born from protracted labour, not one case of sloughing, or even severe inflammation of the maternal structures, had occurred. It was said by some who advocated the frequent use of the forceps in the first stage of labour, that the instrument should only be used when the os was dilatable; it seemed, therefore, that the forceps was employed in cases where no necessity existed for its use, for the head pressing on a dilatable os would soon expand it. There was a class of cases belonging to neither feeble lingering labour nor to the exhausted condition of laborious labour, as in very nervous women, whom it was desirable to deliver by forceps. Such women bore their pains badly; they were unskilful in their efforts to assist the uterine force by their voluntary efforts; on the contrary, they did all they could to retard delivery by screwing themselves into unfavourable attitudes. It was good practice to place such women under the influence of chloroform, and to deliver them with forceps, provided there were no contraindications. In the prolonged first stage of labour, caused by rigidity of the os, when the patient was wearied and fatigued, his practice had been to give opium or repeated small doses of chloral, or to use the inhalation of chloroform to a mild extent, with a view of procuring rest; giving at the same time easily digestible nourishment. It was also important to assure the surrounding friends of the safety of such a labour, though it would of necessity be protracted, and thus to prevent their incessant worry and importunities that something should be done to deliver the patient forthwith. Dr. Roper then referred to the frequent use of the forceps in ordinary practice. Many practitioners were in the habit of taking forceps with them to every case of midwifery, and whenever any delay took place, the forceps was forthwith applied without the existence of any factors of difficulty. The instrument could not be said to be used in such cases in the interest of either mother or child; the best that could be said in favour of such practice was that it diminished the duration of maternal suffering; and this it might do, but against this diminution of prolonged suffering of a slight kind must be placed the intense pain of rapid delivery by the forceps, the risks of injury, *post partum* hæmorrhage, trouble with the placenta, and the after-effects of subinvolution caused by not allowing the uterus to do its own work. He could not help thinking that much of the gynæcological work of the present day resulted from this frequent interference with the natural functions of the uterus in childbirth. All must have observed the good gettings-up of women who had gone through severely laborious labours, probably a consequence of vigorous uterine action tending to produce good involution. The remarks of Dr. McClintock on the question of the frequent use of the forceps in ordinary midwifery practice, in one of his annotations in editing Smellie's works (volume i, page 271) were excellent. In 9,389 cases in the Eastern Division of the Royal Maternity Charity, he (Dr. Roper) used the forceps 80 times. The total number of fœtal deaths with forceps was 17; total number of maternal deaths with forceps, 2; total number of cases of craniotomy or cephalotripsy, 13; total number of deaths after craniotomy or cephalotripsy, 2; total number of still-births in total deliveries, 300; total number of maternal deaths from all causes, 32. He had also given the factors of difficulty in forceps-cases, and gone through the whole of them in this way: maternal deaths with forceps; craniotomy deaths with forceps; and so on. He had, too, given maternal deaths from all causes in chronological order; and he had compared the 9,389 cases with the practice of Dr. Johnston and Dr. Collins, because Dr. Johnston's practice represented a high rate of mortality, Dr. Collins's a low rate of mortality, and his own practice a middle rate. Dr. Johnston endeavoured to account for his high mortality by the fact of the women going into the hospital from districts that were affected by zymotic diseases; but the women died of the ordinary puerperal diseases. On the other hand, the patients of the Eastern Division of the Royal Maternity Charity lived in the courts, alleys, and narrow streets of Spitalfields, Shoreditch, Whitechapel, Bethnal Green, etc., where there were always some of these zymotic diseases prevailing. He did not see, then, how it could be said that the rate of mortality was diminished by the use of the forceps; on the contrary, he thought it was much increased. The first thing that would strike one was, that the mortality was increased by the frequent use of the forceps in the first stage. But that was not so; for, in 752 cases recorded, the death-rate was 1 in 13; and in 169 cases, where the os uteri was two-fifths, three-fifths, or four-fifths dilated, there were only 9 deaths, or 1 in 19; so that the deaths where the forceps was applied in the first stage of labour were not so numerous as where the forceps was applied in the second stage. Dr. Johnston stated that he never used the forceps unless there were imminent danger to the mother or child, and that he always used them to prevent sloughing. Dr. Roper had attended twelve thousand cases, and had not seen a case of sloughing; and Dr. Collins, who had attended sixteen thousand cases, had only seen one case of sloughing. He thanked Dr. George Johnston for the publication of his practice and its results. He could, however, only regard that practice as a great experiment, carried out with a view to demonstrate that the frequent use of the forceps tended to save both fœtal and maternal life in childbirth; but in its results the experiment had failed to prove that it had this fortunate tendency.

Dr. BRAXTON HICKS said the matter might be looked on from two points of view. There was, first, the general practitioners' view, who attended upon ordinary labour-cases; and there was the view of those who were not called in until after a labour had progressed for a long time. Those who were called in consultation were apt perhaps to overrate the numerical frequency of the severe cases, while others were perhaps a little inclined to underrate them. He would first refer to two alternatives, chloroform and turning. Sometimes, when a woman must be delivered, and no instrument was at hand, turning was efficacious and successful. Lingering labour unquestionably occurred without entailing danger to the mother and child during the first stage of labour. He had seen a considerable number of women sacrificed because the fœtus had been held *in utero;* there had been trismus in the uterus, and the fœtus had been held in, when the woman might have been delivered with facility. The application of the forceps was sometimes necessary before dilatation of the cervix; *how often* was a matter of further consideration. Then there were two propositions put into one. "In lingering labour, when the head is above or engaged in the pelvic brim, and when it is known that the pelvis is well formed, the forceps is better than its alternatives." It was impossible to discuss a question like this without going more specifically into the causation of lingering labour. There were two typical opposite conditions of labour. Before discussing them, it would be better to inquire what were the difficulties in the first stage of labour, and where they lay. They were very few indeed. There was inertia of the uterus, and there was overaction or trismus of the uterus, and there were intermediate conditions. Then there was spasm of the lower segment of the uterus almost akin to the other, and of the os uteri. Then slight obliquities of the uterus interfered with the progress of the child. Then sometimes the child was a little doubled up, and could not descend; the uterus did not act upon it sufficiently. Sometimes there was toughness of the membranes causing detention. When there was a deficient action, a slow opening of the os uteri, long intervals, perhaps many hours, between the action of the uterus, the liquor amnii being or not being discharged, there was no reason for any interference. Inter-

ference might be followed by an atonic uterus after delivery, non-expulsion of the placenta, and perhaps *post partum* hæmorrhage. In these cases, length of time was not of the smallest consequence. Death was not likely to occur in a woman from simple detention in the first stage, so long as the pulse was not rising. The only condition in which exception might be made was where the fœtus had been already dead before labour had set in, and the liquor amnii had escaped, the fœtus decomposed, and the patient had fallen into a septicæmic condition, which might go on, without expulsive pains, to death; but that was a very rare occurrence. In the opposite condition of trismus, the uterus was tightly contracted round the child; there was no flaccidity; no dulness outside the fœtal shape; the fœtus was fixed. When the uterus took this form of action, it was very seldom that the fœtus was expelled by natural efforts. These cases were not so uncommon as might be supposed. They showed themselves not so much in the first as in the second stage. It was in the second stage, he believed, that the difficulties of the first stage accumulated, and might be avoided. The uterus began to be continuously contracted between the pains; the pains did not go off, and the contraction passed into the interval. When that began, the time for action had arrived. It was possible that, by the use of a little chloroform (not too much), the contraction might be eased, or small doses of opium frequently repeated, that state of irritability might be made to subside. Or the milder alternative of expression might be tried. Certainly, as a general rule, ergot should not be used. If ergot were used in the early stages, when the os uteri was a little tight, and the uterus not prepared for the expulsion of the child's head, this irritable condition would be brought on by the ergot, and there was nothing more dangerous. He had been called to numerous cases in which ergot had been given because the practitioner had not distinguished between the total inertia and this continuous contraction which was going on, accompanied by mild and feeble pains. As soon as the pains began to run into the interval, the pulse began to rise, and there were nerve-irritation and exhaustion from the long continuance of the trismus, there was what was called powerless labour or exhaustion. It was not powerless labour; it was an over-active condition. The uterus gradually contracted until it became so hard and rigid that not the smallest impression could be felt upon it. That extreme form would come on sooner or later, if the woman were not delivered after the symptoms of powerless labour commenced. It was not the crushing or bruising of the parts by the pressure of the child's head that produced that condition; it was nervous irritation and exhaustion. As soon as a woman in this condition was delivered, if she had not gone beyond a certain point, the condition ceased in a couple of hours. If there had been any bruising or sloughing, of course that would not occur. If the patient went into the highest degree of trismus, she would generally die. It was important that the symptoms should be recognised early. Sometimes the water drained off slowly, the uterus gradually became irritated, and the pains hardly began at all. As soon as the condition to which he had referred came on, traction must be adopted, unless, by giving chloroform or small doses of laudanum, relaxation could be produced. The condition might occur sometimes when the os uteri was open, and sometimes when it was contracted. If it were an open os uteri, the forceps would go in readily, and draw the fœtus out of the grip of the uterus; and the sooner this was done, the better for the child. But when the os uteri and the lower part of the cervix were rigidly contracted, then the difficult question arose how far we should interfere. Where there was a cicatrix, sometimes the hydrostatic bags of Dr. Barnes might be used with very great effect. He had sometimes seen a case which in one labour had been three days without any dilatation, and it had only taken two or three hours in the next to get over it with the greatest ease and safety. But where there was no cicatrix, and there was only spasmodic rigidity of the uterus, so that it would not relax physiologically, then what should be done? Craniotomy was more dangerous than the forceps. The only danger of the forceps was that it could not be got in, or that, having been got in, in locking, the os uteri might be stretched like a skein of thread on the top of the finger. It was of no use talking of the dreadful things that might arise from the use of the forceps; the danger must be faced. Then the forceps must be drawn out very slowly. When the rotundity of the child's head was brought into the os uteri, there was a very good dilator. If the forceps were pulled down gently, supplementing each pain, dilatation might be produced as gently as possible; and when the rotundity of the child's head came in, there would be no great difficulty. He never met with any great difficulty, except where the os uteri was stretched like a skein of thread round the wide-spread shanks of the instrument. He had a case of a lady in a condition requiring help. The os uteri was about the size of a five-shilling piece, slightly dilatable, and the head was coming down and occupying it pretty well, distending the cervix. Before passing the forceps, he examined her, and found the os uteri perfect for an inch upwards; but there was a large slit extending upwards on the side in the neighbourhood of the broad ligament, going as far as he could reach, the head occupying the rest. With the forceps he carefully drew down the child's head; it did not rupture the parts. The child was born alive, and was still living. The mother had not a single symptom indicating that there was any mischief. If he had not examined the patient beforehand, and if it had been found that she had laceration, it would have been put down to the forceps. The numerical proportion in Dr. Johnston's cases certainly did not accord with his practice. Perhaps Dr. Hicks had not had such difficult cases to contend with, nor such irritable patients as the Irish. In the second stage, when the head was in the cavity of the pelvis, and the uterus was a little inactive, he had used ergot without fear, because, if he found that the uterus was not equal to deliver, he could supplement its efforts by the forceps. Suppose that a woman could deliver herself in twelve hours; the uterus was well aroused, so that no consequences of inertia would occur afterwards; would it be better to relieve her at once, or within two or three hours, or to let her go on for the whole twelve hours? In primiparæ, the parts were more slowly dilated, and the head was more slowly moulded; but, in a general way, supposing the uterus to be at work, and the pains at the maximum, and an obstacle took place, he thought it beneficial both to the child and the mother, certainly to the child, to abstract it gently and quietly. But to empty the uterus, or draw out the child—to haul it forth, as Dr. Blundell used to say—when the uterus was not responsive, was one of the most critical things a man could do. Gentlemen often fell into error in this matter. One gentleman told Dr. Hicks that he always drew out the child directly he saw any little difficulty in the way. Afterwards he told him that he had had a case of flooding, and it was a lesson to him not to do as he had done before. That was a case of inertia, not a condition where the uterus was in full action. He thought, then, that assent might be given to the fourth proposition of Dr. Barnes. It was almost self-evident that, "in proportion as the head was arrested high in the pelvis, in the brim or above the brim, the necessity, the utility, and the safety of the forceps became less frequent"; and, "as a corollary from the preceding propositions, increasing caution in determining on the use of the forceps, and greater skill in carrying out the operation, were called for".*

[*To be continued.*]

BATH AND BRISTOL BRANCH.

THURSDAY, MAY 29TH, 1879.

H. HENSLEY, M.D., President, in the Chair.

Treatment of Pleuritic Effusion.—Dr. MARKHAM SKERRITT read a paper on the treatment of the various forms of pleuritic effusion. He said that the most important varieties were serous effusions of inflammatory origin, and empyemata. In the case of serous effusions, paracentesis was indicated, first, when the fluid was so large in amount as to threaten life; and, second, where it showed no sign of speedy absorption. It was in the latter class of cases that there was most difficulty in making a decision; but the following might be laid down as a general rule. If there were no sign of absorption after ten days or a fortnight, a small quantity of fluid should be removed; if this were ineffectual, a rather larger quantity should be drawn off in a few days, and the operation should be repeated as often as necessary. The author preferred the aspirator, as air was thus kept out, and he believed that the way to avoid the various ill effects that might follow aspiration was to remove only a moderate proportion of the fluid. With regard to empyema, it was to be remembered that it was an abscess, and must be treated as such; and the following was the author's practice: to aspirate once (because in rare cases a cure might result), and, if the pus collected again, to insert a drainage-tube at the base posteriorly, as low as possible, generally in the ninth space, and to treat the case antiseptically. He held strongly that the antiseptic method should be used, because thus free drainage was allowed, and no ill effects followed the admission of air; while, in his experience, in cases thus treated, it had not once been necessary to use any injections into the pleural cavity. In patients whose chests had lost their elasticity, pleuritic effusion was a very serious thing—because, if the lung were bound down, the chest-wall would not fall in; and, therefore, the condition would probably become chronic. In such a patient, paracentesis for serous effusion should be performed as soon as it was evident that absorption would not be rapid; but, if it were probable that the lung was already bound down, interference was to be avoided. Similarly, if empyema existed, operation would pro-

* In the report of Dr. Lombe Atthill's speech in the JOURNAL of June 14th, page 896, column 1, line 35 from bottom, for "had been six hours", read "had been "twenty-six hours".

bably leave a chronic fistula; and therefore should be undertaken only if hectic existed, or the general health were materially suffering.

An animated discussion followed, in which Drs. Goodridge, Harrison, E. L. Fox, and Shaw, and Messrs. Michell Clarke, Board, Elliott, and Prichard took part.

Dr. MARKHAM SKERRITT, in reply, said that he believed the aspirator to be a very convenient and safe instrument in the hands of those accustomed to its use; the flow of fluid could be regulated with the greatest accuracy, and, provided that the rule was followed to remove only part of the fluid, there was usually no special distress complained of by the patient; if there were any hindrance to the expansion of the lung, in many cases it was advantageous to be able to exert a certain amount of traction on it; and, lastly, with the ordinary trocar it was impossible to prevent the entry of air when the patient took a deep inspiration, as in coughing. With regard to counter-openings in the treatment of empyema, these were necessary in some cases; but, in the majority of cases, one opening had been found sufficient, provided that this was made at the lowest part of the cavity. As to the danger of tapping as low as the ninth interspace, this was probably theoretical rather than real; for, if the aspirator-needle were used, no harm would be done even if some organ were punctured; and in empyema, it was an excellent plan to explore with a hypodermic syringe before proceeding to insert a drainage-tube. A due consideration of the physical signs would usually prevent any serious mistake; and, as a matter of fact, the author had seen no harm in any case from opening the chest low down, but, on the contrary, much advantage, as he believed, in securing the efficient drainage of the cavity. The bearing of statistics upon the subject of thoracentesis was a subject deserving careful consideration; but it was impossible to appreciate their significance without a knowledge of the details of the individual cases. The objections that had been urged against the use of antiseptics in empyema would be found to disappear on practical acquaintance with this method of treatment, not only in hospital but also in private practice; the dressings would not shift, if properly applied; and the time occupied was much less than was required for the old plan of washing out the pleural cavity, while the patient was saved a vast amount of disturbance and discomfort.

HARVEIAN SOCIETY OF LONDON.

THURSDAY, MAY 1ST.

H. C. STEWART, F.R.C.S., President, in the Chair.

Chloral Poisoning.—Dr. CLEVELAND read notes of a case of poisoning from chloral. The patient took two ounces of syrup of chloral-hydrate instead of two drachms. The respiration ceased, but was restored artificially. The heart beat very feebly. After a time, there were convulsions. The pupils were widely dilated. The breathing again fell very low; but ultimately the man recovered. The paroxysms of breathlessness were well marked.—Dr. MILNER FOTHERGILL, Mr. SEDGWICK, Dr. FARQUHARSON, Mr. PEPPER, Drs. DAVSON and WESTMACOTT spoke, after which Dr. CLEVELAND replied.

Tubercular Testicle.—Mr. PEPPER exhibited a testicle which was the seat of tubercular disease. It was removed from a man aged 35, a horsekeeper, who had repeatedly been kicked on his testicles. This one was removed; but he declined to part with the other one, though impotent.—Mr. PYE, Mr. ALDERSON, and Mr. GANT spoke, after which Mr. PEPPER replied.

Nerve-Stretching in Sciatica.—Mr. WALTER PYE related a case where the sciatic nerve was laid bare and well pulled. The wound healed readily; and the pain was relieved at once and for a time; but returned in the calf of the leg. There was no paresis; but there was abolition of sensation, and as the sensation was restored the pain returned.—Dr. CLEVELAND, Mr. PEPPER, and Dr. FARQUHARSON took part in the discussion which followed.

Mr. PYE exhibited a case of excision of the wrist.

Chorea.—Dr. W. H. DAY read a paper on chorea, which he described as capricious in its manifestations. The pulse becomes irregular, but is not accelerated; indeed, occasionally it is retarded. The temperature is mobile, and the heart's action excited, while a soft systolic murmur is occasionally audible. There are often fleeting rheumatic pains. Chorea is often found at the initiation of puberty, and is almost exclusively a disease of girls. The urine is often of high specific gravity, and contains lithates. Chorea is often excited by terror or alarm. At times, it is provoked by masturbation. It is at other times associated with rheumatic fever, and an embolon or hyperæmia of the corpus striatum. Rest in bed is a great matter in its treatment. Warmth and good food are important; and iron, quinine, zinc, and arsenic are useful. A case treated by curari was then given in detail. A combination of the phosphites of soda and iron is often very useful.—The PRESIDENT, Mr. ALDERSON, Drs. WESTMACOTT and FARQUHARSON spoke, after which Dr. DAY replied, and the meeting adjourned.

THURSDAY, MAY 15TH.

H. C. STEWART, F.R.C.S., President, in the Chair.

Ovarian Neuralgia.—Dr. ALFRED MEADOWS read a paper on this subject, in which he stated that the ovarian excitement came first, and was followed by menorrhagia and leucorrhœa. Without ovulation, there was no menstruation; and too frequent ovulation was followed by too frequent menstruation. The left ovary was more frequently affected than the right; just as in man the left testicle was more liable to varicocele than the right. Bromide of potassium was the agent to administer internally, with a pessary of conium and atropine locally. Iron was worse than useless. In some cases, the catamenia were arrested by the use of the bromides.—Dr. MILNER FOTHERGILL and Mr. MILNER spoke; and Dr. MEADOWS replied.

Closure of Cleft Palate by Operation.—Mr. EDWARD OWEN gave the history of this operation, pointing out how it was performed at an earlier age as experience increased. It was now performed as early as possible, in order that the infant might be enabled to suck effectively. The use of the thermo-cautery prevented hæmorrhage. Care should be taken that the sutures are not torn out; even when this occurs, there is growth from each side of the fissure.—Mr. CUMBERBATCH and Dr. VENN spoke; and Dr. ARTHUR EDIS pointed out that cleft palate was common in lion cubs born in confinement, and that this was remedied by feeding the pregnant lionesses with bones as well as meat.—Mr. OWEN replied.

The Antiseptic Method as applied to Drainage of the Peritoneum in Abdominal Surgery.—Mr. KNOWSLEY THORNTON read a paper on this subject. The author took ovariotomy as the operation most common, and also most suitable for the illustration of his subject as formerly most frequently rendering drainage of the peritoneum necessary. He alluded to the various kinds of fever which may follow ovariotomy, their diagnosis and appropriate treatment; and referred to the old plan of draining by long ligatures; to the proposal of Dr. Marion Sims; and called attention to the description of drainage as at present almost universally used, contained in a paper read by Mr. Spencer Wells before the Royal Medical and Chirurgical Society, and published in their *Transactions*, vol. lx. He discussed the advantages and dangers of Kœberlé's glass drainage-tube, and recorded his own experience with it before he began antiseptic ovariotomy. Of thirty-eight cases, he drained thirteen; and five of these died. Of the twenty-five cases not drained, only three died. He believed that ovariotomy could now be made certainly aseptic in cases which had never been tapped without antiseptic precautions. Since tapping antiseptically, he had never seen any evil result from that operation. Neither absence of odour nor *apparent* absence of bacteria could be taken as certain evidence of asepticity. Since operating antiseptically, eight cases had been drained, of which three had died. These cases were recorded, and twenty-two cases were mentioned in which drainage would have been used before antiseptics: all but one recovered without it, and this one had been several times tapped before she came under the author's care. She was a very unfavourable subject, and the tumour was very large, weighing seventy-five pounds. After discussing some modifications in the method of draining in cases certainly aseptic, and comparing his views at the end of the septic period with those he at present held, he concluded by remarking that, in fresh aseptic cases, and with proper antiseptic precautions, he believed the need for drainage had passed away. At any rate, cases requiring it must be very exceptional.—The PRESIDENT, Dr. BANTOCK, and Mr. ALBAN DORAN spoke on this paper; after which Mr. THORNTON replied.

The meeting then adjourned till next autumn.

BEQUESTS.—The late Mr. Richard Ormsby Vandeleur has bequeathed £1,000 to the Cripples' Home, Bray; £2,000 to the Stewart Institution for Imbeciles; and £1,500 to the Convalescent Home, Stillorgan. Mr. Christopher A. Wood has left £50 to St. Michael's Hospital, Kingstown. Mr. Henry Phelps has bequeathed £200 to the Hospital for Incurables, Donnybrook; and £50 to the Rathdown Hospital, Monkstown. The Misses Brooke have given £50 towards the "Gregg Memorial" Wing of the Cork Home for Protestant Incurables, Cork; being their second donation of £50 to the charity. The late Mrs. Francis Russel, of Kirkland, has left the sum of £150, free of legacy-duty and charges, to each of the following charitable institutions: the Glasgow Royal Infirmary; the Glasgow Western Infirmary; the Association for the Relief of Incurables for Glasgow and West of Scotland; and the Mission Coast Home, Saltcoats.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 12TH, 1879.

THE APPROACHING SESSION OF THE GENERAL MEDICAL COUNCIL.

WHILE the air is rife with projects of reform, and the members of the Council are stating to the Committee of the House of Commons their extreme satisfaction at their own doings and their entire approval of the constitution of the body to which they belong, another meeting is at hand which promises to be entirely of the old stereotyped form. A good deal of money will be spent in fees, and but with little prospect of progress upon any subject. The prospect for the week is characteristically nihilistic; and if the proceedings should happen to be studied by the members of the Select Committee now sitting, they will not fail to be instructive in that respect at least.

The General Medical Council will assemble on Thursday next, July 17th, at two o'clock. The first business will, of course, be the President's address. The election of President will take place at five o'clock on Friday, the 18th, when Dr. Acland's term of office expires. Amongst the business which stands over for the Council to consider is a series of communications from licensing bodies in answer to the ophthalmic and obstetric memorials, of which copies were sent on March 31st last to all those bodies. Some of those communications are of considerable length, and will give rise to interesting discussion. On the subject of the teaching of ophthalmic surgery, the College of Surgeons of Edinburgh considers that ophthalmic medicine and surgery are not less a specialism than aural disease, mental disease, cutaneous disease, urinary disease, diseases of the rectum and anus, and enthetic affections; and they consider that the student is already required to learn about as many things as an ordinary intellect can acquire within four years; and further, that the student who has obtained his diploma has not finished his medical education, but has only passed the threshold of the profession: and the College reads the Council quite a little lecture, or rather, perhaps, furnishes it with an essay, on the advantages to be derived from subsequent continental study, and of instruction spontaneously sought and retained rather by private study than as the dogma of a teacher. After this rather lengthy and irrelevant exordium, the College authorities come to the point by saying that "all they can at present see their way to recommend, while the curriculum of study is limited to four years, is that the certificate for hospital attendance may be signed equally by a surgeon of the ophthalmic department as by any of the ordinary surgeons, and believe that in this way they may indicate the importance they attach to regular attendance upon the ophthalmic wards is not less than that with which they regard attendance upon ordinary surgical practice, of which, however, they would desire to have it regarded as constituting an essential part". The University of Edinburgh can only regard ophthalmic disease as a part of surgery; and points out that at present these diseases, in common with other departments of surgery, form a part of the examinations conducted in the University. The College of Physicians of Edinburgh adopts the same tone.

The College of Surgeons of England considers "that in the College examinations, whether written or *vivâ voce*, ophthalmic surgery is, in proportion to other subjects, adequately represented; and the Council does not consider it desirable that any addition should be made to the extensive curricula of professional education for the diplomas of Member and Fellow of the College".

The University of Dublin alleges that the practice of that University is in conformity with the recommendation as to ophthalmic surgery and midwifery.

With reference to the more extended teaching of obstetric medicine, the College of Surgeons of Edinburgh observes that the whole force of the request of the memorialists that the General Medical Council will approve of no scheme which does not make provision for a six months' course of study of obstetric medicine, turns upon the significance of a three or six months' course. In the College of Surgeons of Edinburgh, the three months' course consists of sixty lectures, whilst it is believed that the three months' course common in London, of which the Obstetrical Society complains, consists of only twenty-five lectures. The Edinburgh College considers that while a single course of twenty-five lectures is no doubt insufficient, the course of sixty which it recognises is adequate; and it considers that the winter six months' course of one hundred lectures peculiar to the Universities of Scotland is, if devoted to obstetrics alone, an undue extension of the subject beyond the limits absolutely requisite as compared with the other practical studies prescribed.

The University of Edinburgh observes that it endorses the very reasonable request in the memorial from the Obstetrical Society, seeing that its practice is in accordance with it. The College of Physicians of Edinburgh agrees that either attendance at a course of one hundred lectures in midwifery and the diseases of women should be required, or, as an equivalent, attendance at two separate courses—one of midwifery and the other of diseases of women, including together one hundred lectures.

The College of Surgeons of England tersely expresses the opinion on this head, that it is not expedient at present that any addition should be made to the curricula of professional education now in force for membership and fellowship of the College.

There are other matters of interest which may possibly come before the Council, amongst them being the action of the Ontario College of Physicians and Surgeons in deciding that English registered practitioners are not fit to practise in Canada—an action which Mr. Ouvry, in a very curious memorandum appended to the document, describes "as peculiar, especially as legislation is contemplated to admit them here"; the "them", we presume, referring to Canadian candidates. Mr. Ouvry very wisely adds, that the Government must consider the matter as a material question affecting the relations of the mother country with her colonies; and it would be a thing to be lamented if, from any action on the part of the colonies, permission to practise should be done away with or limited. Among the correspondence on this subject is a letter from Mr. J. Skirving, a Licentiate of the Faculty of Physicians and Surgeons of Glasgow, who has been proceeded against and sentenced to pay a fine of twenty-five dollars, as not being a qualified practitioner within the meaning of the Medical Act of Canada.

Another characteristic incident may possibly arise out of the communication from the Royal College of Surgeons of Ireland on two subjects; the first being one on which they decline to waive their privilege of deciding as to any exceptions to be permitted in the case of students producing evidence of having passed a preliminary examination in arts, and the other a communication from the same body (which appears very accurately to measure the powers and determination of the Medical Council), in which the Irish College politely announces to the Council that it does not intend to accede to that portion of the regulations drawn up by the Council relating to the examination of candidates *sine curriculo* up to August 1881, whereby the examination of candidates for their licence would be confined to residence in Ireland. This, in their opinion, could not be justified by what has hitherto been, and still is, the practice in regard to medical and surgical qualifications, or which obtained in England at the time a qualification in dental surgery was insisted upon by the Royal College of Surgeons in England.

CARDIAC NEURITIS.

ATTENTION has recently been called by some Continental physicians to a pathological condition of considerable clinical interest and importance, especially in connection with some forms of angina pectoris. Dr. Peter, the eminent physician of La Pitié, and well known as the editor of the last edition of Trousseau's *Lectures*, has been especially concerned in endeavouring to give prominence to the theory that, when symptoms of angina pectoris accompany disease of the coats of the aorta (aortitis) with dilatation of that vessel, the peculiar clinical phenomena observed are due to an inflammation of the nerves of the cardiac plexus: an inflammation which extends from the arterial tunics to the branches of the cardiac plexus in contact therewith. Several cases have been reported and analysed in support of this view. In one case observed and reported by Dr. Bazey, the cardiac plexus was carefully dissected at the necropsy, and the nerves composing it were found thickened and presenting moniliform swellings along their course. It has been noticed that in these cases, in contradistinction to others which are purely neuralgic, the pain is permanent instead of intermittent, or at any rate, there are certain points which remain always painful on compression with the finger, especially, for example, the intercostal spaces along the left border of the sternum. In some of these cases, compression of the left vagus in the neck would at once induce pain in the region of the cardiac plexus, and the pain would radiate along the course of the branches of the pneumogastric; as, for instance, along the back of the sternum, in the stomach which becomes distended with gas, and in the region of the pulmonary plexus. M. Bucquoy has also noticed, at the termination of such attacks, severe pain in the hepatic region, which he refers to a participation in the disturbances of the terminal ramifications of the vagus on the right side. M. Peter maintains that the aortic insufficiency which frequently coexists in such cases must be regarded simply as a "contingent fact", and as quite incapable of itself to excite the paroxysms of angina. He, however, is especially urgent in calling attention to the far more serious significance of aortic insufficiency when it arises from an affection of the arteries, when disease of the aorta extends to and implicates the sigmoid valves, than of aortic insufficiency of endocardial origin; since the former condition commonly leads to a cardiac neuritis with all the grave phenomena of angina pectoris. M. Huchard has also insisted on the fact that the gastro-hepatic disturbance which he has observed in several cases of cardiac disease is exclusively dependent on a phlegmasia of the cardiac plexus; such as severe pain after food, enormous distension of the stomach with gas, pyrosis, anorexia, and vomiting. Hence in cardiac neuritis we may encounter a great variety of symptoms, according to which of the numerous ramifications of the pneumogastric are especially involved; disturbance of cardiac rhythm and syncope if the cardiac branches themselves be chiefly involved; or gastro-hepatic symptoms or pulmonary symptoms, if the branches going to the digestive or respiratory organs be mainly implicated.

The morbid anatomy of the nerves of the cardiac plexus has been specially examined by Putiatin of St. Petersburg, who has found in some cases, after death from cardiac paralysis, in which no coarse changes in the cardiac structures could be discovered, a diseased condition of the cardiac ganglia limited to distension of their vessels, and an intermixture of granulation-cells with the nerve-fibres and corpuscles. In older cases, where organic disease of the heart also existed, more decided pathological changes were observed, consisting chiefly in increase of interstitial connective tissue and atrophy and granulation of the nerve-cells.

This is a somewhat neglected branch of cardiac pathology, to which we would especially direct the attention of our many able and industrious morbid anatomists.

THE medical students of Liverpool gave their annual dramatic performance in aid of the funds of the Liverpool Royal Infirmary on the evening of June 30th. We understand that the performance was a great success.

IN the twenty largest English towns, only 42 deaths were last week referred to diarrhœa, against 188, 155, and 269 in the corresponding weeks of 1876, 1877, and 1878.

THE healthiness of the recent cold and wet weather, in well-drained cities, is further exemplified by the fact that the deaths in London were last week 206 below the average of the week; and that the annual death-rate from all causes, which had been equal to 19.5, 19.0, and 18.3 per 1,000 in the three preceding weeks, further declined last week to 17.4, the lowest rate that has prevailed in London since the middle of September 1877. The deaths from diarrhœa during the week in London were 13, being 106 below the average.

ADVICES from Natal state that Dr. Grant, R.N., who fought bravely against the small-pox on board the *Flora*, is laid low in Zululand. It was thought he threw himself into the excitement too hurriedly.

ON the occasion of Professor von Langenbeck resuming his clinical duties on June 16th, after recovery from a severe illness, he received a hearty welcome from his colleagues and pupils. The corridors of the clinic, his receiving room, and the operating theatre, were gaily decorated. In returning thanks to an address by the senior assistant, he said that it had been most painful to him to feel unable to open his clinical course with his usual punctuality.

THE Committee of the Consumption Hospital have received an intimation that the Prince of Wales will be accompanied by the Princess, on the occasion of the visit to Brompton of his Royal Highness to lay the foundation-stone of the New Extension Building on Thursday, the 17th instant.

DR. CLEMENT WILLIAMS, formerly Assistant-Surgeon to the 68th Light Infantry Regiment, and first Political Agent at Mandalay, has died in Italy on his way home from Burmah. He was, it is stated, one of the few Europeans who stood high in favour at Mandalay. The deceased was only forty-five years of age.

AT Huddersfield, this week, an inquest on the body of Mrs. Hetty Blackburn, who died from arsenical poison contained in a preparation of French chalk taken for heartburn, was concluded. The chemist who sold the chalk said that he sold it as purchased from a Manchester firm, and that he believed it was intended to be used by bootmakers. A verdict of "Death by misadventure" was returned, and the Chief Constable was instructed to take steps to prevent the indiscriminate use of the article.

A FESTIVAL in honour of the celebrated pathologist Rokitansky will be held at his birthplace, Königgrätz in Bohemia, on the 3rd of August, by the town authorities in conjunction with the Bohemian Medical Association. They will assemble in the town hall, and thence proceed to the house in which he was born, where a memorial tablet will be unveiled, and an oration delivered by Professor Albert of Innsbruck.

THE principal Medical Officer at Woolwich, Deputy Surgeon-General J. Small, of the Army Medical Department, died at his residence on Woolwich Common on July 3rd. The deceased was appointed assistant-surgeon in December 1845; was promoted to surgeon July 10th, 1855; surgeon-major December 30th, 1865; and attained the rank of deputy-surgeon-general September 2nd, 1875. He was appointed to the post of principal Medical Officer at Woolwich Garrison, in succession to Deputy-Surgeon-General H. G. Gordon, M.D. His services include the Caffre War of 1853-4, for which he received a medal.

DR. BRÜCKE, Professor of Physiology, has been elected Rector Magnificus of the University of Vienna. He is the first Rector since the foundation of the University who has not been a Roman Catholic. He is a Protestant.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a meeting of the Council, on the 10th instant, Mr. Luther Holden, of Gower Street, Bedford Square, Senior Surgeon to St. Bartholomew's Hospital, was elected President of the College, in the vacancy occasioned by the retirement of Mr. John Simon, C.B., F.R.S.; and Mr. J. E. Erichsen, F.R.S., of Cavendish Place, Surgeon to University College Hospital, and Mr. Erasmus Wilson, F.R.S., of Henrietta Street, Cavendish Square, were elected Vice-Presidents for the collegiate year. At this meeting of the Council, the recently elected members of it—Messrs. John Wood, F.R.S., Henry Power, and Jonathan Hutchinson—made the necessary declarations, and took their seats. The several professors and lecturers were re-elected.

QUERIES ON MEDICAL EDUCATION.

AT a meeting of the Metropolitan Counties Branch of the British Medical Association, on June 25th, Dr. Andrew Clark, President, in the chair, a Subcommittee was appointed to collect detailed information on the subject of the Professional Education of the General Practitioner of Medicine from the teachers in the various schools of medicine and from the members of this Branch, and to make a report to an adjourned meeting, to be held on Wednesday next. We understand that many leading authorities have already communicated their experience and views on the subject to the Subcommittee, and it is hoped that as many others will do so as possible. The experience is also specially desired of gentlemen in general practice. The following are the questions for which answers are requested. 1. Is it desirable that intending medical students should pass an examination in the elements of Botany, Physics, and Inorganic Chemistry, prior to admission to the regular medical curriculum, and that these subjects should form part of their "preliminary general education and examination"? 2. Is it desirable that a certain period, previous to admission to a medical school, should be spent with a general practitioner in the form of an "articled pupilage"? *a*. If so, how long? *b*. And which of the subjects mentioned in Question No. 1 should form part of this preliminary training; or are there any others? 3. Is it desirable that the age of eighteen years should be attained before a student enters the regular medical curriculum, and that the age of twenty-two years be completed before he is permitted to receive a qualification to practise? 4. Do you approve, or not, of the introduction of an examination in Elementary Anatomy and Physiology at the end of the first year of medical studies? 5. Is it desirable that, after passing the "primary" professional examination, every student should be compelled to devote two full years to Clinical Medicine, Surgery, and Obstetrics, at a hospital, prior to being allowed to present himself for his final or qualifying examination? 6. Should a student be allowed to attend the out-patient department before the commencement of the second year of his medical curriculum? 7. Is it desirable hat the clinical teachers of Medicine, Surgery, and Obstetrics, should be required to testify as to their *personal knowledge* of the diligence and acquirements of each student (in place of the formal certificate of attendance now supplied), and that such certificate should be placed before the examiners for their information and guidance? 8. Is there any subject at present compulsory in the curriculum of medical studies which, in your opinion, might be omitted? Or is there any other subject not now compulsory which you think might with advantage be made so?

POISONING BY SEWER-GAS.

DR. DIPLOCK, coroner for West Middlesex, concluded an inquiry this week at St. Mary's Catholic Orphanage, North Hyde, Heston, relative to the death of Joseph Moyenham, aged thirteen; Dennis Sullivan, aged fifteen; and Henry Fitz-Morris, aged twelve. The evidence showed that the deceased boys were suddenly taken ill with pains in the head and vomiting, and died after a few hours' illness. The local medical men were unable to determine the cause of death, and the coroner accordingly communicated with the Home Secretary, who made an order for two experienced pathologists to make a *post mortem* examination and analyse the stomachs. Dr. Thomas Stevenson of Guy's Hospital, lecturer on forensic medicine and chemistry, said he had submitted the contents of the stomachs to a chemical and microscopic examination. He found no vegetable or other irritant poison, and there was nothing to account for the cause of death. Mr. Thomas Bond, lecturer on forensic medicine at the Westminster Hospital, said that a *post mortem* examination showed an entirely negative result as to poison having been swallowed by the boys. He was of opinion that the cause of death was blood-poisoning from the sewage. He had examined the earth-closets, and found them in a very bad condition. The jury returned a verdict of "Death from poisoning by sewer-gas", and thought that the evil spoken of by Dr. Bond should be remedied. The circumstances here appear somewhat remarkable, and deserve further attention. If "earth-closets" are capable of becoming a source of so much danger, it is well that it should be known: but what extraordinary neglect!

HOSPITAL ARRANGEMENTS IN SOUTH AFRICA.

A CONTEMPORARY, in writing of the medical arrangements with the army in Natal, says that the unification system has proved so complete a failure, that Lord Chelmsford has written a strong despatch on the subject. What the particular points are on which Lord Chelmsford has written, we can only know when the despatch in question is published. We have heard complaints of a want of medical officers, medicines, and medical comforts on several occasions, but such wants may occur under any system if the administration be imperfect. If the term "unification system" be employed in the sense in which it is generally employed, as opposed to the system known as the "regimental hospital system", we can hardly imagine that Lord Chelmsford or any general officer would advocate the system of regimental hospitals in such a war as that which is being carried on against the Zulus, however much they might approve of it in England. The movements of the troops are already hampered beyond measure by the transport of the necessary food for themselves and the animals with them, and no one could contemplate the addition of such incumbrances as regimental hospitals. They have been abandoned as impracticable in European warfare; their employment would be attended with far greater difficulties in a war carried on in an uncivilised country against savages.

ALEXANDER MEMORIAL FUND.

AT a meeting of the committee of Alexander Memorial Fund, held on July 9th, 1879, at the Army Medical Department, 6, Whitehall Yard, it was unanimously resolved that the prize of £50, and a gold medal of the value of £10, be awarded to Surgeon John Martin, of the Army Medical Department, who joined the army on March 31st, 1874, for the best essay "On the Influence of Drinking Water in Originating or Propagating Enteric Fever, Diarrhœa, Dysentery, and Cholera; to be illustrated, as far as possible, by instances which have come under the personal observation of the author". It was decided by the committee, at the same meeting, that a prize of like value, the competition for which is limited to executive medical officers of the army on full pay, be offered to the writer of the best essay "On the Prevalence of Enteric Fever; its Etiology, Pathology, and Treatment; to be illustrated by the personal observation of the author". The essays must be dispatched so as to reach the president of the committee on or before December 31st, 1881.

THE ROYAL HOSPITAL FOR INCURABLES.

HIS Royal Highness the Prince and the Princess of Wales laid this week the foundation-stone of a new wing of this institution. It was stated that the recipients of the benefits of this hospital are of two kinds—inmates and outdoor pensioners; and its funds are expended in about equal proportions upon those who reside within its walls and on those who live outside of it with their friends. Of this latter class there are at the present time four hundred and twenty-eight hopeless sufferers, who enjoy in their own homes an annuity of £20 each for life, which enables them to procure medical comforts and to keep unbroken the family bond. The hospital contains at the present time one hundred and ninety inmates, and, it being quite full, the managers have

found themselves obliged to undertake the present important enterprise. The new wing will contain not only accommodation for one hundred additional beds, but will comprise a spacious assembly-room, and dining and day-rooms, for male and female patients, with a kitchen and other offices, the outlay on which will be not less than £20,000.

THE FRENCH HOSPITAL.

THE Prince and Princess of Wales also paid on Monday a visit of inspection to that admirably conducted and useful institution the French Hospital, Leicester Square. They were received by the administrators, the leading members of the French Embassy, Dr. Vintras (the virtual founder, and from the commencement the chief physician of the hospital), Dr. Colomiati Meredyth, Mr. Mac Cormac, Mr. Mc Keliar, Mr. H. de Méric, and other members of the staff.

A MEDICAL MINISTER.

DR. ROBERT LUCIUS, who has been nominated as successor to Dr. Friedenthal in the Prussian Ministry of Agriculture, was born at Erfurt in December 1835. He studied medicine at Heidelberg and Breslau. He made the campaign of Morocco in 1860 with the Spanish army, and was subsequently attached to the Prussian expedition to Eastern Asia, after which he retired from the medical profession. He made the campaigns of 1864, 1866, and 1870, as a cavalry officer of Landwehr. In the intervals of peace, he has resided on an estate of his own, and devoted himself to farming. He is a member both of the Prussian Parliament and of the Reichstag, and has been since September second Vice-President of the latter body. He belongs to the Imperialist party. He is a Roman Catholic, but voted for the May Laws, in opposition to his brother, who was a member of the Centre and representative for Aix-la-Chapelle. Dr. Lucius is one of the most intimate friends of Prince Bismarck, who has frequently availed himself of his talents and address in various important political negotiations.

EAST LONDON CHILDREN'S HOSPITAL.

AN interesting and novel ceremony took place in the Board Room of this hospital on Monday, July 7th. Mr. Charrington, chairman of the board, presided at a distribution of prizes to some of the nurses who had successfully passed examinations in elementary anatomy and physiology, lectures on which subjects had been given during the past winter by Mr. Hayward, resident medical officer. The lectures had been kindly undertaken at the suggestion of Miss Mackenzie, the superintendent of the nurses. Mr. Hayward expressed himself as amply repaid for the trouble he had taken by the intelligent interest displayed by the pupils, and the surprisingly good results shown in their examinations. He was of opinion that an adequate reason for the continuance of such lectures is the fact that work intelligently done is done best. He trusted that the East London Hospital for Children would become one of the best training schools for nurses in London. The prizes were then distributed by Mr. Charrington to the four successful candidates, who were introduced in succession by Miss Mackenzie. A vote of thanks to Mr. Hayward for having given the lectures was proposed by Mr. R. W. Parker, and seconded by the chairman, who spoke in high terms of the present state of nursing at the hospital. The East London Hospital for Children may be congratulated on the interest and energy shown by the resident staff in inaugurating a work which, if carefully carried out, cannot fail to be productive of good results, and is worthy of imitation in other institutions.

L'HOMME SERPENT.

OUR Paris correspondent writes:—Among the "great attractions of the day" is "l'Homme Serpent", who is to be seen at the *café* called "l'Horloge", where he goes through the most astounding feats; and the movements and contortions of his body are such as to justify the *sobriquet* he has acquired. "L'Homme Serpent" is a lad aged 18, a Saxon by birth, of short stature; and there is nothing remarkable in the make of his body which would explain his extraordinary serpent-like movements. His osseous system is small; but the muscles are well developed, like those of athletes in general. He is a fair example of what can be effected by training and practice. He began at the age of 11, and he has ever since gone through the exercises daily. He dares not miss a single day; for, when he does, his joints get stiff, the muscles and ligaments lose their elasticity, and the body its suppleness; so that, when not engaged in public, he goes through the exercises in his own room. He is of temperate habits, living on two meals a day. His diet is mixed—consisting principally, however, of vegetables and farinaceous substances. His drink consists of water, tea and coffee, and the lighter wines, but no beer or spirits. When he is to perform his exercises, he takes no food for nearly twelve hours. He makes a hearty meal in the morning, and drinks coffee, alternated with beef-tea, soda-water, and other mild drinks, for the rest of the day, to keep up his strength; for the amount of fatigue he goes through at these exercises his prodigious.

MARTYRS OF MEDICINE.

THE prefect of the Seine lately appointed a commission for the purpose of arranging inscriptions to be placed on memorial tablets in various parts of Paris. The first two tablets and inscriptions were of a political character; the third is to be placed in the interior of the hospital for sick children. Its tenour is as follows. "To the memory of Henri Giboulon, born at Paris, provisional house-surgeon, died at the age of twenty years, on the 10th of April, 1875, of diphtheria; Leopold Poisier, born at Baufay (Sarthe), provisional house-surgeon, died at the age of twenty-five years, on the 30th January, 1876, of diphtheria; Emilie Périer, born at Grenoble, of the order of St. Thomas de Villeneuve, died at the age of forty-eight years, on the 3rd May, 1878, of diphtheria; Ernest Frevel, born at Paris, pupil in pharmacy, died at the age of twenty-six years, on the 9th January, 1879, of small-pox; Jacques Abaddie Tourné, born at Pau, house-physician, third year, died at the age of twenty-eight years, on the 24th May, 1879, of diphtheria. Died victims of their devotion in the care of sick children."

INSPECTION OF DAIRIES AND MILK.

THE North-Western Association of Medical Officers of Health held a meeting on Saturday at Manchester, and discussed the new dairies and milkshops order. It was urged that the inspector under the order should be a qualified veterinary surgeon; that the general administration of the order should be by the medical officers of health, instead of by the police; and that the putting of an order into effect should be compulsory. The question of taking action to effect a change in the order was adjourned to another meeting. We pointed out at the time the absurdity involved in making this sanitary regulation part of the duty of other than the local sanitary authorities. It was by some curious jumble made part of a Privy Council measure, and subjected to the authority of the Quarter Sessions Justices, who have no sanitary machinery.

SKULLS OF ASSASSINS.

DR. BORDIER has communicated to the Society of Anthropology of Paris the results of the study which he has made of thirty-five skulls of assassins, shown at the Trocadero by the authorities of the Museum of Caen. These crania were of considerable size, which, as is known, constitutes a sign of superiority. Ought it then to be concluded that assassins are more intelligent than honest people? A more complete analysis soon shows that this is not so. The frontal region—the seat of the intellectual faculties—is, in fact, somewhat less in assassins than in other men; on the other hand, the lateral or parietal region is more developed in them. This region appears, according to recent researches, to be the seat of the motor centres—the centres of impulse. It is that which is found atrophied in apathetic idiots, and hypertrophied in those who are in constant motion. Further, the back of the head is much the same in them as it is in the rest of the world. To sum up, less reflection and more action than other men would be the intellectual disposition which this craniometric study seems to assign to assassins. In this they approach prehistoric man, and even the protohistoric. In them also is found a frontal region somewhat less, the parietal region

somewhat greater. This instantaneity of action, which is thus presumed in the assassin, was, it is suggested, probably a precious quality in the savage of the stone period. The conclusion of M. Bordier is philosophically curious enough; it is that the criminal is an atavic being "similar to an animal who, born of parents long domesticated, tamed, and habituated to labour, should appear suddenly with the unconquerable savagery of his ancestors". Examples of this kind are seen amongst domestic animals. Amongst men, the analogues of these reversions *(retifs)* would be our criminals. The second part of the work of M. Bordier is devoted to the pathology of criminals. It is still more demonstrative in its character and object. Of thirty-six crania, M. Bordier found only three normal, twelve abnormal, and twenty-one pathological. The lesions affected most often that same parietal region which has been mentioned as frequently hypertrophied among them.

WRITERS' CRAMP.

DR. GEORGE M. BEARD (*New York Medical Record*, March 15th, 1879), gives the results of an extended study of writers' cramp observed in one hundred and twenty cases. 1. What is called writers' cramp is but one of a large number of symptoms of the disease, and no two cases are precisely alike. Among these are fatigue, exhaustion, dull aching pain, nervous, irritable feeling, general nervousness, trembling, unsteadiness, cramp, spasm, jumping, twitching, rigidity, contraction of muscles, etc. 2. In other forms of professional cramp, as that of telegraphers, musicians, sewing women, painters, artists, dancers, hammerpalsy, and so forth, the cramp is but one of a number of symptoms, and by no means the most important one. As in the writers' cramp, there is frequently no cramp at all from the beginning to the end of the disease. 3. This disease is primarily a peripheral and local disease of the nerves and muscles; secondarily and rarely it becomes central and general, or it may result from various central lesions; and it may affect any point between the extreme periphery and the centre. 4. This disease occurs mostly in those who are strong, frequently of very strong constitutions, and is quite rare in the nervous and delicate; and when it does occur in those who are nervous, is more easily relieved and cured than when it occurs in the strong. 5. This disease is far less likely to occur in those who do original work, as authors, journalists, composers, than in those who do routine work, as clerks, book-keepers, copyists, agents, and so forth. 6. This disease, like all nervous diseases in this country, diminishes in frequency as we go south. 7. Writers' cramp is no longer an incurable disease. 8. The treatment of writers' cramp and affections allied to it consists—*a*. In the use of electricity locally applied; *b*. Hypodermic injections of atropia, strychnia, duboisia, Fowler's solution, and other tonics, narcotics, and sedatives; *c*. The internal use of Calabar bean, ergotine, iodoform, and in some cases of nerve-food, as oil and fats; *d*. Massage; *e*. The alternate use of hot and cold India-rubber bags; *f*. The use of the actual cautery and very small blisters to the upper portion of the spine, or along the course of the affected nerves and muscles.

ODD FISH.

OF the many ways of carrying on the struggle for existence, the art of living at the direct expense of another is that most popular in the animal kingdom, not always excluding the bimanous mammalia. This principle is well carried out by the *malapterurus electricus*, a small siluroid fish found in West African rivers. In the April number of the *Journal of Anatomy and Physiology*, Mr. A. B. Stirling describes a strange habit of this electric fish. Receiving a live specimen, which he called "Joe", together with a living example of another siluroid fish, which he called "Dick", he placed them in an aquarium, and found that Dick, an active handsome fish, readily took worms from his master's hands, whilst Joe could not be made to rise for food. One day, however, Joe was seen pursuing Dick, and the moment the former touched his non-electrical companion the latter threw up all his food, which Joe devoured. To keep a cook on such extreme physiological principles, and to be one's own torpedo, may confer the blessings of easy digestion, and certainly seems most scientific; still it must be said of the *malapterurus*, as of some of his human fellow-creatures, that his manners are none and his customs nasty. Dick was at last found dead on the floor, probably having received "one shock too much"—as his owner writes—from Joe, who lived on a few months, refusing all food. He died at last from the overheating of his tank, which caused him to leap out from it; and his remains and those of his companion lie, or rather hang, in the Anatomical Museum of the University of Edinburgh.

OUR CANAL POPULATION.

IT is very unsatisfactory to learn from so competent an authority as Dr. Browning, medical officer of health, that the Canal Boats Act (1877), from which much was hoped, is, in his opinion, practically a dead letter. It is so, in his experience, partly because it is an Act devised a double end to serve, not only to prevent overcrowding, but also to compel parents living on board these boats to send their children to school. This would entail separation from one or both parents at very frequent intervals, so that the children, and in many cases other persons, got out of the boats when they approached localities where they might be inspected. There is also considerable difficulty in getting a summons under the Act, so that only one conviction, he says, has been obtained—viz., at Stratford, where a fine of 5s. has been inflicted. Sea-going barges are not included in the provisions of the Act.

BRITISH PRACTITIONERS IN FRANCE.

OUR Paris correspondent writes:—In the last number of the JOURNAL, I find an inquiry, signed "Emigrant", as to whether he can practise on French territory with his English M.D. Your answer is correct, as the law stands at present; but before many months, perhaps weeks, if the Roger-Marvaise *projet* be carried out, it will go rather hard with foreigners who intend to practise in France; for no foreigner, whatever may be his qualifications, will be allowed to do so without taking a degree in one of the universities of the country; and the Minister of Public Instruction, who was hitherto omnipotent in these matters, will not be allowed for the future to grant simple permission to practise. Moreover, I am told that the new law is intended not only to keep out future "interlopers", but those now in France who have hitherto been allowed to practise through the favour of the Minister will only be required to pass an examination, for which a certain lapse of time will be allowed; failing which, they will receive notice to quit either the territory or their practice. Such is liberal France. *Vive la République!*

THE PARKES MUSEUM OF HYGIENE.

THIS collection, founded as a memorial of the late Dr. E. A. Parkes to promote the study of all matters bearing upon the health of the community or the individual, was formally opened on Saturday week by the Home Secretary. Mr. Cross, the Duke of Northumberland, Viscount Cranbrook, Cardinal Manning, and others who took part in the proceedings, were received in the Flaxman Gallery of University College by Sir W. Jenner, Dr. Gowers, and the Executive Committee, and conducted to the rooms on the top floor of the building, lent by the Council of the Institution until separate and suitable premises can be obtained. Dr. W. H. Corfield, Professor of Hygiene in University College, and Mr. Mark H. Judge, the Curator, accompanied the party to explain the arrangements. At present, there have been brought together apparatus, specimens, books, reports, and drawings illustrative of matters connected with engineering and local hygiene; architecture, including general designs and details of buildings, methods of constructing hospitals, blocks of artisans' dwellings, etc., with specimens of appliances for necessary sanitary arrangements, drainage, ventilation, and lighting; the furnishing of buildings, public and domestic, clothing, food, and the preservation of health and the relief of sickness. Dr. Poore, one of the honorary secretaries, gave a short account of the circumstances which led to the formation of the Museum. Mr. Cross, who was received with much cheering, said he was there to testify his hearty agreement with the founders of this museum in all the objects they had in view. The object of this institution was to bring to bear upon the practical work of life the scientific knowledge which many possessed. Looking

at the disease and misery around them, they knew that much of this was preventable, and arose from preventable causes, and what they wanted to do was to hunt disease down into a corner and to stamp it out. In short, they wanted to restore that which was the actual birthright of every citizen—pure light, pure air, and pure water. Mr. Cross, in conclusion, declared the museum open. The Duke of Northumberland moved: "That the Parkes Museum, as fulfilling an educational want which has been long felt, is well worthy of public support." Mr. G. Godwin, in seconding the resolution, expressed a hope that the Government would find a suitable building for the museum and aid in the establishment of lectures on sanitary science. Lord Cranbrook moved a vote of thanks to the Council of University College for the assistance they had rendered in the development of the Parkes Museum. Sir W. Jenner attributed the dreadful condition in which he found many houses of wealthy people either to the owners' want of faith in sanitary science, or to the ignorance of those who were employed to carry out sanitary works. Professor Huxley expressed a hope that Mr. Cross would use his influence with the Government and with the House of Commons to stay a movement adverse to the development of school-board teaching, which appeared intended to dam back the stream of education and prevent the lower classes from gaining the knowledge they so much needed.

A NEW HOSPITAL FOR LONDON.

THE fine new infirmary erected in the Archway Road, Upper Holloway, for the additional accommodation of the sick poor of the Holborn Union, was formally opened on Saturday by Mr. Sclater-Booth, M.P., President of the Local Government Board, in the presence of the guardians and the local clergy, and a number of their friends. The building, which is one of the largest of the kind in the metropolis, cost upwards of £80,000, and will accommodate six hundred and twenty patients. After a prayer and a short address from Bishop Claughton, and a procession through the principal parts of the infirmary, Mr. Sclater-Booth declared the building open; and in doing so he remarked that in London people were too apt to forget the common interests of localities and parishes with which people in the country were more familiar, and therefore, when he found people coming out of their own districts to inaugurate a building to be devoted to the care of the sick from one of the most thickly populated places in the very heart of London, he thought it matter for much congratulation. The guardians of the Holborn Union had shown that they were anxious, on the one hand, to avoid putting those whom they represented to unnecessary expense, and, on the other hand, to provide separate accommodation for the sick poor, and give to them more humane and satisfactory treatment, which would restore them speedily to health, and enable them to maintain themselves and their families. Although at the present moment it entailed a high charge on the ratepayers, they must recollect that the children had to pay for the sins or the *laches* of their parents, because, during the first twenty or thirty years of Poor-law administration, our predecessors had not paid proper attention to the maintenance and conduct of workhouse establishments; and, about a dozen years ago, public attention was aroused, Parliament interfered, and an Act was passed under which this and similar buildings were erected for the benefit of sick poor, and, as he believed, for the ultimate advantage of the ratepayers. He congratulated the guardians on the completion of that splendid work. It would prove not only a satisfaction to them, but one also to the ratepayers, because they must feel that with pure air and the best sanitary appliances the poor patients would have a better chance of speedy recovery.

THE CONTAGIOUS DISEASES ACTS.

THE annual report of the Assistant Commissioners of the Police of the Metropolis for the year 1878 on the Contagious Diseases Acts has just been printed. It will be read with special interest at this time, when a Committee of the House of Commons is investigating the operation of these Acts. Captain Harris states that the persons in the places subject to the Acts have attended examinations with great regularity, the average number of examinations made being 23.39. The police generally employed under the Acts have discharged their duties to his entire satisfaction; not a single case of excess or violation of duty has been brought to his notice. The number of names in the register at the end of the year was 36 less than on the preceding year, showing a total decrease of 3,064 since the Act came into operation. Whenever a chance of reclaiming exists, every effort is made to turn it to good account before the Acts are enforced; and after the voluntary submission form has been signed, the opportunity is still given to a person of returning to friends. Eighty girls between the ages of twelve and eighteen, 89 between the ages of eighteen and twenty, and 10 above that age, who had been in bad company and improper places, had been rescued. In addition to the above, 29 young persons between the ages of twelve and eighteen, and 117 between the ages of eighteen and thirty, and 29 above that age, who had commenced a disreputable life, abandoned it on being cautioned by the police; their names, therefore, were not put upon the register. The number of houses of ill-fame had been reduced last year by 23, showing a total decrease of 790 within the protected districts since the Acts came into force. Of these, 138 were public-houses and 256 beer-houses. Fourteen public-houses and 7 beer-houses, however, are still used for improper purposes. During the year, 938 persons had left the district under the protection of the Act; 69 had married; 259 had entered homes; 689 had been restored to friends; and 22 had died. In regard to the general effect of the Acts, Captain Harris again states that the continued efforts of the police employed under them are directed to the reclamation of young girls who have begun to lead an immoral life, and the prevention of others from adopting it. If these results are attained, besides the great result of diminishing disease, then, he says, it seems evident that the working of the Acts is beneficial.

DEATHS FROM STARVATION.

ACCORDING to a parliamentary return, the number of deaths in the metropolitan district in the year 1878, upon which a coroner's jury returned a verdict of death from starvation, or death accelerated by privation, was seventy-seven. Of these, forty-nine occurred in the central and twenty-three in the eastern division of Middlesex.

SUPERANNUATION OF ASYLUM MEDICAL OFFICERS.

THE following resolutions will be proposed by Dr. Murray Lindsay at the annual meeting of the Medico-Psychological Association, to be held in London on July 30th, 1879. That, in the opinion of this Association—1. The clauses in the Lunacy Acts affecting superannuation of the officers and servants of county borough lunatic asylums require revision and amendment; 2. The power of granting them retiring allowances should no longer be merely permissive; but they should be entitled to claim pension, as a matter of right, after a certain period of service, and according to some fixed scale, on condition of good conduct and satisfactory performance of duty; 3. The regulation of the salaries, emoluments, wages, and pensions of the officers and servants of county, borough, district, and parochial asylums should be transferred to the Imperial Government, and the Treasury capitation grant of 4s., instead of going to union guardians, should be applied to these purposes, as well as to the payment of the repairs, alterations, and future extensions of the fabric; 4. Medical superintendents should be placed under the Civil Service Superannuation Act, and on the same footing and scale with regard to pension as the Commissioners in Lunacy and other first-class civil servants—viz., one-sixtieth for every year of service, and ten years allowed on appointment as medical superintendent; 5. Service should be considered continuous or unbroken, notwithstanding change from one pauper asylum to another, and should reckon towards pension; 6. There should be compulsory retirement after a certain age—at least in the case of medical superintendents and superior officers, with power to the authorities to continue them longer in office, if for the good of the service; 7. Legislative provision should be made for granting superannuation allowances to the officers and servants of the district and parochial asylums of Scotland.

THE UNIVERSITY OF BERLIN.

THE University of Berlin has during this summer session 2886 students, of whom 412 are medical. Of the 412 medical students, 344 are Prussians; 23 come from other states of Germany and 2 from Austria. Russia sends 11 students to the faculty of medicine, Roumania 5, Servia 4, Greece 3, Great Britain and Hungary each 2, Belgium, Holland, Switzerland, and Spain each 1; America 8, Africa 3, and Asia 1. There is an apparently steady increase in the attendance of students in the Faculty. In the summer of 1878, the number was 346, and that of 1877, 297.

SMALL-POX.

THE fatal cases of small-pox in Dublin last week were 6, and in London 11. There was not a single death from this disease recorded in any of the nineteen large provincial towns of England and Wales. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had slowly declined from 207 to 195 in the four preceding weeks, had further fallen to 190 on Saturday last. Twenty-eight new cases of small-pox were admitted to these hospitals last week, against 35 and 41 in the two previous weeks. The Highgate Small-pox Hospital contained 12 patients on Saturday last, against 15 and 19 at the end of the two preceding weeks.

APPOINTMENT OF ST. KATHARINE'S NURSES.

A LARGE gathering of people interested in this subject took place on Tuesday last, in the Library of University College, London, to witness the presentation by Lady Jenner of the royal warrants and badges of the order of St. Katharine to two nurses of University College Hospital. The Duke of Westminster presided, and, in opening the proceedings, gave a short account of the ancient hospital of St. Katharine from the time of its foundation in 1148 until its removal in 1825 from the site of St. Katharine's Docks to Regent's Park, and explained the circumstances under which Her Majesty had decided to apply a portion of the funds to mark out for distinction a certain number of nurses connected with the hospitals of London. In speaking of the great importance to the public of a proper recognition of the qualifications essential in a good nurse, his grace said that the art of the nurse was now admitted to be second only to that of the physician and surgeon, so much did the cure of patients depend upon good nursing. The two nurses selected to receive this honour were Elizabeth Church, aged 38, who had entered as a probationer in May 1869, and Ellen Harrington, aged 32, who had been for eight years in the wards of the hospital. Lady Jenner then placed the badges upon the arms of the two newly appointed members of the order, who were presented by the Lady Superior of the staff of nurses. The secretary next read the conditions under which the appointment was held, namely, for three years, with a payment of £50 a-year, in addition to the salary paid by the institution, £50 a-year being also paid to University College Hospital for the sustenance of each nurse; but should the Queen, as patron of St. Katharine's, require the services of any one of the St. Katharine's nurses for any poor or other person, such nurse is to attend the patient as long as may be necessary without any further remuneration. Sir Rutherford Alcock next moved a resolution, recording the satisfaction of the meeting at the step taken by Her Majesty in initiating the new order, and expressing an opinion that the gracious notice by the Sovereign of a body of deserving persons would do much to elevate and attract attention to nursing as a vocation, and serve as a stimulus to those already engaged in nursing in the hospitals of London and elsewhere. Mr. Erichsen, in seconding the motion, testified to the value of such a recognition of good and useful work as that which they had witnessed, remarking that it was calculated to elevate the calling of the nurse almost to the dignity of a profession. He commented on the perilous nature of the nurse's vocation, pointed out the high mortality amongst them as a result of the attacks of infectious diseases, and conveyed his great pleasure at such a mark of appreciation of exertions so unostentatious and so valuable. Mr. C. B. Marlay, of St. Katharine's Hospital, supported the resolution, which was cordially adopted. Mr. John Marshall moved a hearty vote of thanks to Lady Jenner, which was acknowledged on her ladyship's behalf by Dr. Russell Reynolds. On the motion of Mr. Edward Enfield, treasurer of the hospital, thanks were passed to the Duke of Westminster for presiding, and this having been seconded by the Master of St. Katharine's Hospital, was responded to by his grace, and the proceedings terminated. A similar presentation to one of the nurses of the Children's Hospital in Great Ormond Street took place on Thursday.

HÆMATINIC PROPERTIES OF DIALYSED IRON.

DR. ROBERT AMORY of Boston has recently reported a series of observations made by him upon the blood of patients to whom dialysed iron was being administered, and says: "Dialysed iron may increase the globular richness of the blood, but it may have no effect in bringing about the chemical combination of oxyhæmoglobin. If the suspicion be true that there is a state of ill-health in which the corpuscles may be numerically normal, but may simultaneously be deficient in colouring matter, we may conceive of an anæmic or chlorotic patient who may require some therapeutical means for improving this deficiency other than simple iron. I may have been extremely fortunate in selecting just those cases (five in all) in which a simple form of iron was indicated, and it may not be impossible that another form would have benefited my cases as much as the dialysed iron; yet the latter is preferable to the more astringent iron-salts, because it does not impair the digestion, nor produce constipation. Now one final word about the various solutions of dialysed iron. Many of these solutions are valueless, more are very dilute, and a few are of pretty uniform standard and contain only the products of dialysis from a salt of iron and distilled water. If physicians use a worthless preparation, they need not expect an improvement in the anæmia; if they use a dilute solution, they must use a larger amount of it. In the preparation I used for these experiments, the solution had a specific gravity of 1.042, and had no free acid." The preparation which he used, and which he found most trustworthy, was that of Wyeth and Co.

MEDICAL EDUCATION IN CEYLON.

THE *Indian Medical Gazette* of June 2nd gives an interesting account of the Ceylon Medical School, which, it rejoices to observe, continues to prosper. It was established in 1870 by Sir Hercules Robinson, and opened on the 30th of June of that year. The report for the eighth session (1877-78) by the Principal, Dr. Vanderstraaten, states that up to the close of the session one hundred and thirty names had been enrolled: of these, one hundred and six belonged to the primary class and twenty-five to the secondary. Twenty-nine of the former class, after completing the required course of study, were examined and obtained licences to practise. The great majority of them have been employed as "sub-assistant colonial surgeons"; and Dr. Kinsey, the principal civil medical officer, testifies to their merits and ability. The secondary class is only taught for two years, with a view to serving in subordinate capacities, as vaccinators, dispensers, and dressers. Six students of the primary class and one licentiate had proceeded to Europe to complete their studies. Three had obtained diplomas. Dr. Vanderstraaten is sanguine that the certificates of the school will be recognised by "the new Conjoint Board of Examiners in England and by the University of Calcutta". At present, the certificates are recognised by the University of Madras, and one year's certificate by the University of Aberdeen. The medical authorities are adopting the very best means of attaining that end—namely, raising the standard of preliminary education and professional instruction. The curriculum has been extended from three to four sessions. These are signs of vitality, and it is intended to abolish free scholarships altogether. This is considered to be a sure sign that medical education is being appreciated and sought in Ceylon. A suitable building for the accommodation of the school was provided in 1876 by Sir William Gregory, whose interest in medical institutions and education is warmly acknowledged in the Principal's report. The Principal's report records two incidents of a painful character—the death from a dissection-wound of his predecessor Dr. Koch, who appears to have been much respected and beloved, and of Dr. F. C. Tillaimutto

Evart, Demonstrator of Anatomy, from the same cause. This young man obtained his degree in the University of Calcutta in 1877, after a very brilliant and successful career.

SCOTLAND.

THE Musselburgh Trust have instructed their clerk to apply formally to the Edinburgh Trust for a supply of water at threepence per one thousand gallons, and also to ask them to lay the necessary pipes.

THE medical board of the Royal Maternity and Simpson Memorial Hospital have appointed Mr. George Hurst, M.B., C.M., and Mr. T. A. Machattie, M.B., C.M., as house-surgeons for the next quarter. During the same time, Dr. Halliday Croom will be medical officer, succeeding Dr. Keiller, who has been on duty during the last quarter.

THE NEW INFIRMARY, EDINBURGH.

THE scheme for furnishing the wards by subscription from various professions, public bodies, and trades is working well. The brewers have subscribed £400, the practitioners £200 already. The assistants, male and female, to drapers in town have determined to furnish a ward, if possible; and the teachers are preparing to do the same; so that there is every prospect of the scheme accomplishing its aim.

HEALTH OF EDINBURGH, LEITH, AND GLASGOW.

THE mortality in Edinburgh last week was 17 per 1,000. Of 79 deaths registered, no fewer than 13 were due to zymotic diseases, 6 of these being whooping-cough, occurring in equal numbers in the Old and New Town. Only one death from fever occurred. In Leith, the mortality was 23 per 1,000. In Glasgow, the death-rate was 19 per 1,000. At a meeting of the Public Health Committee of the Edinburgh Town Council, Dr. Littlejohn reported that 20 patients had been admitted to the City Hospital since the beginning of the year, but that it had been closed since June 21st; he also recommended strongly the provision of baths and washing-houses for the poor of the community now that Edinburgh has an abundant water-supply.

VACCINATION-RETURNS IN SCOTLAND.

DR. J. B. RUSSELL presented a report at the meeting of the Glasgow Town Council on Monday, in which he gave the result of recent inquiries into the operations of "The Vaccination (Scotland) Act, 1863". During the seven years from 1871 to 1877 inclusive, fully three per cent. of the children born in Glasgow, and scarcely two per cent. of those born in the rest of Scotland, had escaped vaccination. It might be regarded as a small proportion; but the aggregate was considerable, and the evil cumulative. The object he had in view in ascertaining and reporting the facts had partly been to make them known to the Registrar-General of Scotland, who had given a close and intelligent attention to the working of the statute. The principal question, he said, which presented itself was—Why should the carrying out of the Vaccination Act, especially in large towns, be put into the hands of the parochial boards? It seemed to him inconsistent with general principles that the local authority of such a city as Glasgow, for example, supporting a large and well organised staff for the sanitary supervision of the population, more particularly for the detection and suppression of infectious disease, having small-pox hospitals, and being responsible for the treatment of that disease when it occurred; having, also, a public vaccination-station, and a vaccinator who dealt with twelve or thirteen hundred children *per annum*, should yet have no responsibility or even *locus standi* in reference to the carrying out of an Act whose provisions strike at the very root of epidemic small-pox. He was satisfied that if, in the populous burghs of Scotland, there were a special department instituted in an already well organised sanitary staff for the working up of defaulters, in course of time very few indeed would escape. He hoped they would concur with him in this opinion, and authorise him to transmit that report, with their approval, to the Registrar-General and Board of Supervision, for their consideration in any amended Vaccination Act which might be in contemplation. The Council granted this request of Dr. Russell unanimously.

IRELAND.

IT is proposed to hold a bazaar in the Ulster Hall, Belfast, on December 18th and 19th, in aid of the funds of the Belfast Royal Hospital. The last bazaar cleared upwards of £1000, and we trust this will be equally fortunate.

THE election of a coroner for the Eastern Division of the county of Limerick, in the vacancy caused by the death of Dr. Murphy, was held last week. There were two candidates—Dr. Macnamara and Mr. Casey. The latter was successful.

IN Sligo, during the week ending June 28th, the annual rate of mortality was only 9 per 1000 inhabitants; and for the week ending May 31st, the rate was at the same low figure.

THE deaths from small-pox registered in Dublin during the second quarter of the present year amounted to 125, making, with those recorded for the previous three months, a total of 376 deaths from this disease.

KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE unusually large number of twenty-nine candidates presented themselves at the examination for the licence of this College to practise Medicine, which took place this week. There were seven candidates for the first professional examination, five of whom were ladies.

BELFAST HOSPITAL FOR SICK CHILDREN.

THE new hospital is now in full working order, but a deficiency of about £600 has still to be made up—a sum which we have little doubt will soon be forthcoming. The hospital is one of the best appointed institutions of the kind; and since it has been established, about 1,600 patients have been admitted to the wards, and 40,000 have been under treatment at the extern department of the hospital.

HEALTH OF BELFAST.

AT a meeting of the Belfast Town Council last week, the report of the medical superintendent officer of health showed that the average death-rate for the four weeks ending June 21st was, on the corrected population, 22.78 per 1000. It is satisfactory to learn that the death-rate is considerably lower than in the preceding month, showing a diminution in the ratio of mortality of nearly 5 per 1000. Were it not for the fatality of whooping-cough and diarrhœa, the deaths resulting from zymotic diseases in June would be much below the ordinary monthly average. Two cases of small-pox were reported, but there does not appear to be any tendency to an increase of the disease, and the medical officer of health does not apprehend that they are likely to have any outbreak in an epidemic form. The utmost vigilance, however, is exercised in every instance of the malady, as in all the principal zymotic diseases reported, to prevent the contagion from spreading.

MEDICAL FEES IN SANITARY PROSECUTIONS.

THE Galway Guardians have recently requested the Local Government Board to inform them whether the sanitary authority are liable for payment of the Sanitary Officer's fee for attending as a witness in a sanitary prosecution, if the person fined be too poor to pay the fee in addition to the fine inflicted. The Local Government Board, in their reply, state that the sanitary officer is entitled to remuneration irrespectively of the circumstances of the parties prosecuted or the penalty that may be inflicted by the justices; and point out that the 258th section of the Public Health Act provides for a matter of the kind.

SELECT COMMITTEE ON THE MEDICAL ACT (1858) AMENDMENT BILL (No. 3).

House of Commons, Friday, July 4th, 1879.

THE RIGHT HON. W. E. FORSTER in the Chair. Present: Mr. A. Mills, Dr. Dalrymple, Mr. Errington, Mr. Wheelhouse, Mr. Plunket. Mr. Mitchell Henry, Dr. Cameron, Dr. Lush, and Sir Trevor Lawrence.

Dr. WATERS of Chester was called, and examined as follows.

By the CHAIRMAN: I have been connected with the British Medical Association for twenty-five years. I was President of the Association in the year 1866. I have been a graduate of the University of Edinburgh since 1847, and Fellow of the College of Physicians of Edinburgh since 1848. The British Medical Association was first formed in 1832, under the name of the Provincial Medical and Surgical Association; but, its sphere of operations extending, it became necessary, about the year 1856, to adopt the present name. [Having named the dates, towns, and presidents of some of its annual meetings, Dr. Waters continued:] Each member is proposed by three nominators and his name balloted for, a majority of three-fourths being necessary for election. The present number of members is nearly eight thousand, and is steadily increasing. The number when I was President, in 1866, was from three thousand four hundred and fifty to four thousand. The Association has about thirty Branches, which hold independently annual and intermediate meetings. [Dr. Waters further explained the constitution of the Association, of its Council and Committee of Council, and their *modus operandi*.] The Association was especially formed for the good-fellowship and friendly intercourse of members, and also for the promotion of science and the discussion of questions relating to the public health and professional interests. In 1834, a Committee of the House of Commons sat, and took voluminous evidence in relation to the three divisions of the United Kingdom. The evidence as to England alone was published, and occupied a volume of about eight hundred pages. That regarding Ireland and Scotland was never published, and the Committee did not make any report as to it. In 1837, a Medical Reform Committee was formed in the Association, and made a report in 1839, when the Association arrived at the conclusion that it was indispensable that the numerous examining bodies should, in some manner or another, be brought into shape, so that there might be something like uniformity of qualifications. The objects which the Association had in view were a good preliminary examination in general education, to get rid of the defective attainments found amongst members of the profession; then uniformity of qualification, as being desirable for entrance to the profession, and, based upon that uniformity reciprocity of practice, so that a person passing an examination in one part of the kingdom should be able to practise anywhere; registration and the general superintendence of professional examination by a Medical Council, and representation of all interests in the Medical Council, including that of the profession. Registration and reciprocity have been realised. By reciprocity, I mean this: before the Act of 1858 was passed, the College of Physicians of London, for instance, possessed an exclusive right to license all persons practising within seven miles of London. In 1815, the Act of the Apothecaries' Society gave them the power of prosecuting any one who attempted to practise as an apothecary in England. The consequence was that a graduate of the University of London could not practise as a physician in London, or a graduate of Scotland or Ireland—so that the privileges of the different licensing bodies were exercised in limited spheres. By reciprocity of practice, any one who was licensed by a body in one area would be allowed to practise in the area of another body, on a like return being made. For instance: a licentiate of the Apothecaries' Hall in Ireland, which granted its diplomas at 10s. 6d., is now entitled to practise anywhere in the United Kingdom. Uniformity of test-examinations and uniformity of qualifications have not been gained. The Medical Council was not constituted on the principle desired by the Association. The profession generally, as well as the Association, had always stood up for representative councils. The first efforts to obtain them were of a somewhat crude character. In 1840, a Bill was introduced by Mr. Warburton, and was warmly supported by Mr. Wakley, the proprietor and founder of the *Lancet* and coroner for Middlesex. The Bill contained provision for the election of representatives of the profession in the proposed General Medical Council. The British Medical Association advocated direct representation in their first petition. There are in England more surgeons than physicians, but the Association comprises all classes of practitioners. It has, perhaps, more frequently happened that the President of the Association has been a physician, but still on numerous occasions he has been a surgeon; at the last meeting in London, for instance, Sir William Fergusson was elected President of the Association. I think you may take it that the *élite* of the profession belong now to the Association. There is a considerable number of graduates of Scotch universities in England, and the greater portion of them would be members. Several of the leading men in the profession do find time to attend the meetings of the Council of the Association; and I may say that Mr. Callender of St. Bartholomew's and Dr. Sieveking are regular attendants. I do not see how the statement, that the Association does represent the profession, can fairly be challenged. The twenty-three thousand legally qualified men on the *Register* include men in all parts of the world; and I should say that we represent eight thousand out of twenty thousand or less, as I believe there are not twenty thousand in the United Kingdom. I am not aware there has ever been any other society formed with similar objects, except perhaps the Irish Medical Association, which in Ireland plays the same part that the British Medical Association does here. The Irish Association was formed before the operations of the British Medical Association had extended to Ireland. We went to Ireland in 1867, and it is only since then we have constituted anything like an important Branch there. The Irish Medical Association works entirely in harmony with the British Medical Association in the matter of medical reform, and the Medical Reform Committee has accepted, as a member, a member of the Council of the Irish Medical Association, viz., Dr. Grimshaw. I am not aware that there has ever been any schism in our body. The honourable member for Exeter has brought his Bill forward in connection with our Association. In Ireland and Scotland, the petitions in favour of the Bill have not been so numerous, in consequence of the feeling in favour of a conjoint board not being so strong in those divisions of the kingdom as in England. The clauses of this Bill providing for a conjoint board are similar to the clauses in the Government Bill; but the latter was materially modified in its passage through the House last year. I certainly prefer the second edition of the Government Bill, which makes conjoint boards compulsory, to the first, which made them permissive only. The feeling in England on the subject was quite general. While the English medical authorities were working towards the establishment of a conjoint board in England, we suspended Parliamentary action, as we felt that then the strength of the Association, in trying to enforce it in Scotland and Ireland, would be greatly increased. We believe that a number of men of deficient attainments, both professional and educational, get into the profession through the facilities afforded by rival examining bodies, as I may call them. The officers of the Association see no reason why the universities should not co-operate with the corporations of Scotland, inasmuch as the universities are equally with the corporations examining and licensing boards. No doubt the improved character of the Government Bill was, to some extent, due to the action of the Association. We took the opinion of our members last year, as to whether the conjoint board should be compulsory or not. The result was that 4,910 voted in favour of it and only 264 (about 1 to 18) against it. I think there can be no question as to the profession being in favour of it. The result of the appeal on the question of direct representation was that there were 5,075 ayes and 121 noes (1 to 41). We think the corporation representatives are in undue proportion on the Medical Council, inasmuch as they are the parties who have to be controlled by the Council. Mr. Headlam's Bill, which was the Bill of the Association, passed a second reading in 1857, by a majority of 147. I do not see that the representatives of the corporations can be regarded as the representatives of the profession—because I observe, in Mr. Simon's evidence and in his report to the Privy Council in 1873, he designates them as delegates; and the office of a delegate is strictly to take charge of the interests committed to his special charge. The licensing corporations will have their funds materially lessened, perhaps, by the conjoint scheme; and that accounts no doubt for their opposition. I believe the College of Surgeons, powerful as it is, feels that if the conjoint scheme be not extended to Ireland and to Scotland, then it would be very detrimental to its own interests. The representatives of corporations meet, of course, in the Medical Council as friends; and it would be a very unpleasant thing to mar the harmony of their meetings by the introduction of subjects of a disagreeable character. The consequence has been an amount of mutual forbearance which has tended to keep back the education of the profession; and the conjoint scheme has really had to be forced upon them by outside pressure and the influence of the Government. If we go over the reports of their visitations to examinations, we find such defective spelling in the papers, and such ignorance of the very first principles of mechanics—mechanics being considered an essential part of the education of medical students—that it is fair to assume would not have

existed had there been representation of the profession in the General Medical Council. For instance, there was a question put, "Why does the water ascend in a syringe?" to which the answer was, "Because the piston attracts it". The Council should have represented such glaring ignorance to the Privy Council and to the public. Such answers were given in 1873. Before that time, the Council did urge the necessity of bringing in a Bill, which Bill was brought in by Lord Ripon. Notwithstanding the reports showed that such ignorance existed, and vigilant supervision was therefore necessary, the Council have not repeated their visitations for some years, but allowed these examining bodies to go on in the same vicious way. The candidates who gave such answers as I have described obtained their diplomas at the Queen's University. Looking at page 182 of the Report made in 1874 of the previous year's visitations, I find Mary Wills says she fell down from a "hight"; and sudden is spelt "sudent", and region of the heart is given "regon". I believe that candidate passed. I cannot conceive the object of giving it in the report unless the candidate passed. If you turn to page 162 of the same book, you will find the first paragraph says: "This is the *verbatim* answer of a candidate whose answers were amongst the lowest"; and at page 157 it says that, out of twenty-four candidates for a final examination, seventeen passed, five were rejected, and two withdrew.

Mr. MITCHELL HENRY: That is a very small proportion of the candidates who ought to be successful.

Mr. FORSTER: You observe the visitors state, "After having seen the written answers of the candidates, we did not observe any instance of a candidate being passed who in our opinion deserved to be rejected." If you are unable at present to tell us whether those lowest answers which are given are answers of passed candidates or of those who were plucked, will you try to find out, in order that the matter may be clearly explained?

Dr. WATERS: There is one point in connection with this subject which I should like to mention, and it is this, that every medical student is required to pass a preliminary examination. Now I say that such a person never should have been admitted as a medical student. There is one great vice with regard to the examinations, and that is, that the licensing bodies themselves are able to examine for the preliminary examination. In the army, navy, and civil service, we have independent examiners, but the licensing corporations themselves examine in preliminary examinations. The fault must be with the Council for not insisting upon proper education. Here we are, after the twenty-one years' existence of the Medical Council, and the profession is worse off now as regards medical attainments than all the countries of Europe. I have, within my own knowledge, cases where Doctors of Medicine, if they even write a letter, display such defective orthography as would not be found amongst ordinary schoolmasters. I happened, not very long ago, to meet a man who was a graduate of an university, and, in conversation with him, his English struck me as being exceedingly defective. I think such cases prove that the Medical Council does not properly fulfil its duty in regard to general education. I should imagine all the members of the Council of the British Medical Association would be able to pass a creditable, and not a discreditable, examination in writing and spelling. I cannot say the Council fails in its duty as to registration. There were a great many errors in the *Medical Register* of last year, I believe. I have no fault to find with the *Pharmacopœia*, except, perhaps, that it costs an enormous sum of money. The Association in 1839 endeavoured to impress upon the legislature the importance of having properly educated vaccinators, and it is only quite recently that such recommendation has been acted upon, and that only after the country has been alarmed by repeated epidemics of small-pox. I think the General Medical Council might, in a certain important matter, have taken action with advantage to the public. In my opinion, there should be somebody to advise the Government, or a body to which the State could refer, and that body should be one representing collective professional opinion. It was only after twenty-five years of unceasing agitation and labour that the Act of 1858 was passed, and here we are again, another twenty-one years being elapsed, and we are yet without an amended Act. A Medical Council representing the profession would have its power greatly increased. The Association has not officially declared that the Medical Council ought to take up the function of advising the Government with regard to questions of health. What I say, therefore, on that subject must only be taken as my own individual opinion. The Association has never given any particular prominence to questions connected with underpaid medical services, either by the central, government, or local bodies. In 1869, the Medical Reform Committee of the Association issued an address to members of the legislature and the general public, and in referring to the shortcomings of the Medical Council, it called attention, first, to the defective education of the medical student; secondly, to the character and course of study in the examinations, which were not sufficiently practical. Since this address was issued, the examinations have been made to some extent more practical—that is, through clinical examinations previously to granting certificates. And then, thirdly, as to the number of examinations and examining boards: the Committee said the preliminary examination was in many instances a very imperfect test of the candidate's general knowledge. The proposal as to the mode of election to the Medical Council was, that voting papers should be issued by the Registrar, and the posting of these should be considered as equivalent to delivery. The answers would have to be signed and witnessed, and returned to the Registrar, and the elected candidates would then be declared. Every member of the profession would be eligible to be a candidate, but each candidate must have at least twenty-five nominators; and the names of the nominators, we believe, would be to a great extent a guide to the profession generally as to the eligibility of the candidates. I have no doubt that, in the case of anyone being nominated by any of the Council of the Association, it would have great weight with the electors, but I do not think the Association desires to put forward its own officials as candidates, because it has expressly declared that it has been acting for the profession, and not for itself alone. The term "universal popular suffrage" has been very freely used in this matter by the opponents of direct representation, but I scarcely think it is proper to apply such a term to the members of a profession who should be regarded as an educated constituency; and if the representative principle is worth anything in the estimation of the public, surely such an educated constituency as the medical profession may be fairly assumed to be able to estimate the respective merits of the candidates. The representative principle is applied to the election of the Council of the Association, as there is a member for every twenty members of a Branch, in addition to the Secretary of each Branch, who is himself elected by his Branch. The President is elected at the annual meeting. We only wish to apply direct representation to a certain extent to the election of the Medical Council. I do not think that, if direct representation were introduced, candidates would issue addresses, or that there would be any spirited contests. The present representative of the University of Oxford is elected to the Council by about five thousand doctors, lawyers, and graduates, and there is no difficulty in this election, no expense, no issuing of addresses, no turmoil or agitation. The representative of the University of Cambridge is elected by a constituency of five thousand five hundred, and there is no difficulty there either. It is simply proposed that elections to the Medical Council should take place once in five years, and there need be no difficulty about them at all. Our Bill proposes to prevent dentists from affixing the words surgeon and physician to their descriptions, unless they are properly entitled to use either of those words. In my own opinion, I do not see why dentists, who are simply mechanical dentists, should be represented in the Medical Council, as they are not members of the medical profession. It is rather remarkable that the medical profession and the Medical Council should be at issue, and the difference existing between them has retarded legislation.

By Mr. MITCHELL HENRY: I think the Council ought to take care, in the interests of the public as well as of the profession, that men whose conduct is discreditable should be removed from the *Register*. I do not, however, make any charge against the Council with respect to the *Register*. The *Pharmacopœia* is hardly kept up to the requirements of the day. There is scarcely a leading physician who does not prescribe remedies which are not in the *Pharmacopœia*. I am not prepared to say that new remedies should be readily admitted into the *Pharmacopœia*. Where the Council has failed in its duty, has been with regard to medical education. A great deal has been said of the importance of affiliating every member of the profession to one or other of the corporations on account of the moral and disciplinary influence which the corporation would exercise over him. I am not aware that the Colleges have exercised that power, and certainly the Council has never made any effort to induce them to do so; for instance, members of the profession pursuing objectionable modes of practice have never been brought to task through the action of the Council. If the different licensing bodies have the power of striking off the names of persons who bring disgrace upon their Colleges, they have certainly never exercised it, and, if they have not that power, then it should be given them. I am aware that the Medical Council has struck off some quacks in the course of its twenty-one years' existence. I quite approve of the conjoint scheme which has been drawn up for England. I believe the corporations in Ireland have given in their adhesion to the principle of a conjoint scheme, yet the conjoint scheme is not popular in that country; for instance, the Northern Branch of Ireland—the Branch of the Association—passed a resolution in favour of direct representation as distinct from approving of the conjoint scheme at its last meeting, and that resolution was sent

to all the members in the North of Ireland with an intimation that such was the view of that Branch of the Association, but they would not petition in favour of the Bill of the hon. member for Exeter on account of its including the conjoint scheme. You may take it, therefore, that, in the opinion of these persons, direct representation is more necessary than a conjoint scheme; and I may add that the Branch in the South of Ireland regards the Medical Bill No. 2 as injurious to the Irish Universities and the graduates; they are also in favour of direct representation while not accepting the conjoint scheme. The advantage accruing from the election of direct representatives to the Medical Council would be this: although the vote of the Association last year shows a greater number of "noes" to the conjoint scheme than to direct representation, yet the noes would be overwhelmed by the advocates of the conjoint scheme, so that there would be a considerable number of representatives in the Council who would be in favour of it. I do not think the conjoint scheme will ever be adopted unless it is made compulsory. I believe direct representation will improve the condition of the Council in relation to the profession; and, instead of being at issue and arranged in opposing camps on questions of medical policy which come before the public, they will work harmoniously together. The British Medical Association has always been anxious to work with, and not in opposition to, the Medical Council, as was most distinctly shown in May 1867, when I proposed, and Dr. Wilbraham Falconer, the present President, seconded a resolution that we should support the Council in its endeavour to remedy the Medical Act. We had at that time every confidence in the Council, and thought we might rely upon the efficiency of its work, and also upon its accepting to a reasonable extent the influence of the profession. We passed that resolution, and at the same time another resolution was submitted that, in any alteration of the Medical Act, the constitution of the Medical Council ought to be reconsidered, so that the great body of the profession should be fairly represented. In using the term medical policy, I meant action as to matters relating to the medical profession, and to that profession in regard to its relation to the public; for instance, I consider the conjoint scheme a matter of medical policy. The profession has given £150,000 to the Medical Council, for which they have received a *Pharmacopœia* and a *Register*, but they are inferiorly educated as compared with every other nation in Europe. A medical man in France is much better educated than a medical man in England, and I think that inferiority is due to a great extent to the action of the Council. The medical profession is, no doubt, better educated in many respects than it was twenty-nine years ago; but, taking the enormous progress of education generally in this country during the last twenty years, then I say the medical profession has not kept equal pace. I believe there is such a strong feeling in favour of direct representation throughout the country that it will be most difficult, if not impossible, to pass any Bill that does not provide for it. The Association has not declared for any special number to constitute the Council. There is a great deal of work to be done in the Council, and I think it would be injudicious to diminish the number, because a good Council affords facilities for the transaction of business by the appointment of committees. Reverting to the subject of defective examinations, I may mention that a member of the examining body of the College of Surgeons of England, told me the other day that the spelling of some of the candidates was atrocious, and I understood that such candidates passed. If the Medical Council did its duty, those candidates could not present themselves to commence their studies. The Medical Council issues recommendations as regards preliminary examinations.

By Mr. PLUNKET: I do not see any reason for the existence of the Apothecaries' Hall in Ireland. I do not know what object it serves. The other corporations in Ireland which are at present represented—the King and Queen's College of Physicians, the Royal College of Surgeons, the University of Ireland, and the Queen's University should each have a representative. Although the Council is a Council for education, yet it has had to consider the question of vaccination, and I understand that in former times it has gone into the question of coroners' inquests. I would not debar the Council from the discussion of any of these matters, if they deemed it advisable, on which they should be the judges. Men in large practice can be found to sacrifice their pecuniary interests to the interests of the profession, as I have had ample opportunity of observing in the British Medical Association. It is regarded in the profession as very objectionable that the licensing bodies should conduct the examination of candidates. I consider the conjoint scheme of great importance and can sacrifice much to secure it, but I am not prepared to say that I would give up direct representation in order to do so. I should feel bound now, as I have always been bound since I have been Chairman of the Medical Reform Committee, to act in the interests of the Association, which, I think, is entitled to make itself heard in Parliament.

By Mr. WHEELHOUSE: The whole future of the medical profession will be handed over to the Medical Council by the Bill; and if it were important to have direct representation at any time, it is certainly important to have it now, and I cannot say as an officer of the Association that I am prepared to accept legislation that does not provide for it.

By Dr. LUSH: I should like the Medical Council to retain something like its present number of members. The Council has not sufficient power. It has itself admitted its want of power in the direction of suppressing quacks, and all the bills aimed at giving it greater power. The penal clause of the bill of the hon. member for Exeter is stronger than the penal clause of the bill of 1858.

By Mr. ERRINGTON: I think, if the profession had been aware that their votes would have influenced legislation, we should have had a much larger response to the circulars which we sent out in 1878, though I have no doubt that we should get a much greater number of objections to the conjoint scheme. I am aware that the majority in favour of a conjoint scheme was considerably smaller in the Council in 1879 than it was in 1870. I rather think the opposition to the conjoint scheme is more pronounced in the present day, from the discussions which have taken place, and from the belief that certain medical authorities in Ireland and Scotland will suffer from it. I am aware there is a project supported very largely for medical reform by means of a Council much strengthened with enlarged powers; but I do not consider it adequate to meet the necessities of the case. I look upon the numerous licensing bodies as very objectionable. We should diminish them as much as possible, and make the entrance to the profession through one portal.

The Committee then adjourned. It was arranged that Dr. Waters should reappear before the Committee on Monday.

Monday, July 7th.

The Committee met again on Monday, when there were present: The Right Hon. W. E. FORSTER (in the chair), Messrs. Lyon Playfair, Wheelhouse, Maitland, Mills, Errington, Mitchell Henry, Plunket, and Sir Trevor Lawrence.

Dr. WATERS was again called, and further examined.

By Mr. MAITLAND: Though the Medical Council is strictly a council of registration and education, it has interested itself in matters of medical policy; for instance, on July 4th, 1868, Sir Dominic Corrigan said the duties of the Council were not confined to registration and education; the Council had considered other subjects of interest, such as vaccination, medical evidence as to the Pharmacy Bill, and also the interests of dentists and vivisection. I believe direct representation would send a number of representatives to the Council who would bring a great amount of knowledge to bear upon its deliberations in public, and would still further be advantageous in private intercourse. Once the question of conjoint schemes settled, there would remain comparatively little for the Council to do. The improvement of medical education is not the way to get the largest number of candidates for licensing bodies; therefore, to a certain extent, medical legislation has been resisted by the corporations. I believe that the conduct of the visitation of examinations would be more to the satisfaction of the profession at large under direct representation, and that it would have been impossible for the disclosures in the reports of visitations to have passed for five years without any fresh visitation of examinations. But for Dr. Parkes's presence on the Council, the glaring defects with regard to the ignorance of those who come up to the army and navy boards would never have been exposed; it fell like a bombshell on the Medical Council and the profession generally; but the Medical Council did nothing.

By Mr. MILLS: The answers given in the report of visitations at the Queen's University in Ireland, and which show such serious orthographical defects, are the answers of successful candidates, as I gather from the marks attached to the report.

The CHAIRMAN: I have found out that that is so.

By Mr. MILLS: The corporations are at present dominant in the Council; and, as their interests are not identical with those of the profession or the public, professional representatives are required to temper this domination of the corporation representatives. There must have been at least a dozen Bills brought forward prior to 1858, all of which failed. The British Medical Association has been always most desirous to cooperate with the General Medical Council, and we have made efforts to do away with the anomaly of the Council being antagonistic to the profession. The expression of the desirability of an alteration in the constitution of the Council has found an echo in the Council itself. Dr. Andrew Wood went so far as to advocate the admission of direct representatives. The Association prefers Bill No. 2, which is now before the House. The Association has never deviated from the principles they have set forth. The signatures to the memorial in favour of direct representation, which were referred to by Mr. Simon,

included those of the physicians and surgeons of most of the hospitals and of the most eminent men in the profession, and it was not the case that the signatures were obtained by pressure of any kind or were not *bonâ fide*. They were the result of deliberate judgment sustained through a long series of years by the most thoughtful men in the profession. There are men of great distinction in the Medical Council I know, but there are men of equal distinction outside; indeed, there can be no doubt but that the profession embraces men of far greater eminence than some of those in the Council. The medical press has been entirely unanimous in favour of direct representation. I do not think there is a single journal of eminence which does not advocate, however much it may differ on other points, an alteration in the constitution of the Council by the introduction of direct representation. I cannot speak for the *Medical Times*, which is rather uncertain, although it is a most respectable journal; and the Irish Medical Association, which has existed since the year 1839, and which issued last year observations on impending medical legislation, is also unanimously in favour of it.

By Dr. LYON PLAYFAIR: I quite approve of the proposals of the Scottish corporations, that the first two examinations should be conducted by the universities themselves, and that the third and final examination should be conducted by the conjoint board. I believe the general feeling among Scotch medical men as to the conjoint scheme is divided. I think outside the corporations there are many in favour of it. The subject of education in midwifery is one of those points on which professional opinion is divided. I believe it to be the case that Dr. Risdon Bennett has declined to furnish the source from which he got his information as to persons rejected by the Queen's University obtaining Scotch diplomas. I am aware that the Scotch corporations did endeavour to ascertain what foundation there was for the statements, but I am not able to answer as to their "diligence" in so doing.

By Sir TREVOR LAWRENCE: My position as chairman of the Medical Reform Committee has been a severe tax upon my time; and to a certain extent perhaps the position of President of the Association, which I occupied in 1866, was also a slight tax, but then it must not be forgotten that being President of the Association would help one considerably with the public. I think if representatives of the profession were on the Council, they would be amenable to the bar of the profession, and that they would not be likely to advocate the interests of corporations as opposed to those of the profession. There has been no proper preliminary examination in the profession. I am not an advocate for the Council undertaking prosecutions; still I think that the General Medical Council, which has a register under its guardianship, ought to take care that none but the most thoroughly qualified men are registered. The Council might perhaps have done more in that matter, but I confess I am not a good witness as to that. It might be of some value to the Council if men were appointed to it who were acquainted with the drainage of large districts, with the pollution of rivers, their influence on public health, and kindred matters.

Dr. JAMES GREY GLOVER called and examined.

By the CHAIRMAN: I am a Doctor of Medicine of Edinburgh University, a Licentiate of the Royal College of Surgeons of Edinburgh, a Licentiate of the Apothecaries' Society of London. I am in practice in Highbury, and I am on the staff of the *Lancet*. I have had unusual opportunities of seeing the working of the General Medical Council during the last ten or fifteen years. Although I have the highest possible respect for the members of the Council individually, yet I disapprove of the way in which the Council is appointed. I object to the predominance of the representatives of corporations and licensing bodies. They have a certain interest to look after, which is not always identical with that of the profession or the public; the Scotch Universities are using all their power in opposition to the present demand for a conjoint board. Of course I am aware that the Scotch Universities do not get four members for four universities, but only two for four. My objection to the representation of corporations is greater than to that of the universities. I think the history of both the examining boards and the Medical Council shows that the corporation influence has retarded the work of medical education. I have the strongest possible objection to the constitution of the Council from practical observation of its working; if not, I would not propose any theoretical objection. I think by far the most important function of the Council is the supervision of medical education; and, if it have not improved education, of course it has failed to fulfil its duty. I do not say it has failed seriously, when we consider the eminence of the members, the large sum of money it has received, and the length of time it has had to do the work which it has not done. I think what it has done might have been done at a less cost of time and money. I find fault with the Council that, while it has greatly added to the strain and severity of examinations, it has not made any corresponding improvement in medical education. It took up the matter of education at its first sitting in 1859; and there was then made a report, to which the name of Sir Benjamin Brodie was attached, expressing the opinion of the Council as to the necessity of preliminary education, and saying that the Committee hoped that next year they would be able to formulate their views as to a system of proper professional education; and I think I am not wrong in saying that, though twenty years have since elapsed, the Council has not even yet given its complete opinion on the method and details of medical education. During the last twelve years, there have been two special occasions on which the subject has been brought before it; the first at the instance of Dr. Parkes, who was by far the most earnest educationist that ever sat on the Council. That was in 1864. Dr. Parkes was for many years examiner at the Army and Navy Board; and he gave the Council some of his experience as to the ignorance which was found in men who had passed two of the licensing examinations. The Council received another stimulus in 1876, when the returns of the various examining boards began to accumulate, and showed clearly that the number of rejections at the examinations was going on steadily increasing. The Council had been attaching much importance to strictness of examinations while neglecting the efficiency of the schools. The Committees of the Council, such as that which was appointed in 1869, paid great attention to the length of the curriculum, to the mode of teaching, and made various suggestions in the interests of the students. One very important suggestion was that the student should be examined constantly in his class; that he should require not only a certificate that he had attended the class, but a certificate that he had been examined periodically, and that unless, such certificate were forthcoming, he should not be admitted to the examination. Such a recommendation was made by the Committee in 1869, and has been frequently repeated and supported since, sometimes by full meetings of the Council. One of the causes of the present defective condition of medical education arises from there being no compulsion upon the schools to have a proper curriculum—no compulsion on them to accept the recommendations of the Medical Council. I have here an extract from a recommendation made ten years ago to the effect that the attention devoted to midwifery was too slight, and the Committee recommended a six months' course of practical instruction. Some years after, the Council, still containing such men as Dr. Andrew Wood and Dr. Acland, after they had recommended that, sanctioned a conjoint scheme for England, which reduced it to three months, as if they had forgotten their own recommendation. Dr. Aquilla Smith made an analysis with regard to rejecting at the final examinations. An analysis with regard to the first examination is equally important; and I will hand in some tables showing the result of the first professional examinations in 1867 and 1877. There were rejected in 1867 at the first professional examination, $24\frac{8}{11}$ per cent.; in 1877, the rejections were $36\frac{1}{20}\frac{9}{0}$ per cent. That arises from the examination being more stringent. The first examination is supposed to take place at the end of the second year, and the second examination at the end of the fourth year. It is very remarkable that some of the largest rejections are by bodies which would not be suspected of severity. The Royal College of Surgeons of Edinburgh rejected 40 per cent.; the Faculty of Physicians of Glasgow, $41\frac{6}{7}$ per cent.; the Royal College of Physicians of Edinburgh and the Faculty of Physicians and Surgeons—one of the two conjoint examinations of Scotland—rejected 43 per cent., and the conjoint examination of the Royal Colleges of Physicians and Surgeons of Edinburgh, 30 per cent.; the College of Surgeons of England, 22 per cent.; the College of Physicians of London, 11 per cent. It would seem, therefore, that the most rejections were from those examining bodies whose examinations were thought to be the easiest. That may have arisen from their complying with the recommendations of the Council to make their examinations more stringent, and as a result of public criticism; or, on the other hand, it may have arisen from the student's unpreparedness rather than from the nature of the examinations. Increased stringency may tend to improve education; but it must be remembered that the student has no power over his teachers or over his school. Of course, the rejection of a student by a Board may be due either to the great ignorance of the student, or to the great exactions of the examining board. When a student finds that many men have been plucked, to avoid such a contingency he will work very hard; but he may work under disadvantageous conditions, and will not be as well educated as he ought to be. Public attention was directed to the large number of rejections, and the medical press took the matter up. The Medical Council appointed a committee in 1876; and that committee commissioned Dr. Humphry to make a valuable report. I do not think it required a Council of twenty-four eminent men to make a *Register*. The advancement of medical education is the chief duty of the Council. So far back as 1864, the Council adopted a recommendation that no student should be compelled to go through more than one course of

lectures in the same subject. No action has ever been taken on the recommendation by any one of the bodies. My main charge against the Council is that it has done so little to help and improve medical education. It has appointed committees to consider certain matters in connection with education and examination; certain resolutions are then passed, partaking of the character of Recommendations, and these are disregarded; the Council then came back to the same work, five or ten years after, and do exactly the same thing over again; all this at a great cost of time and money. The committees of Council have made many reports, but they have been very disrespectfully treated by the Council. They have been brought in at the end of the sitting, when members were tired and wishing to get home; the reports have then been put off to the next year; and next year has sometimes come and gone without any mention being made of them. This was so in 1873, and again in 1876. In 1875, a committee was appointed on the working of the recommendations of the Council. The next year came, and it was resolved to take the report in the following session, when it came in at the same time as Dr. Humphry's report; the two came into collision and were jumbled together, and nothing was done. Dr. Humphry's report was on the rejections at examinations. A report of 1869 met with an exactly similar reception, although it was drawn up by a committee of great weight, consisting of Mr. Syme (chairman), Mr. Cæsar Hawkins, Dr. Acland, Dr. Andrew Wood, Dr. Thomson, Dr. A. Smith, Mr. Hargrave, Dr. Apjohn, Dr. Sharpey, Sir R. Christison, Dr. Parkes, and Dr. Stokes. The fact of the report of such an influential committee not having any effect shows, I think, that there is something in the constitution of the Council which counteracts the eminence of its members, and invalidates its gravest decisions. Up to the present, not one of the recommendations which have been made, from time to time, has received the force of law; and but lately it has given its sanction to a curriculum which is inconsistent with its previous recommendation. It was a great misfortune that the Council did not have the power to enforce such improvements in medical education as it felt necessary to recommend. I blame the Council very strongly and distinctly for this: that when it had ample proof that its recommendations were not taking effect, it did not ask for more power, on the contrary, in 1878, the Council declined to have more power. Last year, when the present Bill was introduced, which proposed to give the Council power to regulate the courses of study in medical education, and also the examination-rules, the Council distinctly requested to be excused, and wished to leave all the matters which it had been impotently recommending for ten or twelve years in the hands of the various bodies. That clause I regard as one of the most essential provisions of the present Bill. The two faults, then, which I find with the Medical Council are, first, a want of responsibility; and, secondly, a certain timidity which characterises all its proceedings. The Council relies a great deal too much on the various licensing bodies for doing the work which it ought to do itself. My suggestion would be to alter the constitution of the Council, in the first place; and then make it responsible by giving it more power. I would certainly reduce the influence of the corporations in the Council by striking some out. That may be a strong measure; but I would do that on the ground that some of those bodies are evidently not wanted any longer in the nature of things. They came into existence under a different state of conditions from that which obtains at the present time; and further, the occupation of seats in the Council by several of them is not defensible. I could name three, and, as a matter of impartiality, I will give one in each division of the kingdom. The Irish Apothecaries' Hall could be dispensed with; the English Apothecaries' Society, though it has done good work in the past, is certainly no longer wanted; and I think one of the Scotch corporations may be dispensed with. I do not like to say what body, but perhaps the Faculty of Physicians and Surgeons, leaving two Royal Colleges. The English bodies, until the Act of 1858 was passed, alone gave the qualification in medicine for English practitioners. Partial examinations are hardly to be found now. The Apothecaries' Company has not the power to examine in surgery. I myself am a licentiate of it. I think there is a great deal of truth in the statement, that members of the Council, however eminent, do not, for some reason or other, understand the wants of general practice; the duties of their lives are very seriously different from those of general practitioners. The members of Council may be men of great abilities, and most of them hold good social positions; but I do not think they quite understand the difficulties of ordinary practitioners. On one occasion, for instance, a discussion took place in the Council on the subject of midwifery, and it was remarkable to notice what a deficiency of obstetrical experience was manifested. One of the members (Dr. Stokes of Dublin) said he had never been in the chamber of a lying-in woman. I am decidedly of opinion that men who are familiar with the experiences of the general practitioner ought to be upon the Council. I do not care much about the methods by which that result is attained, but I should prefer direct representation. I am aware certain difficulties are urged to it in relation to the machinery; and, if these were insuperable—which, however, I do not think—I should say, let the Crown appoint the representatives. I do not think it is possible for any full measure of improvement to be effected merely by the co-operation of examining bodies. Unless the constitution of the Council be altered, we shall have a repetition and perpetuation of the anomalies which have existed during the last ten years. The University of Edinburgh I consider one of the principal medical schools, not only in this country, but in the world; and yet it has only half a representative on the Council. It is utterly absurd that a body which has twelve hundred students should have but half a representative, when a body like the Apothecaries' Society of Ireland has a whole one. [Dr. Glover then quoted from a speech delivered by Mr. Simon, in 1868, to show the bad influence of corporation examining boards.]

By Dr. PLAYFAIR: I do not see the difficulties in the way of a direct vote of the profession which have been raised. I saw, the other day, the Secretary of the Law Society, a body composed of three thousand or four thousand members, and I ascertained that the Council of that body is elected by a direct vote. That Council has also examining duties—it examines solicitors and so on—and there is not very much expense attending the discharge of its functions. I consider that reform in the constitution of the Medical Council and increased powers must go together, as there is such a want of responsibility and such an absence of effect; for, as a matter of fact, we find examining bodies do not adopt the most important recommendations; and after ten years' experience of that, I think it would be a great waste of time to go on in the same useless way. Of course, I would give the Council the power of visiting, and not only visiting of examinations but visiting of schools. In 1877, a proposal to visit schools was brought before the Council and discussed, but it was not agreed to. I am aware that universities are extremely jealous of anyone, even the Government, interfering with their autonomy; but I should be disposed to give the Council a power of interference to some extent. I do not think the universities would object to visitations of their schools; they have not objected to visitations of examinations. If a teaching institution did not carry out certain points which the Council considered essential, and which committees have recommended over and over again, I should not hesitate to give the Council power to declare the institution in default, and put it on its defence before the Privy Council. With regard to the *Register*, it is a tolerably good one, but on the whole I do not consider it a model of accuracy. In some years, there have been many inaccuracies in it, both with regard to addresses and qualifications, and I think with greater attention they might have been avoided; but the Council has not had time, its time having been so much absorbed in looking fruitlessly after corporations, and in semi-political matters. In my opinion, the Council, as a Council of registration, should not only take pains to make the *Register* more perfect, but should show some disposition to punish, in bad cases, men who pretend to be registered, and others who, being registered, abuse the privilege of registration. Under the present system in England and Ireland, a person has to undergo two nearly identical examinations in order to receive the double qualification, and I think there is both an inconvenience and an injustice in that. There is no need to pass two such examinations. The only benefit is to the corporations, who receive a double set of fees. There might have been some show of reason in it when some corporations examined for one half of the profession and some for another, but now it is an anachronism. I do not think there is anything but regard of pecuniary interests involved in the retention of the system of half qualifications. With reference to the conjoint scheme, I do not altogether approve of that. I think it would be a very great improvement on existing arrangements, but my own private opinion is strongly in favour of independent examining boards. I would give the Council the power of electing examining boards; but if that be impracticable, the conjoint board would be a great improvement. At the present time, there are no provincial licensing boards for England except the universities, and all the candidates with this exception have to come to London, and the licences given by the universities are very few in number. I think a high minimum examination would raise the whole tone of professional feeling; the higher the examination is made, the greater will be the demand for good medical education and for higher degrees. Next to independent boards, I should prefer the conjoint board for each division of the kingdom. The advantage of the conjoint board is, that it will secure one examination in the place of two, which I think is very important. Then three boards in the place of nineteen would be much more easy to supervise and inspect. The quality, and cost, and severity of examinations I take for granted, but it is one of the difficulties of the conjoint system to make the

examination fees unequal. If all existing parties are to be satisfied with the fees of the conjoint boards, then the fees in the various divisions of the kingdom cannot be equalised. It would be a great advantage if the Council had increased powers, and saw that conjoint boards were thoroughly efficient in examinations; but still I think the fees must be considered and cannot be small. It seems to me one of the faults of the conjoint scheme that it contemplates very high fees; that a man should have to pay £30 for a mere license to practise appears to me a very great objection. I approve of the proposal that the first and second examinations as to England should, in the case of intended graduates, be conducted by the universities, and the final examination by a conjoint board; and also as to Scotland and Ireland; in both cases with the qualification that the Council should be distinctly represented in the university examining boards. I consider it an objection to this scheme, that it contemplates the maintenance and perpetuity of all the different bodies, though the very essence of the case is that they are too numerous, and not at all adapted to the requirements of the day. A huge amount of labour has been thrown upon the Council by the Dentists' Act, which has interfered with its proper work. It would be very undesirable for the Council to undertake fresh duties in the interest of other specialists.

By Mr. ERRINGTON: The change in the opinion of some members of the profession—Dr. Andrew Wood, for example—as to the conjoint scheme is a proof of the vacillation of the human mind, especially in corporate conditions, but it has not altered my opinion as to the necessity of some consolidation of the examining bodies. My contention is that, in order to discharge the duties which it was created to do in 1858, the Council should have some representatives of the profession. Questions of medical policy and questions affecting the interests of the profession should be referred to voluntary associations. Personally, I do not desire that Parliament should give the Council the option of interfering in such questions. With regard to its size, I think the Council is quite large enough as it is.

By Mr. MAITLAND: There are some specialities in the education of medical men for army and navy purposes, so that I am not sure the test applied by the army and navy authorities could be altogether abolished if there were an improvement in the examinations of licensing boards. I do not see how it can be maintained that, if the State recognise qualifications which are sufficient to practise amongst people who are not paupers, it can refuse to recognise their fitness to treat paupers. Surely if I pass a sufficient examination to enable me to practise with the public, it should enable me to take a poor law appointment.

By Mr. WHEELHOUSE: Persons who are merely Licentiates of the College of Physicians of Edinburgh, in many cases assume the title of "Dr." when they practise in England, and that, I suppose, is one of the principal attractions of the College. No doubt it is a strong inducement in many instances to persons to go to Edinburgh for their examinations. The licence of the King and Queen's College of Physicians used also to be supposed to carry the power to use the title of "Dr.". I think it would be just possible under the present regulations for a person to get upon the *Register* without having attended a single lecture; but I do not say that it is a common thing. A student might omit a very considerable number of lectures, and yet by a process of cramming pass his examination. There are no satisfactory means that I know of for testing the attendance of students at any of the lectures, except, perhaps, by class examinations; but these are not compulsory. It was a recommendation of the Council that there should be compulsory class examinations; but, as I have said, its recommendations have not been carried out. In any case, I would not give any of the present bodies more than one representative on the Council, and I think the chairman might advantageously be elected from the members of the Council. It might, perhaps, be desirable to take the evidence of some of the senior medical students in London and elsewhere, as to the present working of the schools, if such students were judiciously selected. Of course, I would have the central examining boards in London, Edinburgh, and Dublin, whether under the conjoint scheme or otherwise. The first examination should be at the end of the first year, as was recommended by the Council; the student very often wastes the first year. As to accepting the Government Bill without direct representation, if that cannot be obtained, that is a difficult question; but, speaking for myself, I should not like to accept any bill which did not include an amendment of the constitution of the Council, having had so much experience of its unsatisfactory working. I am so impressed with the probable permanency of legislation required, that I would rather have legislation postponed, if it did not provide for an alteration of the constitution of the Council.

By Mr. MITCHELL HENRY: It is to the interest of medical schools to see that their lectures are attended properly; but if the rules and curricula are not such as to ensure regularity of attendance or efficiency, they should be altered. The number of lectures has generally been proportioned to the number of subjects. I am in favour of the resolutions which have been proposed in the Council, that a student should not be required to attend more than one course of lectures on any one subject. I have no objection to adding six members to the present Council. From what I can learn, I do not consider the expenses of election would be very heavy, and they should come out of the funds of the Council.

By Mr. MILLS: I think the provision you propose in your Bill, that each candidate should have at least twenty-five nominators, would meet the objection that electors would have no means of judging of the eligibility and qualifications of the respective candidates. I have no doubt whatever that the signatures to the memorials for direct representation were perfectly *bonâ fide*, and were given by men who knew what they were about. The medical press is decidedly in favour of direct representation.

By Mr. PLAYFAIR: A person who is simply a Licentiate of the College of Physicians of Edinburgh has no right to assume the title of "Dr.". I do not think the College now encourages the opinion that a licentiate is justified in using the title; and, if he do use it, it is an act of error on his part rather than on the part of the College. With regard to the memorial of 1869, Mr. Simon very inaccurately represented, I think, that the memorialists were actuated by a regard for the interests, pecuniary and otherwise, of the profession. I was one who signed it; and, knowing something of many of those who subscribed their names, I am prepared to say that such was not the case, the main object in view being the improvement of medical education and of the Medical Council generally.

The Committee then adjourned till Friday.

THE ANNUAL MEETING AT CORK.

THE arrangements for the forthcoming annual meeting of the Association in Cork are progressing rapidly towards completion. The Sections and Subsections will be the scene of what without doubt will be instructive discussions on several topics of practical importance, in which the views not only of British and Irish but of continental and American authorities will be expressed; and in addition a good number of papers on various subjects are promised. The portion of the programme which we publish this week includes the excursion arrangements—always a most interesting terminal feature of the annual meetings. Full information regarding hotels, lodgings, etc., will be given in the JOURNAL of July 19th.

As the amount of labour devolving on the Local Committee and the Honorary Local Secretary is always very great in the weeks immediately preceding the annual meeting, members desiring information will perhaps kindly avail themselves as far as possible of the programmes published in the JOURNAL.

MURCHISON MEMORIAL.

THE following resolution was proposed and carried unanimously at a general meeting of the subscribers to the St. Thomas's Hospital Murchison Memorial Fund, held on July 5th: "That, with the view of uniting all the efforts being made to raise a memorial to the late Dr. Murchison, and to prevent any possibility of rivalry between the existing schemes, this meeting is of opinion that the St. Thomas's Hospital Fund should be amalgamated with the London and Edinburgh Committee, on the following conditions: 1. That the Murchison Memorial Scholarship be thrown open to students from all the London medical schools; 2. That a sum of £300 be guaranteed to the St. Thomas's Hospital Committee, for the purpose of raising a memorial to Dr. Murchison in St. Thomas's Hospital."

PRESENTATION TO DR. T. W. THURSFIELD.—The members of the Leamington Provident Dispensary have presented Dr. T. W. Thursfield with a handsome epergne, on his retiring from the duties of Medical Officer, which he had performed for ten years. The centre-piece of the epergne bears the following inscription:—"Presented to Dr. Thos. Thursfield, on his leaving the Provident Dispensary, as a token of gratitude from the patients who have benefited by his kindness and skill. June 1879." A similar presentation was made a few weeks ago to Mr. J. Fenn Clarke, on the occasion of his ceasing to be one of the Medical Officers of the Institution, after ten years service. Dr. Thursfield and Mr. Clarke have been appointed by the Committee Consulting Medical Officers to the Dispensary.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:

FORTY-SEVENTH ANNUAL MEETING.

THE Forty-Seventh Annual Meeting of the British Medical Association will be held at Cork, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1879.

President: R. W. FALCONER, M.D., F.R.C.P., D.C.L., Consulting Physician to the Royal United Hospital, Bath.

President-Elect: DENIS C. O'CONNOR, A.B., M.B., Professor of the Practice of Medicine in Queen's College, Cork.

An Address in Medicine will be delivered by ALFRED HUDSON, M.D., M.R.I.A., Regius Professor of Physic in the University of Dublin.

An Address in Surgery will be delivered by WILLIAM S. SAVORY, M.B., F.R.C.S., F.R.S., Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.

An Address in Public Medicine will be given by ANDREW FERGUS, M.D., President of the Faculty of Physicians and Surgeons of Glasgow.

The business of the Association will be transacted in Six Sections.

SECTION A.: MEDICINE.—*President:* Andrew Clark, M.D., F.R.C.P. *Vice-Presidents:* James Little, M.D.; William Townsend, M.D. *Secretaries:* George F. Duffey, M.D., 30, Fitzwilliam Place, Dublin; Benjamin Spedding, L.R.C.P.Edin., 17, Cherry Mount, Belfast.

SECTION B.: SURGERY.—*President:* Professor W. K. Tanner, M.D. *Vice-Presidents:* W. Mac Cormac, F.R.C.S.Eng.; J. Cooper Forster, F.R.C.S.Eng. *Secretaries:* J. G. Curtis, F.R.C.S.I., 7, Camden Place, Cork; N. J. Hobart, M.D., 33, South Mall, Cork; Stephen O'Sullivan, M.D., 6, Camden Place, Cork.

SECTION C.: OBSTETRIC MEDICINE.—*President:* George H. Kidd, M.D. *Vice-Presidents:* W. J. Cummins, M.D.; Alfred Wiltshire, M.D. *Secretaries:* Professor R. J. Kinkead, M.D., Galway; Fancourt Barnes, M.D., 39, Weymouth Street, London.

SECTION D.: PUBLIC MEDICINE.—*President:* T. W. Grimshaw, M.D. *Vice-Presidents:* H. J. Littlejohn, M.D.; C. Meymott Tidy, M.B. *Secretaries:* J. L. Notter, M.D., Netley; James Martin, L.K.Q.C.P., Portlaw, County Waterford.

SECTION E.: PSYCHOLOGY.—*President:* J. A. Eames, M.D. *Vice-Presidents:* Henry Rayner, M.D.; Herbert C. Major, M.D. *Secretaries:* Oscar T. Woods, M.D., Killarney; Ringrose Atkins, M.D., Waterford.

SECTION F.: PHYSIOLOGY.—*President:* Henry Power, F.R.C.S. *Vice-Presidents:* Professor John J. Charles, M.D.; Reuben J. Harvey, M.D. *Secretary:* W. H. Allchin, M.B., 34, Wimpole Street, London.

Secretary to the Physiological Museum: C. Y. Pearson, M.D., Cork.

Secretaries to Museum Committee: T. Gelston Atkins, M.D.; C. Harvey, M.D.

Honorary Local Secretary: Professor H. MACNAUGHTON JONES, M.D., St. Patrick's Place, Cork.

Honorary Assistant Local Secretaries: RINGROSE ATKINS, M.D. Waterford; D. C. O'CONNOR, jun., L.R.C.P. & S.Ed., 2, Camden Place, Cork.

TUESDAY, AUGUST 5TH, 1879.

10 A.M.—Meeting of Committee of Council.
11 A.M.—Meeting of the Council of 1878-79.
3 P.M.—General Meeting. President's Address; Annual Report of Council, and other business.
8 P.M.—Reception by the President of the Association and the Local Reception Committee at Queen's College.

WEDNESDAY, AUGUST 6TH.

9.30 A.M.—Meeting of Council of 1879-80.
11 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—Reception by the Mayor, Corporation, and Citizens of Cork.

THURSDAY, AUGUST 7TH.

9 A.M.—Meeting of the Committee of Council.
10 A.M.—Third General Meeting. Reports of Committees.
11 A.M.—Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 8TH.

10 A.M.—Address in Public Health.
11 A.M.—Sectional Meetings.
1.30 P.M.—Concluding General Meeting.
4 P.M.—Garden Party by Reception Committee at Queen's College.
8 P.M.—Concert by the Reception Committee.

Arrangements have been made for providing a Subsection of Ophthalmology and Otology in the Surgical Section. Mr. Jonathan Hutchinson, F.R.C.S., has consented to take the Chair. Dr. James Patterson Cassells, of Glasgow, will act as Honorary Secretary for Otology; and Mr. H. R. Swanzy, of 23, Merrion Square North, Dublin, and Mr. Edward Nettleship, of 4, Wimpole Street, London, will act as Secretaries for Ophthalmology.

There will also be a Subsection of Dermatology in the Section of Medicine. Professor McCall Anderson has consented to take the Chair, and Mr. Malcolm A. Morris, 63, Montagu Square, Hyde Park, W., London, and Dr. Walter Smith, 34, Lower Baggot Street, Dublin, will act as Honorary Secretaries.

SECTIONAL ARRANGEMENTS.

The following communications have been promised in addition to those already enumerated in the JOURNAL of last week. A complete programme of the sectional arrangements will be published in one or more numbers of the JOURNAL before the meeting.

AVELING, J. H., M.D. The Treatment of Chronic Complete Inversion of the Uterus, with cases illustrating the advantages of the direct method of applying gradual Elastic Pressure.
FOX, T. Colcott, M.B. On the Neurotic Origin of Lichen Planus.
HARKIN, Alex., M.D. Chlorate of Potass in the Hæmorrhagic Diathesis.
HAYES, J. R., M.D. Case of Removal of entire Right Parietal and half of Frontal Bones, the result of Burn: Treated by Skin-Grafting: Recovery. (The patient will be exhibited.)
HOWIE, J. M., M.B. A Fatal Case of Autogenetic Puerperal Septicæmia, in which the Symptoms appeared previously to Delivery.
JAGIELSKI, Victor, M.D. The Effect of Koumiss upon the Urine in Health and in Disease.
JONES, Thomas, M.B. Short notes of a dozen Cases of Subcutaneous Osteotomy.
LUSH, W. Vawdrey, M.D. A Case of Embolism into the Right Axillary, Left Brachial, and Right Middle Cerebral Arteries: Recovery.
MAJOR, Herbert C., M.D. The Histology of the Brain in Apes.
MILLER, Hugh, M.D. Puerperal Mortality in Lying-in Hospitals.
PIERCE, F. M., M.D. Auditory Exostoses.
STARTIN, James, Esq. Lupus, and its Treatment by Caustics.
WALTER, William, M.D. The Treatment of *Post Partum* Hæmorrhage by the Intra-uterine Injection of Warm Water.
WHEELER, W. J., M.D. Fracture of the Patella; and the Reports of several Cases treated by the Writer's Splint. (Exhibition of splint, and of a specimen of bony union of the patella.)
WOLFE, J. R., M.D. 1. How to obviate the Complications which render Cataract-operations precarious. 2. The injurious effects of Tea-drinking Habits upon the Nutrition of the Eyeball.

TRAVELLING AND TOURIST ARRANGEMENTS.

THE JOURNEY TO CORK.

Subjoined is a statement of the different ways in which Cork may be reached. All return tickets are available for two months.

1. *Viâ New Milford.* From New Milford at 8.30 P.M. on arrival of 10.15 A.M. express train from Paddington; arriving at Passage at 8 A.M. Fares from Paddington to Cork, first class, single, £2 8s.; return, £4; second class, single, £1 18s.; return £3 3s.

2. *Viâ New Milford and Waterford.* From Paddington by express train at 5.15 P.M., arriving in Waterford about 11 the following morning, and at Cork at 4.35 P.M.

3. *Viâ Bristol.* Steamer from Bristol to Cork, Saturday, August 2nd, at 6.30 P.M. Fares, cabin, single, £1 4s.; return, £1 16s.; from Paddington, first class and saloon, single, £2 2s. 6d.; return £3 8s.; second class and saloon, single, £1 16s.; return, £2 18s. 6d. Average length of sea-passage, 20 hours.

4. *Viâ Holyhead and Dublin.* *a.* From Euston Station by Irish mail at 7.15 A.M.; from Holyhead at 2.15 P.M.; from Dublin at 7.45 P.M.; arrive in Cork at 2 A.M.—*b.* From Euston Station by Irish mail at 8.25 P.M.; from Holyhead at 3.15 A.M.; from Dublin at 9 A.M. and 10.15 A.M.; arriving in Cork at 2 P.M and 4.35 P.M. On Sunday mornings, the Irish mail trains, first class only, leave Dublin at 9 and 9.30 A.M., and arrive in Cork at 1.20 and 4.33 P.M.—*c.* From Euston Station by ordinary fast train at 5.15 P.M.; from Holyhead at 1.30 A.M.; from Dublin (North Wall) at 7 A.M. (except Mondays), and Kingsbridge daily at 9 A.M.; arriving in Cork at 2 P.M. (1.20 P.M. on Sundays).—Fares from London to Cork: Irish mail, first class, single, £3 9s. 6d.; return, £5 16s. 6d.; second class, single, £2 12s.; return, £4 7s. 6d.; ordinary train, first class, single, £2 17s.; return, £4 15s.; second class, single, £2 4s.; return, £3 13s. 6d.—Trains leave Dublin (Kingsbridge) for Cork at 6 A.M., 9 A.M., 10.15 A.M., 1 P.M., and 7.45 P.M. (mail).

5. *Liverpool to Cork, by Steamer.* Saturday, August 2nd, at 9.30 P.M.; returning from Cork on Saturday, August 9th, at 6 P.M. Average length of sea-passage, 20 hours. Fare, single, £1 1s.; return, £1 11s. 6d.

TOURIST ARRANGEMENTS.

The following arrangements are available in connection with the Great Southern and Western Railway during the tourist season.

Killarney viâ Mallow. Tickets, available for a calendar month, are issued to Killarney and back from Kingsbridge, Dublin. Fares: one passenger, *a*,* £2 10s.; *b*, £2; two passengers, *a*, £4 10s.; *b*, £3 12s.; three passengers, *a*, £6 7s. 6d.; *b*, £5 2s.; four passengers, *a*, £8; *b*, £6 8s.; and so on in proportion up to eight passengers. Tickets are also issued from other stations on the line at proportionate reductions. Passengers may break the journey at Limerick Junction or at Mallow.

Killarney and Connemara Circular Tour. Tickets, available for a calendar month, are issued at Kingsbridge for Killarney, Limerick (or Tralee), Athenry, Galway, Westport, Ballina, and thence, *viâ* Midland Great Western Railway, to Dublin (Broadstone), at the following fares: One passenger, *a*, £3 1s. 6d.; *b*, £2 2s.; two passengers, *a*, £5 10s. 6d.; *b*, £3 15*s.* 6d.; three passengers, *a*, £7 16s. 6d.; *b*, £5 7s. 6d.; four passengers, *a*, £9 16s.; *b*, £6 13s. 6d.; and so on in proportion up to six passengers. Cars run between Galway and Clifden, Cong and Clifden, and Clifden and Westport in connection, at moderate fixed fares.

Dublin to Cork viâ Killarney and Glengarriff. Tickets are issued at Kingsbridge for Cork, *viâ* Killarney by rail, thence by car to Glengarriff and Drimolage, thence by rail to Cork, *viâ* Cork and Bandon Railway, at the following fares: first class rail and car, £2 17s. 9d.; second class rail and car, £2 7s. 10d. These tickets are not available for return from Cork, but are good for a month from the date of issue. Similar tickets for performing the journey the reverse way—viz., Cork to Drimoleague, Glengarriff, Killarney, and thence by rail to Dublin—can be procured at the Cork Terminus of the Cork and Bandon Railway.

Circular Tour, Cork to Killarney, Glengarriff, Drimoleague, and Cork. Tickets, available for a week, can be obtained for the above tour at the Great Southern and Western Railway Station, Cork; or for the same tour in reverse direction, at Cork Terminus of Cork and Bandon Railway. Fares: first class rail and car, £1 14s.; second class rail and car, £1 10s.

Cork and Blackwater Circular Tour. Tickets, available for six days, are issued at Cork (Glanmire Road) for the above, *viâ* Mallow, Lismore, Cappoquin: thence by Blackwater steamer to Youghal and by rail to Cork (Summerhill), or *vice versâ*, from Cork (Summerhill) to Youghal; thence by Blackwater steamer to Cappoquin, and by rail to Lismore, Mallow, and Cork (Glanmire). Fares: first class, 10s.; second class, 8s.

Through tourist tickets can be obtained from all the principal stations in England, the North of Ireland, and Scotland for Killarney, and the holders, if they prefer it, can travel to Cork in place of Killarney. The holders can break the journey at Dublin, Limerick Junction, and Mallow.

Special tourist arrangements in connection with different parts of England, Scotland, North of Ireland, County Wicklow, etc., have been organised by Messrs. Cook. Particulars will be found in our advertisement columns.

EXCURSIONS.

SPECIAL EXCURSIONS FROM CORK.

Killarney.—A special train will leave Cork on Saturday, August 9th, at 7.45 A.M., arriving at Killarney at 10.20 A.M. The party will be met at the train by carriages, to drive them to the Gap of Dunloe, through which they can walk or ride on ponies. Boats will meet them at the top of the Upper Lake, and they can row across to Durricunnihy Cottage, where the Reception Committee will have luncheon provided. Afterwards, they will row down through the three lakes. The return special train will leave Killarney at 7 o'clock. Excursionists can either remain, or return to Cork on the Saturday night. The return-tickets to Cork will cost 10s.; carriages, 2s. 6d. per head. Lord Kenmare has kindly lent his boats.

Blackwater Valley and Lismore Castle.—A special train will leave Cork at 7.50 A.M. on Saturday, August 9th, arriving in Youghal at about 9 A.M. The steamer will leave for Cappoquin at 9.10 A.M. The party can drive from Cappoquin to Lismore, or go by rail; also they can visit the celebrated monastery of Mount Melleray on their way. Lismore Castle and the grounds will be opened for the visitors, and the Duke of Devonshire will kindly provide luncheon at the Devonshire Arms. A train will leave Lismore at 5 P.M., arriving in Cork at 8.15 P.M. Price of circular tour tickets, 10s. The Dublin and Holyhead mail-train leaves Cork at 10.6 P.M.

River, Queenstown, Carrigaline River, Harbour, etc.—The Reception Committee will provide a steamer for a party of one hundred, to start at 10.30 A.M. on Saturday. The steamer will visit the different places of interest in the river, Hanlbowline, the Forts, Camden and Carlisle; proceed up the Carrigaline River, and take the party to Ballinacurra. At 1 o'clock, luncheon will be provided for one hundred in the ballroom of the Queen's Hotel, Queenstown. They will return to Cork about 5 P.M. The train for Killarney starts from Cork at 6.30 P.M., arriving in Killarney at 9.32 P.M.

Blarney Castle.—A party of fifty will leave Cork by cars, driving along the Lee Road, passing Carrigrohane Castle, the Valley of Woodside, and arriving in Blarney about 12 o'clock noon. Sir George Colthurst will kindly provide Juncheon. St. Anne's large hydropathic establishment, close to the castle, is well worth a visit. (Mr. Barter will entertain any of the party who wish to remain to dinner.) After visiting the lake, grounds, and Rock Close, the party will return to Cork by train or car.

DONEGAL TOUR.

First Day. (Great Northern Railway, *viâ* Enniskillen and Bundoran Line.)—Leave Dublin at 9 A.M.; arrive at Ballyshannon at 3.20 P.M. Distance, 56½ miles.—(By cars, through Ballintra and Laghey.) Leave Ballyshannon at 3.30 P.M.; arrive at Donegal about 5.45 P.M. The ruins of the old Abbey of Donegal still possess interest for the antiquarian. A few miles to the left, on a jutting crag overlooking Donegal Bay, is Kilbarron, the ruined castle of the O'Clerys, where the celebrated *Annals of the Four Masters* were composed. The Arran Arms Hotel, at Donegal, is a comfortable one. There is an excellent spa in the town. Distance, 13½ miles.

Second Day. (By cars, through Mount Charles, Inver Dunkineely, and Bruckles.)—Leave Donegal about 8 A.M., and arrive at Killybegs about 11 A.M.; thence westwards to Carrick Hotel, where tourists will find guides to conduct them to the summit of Slieve League. Distance, 17½ miles.

Third Day. (By cars.)—From Carrick Hotel to Malinmore, Malinbeg, and Glen Columbkille, and back to Carrick. The bold headlands, the eagle crags, and the wild cliffs present unrivalled scenery. Distance, about 17 miles.

Fourth Day. (By cars. If this journey be considered too much for one day, fair accommodation can be obtained at Glenties.)—From Carrick Hotel, through Glen Pesh, Ardara, Glenties, Doocharry Bridge, and on to Gweedore Hotel, a most comfortable one, with angling privileges in the rivers in the immediate vicinity. Excursions can be made from here to Mount Errigal, a conical hill, and the highest in Donegal, 2,466 feet; also to Dunlewy and Bunbeg, which are short distances from the hotel, and worth visiting. Distance, between 40 and 50 miles.

Fifth Day. (By cars, boat, and rail.)—From Gweedore Hotel, through Glenveagh, Kilmacrennan, Milford, and on to Rathmullen, crossing Lough Swilly, to Fahan, for 5.40 P.M., or 8.40 P.M., train to Derry, arriving there at 6.10 P.M., or 9.20 P.M. Distance, about 50 miles.—Or from Gweedore Hotel, *viâ* Falcaragh, Dunfanaghy, Creeslough, Kilmacrennan, and Letterkenny; and thence to Strabane, for 9.15 P.M. train to Derry. At Dunfanaghy, refreshments may be had at the Stewart Arms Hotel, whence an excursion should, if possible, be made to the cliffs of Horn Head, about 830 feet high. Tory Island is eight miles from the shore. Should time permit, and should the day be calm, a visit to this island will repay the tourist. Some cyclopean remains, a round tower, remains of two stone crosses, and of some ancient churches, are to be seen. Near Kilmacrennan is the rock of Doune, on which The Donnell was always inaugurated. Near Milford, is Cratlagh Wood, where the late Lord Leitrim was murdered. Distance, about 53 miles to Strabane; thence to Derry, 14¾ miles.

* *a* denotes first class; *b* second class.

SPECIAL NOTICES.

All the steam-packet companies will convey goods to the Museum and for the Sanitary Exhibition free of charge.

Any persons requiring description of tours in South of Ireland can have same on application to the Honorary Local Secretary.

Intending visitors are requested to communicate with Professor Macnaughton Jones as soon as possible, stating whether they will bring ladies with them.

Reception and waiting rooms for ladies will be provided in Queen's College and in the City.

Information regarding lodgings, etc., will be given in the JOURNAL of July 19th.

FRANCIS FOWKE,
General Secretary of the British Medical Association.
161a, Strand, London, May 22nd, 1879.

METROPOLITAN COUNTIES BRANCH.

AN adjourned general meeting of this Branch will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish

Square, on Wednesday, July 16th, at 8 P.M. precisely; when the discussion on Medical Education will be resumed.

ALEXANDER HENRY, M.D.
W. CHAPMAN GRIGG, M.D. } *Hon. Secs.*

57, Doughty Street, W.C., June 26th, 1879.

METROPOLITAN COUNTIES BRANCH.

THE twenty-seventh annual meeting of this Branch will be held at the Ship Hotel, Greenwich, on Friday, July 25th, 1879, at 4 P.M.

At 6 P.M., the members will dine together; JOHN WOOD, Esq., F.R.S., in the Chair. Tickets, 14s. each (inclusive of attendance, and exclusive of wine). Members intending to be present at the dinner are specially requested to give notice to the Secretaries on or before July 22nd.

ALEXANDER HENRY, M.D.,
WM. CHAPMAN GRIGG, M.D., } *Honorary Secretaries.*

57, Doughty Street, W.C., July 1st, 1879.

NORTH WALES BRANCH.

THE thirtieth annual meeting of this Branch will be held at Carnarvon, on Friday, July 18th, at 12.30 P.M.

J. LLOYD ROBERTS, *Honorary Secretary.*

Denbigh, July 10th, 1879.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of this Branch will be held in Aberdeen, on Saturday, July 19th, at half-past One o'clock.

Further particulars will be given by circular.

A. OGSTON,
J. URQUHART, } *Honorary Secretaries.*

Union Street, Aberdeen, June 26th, 1879.

BORDER COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the County Hotel, Carlisle, on Friday, July 25th, at One o'clock.

Gentlemen intending to read papers are requested to give early notice thereof to one or other of the Secretaries.

RODERICK MACLAREN,
JOHN SMITH, } *Honorary Secretaries.*

Carlisle, June 24th, 1879.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Luttrell Arms Hotel, Dunster, on Thursday, July 24th, at 5 o'clock.

Dinner at 6 o'clock: THOMAS CLARK, Esq., President.

The President invites the members of the Branch to lunch at One o'clock, and afterwards to visit with him Dunster Castle, the Church, and Minehead.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, July 1st, 1879.

SOUTH-EASTERN BRANCH: ANNUAL MEETING.

THE thirty-fifth annual meeting of this Branch was held at the Bathing Establishment, Folkestone, on Wednesday, June 11th. The chair was taken by the retiring President, Dr. LANCHESTER of Croydon.

Dr. LANCHESTER said that, before he left the chair, there were one or two points on which he wished to make a few remarks. The first was with regard to a question with reference to endeavouring to improve the relations existing between the Committee of Council and the general body of the Association. The Committee of Council had appointed a subcommittee to inquire into the rules of the present mode of election, and they had sent a request to the different Branches for them also to consider whether any means could be devised to increase the efficiency of the Committee. It had been suggested that the Council, instead of meeting, as at present, a short time before the general meeting, should have a different and distinct time of meeting, so that subjects might be discussed in Council, and that they should then be reported upon to the general body. There had been another suggestion. It was a question very well worth consideration whether the Council was not practically useless as at present constituted; and it had been mooted by some whether it would not be well to do away with the Council altogether, and that the Committee should be elected by the general body of the Association. He conceived himself that the Committee would then be a body who would carry more the confidence of the profession, if every member had a voice in their election. He brought the matter forward in order that they might consider it at some future meeting. Dr. Lanchester concluded by cordially thanking the members for the honour which had been conferred on him by being elected to the chair, and wished his successor a very pleasant time during his term of office.

Mr. BURTON moved a vote of thanks to the ex-president, which was seconded by Mr. REID. Dr. LANCHESTER, in acknowledging the compliment, said it was a very great satisfaction to him to have filled the high office.

President's Address.—Dr. BOWLES, the new President, on taking the chair, delivered an address, the chief topic of which was the education of the general practitioner. He maintained that this should not be of too high a standard, nor too extensive, but rather practical, so as to supply ordinary medical and surgical necessities. At the same time, he admitted that, in one sense, no education could be too high for the medical profession.

Report of Council.—Dr. PARSONS, honorary secretary, read the following report.

"The report for the past year which your Council have the privilege of presenting to you to-day is of so simple a character, as to require but few words of comment and explanation from them.

"First, as regards numbers: last year, the Branch consisted of 428 members; this year, of 424 only. This falling off is apparent, however, rather than real, and is due to the migration of many members from the Branch to other and more distant parts of the kingdom; whilst a few only have retired in consequence of advancing years or advancing fortune. In this manner, twenty-three have withdrawn from the Branch. Death has removed seven, and amongst them one who for many years was a member of the Council, and a most zealous honorary secretary of the West Kent District, Dr. Frederick Brown of Rochester, a man of great ability; who did his work with such straightforward transparent honesty of purpose—which was perhaps his chief characteristic—that even those who withheld approval from some of his undertakings, could not but admire and esteem the integrity and unselfish energy of the man. It was little more than a year since he asked to be relieved of the care of his district, in consequence of failing health; and now his death has brought sadness to many old and attached friends in West Kent. Our losses (thirty) are almost made up by the addition of twenty-six new members; and we now number 424 members. Having regard to the area of the Branch, your Council cannot but feel that our numbers should be far greater, not less than 500 certainly; and that very little effort on the part of members individually is necessary to achieve such a result. They therefore earnestly request all who have the welfare of the profession at heart to use such influence as they may possess with their neighbours to induce them to join the ranks of the Association through the South-Eastern Branch.

"As regards the six Districts of the Branch, all are working well, and your best thanks are due to all the honorary secretaries for the admirable manner in which they perform the duties entrusted to them. It is especially satisfactory to record that the West Surrey District, which had almost become defunct, has already, under the auspices of the new honorary secretary, Mr. A. A. Napper, exhibited marked signs of returning vitality; and its meetings will, it is hoped, continue to attract the surrounding profession in ever-increasing numbers.

"During the past year, the Committee of Council have been considering how the relations between themselves and the Branches may be improved; a Subcommittee was appointed to investigate the matter, and report. The recommendation of this Subcommittee seemed so reasonable, that your Council had no hesitation in giving their cordial support. The Branches, however, holding similar views did not appear to the Committee of Council to be sufficiently numerous to warrant them in proceeding with the recommendations of the Subcommittee, and for the present things remain *in statu quo*. It is, however, matter for fair consideration whether the growth of the Association, and of the Branches, has not rendered the machinery of the Councils somewhat too ponderous and cumbersome for efficient working; and whether a seat on the Council ought not to be conscientiously regarded as an executive office, rather than as an honorary distinction with no definite duties attached to it.

"As regards parliamentary work, this Branch has not been idle. Upwards of twenty petitions were presented in the House of Commons from the largest and most influential towns in the Branch in favour of Mr. Mills's Medical Acts Amendment Bill (No. 2). [The Report then contained a review of the work of the Parliamentary Bills Committee of the Association.]

"As regards financial matters, the funds of the Branch were never in a more flourishing condition, as the Report which will be submitted to you presently will show. Your Council, therefore, cannot but congratulate you on the eminently satisfactory condition of the Branch at the present moment."

Mr. HOAR proposed the adoption of the report. He thought they could not but feel very great pleasure in listening to such a satisfactory report in every particular. With regard to the number of members, they ought all to put their shoulders to the wheel, and get other members to join. In Maidstone, there was not a single medical man who did not belong to the Association; while in the neighbourhood, a large proportion belonged to it.

The resolution was seconded, and carried unanimously.

Vote of Thanks to the President.—Dr. LANCHESTER proposed a vote of thanks to the President.—Mr. JAMES REID seconded, saying he felt grateful to Dr. Bowles for his able and clear address.—The resolution was carried unanimously, and acknowledged by Dr. Bowles.

Financial Report.—The Secretary read the financial report, showing the receipts to have been £144 18s. 7d., and the expenditure £64 6s. 2½d., leaving a balance in hand of £80 12s. 4½d.—Dr. BRANSBY ROBERTS moved, and Dr. HENRY LEWIS seconded, the adoption of the report, and it was carried.

Honorary Secretary.—Dr. HOLMAN proposed that Dr. Parsons should be asked to again undertake the duties of honorary secretary. No one knew better than himself what those duties were. There was no question that to the energy of Dr. Parsons the Branch owed the greatly improved position it had held of late years. They were very fortunate indeed in possessing such a man.

Dr. LANCHESTER seconded the resolution.

Dr. PARSONS said he should be most ungrateful if he were not to consent to the proposition. Perhaps nobody was more conscious of his own shortcomings of what a secretary ought to be than he was himself; but he tried to do his best; and they knew how difficult it was to attend to all the work of the Branch, which really required almost undivided attention.

Place of Meeting in 1880: *Officers.*—Dr. BAGSHAWE proposed that the place of meeting for 1880 be Brighton; that Dr. Withers Moore be the President-elect, and Mr. W. J. Harris of Worthing, and Mr. Bostock of Horsham, the Vice-Presidents-elect.—Mr. B. MARSACK seconded the motion, and it was carried unanimously.

Excursions to Hythe and other places in the neighbourhood were arranged. The members also visited the Parish Church and the Sanatorium, under the guidance of the local committee.

The Dinner took place at the Pavilion Hotel in the evening, Dr. BOWLES in the chair.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

THE last meeting of the session was held at the Myddelton Hall, Islington, May 28th; J. W. MASON, Esq., in the Chair.

Pond's Sphygmograph.—Dr. SANSOM showed a number of pulse-tracings effected by Pond's phonographic sphygmograph, and gave it as his opinion that it was a valuable aid in prognosis. He brought forward several cases, which looked hopeful in many respects; but the tracings taken gave evidence of failure of cardiac power, which enabled him to prognose unfavourably.—Mr. MASON exhibited Pond's new phonographic sphygmograph, and compared its easy application with the old forms of instruments.

Obstruction of the Bowels.—Mr. GEORGE BROWN read a paper on the administration of enemata in obstruction of the bowels, in which he urged the importance of the medical attendant administering the enemata himself, or at least superintending their administration, in all cases where the seat of obstruction was situated in the colon, cæcum, or small intestines. He frequently found that the first enema was returned without inducing any action of the bowels. His plan was to repeat the enema time after time, at very brief intervals, until a satisfactory evacuation had taken place. Mr. Brown gave the notes of several cases in which he had overcome most obstinate obstruction of the bowels through the persistent use of soap-and-water enemata at very frequent intervals.

HOSPITAL DISEASES.—Erysipelas of a grave character has been epidemic in the Somerset County Lunatic Asylum, and is attributed to defective draining. During the past five months, 23 cases have occurred in the infirmary for females, 2 of which proved fatal. Amongst the males, there have been 9 cases, 2 also of which have terminated fatally. Efforts to find the origin of this outbreak have led to the discovery that, owing to rats having entered through a lead pipe connected with the sewers, there had been an escape of gas.

ROYAL COLLEGE OF SURGEONS OF IRELAND.—At a meeting of the Court of Examiners held on the 26th and 27th ult., G. P. M. Woodward, M.D., Deputy Surgeon-General A.M.D. (retired), was admitted a Fellow of the College after examination.

CORRESPONDENCE.

PROXY VOTING AT THE COLLEGE OF SURGEONS.

SIR,—It being found that there were very few provincial Fellows present at the election of members of Council of the College, it was thought undesirable to hold a meeting to consider the above named subject. By an oversight, the petition, which should have been worded praying for an alteration in the charter, was made to ask for an alteration in the by-laws. I shall feel obliged if all those who have signed the petition in its present form will signify to me by postcard their willingness to have their signatures attached to a memorial containing that alteration; also, if they are willing to have their names put on a committee to organise a meeting to be held prior to the next election of members of Council. I may mention that 338 signatures have been obtained to the memorial up to the present date.—I remain, yours obediently,

G. JACKSON, F.R.C.S.Eng.

Plymouth, July 7th, 1879.

IRISH GRADUATES' ASSOCIATION.

SIR,—I have had during the last week numerous inquiries as to the membership of the above association, and I venture to ask you to permit me to say, through the medium of the JOURNAL, that the membership of this society is not confined to Irishmen practising in England. We desire to embrace all Irish graduates wherever practising, and also as Associates all Irishmen who may possess any other qualification, and not necessarily a professional degree. Our annual meeting at Cork, on Wednesday, August 6th, will, I hope, be the means of introducing many new members, who have not joined before this under the impression that we only admitted Irishmen practising in England. I presume that this idea has been caused by the beginning of the Association having been made by residents in England. I think it is desirable that it should be known that our objects are social and medico-political only, and that the discussion of modes of treatment forms no part of our programme. We desire to establish a bond of union between men holding medical qualifications from any Irish source, and also to include Irishmen who may have qualified outside the Emerald Isle. I shall have much pleasure in proposing as member or associate any gentleman, if he will kindly forward his name and address to me. I trust a goodly number will come forward to give a good reception to our president at Cork, as Mr. W. Mac Cormac, is an able representative of Irish surgery, and a well known Fellow of the London College of Surgeons, not to mention the other positions which he has had the honour to adorn.—Yours faithfully,

JAMES THOMPSON, M.D., Hon. Sec.

Leamington, July 7th, 1879.

THE NORTHERN UNIVERSITY.

SIR,—I am desired to forward you the accompanying copy of a memorial to the Privy Council.—Yours truly,

RICHARD EATON, Registrar, *pro* W. JONES.

Liverpool Royal Infirmary School of Medicine, July 4th, 1879.

"To Her Majesty's Most Honourable Privy Council.

"The humble Petition of the Council of the Liverpool Royal Infirmary School of Medicine showeth—

"1. That your memorialists have had brought under their notice the memorial presented to your lordships by the Owens College, Manchester, praying that a charter may be granted establishing a new northern university, to be called the Victoria University, to which shall be affiliated Owens College, and such other colleges, giving instruction in arts and science, as may hereafter be founded in the north of England; such university having the power to grant degrees to its own students in the faculties of arts, science, medicine, and law.

"2. That, while your memorialists are strongly in favour of the increase and extension of facilities for higher education throughout the north of England, they consider it highly undesirable that any new university should be founded with the power to confer degrees or licences to practise medicine.

"3. That there are at the present time in the kingdom no fewer than ten universities granting academical degrees in medicine, and nine corporations granting other licences to practise in that faculty, a number which your memorialists believe is already too large in the interests both of the public and of the medical profession. This opinion is well known to be strongly entertained by the medical profession in general. Your memorialists are further of opinion that, even if a single and

uniform qualification for the practice of medicine in the United Kingdom were established by Parliament, it would still be prejudicial to the interests of medical education to increase the number of academical distinctions in the faculty of medicine.

"4. Your memorialists, therefore, pray that, if a charter be granted to the proposed Victoria University, such University shall not have the power of granting degrees in medicine."

ARMY MEDICAL DEPARTMENT.

SIR,—As Sir William Muir is now advertising an examination for entrance to the Army Medical Department, to be held in August next, do not you think it would be more satisfactory for intending candidates if he stated under what conditions successful candidates will enter the service?—whether under the last ten years' service warrant, which is still in force until cancelled, or under the conditions of a promised but as yet unpublished, warrant? If under the former, men enter the service with their eyes open, and know what to expect, but if under the latter, I should strongly advise intending candidates not to compete until the promised warrant is published.

If I recollect aright, in 1864 a number of young gentlemen were induced to enter the service, and fill up the attenuated ranks of the Army Medical Department, under the conditions of a promised warrant which was to do wonders for the department; but as soon as the required number of recruits were caught, the promised warrant was torn up, or, at least, was never published. And as sure as "history repeats itself", the same will be done again. I, therefore, warn intending candidates not to be caught with chaff.—Your obedient servant,

VERB. SAP.

July 8th, 1879.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Thursday, July 3rd.

The Northern University.—Mr. CROSS stated, in answer to Mr. Jacob Bright, that the Committee of the Privy Council had called on the promoters of the Northern University to submit a draft charter for consideration, and it was not yet known whether or not they wished for power to grant degrees to women.

The Artisans' Dwellings Act.—Mr. CROSS, replying to a question by Colonel Beresford, said the estimate of the cost of all schemes which had been presented by the Metropolitan Board of Works would be found in a paper already laid on the table. He had not yet received accurate information as to the number of persons removed or to be removed; but these works had to be done gradually, and his consent had to be obtained before any large number could be removed. The hon. member might, therefore, rely upon it that no unnecessary hardship would take place. As regarded the amount for which the Metropolitan Board of Works contemplated selling the land, it must be remembered that the Board had to buy the land covered with buildings, and had to sell the vacant land; therefore, it could not be expected that they should get back the same amount that they had had to expend. In his opinion, the Board would be wise to look for their return, not so much to selling the land at a certain price as to getting it covered with buildings, and to the consequent decrease of pauperism. He understood that there was a proposition before the Board from persons able and willing to cover the sites with buildings within three years; and, although the apparent loss might be very great, still he should use every power he had to induce the Board to assent to that proposal; and he did not think that they would be doing their duty if they did not assent to it.

Main Drainage of the Metropolis.—Mr. CROSS, in reply to Sir A. Lusk, said there was no doubt that the Metropolitan Board of Works, in devising their main drainage system, used the best of their powers for the purpose of benefiting the metropolis after taking the best advice they could obtain. Complaints had been made of overflows of sewage-matter into the houses of many inhabitants of Holloway and other parts of the metropolis during the heavy rainfalls last year. The injury complained of was principally caused by the great amount of storm water which flushed the sewers and made them flow back into the houses. In some cases, he believed, the houses were not built on the proper levels. He had had communications addressed to him on this point, and he was himself now in communication with the Metropolitan Board of Works with a view to remedy the evil. At the present time, he could say no more.

The Lunacy Commissioners.—Mr. CROSS said, in answer to Mr. Dillwyn, that he had communicated with the Lunacy Commissioners, who stated that no time should be lost in presenting their annual report. No official interchange of annual reports had taken place between the Lunacy Departments of England and France, but he had requested the Secretary of State for Foreign Affairs to communicate with the authorities in France on that subject.

OBITUARY.

CHARLES FREDERICK MAUNDER, F.R.C.S.,

SURGEON TO THE LONDON HOSPITAL.

ANOTHER sudden death has occurred in the ranks of the medical profession. Mr. C. F. Maunder, Surgeon to the London Hospital, died suddenly on Friday, at the early age of 47.

Charles Maunder received his early training in the Royal Infirmary, Edinburgh, where he studied surgery under the late Mr. Syme; he subsequently continued his studies at Paris and Guy's Hospital; and entered the profession in 1854.

In 1857, he was admitted a Fellow of the Royal College of Surgeons; and in the same year was appointed Demonstrator of Anatomy at Guy's Hospital; and from this time devoted himself to practical surgery. During the Crimean war, he served as Assistant-Surgeon in the Renkioi Hospital.

In 1860, he was appointed Assistant-Surgeon at the London Hospital, becoming full Surgeon in 1869.

Mr. Maunder is well known as an operator, and as having contributed to the development of several important procedures in practical surgery. He was a good speaker and lecturer, and delivered the Lettsomian Lectures in 1875 on "the Surgery of the Arteries". As an author, he produced a very excellent work on *Operative Surgery*, besides various contributions on surgical diseases.

For about a year, his health had been obviously failing; and in May last, on the recommendation of his professional friends, he withdrew for awhile from his active duties at the hospital, and went into the country to recruit his health. These means, however, failed to restore health; he never rallied, and died suddenly on July 4th.

Mr. Maunder was valued by his colleagues and by all who knew him as a man of thorough truthfulness and straightforward action; he always displayed great interest in the London Hospital and Medical School; and his name will long be held in remembrance by all who worked with him.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 3rd, 1879.

Cheesman, George Edward Alexander, Southampton
Pryce, Evan William, The Farm, Montgomery
Raine, Arthur Robert, Billericay, Essex
Walford, Robert, Harrington Street, N.W.

The following gentleman also on the same day passed his primary professional examination.

Hart, Robert Alfred Hellings, Guy's Hospital

UNIVERSITY OF DURHAM.—The following candidates, having satisfactorily undergone the necessary examination on June 16th, 17th, 18th, and 19th, 1879, had their respective degrees conferred upon them at a Convocation held on June 24th.—The Degree of M.D. Practitioners of fifteen years' standing.

Travers, William, M.R.C.P., F.R.C.S.

The Degree of M.B.

Bowman, Hugh T.
Crick, Samuel A., M.R.C.S., L.S.A.
Dodd, John Richard
Green, Charles, M.R.C.S., L.S.A.
Ryan, James M., L.R.C S., L.A.H.
Trewman, George T , M.R.C.S., L.S.A.
Tyson, William Joseph, F.R.C.S., L.R.C.P.
Willis, Charles F., M.R.C.S., L.R.C.P.
Woodman, William E., M.R.C.S., L.S.A.

The Degree of M.S.

Bowman, Hugh T.
Crick, Samuel A., M.R.C.S., L.S.A.

Two candidates failed to satisfy the examiners.

UNIVERSITY OF DUBLIN.—At the Summer Commencements, held on Wednesday, June 25th, in the Examination Hall of Trinity College, and presided over by the University *Caput*, Dr. Hart, Pro-Vice-Chan-

cellor, the Very Rev. the Provost of Trinity College, and the Rev. J. W. Barlow, Senior Master Non-Regent, the following degrees in Medicine and Surgery were conferred.

Baccalaurei in Chirurgiâ.—Gulielmus Stewart Lecky, Benjamin Thos. M'Creery, Thomas Orde Smith, Thomas Tilly Moore, Henricus Grey-Edwards, Fredricus Carolus Berry, Johannes Battersby, Andreas Murray, Johannes Auchinleck MacMunn, Abraham Malley, Johannes Carolus Hogan, Arturus Ricardus Fredericus Exham, Fitzgerald Neptunus Blood, and Croasdaile Miller Thompson.

Baccalaurei in Medicinâ.—Gulielmus Stewart Lecky, Josephus Dallas Pratt, Henricus Grey-Edwards, Johannes Battersby, Johannes A. De C. Williams, Andreas Murray, Johannes Auchinleck MacMunn, Johannes Singleton Darling, Johannes Carolus Hogan, Gilbert Richardson, Arturus Ricardus Fredericus Exham, Abraham Cohen, Fredericus Gulielmus Warren, Fitzgerald Neptunus Blood, and Crossdaile Miller Thompson.

Doctores in Medicinâ.—Carolus Rolleston Woods, Samuel Warren, Thomas Blair Worthington, Gulielmus Fetherstone H. Lambert, Gilbert Richardson, Edvardus Josephus Latham Blacker, Josephus Lister (*honoris causâ*), and Jacobus Henricus Reynolds (*honoris causâ, in absentiâ*).

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon at the Western Branch. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Diplomas and testimonials to be sent to the Chairman on or before Monday, August 4th.

COTON HILL INSTITUTION FOR THE INSANE—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing.

DORCHESTER COUNTY ASYLUM—Second Assistant Medical Officer. Salary, £100 per annum, with board, etc. Applications to the Medical Superintendent.

DUNFANAGHY UNION—Medical Officer for Gweedore portion of the Cross Roads Dispensary District, at a salary of £100 per annum, and £10 as Sanitary Officer, with Registration and Vaccination Fees. Election on the 16th instant.

*EVELINA HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications on or before July 25th.

GATESHEAD DISPENSARY—Assistant Surgeon. Salary, £120 per annum. Applications not later than July 17th.

ISLE OF THANET UNION—District Medical Officer and Public Vaccinator. Salary, £95 per annum. Applications not later than July 17th.

*KING'S COLLEGE—Professor of Comparative Anatomy.—Demonstrator in Physiology. For particulars, apply to the Secretary.

*LINCOLN COUNTY HOSPITAL—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to be made on or before August 11th.

*MIDDLESEX HOSPITAL—Physician and Surgeon; Assistant-Physician and Assistant-Surgeon.

*PLYMOUTH PUBLIC DISPENSARY.—Second Honorary Physician. Applications and testimonials to be sent to the Secretary on or before July 12th.

*SALOP FORESTERS' MEDICAL AID ASSOCIATION—Surgeon. Salary, £160 per annum.

*ST. MARYLEBONE GENERAL DISPENSARY—Obstetric Physician and third Honorary Physician. Applications not later than July 21st.

*TRURO UNION—Medical Officer and Public Vaccinator for St. Agnes District. Salary, £35 per annum, exclusive of the fees as allowed by the Local Government Board.

*UNIVERSITY COLLEGE HOSPITAL—Medical Officer to the Skin Department. Applications on or before July 21st.

*VICTORIA HOSPITAL FOR CHILDREN—House-Surgeon. Salary, £50 per annum, with board and lodging. Applications on or before July 26th.

*WEST LONDON HOSPITAL—Assistant-Surgeon. Applications to be made on or before July 25th.

*WESTMINSTER HOSPITAL—Medical Registrar. Salary, £40 per annum.

*WILTS COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £110 per annum, increasing £10 a year up to £150 with board (save beer), residence, attendance, and washing. Applications to Dr. Cooke, at the Asylum, on or before July 23rd.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

ABBOTT, C. E., M.R.C.S.Eng., appointed Medical Referee to the Braintree District of the Essex Provident Society.

DRUMMOND, David, M.A., M.D., appointed Pathologist to the Newcastle-upon-Tyne Infirmary, *vice* Byrom Bramwell, M.D., resigned.

HETHERINGTON, R. P., M.B., appointed Assistant Medical Officer to the Sligo District Lunatic Asylum.

HOLMES, John, L.R.C.P.Ed., appointed Resident Medical Officer to Barrington's Hospital, Limerick, *vice* T. Carey, M.R.C.S.Eng., resigned.

MCPHAIL, Samuel, M.B., appointed Resident Medical Officer to the Greenock Infirmary, *vice* David Cairns, M.B., resigned.

PRICKETT, Marmaduke, M.A., M.D., appointed Physician to the Out-patient Department of the Samaritan Hospital, *vice* *W. H. Day, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

SPARROW—ARMSTRONG.—On the 9th instant, at East Lavant Church, near Chichester, by the Rev. George Gruggen (brother-in-law of the bride), George Gordon Sparrow, L.R.C.P., M.R.C.S., second son of the late Dr. Robert Pennington Sparrow, R.N., of Southsea, to Josephine, youngest daughter of the late Hugh Clayton Armstrong, Esq., Newcastle-on-Tyne.

SWORDER—KERSHAW.—On July 3rd, at St. Mary's, Luton, Horace Sworder, L.R.C.P.London, M.R.C.S.Eng., L.S.A., Medical Officer of Health for the Borough of Luton, second son of Thomas Sworder, Esq., of Holly House, Luton, to Caroline, eldest daughter of J. J. Kershaw, Esq., of Bedford Villa, Luton, Bedfordshire.

IN Dr. Major's report on the West Riding Pauper Lunatic Asylum the interesting fact is stated that during the last year, which has been one of distress and privation in the north, the proportion of admissions to the asylum of persons in whom the exciting cause of insanity was traced to alcoholic excess, has fallen from 17.2 per cent. on the admissions to 13.1 per cent.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 18 in every 1,000 persons living. It was 17 in London, 18 in Edinburgh, 19 in Glasgow, and (including 27 deaths that occurred prior to the 1st of June) 26 in Dublin. In the twenty English towns, the highest rates were as follow: Plymouth 20, Bradford 20, Liverpool 21, Norwich 22, Manchester 22, and the highest rate, 27, in Newcastle-upon-Tyne. The highest zymotic death-rates were 3.9 in Manchester and 4.6 in Newcastle-upon-Tyne. In London, there were 1,208 deaths; which included 11 from small-pox, 79 from measles, 38 from scarlet fever, 11 from diphtheria, 35 from whooping-cough, 11 from different forms of fever, and 13 from diarrhœa. Altogether, 198 deaths were referred to these diseases, being 108 below the average, and giving an annual zymotic death-rate of 2.9 per 1,000. The 79 fatal cases of measles were no less than 46 above the average. The disease was especially prevalent in East London; there were 18 fatal cases in Islington, 4 in Clerkenwell, 6 in Shoreditch, and 5 in Mile End Old Town. The deaths from diseases of the respiratory organs were 197, or 29 above the average. There were eight deaths from drowning; and the death of a coachsmith, on the 4th instant, was referred to sun-stroke. At Greenwich, the mean temperature of the air was 56.5°, and 5.1° below the average. The general direction of the wind was south-west, and the horizontal movement of the air averaged 17.1 miles per hour, or 6.7 miles above the average. Rain fell on six days of the week to the aggregate amount of 1.73 inches. The duration of registered bright sunshine in the week was equal to 41 per cent. of its possible duration.

MR. W. BOWER writes to say that the cases of epidemic illness at Metheringham are cases of scarlet fever, and not, as reported, of typhoid fever.

THE Medical Sanitary Officers of the Ennis Union, having recently applied for expenses of attendance at Petty Sessions to give evidence in sanitary prosecutions, have been informed by the Local Government Board that it was understood that all the duties required within their districts in reference to the sanitary law would be remunerated by the fixed salaries they receive.

FORFARSHIRE MEDICAL ASSOCIATION.—The twenty-first annual meeting of this Association was held in the Queen's Hotel, Dundee, on Thursday, the 3rd instant, under the presidency of Dr. Greig, of Dundee. Twenty-seven members were present. It was arranged to hold the next annual meeting in Arbroath. The following gentlemen were elected office-bearers for the ensuing year: *President:* Dr. Crichton, Arbroath; *Vice-Presidents:* Drs. Warman, sen., Arbroath, and Arrott, Dundee; *Honorary Secretary:* Dr. Sinclair, Dundee; *Honorary Treasurer:* Dr. Macewan, Dundee; *Council:* Drs. Christie, Miller, Rorie, Duncan, Charles Moon, and McCook; *Local Secretaries:* Dr. Dewar, Arbroath, Dr. Lawrence, Montrose, Dr. Mackie, jun., Brechin, Dr. Alexander, Forfar. Dr. Arrott, of Dundee, showed two interesting cases. Dr. Rorie, of the Royal Asylum, Dundee, read a paper on Some of the more Recent Methods of Staining Sections of the Brain and Spinal Cord, which were illustrated by microscopes. Dr. Sinclair, of Dundee, read a paper on the Therapeutics of Acute Rheumatism. Dr. Christie, of Dundee, read a letter from Dr. Cameron, M.P., on the legislation proposed for habitual drunkards. The usual votes of thanks terminated the proceedings. The members afterwards dined together in the hotel. Professor Spence, of Edinburgh, Professor Struthers, of Aberdeen, Dr. Angus Macdonald, Edinburgh, and Dr. Wilson, of H.M.S. *Unicorn*, were present as guests.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of the British Medical Temperance Association will be held in the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Thursday, July 17th, 1879.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

MONITOR.—We thought that our answer distinctly set forth that it is not proper for a surgeon to give notice of removal except to his friends and patients, but not to others. This, of course, excludes advertising in any shape, whether in newspapers or elsewhere, notice of the intended removal, and allows him to communicate such removal by private letters to his patients and friends; and that is, we believe, the only reasonable interpretation which can be put upon the answer we gave. Certainly, it was the only one which was intended to be put upon it.

MR. A. E. WOODS might communicate with the chief of the Metropolitan Police on the subject.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

AN APPEAL.

THE unmarried daughter (middle-aged) of the late Dr. Norris will feel grateful for assistance from members of the medical profession and others. She is striving to obtain a situation, but has hitherto been unsuccessful. All that she has to depend upon is £15 per annum. By the advice of friends, Miss Norris is going to "sink" the small "capital" from which she derives the interest of £15; but before doing so, is most anxious to increase it sufficiently so as to insure her about £40 per annum. Dr. Norris died two years ago at the age of eighty-five, having practised in Stourbridge for more than sixty years.

The case of Miss Norris is strongly recommended by the undersigned gentlemen: The Hon. and Rev. Canon Lyttelton, Rev. Canon Dalton, Rev. Hugh Sherrard, St. Thomas's Vicarage, Stourbridge, and Alfred Freer, Esq., surgeon, Stourbridge.

The smallest contributions will be gratefully received, and subscriptions may be forwarded to Rev. Hugh Sherrard, St. Thomas's Vicarage, or to E. W. Bernard, Esq., solicitor, Stourbridge.

Subscriptions Received.

Sir J. Paget	£3 3 0
Dr. Andrew Clark	1 1 0
Dr. Barr Meadows	3 0 0
Alfred Freer, Esq.	3 3 0
A Friend	1 1 0
E. A. H. Roe, Esq., Army Surgeon	0 10 0
Lawson Tait, Esq.	1 1 0
Alfred Baker, Esq.	1 0 0
Friends, per A. Freer, Esq.	0 10 0
H. W. Webster, Esq.	0 10 6
H. Tyrrell, Esq., Windham Club, S.W.	1 1 0

THE following letters have been handed to the General Manager for attention:—Dr. Gill, Hastings; Mr. W. A. Budd, Exeter; Mr. Jas. Unsworth, Liverpool; Mr. C. Clarke, London; Mr. Wm. G. Facey, Bradford.

MEDICAL ETIQUETTE.

SIR,—What course ought I to pursue under the following circumstances? I have a consultation with a physician at a patient's house. The physician does not write a prescription, but suggests that the patient should continue the medicine he is taking. For some reason, the patient a few days afterwards calls in another practitioner to attend him, and demands from me a copy of the physician's prescription, with the avowed object of showing it to my successor. Am I bound to give it him? I have asked several professional brethren about the matter, and find that the old saying still obtains, that "doctors differ".—I remain, yours faithfully, F. W.

*** We should be disposed to give an affirmative answer. In saying that the same treatment was to be continued, the physician did, in fact, give a prescription, which he only omitted to reduce to writing; and the patient may fairly ask to have a copy, if he require it. We think he is legally and equitably entitled to it.

THE DUBLIN COLLEGE OF SURGEONS AND THE REGISTRATION OF MEDICAL STUDENTS.

SIR,—For years the above College did not enforce registration, and the result was gross fraud. Mr. Wheelhouse's question before the Select Committee hit the mark home, and the College has now resolved to require for the future a return each year of the names of the students from the various schools. This will afford no protection, unless (1) these lists be made public, and (2) unless they contain the address of each student. I hope Mr. Wheelhouse will ask why the recommendation of the Medical Council with regard to students spending one year at some provincial hospital has not been carried out.—Yours truly, T. LAFFAN.

Cashel, Ireland, July 4th, 1879.

MR. RUSHTON PARKER'S letter shall have attention.

VACCINE DIRECT FROM THE CALF.

SIR,—Can you or any of your readers inform me where I can obtain a supply of pure vaccine from the calf?—Yours obediently, H. HABGOOD, M.D.

Eastbourne, July 5th, 1879.

MRS. SARAH GRIBBLE should apply to the Secretary of the Medical Widows' and Orphans' Fund, Berners Street, W.C.

COMPULSORY REGISTRATION OF INFECTIOUS DISEASE.

MR. BUTTERFIELD, the medical officer of health for Bradford, remarks on the heavy mortality from scarlatina in Bradford last year. It is never altogether absent. It will be impossible, he thinks, to effectually deal with scarlet fever so as to limit its ravages until it is made compulsory on the householder to report each case so soon as his medical attendant certifies to him the nature of the disease. When compulsory registration of disease is the law of the land, it will not only enable the sanitary authority to avert epidemics by the adoption of timely measures, but it will have the salutary effect of impressing on the public the fact that infection is a thing to be prevented by every possible means, rather than a circumstance which, as it cannot be averted, must be positively endured.

That gross ignorance on the part of the public with respect to preventive measures does prevail, the following instances among many which have come under his notice will suffice to show. Children have been nursed through scarlet fever in the very room where sweetmeats, fruit, and cakes have been displayed for sale to other children. This is by no means a rare occurrence, and seldom attracts the attention of the medical man in attendance; or, if it do, nothing is done to prevent the flow of business. In order that the mother might go to work, a child was put to bed with two children in a neighbour's house. These children were recovering from what, he was assured by the parents on the doctor's authority, was "only the scarlatina". The result was that the little one had scarlet fever, and died within a week.

As a rule, it is rare to find a case of scarlet fever adequately isolated. In many houses the arrangements are such as to suggest that the object is rather to encourage the spread of disease than to check its progress. The "precautions" consist in placing two or three saucersful of chloride of lime about the sick room, and occasionally sprinkling a little carbolic acid. In the meantime, the window is kept carefully closed, the carpets, curtains, and hangings are unremoved, neighbours and friends are encouraged to visit the patient, and the inmates of the house go to business or school in clothes which have been in contact with the infected person, or after having passed the night in his chamber.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE CASE OF MR. MILLERCHIP.

SIR,—I hope you will be able to spare a line in the JOURNAL in reference to a subscription for Mr. Millerchip. I hear that three secretaries of Branches in this part have consented to receive subscriptions for him. Is it not possible, by a suggestion from you in the JOURNAL, to make this a general thing?—Yours very truly,

Royston, July 1st, 1879. D. B. BALDING.

SIR,—The undermentioned subscribers to this fund have requested an acknowledgment in the medical journals.

Mr. Packman, Sheffield	£0 10 6
Mr. Locking, Hull	1 1 0
M.D., Philadelphia	0 5 0
Mr. Gibson, Hull	0 10 0
Dr. Webster, St. George's	0 10 6
Mr. R. Cremer, Norwich	0 10 0
Mr. G. E. Jeafferson, Birmingham	1 1 0
Mr. S. Harding, W. Haddington	0 5 0
Dr. Walmworth, Newport	0 10 0
Mr. J. H. Hughes, Ombersley, Droitwich	0 10 0
Mr. P. Weston, Wellington, Salop	0 5 0
Dr. W. Aspinal, Lancaster	0 10 0
Mr. C. W. Chubb, Torpoint, Cornwall	0 10 0

I am, sir, yours respectfully, JOSEPH ROGERS.

Dean Street, Soho, London, July 9th, 1879.

MR. M. BLOTT.—The case, apparently, is one involving rather delicate surgical questions. It would be rash of us to express any opinion on the point, and we should advise our correspondent to take his patient for consultation to a hospital surgeon experienced in such matters, who would give an opinion *de visu*.

ACTS OF PARLIAMENT.

SIR,—Could you kindly inform me if the parochial boards in Scotland are bound to supply their medical officer with the Acts of Parliament affecting him in that capacity? Your attention will much oblige, yours truly, R. A. M.

*** There is no regulation which requires that the Board of Supervision or Local Board should forward to parochial medical officers copies of Acts of Parliament which bear on their duties and obligations; at the same time, we entirely are in accord with our correspondent on the propriety of every medical officer, whether he resides in England, Ireland, or Scotland, being supplied with full information as to his duties so soon as he is appointed. As it is, Poor-law medical officers are expected to be acquainted with them by a process of intuition. The importance of efficient medical relief is disregarded by the central authorities, or better arrangements would be made.

QUERENS.—We have frequently informed other correspondents putting the same question, that the best directions with which we are acquainted for establishing provident dispensaries are to be found in the publications of the Charity Organisation Society, and especially in the little penny pamphlet of model by-laws and regulations for provident dispensaries.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

SIR,—Would you kindly insert in this week's BRITISH MEDICAL JOURNAL the enclosed copy of letter received from Sir Trevor Lawrence, Bart., M.P., and oblige, yours truly, J. WICKHAM BARNES.

3, Bolt Court, Fleet Street, July 9th, 1879.

(Copy.)

"Committee Room, House of Commons, July 4th, 1879.

"Dear Sir,—I have to acknowledge your letter of the 3rd instant, and to request you to convey to the Association of Poor-law Medical Officers my sense of the honour they have done me in unanimously electing me their President. I do not think I need enlarge upon my attachment to the medical profession, nor need I assure the Association that at all times my anxious desire will be to promote the interests of the profession in any way in my power.—I am, yours faithfully, TREVOR LAWRENCE.—Wickham Barnes, Esq."

DR. W. MARTYN (Wimbledon Park).—The quotation is a cutting from an American paper, and probably the periodical mentioned may be heard of through Trübner's or Sampson Low and Co., or by writing direct to Dr. W. B. Hammond, New York.

EPILEPTIC SEIZURES.

SIR,—A friend of mine, interested in the case of a boy subject to epileptic seizures, and of weak mind, although by no means imbecile, is desirous of knowing if there be any public institution into which he could be received. Not being aware of any such institutions myself, I will be obliged if you or any of your correspondents can give me any information on this point. The boy is eleven or twelve years of age, the son of respectable working people, but unable to afford any assistance towards the object in view, namely, the proper training and education of a boy unfortunately situated as their child is. I shall be happy to receive any information with regard to such institutions as I am desirous of finding, from you or any of your correspondents.—Yours faithfully, J. M'GRIGOR MACLAGAN.

Riding Mill on Tyne, June 17th, 1879.

MR. LEGG (Paulley).—We know of no institution in London similar to the Rotunda in Dublin, where a student may obtain considerable experience in difficult midwifery in a short space of time.

MEDICAL FREEMASONS.

SIR,—Amongst the thousands who belong to the British Medical Association, there are, I know, a large number who also belong to the Masonic fraternity. Doubtless many of these hope to attend the annual meeting of the Association at Cork; and I am sure it would add materially to the anticipated enjoyment of their visit, if they thought there was any probability of their Masonic brethren in Cork organising a fraternal reception for them. A hint to this effect in the JOURNAL would doubtless have a good result. There appear to be several lodges in Cork, but their days of meeting do not, unfortunately, tally with the days or week of meeting of the Association.—I am, sir, faithfully yours, P. M.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JUNE 1879.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health.

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.		Hardness. (Clark's Scale.)	
			As Nitrates, &c.	Saline.	Organic	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	21.00	0.165	0.129	0.000	0.012	13.2	4.2
West Middlesex ..	20.30	0.037	0.135	0.000	0.012	12.6	3.7
Southwark and Vauxhall	19.11	0.129	0.102	0.000	0.012	12.1	3.3
Chelsea.....	19.80	0.033	0.120	0.000	0.012	12.0	3.3
Lambeth	20.20	0.070	0.120	0.000	0.012	12.6	5.1
Other Companies.							
Kent	28.10	0.002	0.450	0.000	0.003	17.6	8.5
New River	20.60	0.059	0.120	0.000	0.006	13.2	3.7
East London	21.00	0.048	0.150	0.000	0.011	13.2	4.2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the but the following, when it was slightly turbid—namely, in that of the Grand Junction Company.

DR. CARSON (Portrush) is thanked for his kind note offering to facilitate the visit of the members of the British Medical Association at the Cork meeting to the Giants' Causeway. His letter has been forwarded to Dr. Macnaughton Jones, St. Patrick's Place, Cork, Honorary Local Secretary of the Cork meeting.

POISONING BY HYDROCYANIC ACID.

SIR,—Will you allow me to make a remark or two in reference to the interesting case of poisoning by hydrocyanic acid, narrated by Dr. Purvis in the BRITISH MEDICAL JOURNAL of June 21st? In his notes of the case, no mention is made of any peculiarity in the colour of the skin, save and except the "*post mortem* discoloration of the back". A few years ago, a melancholy case of poisoning by prussic acid came under my observation. The gentleman was a handsome fair skinned man, who in a fit of temporary insanity drank an ounce of hydrocyanic acid. I saw him a few minutes after he had swallowed the fatal draught lying dead on his bed, and the empty bottle, which had evidently contained the acid, on a chair by the bedside. As regards the appearance of the body, the first thing that attracted my attention was the brilliant violet colour which the skin presented. Several hours afterwards, when I again saw the body, the violet colour had considerably faded. Probably this peculiar colour of the skin is only well marked when the amount of the poison taken has been very great; and when it does occur it may be transient, being soon dissipated or decomposed by strong light or other causes. In the case kindly given by Dr. Purvis, the colour, though not noticeable when he first saw the body, nevertheless may have been present immediately after death. Dr. Taylor, in his book on *Poisons*, mentions a violet colour as one of the appearances met with after death from poisoning by hydrocyanic acid.—I am, sir, your obedient servant,

Lincoln, June 24th, 1879. WM. O'NEILL, M.D., M.R.C.P.

SIR,—The case of poisoning by hydrocyanic acid recorded by Dr. Purvis in the JOURNAL of June 21st is in many respects similar to one which occurred in Birmingham on the 24th May in the present year. Half an ounce of Scheele's acid was taken by a well grown athletic young man (aged 23). When seen by me very shortly afterwards he was dead, and lay "calm and composed as in deep sleep"; and he, like Dr. Purvis's patient, had, after swallowing the poison, retained sufficient consciousness to replace the cork in the bottle and conceal the latter in the cushions of the sofa on which he was found lying. There was no *post mortem* examination.—I remain, sir, yours truly, J. GARNER.

Birmingham, June 25th, 1879.

MR. GORDON JACKSON, R.N.—The jury of matrons to determine pregnancy in criminal cases is a relic of barbarism which still subsists.—*Vide* Dr. Taylor's *Medical Jurisprudence*, or any other text-book on the subject.

M.B. (Eastbourne) should sign his letter if he wishes the text of it published.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following were the questions submitted to the candidates at the examination for Diploma in Dental Surgery of the Royal College of Surgeons on June 20th, when they were required to answer at least one of the two questions both on anatomy and physiology and surgery and pathology.—*Anatomy and Physiology.* 1. From what source does the liver receive its blood? and how does the bile find its way into the intestines? 2. How is arterial blood distinguished from venous? and on what does the difference depend?—*Surgery and Pathology.* 1. Define what is understood by "mumps", and state how you would distinguish this from other swellings of the face, both as regards the seat of the complaint and its signs and symptoms. 2. What means would you employ to arrest hæmorrhage from an incised wound of the tongue or palate?—The following were the questions on Dental Anatomy and Physiology and Dental Surgery. The candidates were required to answer at least two out of the three questions in each division; they were also subjected to a clinical examination on selected patients.—*Dental Anatomy and Physiology.* 1. Describe specimens 1, 2, and 3 under the microscope. 2. Enumerate and describe the varieties of dentine in the teeth of man and the lower animals, and give examples. 3. What is meant by a "dental formula"? Give the typical mammalian dental formula, and also that of man, and of any other mammals which may occur to you. Which are the teeth usually absent in departures from the typical formula? *Dental Surgery and Pathology.* 1. Describe the symptoms and effects of phosphorus and mercury on the gums and alveoli. 2. Mention the principal irregularities of the permanent teeth; the causes and treatment of them. 3. What are the most usual nervous affections having a dental origin? Mention the nerves which are respectively implicated in their production.

Amyloid Degeneration.

SIR,—Five weeks ago, a paper appeared in your columns in which I suggested a perversion of the glycogenic function as the possible cause of amyloid degeneration. The recent researches of Dr. Seegen would seem to offer such strong evidence in support of my view that I venture again to trespass upon your space.

It would appear that the influence which ferments exercise over glycogen is of a partial character only. Dr. Seegen states that, when the action of ferments or acids upon glycogen is at an end, there remains in solution—besides sugar—a sort of dextrin which ferments are unable to turn into sugar. Considering its resistance to the action of ferments and acids, Dr. Seegen proposes to call it dystropodextrin. There is left, then, after the amylolytic fermentation of glycogen—which, it may be presumed, is normally operative in the human economy—a residual product, differing from the prime substance in its exceeding stability and disregard for all fermentative actions. Given such a residue, it is but a step to suppose that in certain diseased conditions, perverted in quality, and, it may be, increased in quantity, it would deposit itself in the tissues in an insoluble form—for the solubility of a substance in this or that medium, although of paramount importance where the vital processes are concerned, is no indication of its fundamental constitution: witness that achroodextrin is insoluble in alcohol, whereas dystropodextrin dissolves readily in that liquid. The cells of an organ undergoing amyloid degeneration become infiltrated and distended with a lardaceous matter, while the intercellular spaces are choked by a deposit of the same material, until in time the whole organ becomes converted into a waxy mass, a small fragment of which may be said to consist of a million cell-skeletons packed in a tenacious cement. Suppose the cement to be a stable glycogenic derivative such as I have indicated, it would be manifestly difficult, if not impossible, to separate the cell-element from so intimate a mixture. Gastric juice would fail to reach its proteid constituents; and we may thus find an explanation for the fact that, although containing nitrogen, amyloid substance resists the action of digestive fluids. Both dystropodextrin and amyloid substances are coloured dark red by iodine, and in both cases the colour disappears, on warming, never to return.—I am, yours truly,

GEORGE BUDD.

St. John's Terrace, Kingston-on-Thames, July 1, 1879.

ERRATA.—In Dr. P. H. Mules's paper in the JOURNAL of June 21st (page 932, col. 1), at line 8, for "conjunctival sac", read "conjunctival scar"; and at line 23, for "poster", read "posterior".

An Advertisement.

SIR,—I beg to call the attention of your readers to the following ingenious advertisement, which I have just seen in a Welsh newspaper.—Yours truly, M.D.

"Whereas a certain evil-disposed person has circulated a report that I am leaving the neighbourhood, I beg to contradict the same as fabulous. (Signed), R. HUMPHREYS OWEN, L.R.C.P., L.F.P.S., L.S.A., Gold Medallist and Prizeman.

"Wanted a young gentleman as pupil for a term of years, where unusual routine of practice is seen in this district.

"Plascoch, Bottwnog."

A Centenarian.

SIR,—The death of Mrs. Hartshorne of Worcester, at the age of one hundred years and eleven months, was notified in the *Times* and other newspapers a few days ago. The decease of this lady seems to deserve more than an ordinary obituary notice. I was introduced to her, and conversed with her for some time, in the autumn of 1878. She had then passed her hundredth birthday for some weeks. The physical and mental powers which she still retained were very remarkable. Subsequently to her centenary birthday, she had walked more than a mile, nearly all the way up-hill, to the house of a friend, and, after resting, had walked home again. Her hearing and power of sight were only slightly dimmed; her memory and reasoning powers were most acute. The arcus senilis was not more marked than it usually is in persons thirty or forty years younger. But a point that appeared to me to be of particular interest, was the fact of her having retained nearly the whole of her teeth. Her every-day dessert after dinner at the time I saw Mrs. Hartshorne, was a crust of bread with a glass of port wine. One of the arguments of Sir Cornewall Lewis against the truth of the alleged instances of persons living to one hundred years of age was, that digestion would be interfered with long before that period, owing to loss of teeth; but in this instance, nearly all the natural teeth had not only been retained, but were in a sound condition. I am informed that, the day before Mrs. Hartshorne's death, she was in her usual good state of health, and had taken her accustomed drive. Early in the morning, before rising from bed, she complained of a sense of suffocation, and died before medical aid could reach her. Her case is a more remarkable one than that of Canon Beadon, whose death, in his 102nd year, occurred recently, on account of the far higher vital energy maintained by Mrs. Hartshorne to the last, and is well worth a report in greater detail from her habitual medical attendant than I have been able to give from my casual acquaintance with the lady.

Mrs. Hartshorne was of moderate height and spare frame. I had the opportunity of obtaining authorised information regarding the accuracy of the age assigned to her, and was assured that the evidence on the point was complete, not only from her baptismal register, but also from legal documents.—I am, etc.,

F.R.C.S.

False Croup.

SIR,—The case your correspondent, A. I. V., describes, was evidently one of false croup or laryngismus stridulus, or child-crowing, aggravated by the blood-letting received.

Had bromide of potassium in five-grain doses been administered, together with syrupus ferri phosphatis compositus (Parrish's Food), the child would, in all probability, have recovered; at least, I have not found the disease a fatal one. I generally administer cod-liver oil as well, and keep the bowels regular with small doses of hydrargyrum cum cretâ. It is of importance to keep the child from being frightened or made to cry. See also West on *Diseases of Children*.—I am, sir, yours, etc.,

H. SYKES.

"Running Fits."

A SOMEWHAT singular accident is reported in the daily papers from Peterborough. A workman, employed in a brick-field, was suddenly seized with an epileptic fit, which had the peculiar effect of making him run some distance unconsciously. A deep pit, containing nearly six feet of water, being in his way, he fell headlong into it, and would certainly have been drowned, had not a fellow-workman extricated him from his perilous position. This, however, was not effected until the poor man had been submerged for about three minutes. On the arrival of a doctor, the usual remedies in cases of drowning were applied, and, although at first the case seemed hopeless, the patient began to show signs of consciousness. Whether he will recover permanently or not is uncertain, as it is feared that lung-affection may supervene. At present he is in a very critical state. It appears that, a few weeks ago, the man was seized with one of those curious and rare forms of "running" fits, when he ran all the way from Peterborough to Whittlesey, and probably would not have ceased his onward progress until he had either fallen down exhausted or met with some accident, had not a gentleman who knew him stopped him and brought him back to Peterborough.

IN consequence of the length of the report of the proceedings of the Select Committee on Medical Reform, several reports of Branch meetings, and other matter marked for insertion, are unavoidably postponed to next week.

A Disinfectant for Sick-Rooms.

SIR,—Some time since, I wrote to the BRITISH MEDICAL JOURNAL, and gave a formula of a disinfecting wash for use in sick-rooms—the wash containing creasote and acetic acid. I had found that most patients would not suffer the introduction of carbolic acid into their chambers, and I had to cast about for something to take its place. Condy's fluid and chloralum proved feeble and uncertain, and chloride of lime was as ill-borne as carbolic acid. On finding the creasote wash answered so well, I was induced to try if I could incorporate it into a soap, and I think I have succeeded.—I am, sir, yours sincerely,

FRANCIS VACHER.

Birkenhead, June 27th, 1879.

The Council of the Royal College of Surgeons.

SIR,—"A London Fellow" last week in the BRITISH MEDICAL JOURNAL, stated that there were six provincial Fellows in the Council. How can that be, when Messrs. Hancock and Clark are always considered to be London Fellows, and practise as such in town, and have their known places for consultation there? In fact, there are only four Fellows from the provinces.—I am, yours truly,

HENRY HARRIS.

Redruth, July 1st, 1879.

DR. A. H. KEOGH.—An exhaustive treatise on diseases of the nervous system is much needed. The articles on the subject in Ziemssen's *Encyclopædia*, or in Reynolds's *System of Medicine*, give the most complete and recent information, but with the drawback of varied authorship and unequal quality of the different articles. Hammond's *Treatise* perhaps comes nearest to the requirement stated; but Wilks's *Lectures* are in their way unequalled, though not constituting a treatise.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; etc.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Joseph Lister, London; Mr. T. Spencer Wells, London; Dr. Churton, Leeds; Dr. P. Macpherson, London; Dr. Sealy, Weybridge; Dr. J. S. Torrop, Heywood; Dr. McGusty, Slane; Dr. Hewson, Stafford; Mr. R. W. Parker, London; Mr. H. Ll. Williams, Dolgelley; Mr. D. B. Balding, Royston; Mr. J. W. Stride, Brighton; Inquisitor; Dr. Joseph Coats, Glasgow; Dr. A. G. McHattie, St. John's, Antigua; X.; Dr. G. W. Hutchison, Chipping Norton; Mr. A. Waters, Lynton; Our Dublin Correspondent; A Country Doctor; Mr. G. Brown, London; Dr. J. W. Moore, Dublin; Dr. John Smith, Dumfries; Mr. J. Cochrane, Edinburgh; D.; Dr. T. F. Pearse, Bramshot; Dr. H. Harris, Redruth; Dr. Dyce Duckworth, London; Our Edinburgh Correspondent; Mr. L. J. Wilding, Dublin; Mr. W. Jameson, Dublin; Mr. Gaskoin, London; Dr. Kelly, Taunton; Colonel Stanley, London; Deputy Surgeon-General Woodward, London; Our Glasgow Correspondent; Dr. C. S. Roy, Strasburg; Mr. Chiene, Edinburgh; Mr. H. G. Murray, Henfield; Mr. G. E. Stanger, Nottingham; Dr. Shorthouse, Croydon; Dr. Lloyd Roberts, Denbigh; M.R.C.S. Dental Surgeon; Dr. Joseph Rogers, London; The Rev. Dr. Haughton, Dublin; Mr. Buxton Shillitoe, London; Dr. Fairlie Clarke, Southborough; Dr. J. Hardie, Manchester; Dr. A. H. Keogh, London; Mr. Bearcroft, Droitwich; Dr. Goodhart, London; Mr. C. Spurway, Bellagio; Mr. J. C. P. Muir, London; Dr. Procter, York; Hirsutus; F.R.C.S.; Dr. W. Garstang, Blackburn; Mr. J. A. Hedges, Leighton Buzzard; R. M. S.; Dr. Goyder, Bradford; Dr. A. De Watteville, London; Mr. B. Roth, Brighton; Mrs. Heber Percy, Pwllheli; Mr. J. Lyons, London; Mr. E. C. Cripps, London; Mr. J. Pollard, Torquay; Dr. T. W. Thursfield, Leamington; Mr. Brenill, Dudley; Dr. R. T. Wright, Farnborough; Dr. A. W. Edis, London; Dr. A. Doran, London; Dr. E. Wells, Reading; Dr. D. Drummond, Newcastle-upon-Tyne; Dr. W. C. Arnison, Newcastle-upon-Tyne; M.D.; Dr. Burdon Sanderson, London; Dr. G. H. B. Macleod, Glasgow; M. O. H.; Mr. George Eastes, London; Messrs. Newman and Sons, Barnsley; Dr. Taylor, Cardiff; Dr. A. Davidson, Liverpool; Dr. J. Ward Cousins, Southsea; Mr. F. Walker, London; Dr. Laffan, Cashel; Dr. Pearson, Stockton; Dr. Caton, Liverpool; Z.; Mr. W. Sedgwick, London; Dr. H. D. Ellis, Eastbourne; Dr. F. P. Atkinson, Kingston-on-Thames; Dr. Warner, London; Mr. Andrew, Plympton; Dr. Habgood, Eastbourne; Mr. W. J. Beatty, Belper; Our Indian Correspondent; Mr. J. B. James, London; Mr. J. P. Drinkwater, Llangollen; Mr. W. W. Elmslie, Shrewsbury; Dr. R. Mackechnie, Rutherglen; Our Paris Correspondent; Mrs. L. Norris, London; Surgeon-Major Boileau, Netley; Dr. N. E. Price, West Brighton; Mr. F. W. Wright, Derby; Dr. E. B. Baxter, London; Mr. D. H. Gabb, Hastings; Dr. H. Radcliffe Crocker, London; Dr. Alfred Meadows, London; Dr. A. T. Carson, Portrush; Mr. Jackson, Plymouth; Mrs. Sarah Gribble, Turnham Green; Messrs. Harvey and Reynolds, Leeds; Dr. Herbert J. Capon, Dorchester; Dr. W. A. Elliston, Ipswich; Dr. Henry Bennet, London; Mr. Nelson Hardy, London; Dr. W. R. Thomas, Sheffield; The Secretary of Apothecaries' Hall; Dr. Anningson, Cambridge; Dr. Tripe, Hackney; Mr. Blott, London; Dr. E. Waters, Chester; Dr. Jukes Styrap, Shrewsbury; Dr. Broadbent, London; Surgeon-Major H. P.; Mr. W. Battle, London; Sir Trevor Lawrence, London; Mr. C. Clarke, London; Mr. John Brock, London; Dr. Dudfield, London; Dr. Dunglison, Philadelphia; Dr. Thompson, Leamington; Mr. T. D. Acland, London; Mr. W. G. Balfour, London; etc.

REMARKS
ON
GENERAL EXFOLIATIVE DERMATITIS.

BY
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THE cases which form the nucleus of the following communication are interesting, not merely as illustrations of a somewhat rare condition, but also because they appear, when taken together with similar ones recorded from time to time by competent observers, to throw light on a large class of cutaneous affections of a more everyday kind. Again, it is not often that a skin-disease is dangerous to life; and it is important that the possibility of such danger and the signs which indicate its advent should be more generally recognised than they are. Such recognition is greatly facilitated by grouping a number of allied cases under one head, and attempting to trace their relationship to one another. Efforts at synthesis, while many essential elements of a problem are unknown, must necessarily yield only provisional results; but provisional results are often of value at the bedside.

The term "exfoliative dermatitis" was originally applied by Mr. Erasmus Wilson to a group of cases which he believed himself to have identified with the "pityriasis rubra" of Hebra. In his treatise on *Diseases of the Skin* (sixth edition, 1867), he classes them among "ekzematous affections", and suggests that "ekzema foliaceum", or "pityriasis foliacea", would fix attention more effectually than the name used by Hebra on their chief feature—the profuse shedding of the cuticle. In his *Lectures on Ekzema* (1870), he returns to the question of nomenclature, and discusses it at considerable length. Retaining his belief in the identity of his own cases with those referred to by Hebra, he abandons the word "pityriasis" altogether, and adopts "exfoliative dermatitis" in its stead. On referring to Hebra's work, however (*New Sydenham Society's Translation*, vol. II, p. 69), we find him, curiously enough, expressing the opinion that both Rayer and Wilson use the term "pityriasis rubra" in a sense fundamentally different from that to which he is desirous of restricting it; adding, "that it would appear that none of these writers had seen cases of universal pityriasis rubra such as I am about to describe". To this question of the identity or non-identity of the two affections, it will be necessary to return. Here, it is enough to say that I have chosen the term "exfoliative dermatitis", first, because it involves no theory of pathological affinity, such as may be implied in *pityriasis* foliacea, *eczema* foliaceum; secondly, because it has never, so far as I know, been applied to any other disease of the skin; thirdly, because it directs attention to the epidermal flux as the leading feature of the malady.

The following is an eminently typical example of the disease, which was kept under observation throughout its course, and completed by a necropsy.

CASE I.—*General Exfoliative Dermatitis running a rapid course: Pyrexia: Death, preceded by Albuminuria, Œdema of the Lungs, and Diarrhœa.*—Agnes B., aged 6, was admitted into King's College Hospital under Dr. Playfair on April 17th, 1877.

History. (From notes by Mr. R. CLARKE).—Her previous health was good. She never had scarlet fever or measles. There was no tendency to skin-disease in her family. Twelve months ago, she suffered from chilblains on the feet, which never quite healed. Five weeks before admission, the skin round the mouth was noticed to be "scurfy". A fortnight later, after a fright, her face grew white and puffy, and began to "scale off". Within four days, the scaliness had spread all over the trunk and limbs. Since then, she had been very irritable, complaining alternately of feeling hot and cold.

On admission, she was stated to be a fairly nourished child. The skin all over the body was of a deep red colour, stiff, and peeling in large flakes. In the fold of the armpits, it was beginning to crack and weep. The nails and hair were not affected. The urine was repeatedly examined; it was clear, specific gravity about 1030, containing no trace of blood or albumen. A little crepitation was occasionally heard over the base of each lung. Her appetite was excellent, sometimes voracious; bowels regular. Temperature normal.

I saw her first on May 18th, and made the following note of her condition. "The skin all over the body is of an uniform dull red, almost coppery hue. It is universally infiltrated and brawny. On account of its stiffness, it cannot be moved over subjacent parts, though it is nowhere adherent to them. About the face and joints, more especially, it is stretched and hide-bound, interfering very much with movement. The scalp is covered with closely clipped hair, felted together by dried exudation mixed with abundant silvery scales. The face is immovable and expressionless, its skin resembling bacon-rind in consistency. The eyelids, more particularly, are quite rigid, and the eyes wide open; when asked to shut them, she rolls the eyeballs up under the upper lids, without moving the lids themselves. The latter are considerably everted; conjunctivæ uniformly and deeply injected, studded with flakes of pus. No chemosis. The cornea in each eye exhibits a linear crescent-shaped ulcer in its lower half. The ears are rigid, as if cut out of thick cardboard. The lips alone retain a slight degree of mobility, and feel soft to the fingers. The mucous membrane seems normal in colour and texture; the tongue can be put out with ease, and is not furred. The whole surface of the face and neck is peeling in large whitish flakes, which extend into the meatus on both sides. Behind the ears, the skin is a little cracked and weeping; elsewhere it is perfectly dry. The trunk and limbs are in much the same state as the face. Large papery squames are continually separating from the infiltrated skin and accumulating in the bed. Here and there, on the chest and belly, the respiratory movements have cracked the most superficial layer of the cutis, the branching fissures containing a little dried blood. In the axillary and other flexures, the cracks weep slightly. Joints all stiff. Hands and feet uniformly red, scaly, swollen, and immovable. The nails of the fingers and toes are in a peculiar condition; the distal half of each nail is normal in texture and bent into a claw; its proximal half, on the other hand, is fibrous, rough, and wasted. The body exhales a peculiar sickly odour. Notwithstanding her lamentable condition, unable to move any part of her body, the child does not appear to suffer much. Her appetite is fairly good. Pulse 140; breathing 30; temperature 99.5° Fahr."

She grew steadily worse from this time forward. On June 5th, the day before her death, the following notes were made. "During the last few days, emaciation has been rapid. The urine now contains albumen. Bubbling crepitation is heard all over both lungs. Breathing 76, entirely diaphragmatic. The bowels act several times a-day; motions very loose. She suffers much from thirst, and takes nothing but milk; this is put into her mouth with a spoon, but, owing to the immobility of the lips and cheeks, much of it trickles out again without being swallowed. She lies on her back, unable to move any part of her body. The aspect of the face is rendered peculiarly horrible by the condition of the eyes; these are wide open, the conjunctivæ of a deep red, almost purple, colour, and the cornea represented on both sides by a conical heap of dried scab. The skin is everywhere paler than it was, with a decided greenish-yellow undertint. The exfoliation goes on as profusely and universally as ever. The superficial cracks noticed above are now very numerous; those on the abdomen are seen to gape with every inspiration."

Thirty-six hours later she was dead. Her temperature was taken twice a-day throughout her illness. Normal at first, during the second week of her stay in the hospital it rose occasionally, in the evening, to 100°; during the fourth and fifth weeks, it fluctuated between 99° and 101.5°.

Shortly after her admission, she was ordered six minims of liquor arsenicalis three times a-day. She took it for three days only; it had to be stopped because it made her sick. From April 25th to May 3rd, she had a tepid bath of an hour's duration every day; the baths were then discontinued. After that time, she was treated with diuretics and simple unguents. None of the measures adopted seem to have exercised any influence on the course of the disease.

A *post mortem* examination was made by the pathological registrar, Mr. Barrow, forty-five hours after death. The following is taken from his report: "Considerable emaciation; hardly any subcutaneous fat; cutis still slightly reddened. Old adhesions between omentum and abdominal wall; here and there, too, between adjoining knuckles of intestine. Liver firmly adherent to diaphragm, partially to duodenum and colon; weight, 31½ oz.; rather fatty. Spleen partially adherent to abdominal wall; its parenchyma apparently normal. A small collection of clear fluid in pleural and pericardial sacs. Heart's walls thin, rather soft. Valves normal. Lungs pale and emphysematous anteriorly; congested and œdematous behind; bronchial tubes choked with secretion."

Portions of skin from the arm and finger-tip, together with the brain and cord, were set aside for further examination. The pieces of skin were hardened in weak spirit; sections were stained with logwood and mounted in damar. As usually happens, the changes found after death were insignificant in comparison with those observed during life. They were limited, indeed, to the epidermis and papillary body, including the hair-follicles. The corium proper appeared normal; the clusters of fat-cells in its deeper layers were not shrivelled, their nuclei not undergoing multiplication. The almost brawny consistency of the thickened cutis, in the earlier stages of the malady, seems to have been due chiefly, if not entirely, to an exudation of liquid which underwent absorption before death. The papillæ showed a moderate degree of overgrowth, and the interpapillary processes of the *rete Malpighii* extended rather more deeply than usual. The corpuscular elements of the hair-sheaths showed signs of having shared in the general proliferation of the epidermic tissues. But the principal change was in the upper layers of the cuticle. The rete was no longer sharply marked off from the horny layer by the granular deeply stained elements of the *zona granulosa* (*stratum lucidum*); the latter, indeed, had altogether disappeared; and the transition from the polygonal corpuscles of the rete, which greedily absorbed the dye-stuff, to the flat colourless scales of the *stratum corneum*, was most gradual. Even in the most superficial layers of the enormously thickened and lamellated cuticle (at least nine times its normal depth), flattened nuclei, faintly stained, might be seen lying parallel to the surface.

Sections of the pons, medulla oblongata, and spinal cord (in all its regions) were carefully examined, but with negative results.

The above case affords a striking illustration of the way in which the system may temporarily accommodate itself to a serious interference with the functions of the entire cutaneous envelope. It was not till a comparatively late stage that emaciation, albuminuria, and other grave symptoms made their appearance. These symptoms, as well as the changes found after death in the solid viscera, remind one of the effects produced in some of the lower animals by varnishing. When the whole body of a rabbit is coated with varnish, death very speedily ensues. When the coating is partial (above one-sixth of the total surface), the animal succumbs more slowly, with symptoms of blood-poisoning, possibly due to the secondary changes that take place in its kidneys. But the analogy is probably, after all, a superficial and misleading one; for, on the one hand, all the morbid phenomena, whether acute or chronic, resulting from varnishing of the surface in the lower animals, may be accounted for by the rapid loss of heat with which the activity of the thermogenetic processes is unable to keep pace.* On the other hand, it has been shown by Senator (Virchow's *Archiv*, vol. lxx, p. 182), that the whole of a man's body (with the exception of the head) may be covered with impermeable plasters and flexible collodion for a whole week without any fall of temperature or other serious effects. In the case we are now considering, there was no abnormal depression of temperature; and, even if we admit that suppression of cutaneous elimination is adequate to cause death, we have no proof that complete suppression occurred in the present instance. Severe exfoliative dermatitis, with much infiltration of the skin, is, as we shall see hereafter, by no means incompatible with very profuse sweating. And the microscopical examination of the skin, in the present case, lends no support to the belief that the sudoriparous glands are implicated in the morbid process. The death of our patient admits of a simply mechanical explanation: owing to the rigidity of the skin, the movements of the chest and abdomen were greatly interfered with; the secretion with which the bronchial tubes were filled could not be expectorated; and suffocation was the necessary consequence.†

That the above case very closely resembles, if it be not identical with, those described by Erasmus Wilson, there can be no doubt. In what relation does it stand to the "pityriasis rubra" of Hebra? An authority on such matters, who saw the patient at an early period of the disease, suggested "acute pityriasis rubra" as the most appropriate designation of her malady. And yet the feature on which Hebra insists most strongly in his description of "pityriasis rubra" is its exceedingly chronic character. If we throw the leading symptoms given by him into a tabular form, they appear to offer a marked contrast to those enumerated above.

Pityriasis rubra of Hebra.	*Case of Agnes B.*
1. Absence of infiltration.	1. Infiltration universal and considerable in degree.
2. No rhagades.	2. Rhagades numerous.
3. Desquamation slight; scales small and branny.	3. Desquamation most profuse, in large papery squames.
4. Nails remain healthy; system less affected than in lichen ruber.	4. Nails much altered; system profoundly affected.
5. Remarkably chronic course; drags on for years.	5. Death in less than ten weeks from onset.

It seems clear that, as Hebra excludes Wilson's cases from his definition, our case would necessarily be excluded too. But we shall see, as we go on, that the characteristics tabulated above possess no absolute value, and that the indiscriminate use of "exfoliative dermatitis" and "pityriasis rubra" by Magee Finny, Sparks, and others, is justified by the existence of numerous transitional forms which intervene between the extreme terms of the series, and bring them into closer connection with each other. Even chronicity is not an essential distinction; for Hebra admits Devergie's cases, while excluding Wilson's, though he expresses surprise at the former observer's calling his cases "pityriasis rubra *aiguë*", since, "in his own description of the disease, he insists on its long duration, and on its tendency to relapse". How far this explanation is a valid one, the reader may judge from cases VII and VIII in the following summary, in which I have put together brief abstracts of cases of exfoliative dermatitis, differing from one another in many of the features laid down as characteristic by Hebra, but resembling one another in that they are all of them *primary; i.e.*, that the dermatitis did not grow out of, and was not engrafted upon, any other skin-disease. (Group A.)

But exfoliative dermatitis is not always primary. The next two cases illustrate its occasional supervention on eczematous affections.

CASE II. *Eczema of Head and Face three months: Rapid Invasion of General Exfoliative Dermatitis, lasting eight weeks, and ending in Death.*—Henry T., six months old, was brought to the Blackfriars Hospital for Diseases of the Skin on May 24th, 1877, by his mother, a young and remarkably healthy looking woman. When fourteen years old, she had an eruption about the head and back (eczema?), which soon got well under treatment, and never recurred. The patient was her second child; the first, a girl two years of age, had always enjoyed perfect health, and had never had anything the matter with her skin.

The boy had been suckled, and had not had any other food. His health had always been excellent. He was born with a clear skin; but, five weeks after birth, a moist rash broke out on the scalp, followed by swelling and suppuration of the nuchal glands. The rash continued limited to the scalp and face for a long time. About eight weeks ago, however, it spread rather suddenly to the trunk and limbs; its extension was preceded and accompanied by a good deal of irritation. During the last few days, he had been losing flesh, and his voice had grown hoarse. The itching, too, appeared to have ceased; at any rate, he no longer tried to scratch himself.

He was a fairly nourished infant, but looked extremely ill. The skin of the head and face was uniformly reddened and covered with large thin scales; there were also some honey-like crusts behind the ears and underneath the jaw. The nuchal glands were swollen. Over the trunk and limbs, the cutis was of a dull red colour, with a decided yellowish tinge, and slightly infiltrated; the colour varied in depth, so that the surface looked rather mottled. It was covered with very large thin flakes of greyish papery cuticle, easily detached at their edges, and constantly being renewed. The desquamation was very marked on the palms and soles, which were of a deeper tint than the rest of the body. In all the flexures, the skin was cracked and bleeding. (This had only been observed quite lately.) All the nails were affected. The distal third looked normal, and was separated by a transverse furrow from the proximal two-thirds; the latter being made up of an irregular mass of parallel horny fibres. Various lotions and ointments had been applied, and various medicines administered, but without avail. There was no suspicion of any syphilitic taint. The boy had never had thrush or snuffles; the interior of the mouth and throat looked healthy; there were no condylomata about the anus.

The patient died, rather suddenly, on the day after he was brought to the hospital. No *post mortem* examination was made.

CASE III.—*Pityriasis Capitis: Erythema Papulatum: Sudden Invasion of General Exfoliative Dermatitis: Recovery.*—S. C., aged 28, presented herself at Blackfriars on May 24th, 1877. She had occasionally suffered from "small red bumps" on the arms and face during the last two years. When she applied, there was some branny desquamation going on behind the ears and on the scalp, and a crop of erythema papulatum on the back of both forearms and hands. No marked change was noticed till July 5th, when patches of erythema made their

* Professor Laschkewitsch has recently taken the trouble to re-investigate the subject which his researches of many years ago might seem to have finally settled. More than one observer has endeavoured, of late years, to revive the doctrine of "suppressed cutaneous elimination" as the true cause of the phenomena witnessed in animals after extensive varnishing. Laschkewitsch brings forward fresh experimental evidence, of a most convincing character, in support of his original contention that increased loss of heat is the true cause, and the sole cause, of the phenomena; the symptoms of toxæmia noticed when death is delayed being exactly paralleled by those occurring in animals exposed to temperatures sufficiently low to prevent adequate compensation for the heat given off, but not low enough to kill rapidly.—Lomikowsky, *Journal de l'Anat. et de la Phys.*, Juillet-Août, 1878.

† This, of course, must not be taken to mean that death might have been averted by a removal of the liquid by which the lungs were clogged. It would only have been delayed. The rapid loss of flesh and strength was independent of the hindrance to respiration, and would undoubtedly have proved fatal at no distant period.

GROUP A.—CASES OF PRIMARY EXFOLIATIVE DERMATITIS.

No.	Sex; Age; Reference. Name given.	Previous History.	Integument.	General Symptoms.	Treatment.	Result, etc.
1.	Male, 38. Hans von Hebra, *Vierteljahrschr. f. Dermatologie*, 1876, p. 508. "Pityriasis rubra universalis".	Colour of skin unnatural since small-pox at age of eight. Red when warm, blue when cold. Desquamation first noticed on lower limbs two years before admission; in eight months had become universal. After it had lasted six months, all the hair fell off (scalp, beard, pubes).	Universal redness, partly bright, partly dull. Skin very stiff, and partly swollen on extremities. Very profuse desquamation in large flakes. Here and there, cuticle broken into lozenge-shaped areolæ by shallow fissures, especially on face. Marked ectropion of lower lids; nearly bald; rhagades about flexures; nails of fingers and toes irregularly curved, thin, softened.	Rather thin and weak; movements greatly interfered with.	*External:* 1. Oleum morrhuæ; 2. Continuous bath; 3. Benzine; 4. India-rubber clothing; 5. Unguentum diachyli; 6. Ung. hydrargyri ammoniati. — *Internal:* Pill containing arsenious acid 1-10th gr., 3 daily, gradually increased to 12; continued till he had taken 2000. After an interval of two years, same course repeated. Swallowed altogether 400 grains of arsenious acid.	Spent three years and a half in hospital. Only change noticed was in hue of skin from bright red to a brownish tint. Died of phthisis. *Post mortem* examination: Pneumonic phthisis; tubercular peritonitis, with ulcers in large and small intestine. Cheesy lump in right hemisphere of cerebellum; another in right cerebral hemisphere. Fatty liver.
2.	Male, 53. H. von Hebra, *ibidem.* "Pityriasis rubra universalis".	A year before admission, face grew red and scaly; soon spread over whole body. Considerable pruritus.	Skin universally reddened and desquamating. Hair thin; comes out very easily. Nails unnaturally soft.	Pulmonary phthisis. Much broken down. Fever; cough; profuse night-sweats.	*External:* Oleum morrhuæ. No internal remedies.	Died a month after admission. *Post mortem* examination: Destructive changes in lungs; ulcers in colon; fatty liver.
3.	Female, 9. Norman Moore, *St. Barth. Hospital Reports*, 1874. "Pityriasis rubra, in Hebra's sense".	Skin began to get red in August 1870. Since then, has got steadily worse. First seen in June 1873.	General redness; branny desquamation; hands glossy and of a brighter red; forehead mottled. Elsewhere the redness is not uniform, but generally mottled. Palms are peeling; hair and nails normal; face sometimes puffy.	Mitral regurgitation. Urine normal; very thin and weak. Temperature 98.8° to 100.8°, usually raised.	*External:* Oiling. *Internal:* Oleum morrhuæ.	Grew weaker for a time. Redness persisted, but grew less intense. Ultimate issue not stated.
4.	Female, 48. Sparks, BRITISH MED. JOURNAL, Nov. 6th, 1875. "General exfol. dermatitis or pityriasis rubra".	More than one attack of rheumatic fever. Eight living children. Skin had long been rough and dry, but without scaliness: two months before admission, became unnaturally red, and inclined to peel in bend of elbows and axillæ.	Diffuse redness, very general if not universal; skin thickened and parchment-like; profuse desquamation, which showed a tendency to relapse; crops of flat, indolent pustules on various parts; absence of moist discharge, crusting, and pruritus.	Pains in joints; febrile pulse; temperature fluctuating between 101° and 102.5°; brown tongue; extreme prostration, with blunting of intellect and occasional delirium; constipation; slight albuminuria.	*External:* soap and water; unguentum simplex. *Internal:* Quinine; iron during convalescence; no arsenic.	Seven weeks after admission, skin was normal; hair fell off. No alteration of nails observed. Recovery complete.
5.	Female, 77. Hutchinson, *Syd. Soc. Catal.*, plate xxx. "Pityriasis rubra".	Skin always healthy but dry, with brittle nails. In a hot September, redness and *intolerable itching* came on rather suddenly. in three days, whole surface of body affected.	Four months later, universal redness without infiltration; exfoliation of large lamellated scales from all parts; nails much altered; no eczema. Three months afterwards, exfoliation very profuse; hands crippled by curving and stiffening of fingers; skin of face rather tight; eyes irritable; scalp matted into a whitish crust, including remaining hairs, which were few and short; did not become moist or offensive.	Debility appeared to threaten a fatal termination three months after its commencement. Fever not mentioned.	Arsenic given for a short time, but without apparent benefit. It was not pushed.	Ultimate recovery. Lived for several years without a relapse.
6.	Male, 69. Erasmus Wilson, *Diseases of the Skin.* "Pityriasis rubra foliacea".	Onset sudden; became universal in a few days. Previous history of patient not given.	Scarlet from head to foot; dry exfoliation. Lasted a whole winter; got better in summer; returned next winter. No moisture or itching; nails not mentioned; exfoliation most profuse.	Grew thinner.	Not mentioned.	Died, during the second winter, of "bronchitis".
7.	Female, 61. Devergie, *Mal de la Peau.* "Pityriasis rubra se transformant en pemphigus".	Erythema and desquamation set in two months and a half before admission. Previous history not given.	Large patches of erythema, coated with large squames, all over the body, very extensive, without being universal; then an "erysipelatous attack", during which the patches spread more widely, and exuded here and there a small quantity of viscous liquid, with a peculiarly nauseous odour. This liquid, here and there, raised the pre-existing squames into bullæ, which burst as soon as they were formed.	Diarrhœa. Fever of remittent type.	*External:* Oils and unguents. *Internal:* Quinine and iron.	Gradual improvement in her general condition. Ultimate issue not stated.
8.	Male, 52. Devergie, *ibid.* Under the same heading.	Under treatment for five years before admission. No clear history to be got, owing to patient's stupidity.	Admitted with "pityriasis rubra" very general, but not universal. Three months later, febrile action manifested itself, during which the skin-disease underwent great extension, and, from having been perfectly dry, with simple exfoliation, began to secrete a viscid liquid of a disgusting odour, "characteristic of pemphigus".	Occasional diarrhœa; great weakness.	Quinine and iron.	Twelve months later, after various exacerbations and remissions, the patient was still covered with "squames croûteuses", a "mixture of pityriasis and pemphigus". Extent of surface involved somewhat diminished.

appearance on the face and neck, chest, legs, and feet, as well as on the arms. These gradually subsided, and she thought she was getting better, when, on July 26th, the feet and legs swelled up, and turned of a vivid red colour ("just like erysipelas"); there was much painful tingling. The reddened surface was glossy and quite dry.

On July 30th, I saw her, and made the following notes. "Face and neck of a uniform reddish hue; skin not stiff or infiltrated; slight furfuraceous desquamation. Hair very thin; she has been combing out a good deal for several months; there has been some pityriasis of the scalp. She has lost a good many hairs from the eyebrows and eyelashes. Over the entire trunk, the skin is reddened, but not infiltrated; over the back, the red colour is not uniform, but presents a somewhat

mottled appearance. Exfoliation is going on all over the surface; the epidermic lamellæ are large, but excessively thin; they are renewed as fast as they are shed. The arms and hands are rose-coloured, with slight mottling here and there, and very abundant exfoliation of small branny scales. On the palms, the cuticle is thick, and comes off in larger pieces; the colour of the underlying skin, too, is deeper. The lower extremities resemble the upper ones in colour (the vivid redness having subsided); the legs and feet are œdematous, and rather tender. On the thighs, the cuticle is coming off in large, very thin squames. On the feet, the lamellæ are tough and coherent; one foot, indeed, looks as if its epidermic covering could be stripped off in a single piece, like a sock.

"The nails look healthy; but the proximal third of every nail is softer than usual. The eruption is everywhere quite dry; no cracking or weeping in any of the flexures. It is interesting to note that she continues to perspire most profusely; she has always perspired readily in hot weather; and the universal eruption from which she is now suffering does not appear to have interfered in the very least with the activity of her sudoriparous glands. Since the skin grew red, she has suffered much from burning and itching, which kept her awake at night. No scratch-marks are to be detected anywhere. Her throat has been a little sore. The fauces are slightly injected, and the gums are here and there studded with white patches. These are easily removed, leaving the mucous membrane slightly rough—like ground glass—but otherwise unaltered. On microscopic examination, the white matter is seen to consist of a felt-like aggregate of long slender *bacilli*, enclosing nest-like spaces filled with a glœa containing innumerable spheroidal particles (*micrococci?*), unaffected by liquor potassæ. She has been very thirsty, has lost her appetite, and has grown much thinner during the last fortnight. The urine is clear and pale, containing neither sugar nor albumen."

By August 10th, the skin had almost regained its normal hue. Furfuraceous desquamation was still profuse and universal; on the palms and soles, the cuticle peeled off in large thick flakes. Her hair was falling off. Her appetite was improving.

During September, she was confined to her bed with an attack of acute articular rheumatism, and was unable to visit the hospital. She told me that she had suffered severely from rheumatic fever at the age of twelve.

On November 1st, I saw her again. With the exception of a little rosy mottling on the face, the skin was everywhere healthy. There was no desquamation. Hair was still being shed, but fresh hair was coming up to take its place. Some of the nails had dropped off; others were soft, rough, and fibrous at their bases.

In the foregoing case, the very profuse sweating, and the rapid loss of flesh and strength during the process of exfoliation, are worthy of note. The occurrence of acute rheumatism, moreover, is not unfrequently observed in the subjects of general dermatitis; whether the association is more than accidental cannot at present be determined.

[*To be continued.*]

ON THE TREATMENT OF SYPHILIS WITHOUT MERCURY.*

By J. P. H. BOILEAU, B.A., M.D., F.R.C.S.I., Surgeon-Major,
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It is, I can assure you, with some reluctance that I have undertaken to lay before the British Medical Association the results of my experience in the treatment of syphilis without mercury, knowing that by so doing I must expose myself to a good deal of hostile criticism; and, indeed, it is with considerable diffidence that I venture to address, on any professional subject, such an assembly as this. I am here, however, in obedience to the conviction that it is my duty to record my experience, and to subject my inferences to the judgment of more competent and more practised observers than myself.

It is believed by not a few, that no wise man would attempt to dispute the efficacy of mercury as an antidote to syphilis. Many hold that the disease cannot be eradicated from the system without the use of the mineral. With my experience, I cannot but hesitate to accept such views.

My position is briefly this. In May 1865, I was gazetted to a regiment about to proceed abroad. I served with it in the Mediterranean, in Canada, and in the West Indies, and at home; and left it in October 1876. For ten years of that period, I was most closely associated with the regiment, and had many facilities for prosecuting inquiries into the *results of the treatment of disease, and, by observations, continued year after year, for satisfying myself as to the state of my patients, long after they had been the subjects of my treatment;* and so I am in a position to-day to bring to your notice, not only cases of syphilis treated without mercury, but, I believe, cases of syphilis cured (by natural processes, or otherwise) without mercury.

The principle which in the main guided me in the treatment of syphilis, was the principle of avoiding mercury as much as possible; and, in carrying out this principle, I treated most of the cases without prescribing any form of that remedy. Rarely did I resort to fumigation or inunction; and I now believe that it would have been better had I discarded all local remedies having mercury in their composition. As a rule, I did not use such applications. I tried the internal administration of mercury in some cases, without being at all satisfied concerning its alleged antidotal or curative powers.

My general principle is well attested by a gentleman (now a commissioned officer, and occupying one of the most responsible positions in connection with the Army Hospital Corps) who for eight years as hospital sergeant and compounder carried out my instructions. In reply to questions which I have sent him, he writes: "As regards your treatment of syphilis, I know you were always averse to ordering mercury for the disease; indeed, I am quite certain of this, as you invariably marked the venereal register—NO MERCURY." And he adds: "As well as I can recollect now, all the men treated by you for the disease made good recoveries. And I don't remember a single man who was invalided, excepting L."

Such are the indisputable facts of the case. For several years, I treated syphilis, in the majority of cases, without the use of mercury internally or externally; and in all such cases, without any exception, the ulterior results were most highly satisfactory; even the man L., who was invalided, returned to his duty in good health, and served for some years afterwards.

The following cases illustrate the general mode of treatment, and its results.

CASE I.—A. M., aged 32, had a solitary sore in grizzly induration. The occipital and inguinal glands were much enlarged. He had roseola and rheumatoid pains. He was treated in September 1867, locally, by fuming nitric acid, and water-dressing. The chancre healed in twenty-three days. Internally, he had iodide of potassium, nitrate of potash, compound ipecacuanha powder, and liquor opii sedativus. In February 1868, he was looking well, and at duty. In March 1871, he was in excellent health; and he continued so until he was discharged the service.

CASE II.—B. T., aged 20, had an indurated sore, roseolar and papular rash, psoriasis of the arms, and very severe ulceration of the tonsils. He was treated October 1867, locally, by nitrate of silver and sulphate of copper. Internally, he had iodide of potassium, cinchona, and compound ipecacuanha powder. In May 1868, he was in excellent health, and remained in good health until transferred to another regiment in February 1873. I heard in 1877 that he was in good health.

CASE III.—C. J., aged 25, had an indurated sore, indurated glands in both groins, and roseolar and papular eruption, very marked and widely spread. He was treated in December 1867. He was in very good health when he took his discharge in 1871, and also by accounts lately received. The only local application was cold water; and the chancre healed readily, although the induration was very persistent. Iodide of potassium was administered in decoctum cinchonæ, and he had the usual hot baths.

I must state that all my cases of syphilis were treated by hot baths. Whatever variety there may have been in the use of other remedies, there was none in this. *Hot baths was the standing order for all cases of syphilis.* And, for the most part, the men were strictly confined to bed, often notwithstanding their entreaties to be allowed to get up. The most scrupulous attention was paid to the cleanliness of their linen.

CASE IV.—D. W., aged 25, seven weeks previously to his admission for true Hunterian chancre, was under treatment for phagedenic ulceration of the prepuce. With the hard sore, he had indurated inguinal glands. The initiatory fever of secondaries soon appeared, and with it a dusky purplish papular rash, having a pustular tendency. The nates became covered with condylomata, and the scrotum before long looked like a piece of raw beef, dotted with little patches of oyster-shell. He was treated in December 1867, locally, by sulphate of copper. Internally, he had iodide of potassium, cinchona, and Dover's powder. In May 1868, his temperature was 98°, tongue clean, skin perfectly clear; there was not a trace of any rash, pimple, or sore. The scrotum was perfectly healthy looking. He was in robust health, and he continued so until he deserted some years afterwards.

CASE V.—E. D., aged 25, had a circular indurated ulcer, enlarged and indurated glands in the right groin, roseola, and a papular rash. He was treated in July 1868, locally, with cold water only by day; and by

* Read before the Bath meeting of the British Medical Association, 1878.

night, unguentum simplex. Internally, he took chlorate of potash, quinine, and Dover's powder. In October 1868, he was in good health. In March 1871, he was in excellent health. In 1878, he was in good health, and still in the service.

CASE VI.—F. G., aged 26, was twenty-six days in hospital for primary sore, with inflamed glands, which did not suppurate. He had a papular eruption over the whole body, and ulceration of the tonsils. He lost all the hair on his head and face. He was treated in September 1868. In May 1869, there was no trace whatever of the disease. He was in good health when discharged the service in 1871; his hair had all grown again. Chlorate of potash and Dover's powder were the remedies employed.

CASE VII.—G. C., aged 20, had Hunterian chancre, with indurated glands on both sides, and roseolar and papular rash. He was treated, in August 1868, for phimosis, complicated to such an extent that circumcision was necessitated. Alum and carbolic acid were used locally, and iodide of potassium and Dover's powder internally. In December 1868, his health was good. In June 1869, he had not a trace of the disease about him. In March 1871, he was in excellent health. There was a very fine white cicatricial line on the prepuce.

CASE VIII.—H. C., aged 26, was treated in November 1869. He was in good health in Jamaica in 1871. In 1878, I was informed that he was married and the father of two healthy children.

CASE IX.—I. J., aged 22, was treated in December 1869. In January 1871, his health was fair. In May 1871, his health was good. In 1878, he was in good health, and the father of two healthy children.

CASE X.—J. R., aged 19, was treated in January 1869. In January 1870, his health was good. In March 1871, he was in good health, and was so when discharged the service.

The above are examples of cases treated without any mercury. Many others of a similar character passed through my hands; but it is my desire that not only such, but examples of a number in which mercury was locally applied, should be given; because my position is sustained not only by several individual cases such as those narrated, but by the very satisfactory eventual results of all the cases treated by me between 1865 and 1876; and, in order that I may be justified in bringing forward this *tout ensemble* of my practice as a proof of the curability of syphilis without mercury, I am bound to give examples of those cases in which the mineral was locally applied.

CASE XI.—N. G., aged 26, had extensive ulceration in, and surrounded by, cartilaginous induration. The inguinal glands were enlarged. He had roseola and pharyngeal ulceration. Lotio nigra was used in this case. He was treated in October 1868. In March 1869, he was in good health. In April 1870, he had remittent fever, but was discharged in good health in May. In March 1871, he was in excellent health; and in 1877 was still in the service and in good health.

CASE XII.—O. C., aged 23, had a circular solitary indurated ulcer, enlarged inguinal glands, roseolar and papular rash over the whole body, and mucous tubercles on the inside of the thighs; the scrotum was covered by an eruption of papules. On several parts of the body, small gangrenous ulcers appeared; and he had pharyngeal ulceration. The only mercurial preparation used was lotio nigra, and that only for a period not exceeding seven days. He was treated in October 1867. In March 1868, he was in fair health. In May 1868, he looked well and felt so. Not a trace of disease was manifest, excepting some slight coppery patches on the inside of the thighs. In May 1871, he was in excellent health, and was in good health when discharged in 1874.

CASE XIII.—P. M., aged 25, had indurated sores, indurated glands in the right groin, and roseola. Lotio nigra was used for a few days, and the only other drug employed was spirit of nitrous ether in camphor mixture. He was treated in February 1866. In May 1866, he had scarcely a trace of disease about him. He was in good health when he deserted in 1869.

CASE XIV.—Q. L., aged 26, had an excavated hard chancre, four enlarged glands in the left groin, a roseolar and papular eruption, and condylomata of the nates. Lotio nigra was used for a few days, when water-dressing was substituted. He was treated in April 1868, and made a rapid recovery. In June 1869, he was in vigorous health, with no evidence whatever of disease about him. In March 1871, he was in excellent health. In 1878, he was in the service and in good health.

CASE XV.—R. F., aged 23, had a chancre in great cartilaginous induration; the inguinal glands on both sides were enlarged and hard. He had an eruption over the whole body of a roseolar, papular, and squamous character; and tonsillar ulceration. Lotio nigra was used for a few days. He was treated in February 1870. In June 1870, he was in good health. In September 1871, he was in very good health. He was in good health when discharged the service in 1876.

CASE XVI.—S. N., aged 22, had a circular hard sore, indurated glands, and macular rash. Lotio nigra was used. He was treated in October 1871. In 1876, he was in good health, married, and a father of one healthy child.

CASE XVII.—T. J., aged 21, had solitary sore, enlarged glands, roseola, pharyngeal ulceration, and condylomata of the nates, scrotum, and thighs. The only mercurial preparation used was the milder ointment of nitrate of mercury occasionally at night. He was treated in January 1868. In May 1868, he was much improved in health. In August 1868, he had not a trace of disease about him. In March 1871, he was in excellent health. In 1877, he had no trace of disease; his health was good.

Such local applications as black wash, calomel, red precipitate, or citrine ointment do not in the least degree, in my opinion, diminish the value of the cases in establishing the fact that syphilis can be cured without the specific action of mercury. In my cases, the actual amount of mercury imbibed by the system must have been very small indeed; the remedies were not at all pushed, quite the contrary; and any one who could attribute to their use the good results which followed must be a believer in the Hahnemannian doctrine of infinitesimal doses. It must be remembered that advocates of mercury contend that, without approaching the direful effects of salivation, a cure can only be effected by introducing a considerable quantity of the mercury into the system, and by protracting its use over a long period.

Those cases of syphilis in which I have used mercurial preparations locally have, with great complacency, been quoted against me, as mere illustrations of cases cured by diaphoretics, alteratives, and small doses of mercury. I admit nothing of the kind. When I reflect on the composition of these local applications, and on the quantity likely to have been absorbed into the system, I say it is a perversion of the facts to attribute the recoveries in such cases to small doses of mercury. I have, however, treated too many cases of syphilis without any mercurial preparation whatever to doubt that the disease may be cured without them. My sheet-anchor has in all cases been the frequent employment of hot-water baths; the patients being a good deal confined to bed, the most scrupulous attention being paid to personal and surrounding cleanliness, full hospital diet always allowed, and, with some exceptions, a pint bottle of the best ale daily. Iodide of potassium took second place in the treatment, and other salts of the same alkali were freely used at times.

The majority of the patients were young men, and when they contracted the disease were in good health.

During their treatment, they were the subjects of rigorous discipline.

For the purpose of illustration, I have chosen from the hundreds of cases of venereal disease which I have treated only examples of those in which characteristic secondary manifestations followed indurated chancres without suppurating buboes. I thus silence those who might contend that perhaps my cases were not cases of syphilis at all.

I would beg of those who hold that the specific action of mercury is absolutely necessary for the eradication of syphilis from the organism to consult the works of Hughes Bennett, Lancereaux, etc., for a list of observers, committees, or councils that have declared in favour of the simple treatment of syphilis.

My experience as an army medical officer of fifteen years' service, ten of which were passed with one regiment, compels me to believe that syphilis is as curable without mercury as is small-pox or typhoid fever. And until I have some better proof than a mere *ipse dixit* that all the patients that I have treated without mercury are still under the influence of the syphilitic poison, I certainly cannot admit it. To the logic, however, of well sustained facts, I am quite vulnerable.

A PATIENT'S HISTORY OF STRAIN OF THE VALVES OF HIS HEART.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the General Hospital, Birmingham.

THE following particulars, gathered from the patient's account of himself, apply with equal force to a large number of cases of valvular disease in the aortic system. They are not often, however, so clearly conceived by the patient. It will be observed that the tissues exposed to strain were also the subject of any impairment that syphilis and ale-drinking were capable of inflicting upon them.

P. B., aged 45, a powerfully built, magnificently developed Irish labourer, has been in the habit of carrying his hod of bricks, often nearly a hundred weight, up buildings four storeys in height. From the strength of his muscles, he was often picked out when any extra exertion was called for. In the recklessness of energy, it was his practice to run up the ladder rapidly, deposit his load at the top, and drop down again,

doing all in as short a time as possible, that he "might get a few minutes' smoke" at the ladder-foot before his next journey up. More than once, too, he has foolishly tried with how heavy a weight he could climb, and has been "brought to" before getting to the top. Then his master also vends beer, and again the patient's physical power has been called in to deliver eighteen-gallon casks at five o'clock in the morning: a supplement to his other labour which brought with it the added danger of an unlimited allowance of beer. This has been his employment for many years; but for six or seven years, and more particularly for the last two or three, he has noticed that his breath was apt to fail him a little occasionally. After climbing the ladder, he felt a want of breath sometimes; he "used to get a touch of it now and again when he got to the top", and had to rest his hod for a few minutes before depositing his load. Sometimes he has been taken with giddiness on reaching the scaffold; he thought little of it, and used "to take hold of something and hold it till his head got right, telling his mates what was the matter". Again, when getting to the bottom of the ladder, he became liable to feel a lightness in his head, and to lose his eyesight for a few minutes, as if he were "going to take a fit". The trouble would pass away in five or six minutes, and he would mount again. That he put much strain upon his muscles, was evidenced by their aching at night. He took no note of these warnings, but continued his work, and prides himself on never having lost a single day.

After making fifty-nine hours last week (five of them overtime), he went to bed on Saturday considering himself in good health, but at four in the morning was suddenly awakened by a severe attack of what proved to be cardiac dyspnœa, for which he was admitted into the Birmingham General Hospital on the following day (June 14th). Several paroxysms of considerable severity have followed. He presents a very loud regurgitant aortic *bruit*, with almost complete loss of the aortic second sound. He has, besides, a systolic *bruit* at the apex. The apex of the heart beats in the mammary line.

The patient has only once had some rheumatic pain in his hip, which did not disable him. Twenty years ago, he had some venereal affection two or three times; and at present his legs present several cicatrices of a very regular circular or oval shape, and much enlargement of the upper half of one tibia.

A CASE OF AMAUROSIS FUGAX.

By CHARLES EDWARD GLASCOTT, M.D.,
Surgeon to the Royal Eye Hospital, Manchester.

THE following case derives much of its interest from the circumstance that we have here a man in perfect health, and engaged in his daily avocation, suddenly plunged into the most utter darkness, and gradually restored to perfect vision in the course of a fortnight. This occurred without the slightest morbid change observable in the eyes, and was not referable to any known cause; nor was it possible to suggest the cause of the blindness.

Thomas C., a miner, aged 24, was brought to me suffering from sudden blindness. The previous history fails to throw any light upon the etiology of the case. There was no kidney or heart-mischief, no evidence of syphilis, no history of fits, giddiness, or other nervous symptom. He never had had any disease, but a fit of colic four years ago, and had worked as a collier for the last fourteen years without losing a day's work from sickness; and the only accident he ever had was a small scalp-wound on the occiput eighteen months ago. He had been a teetotaller for five years, and only smoked one ounce of tobacco per week.

I first saw him on January 27th, 1877. He stated his case as follows. On going to work at 6 A.M. that morning, his sight was perfectly good, and he worked at getting coal till 8.30, when he noticed suddenly that he was in darkness, and called out to his mate that his lamp had gone out, referring to his Davy lamp which hung at a distance of four feet. He was told that it was burning brightly; but this he refused to believe until the lamp was handed to him, and he found it to be hot; he was then brought to the pit-mouth, but he could not tell when he reached the daylight.

I saw him that afternoon, and found that, with his right eye, there was no perception of light from an argand burner, an inch and a quarter in diameter, at the distance of one foot; with the left eye, he had the very faintest perception of light. The pupils were only moderately dilated; so I instilled some atropia, and made a careful examination of the whole fundus with the ophthalmoscope. The media were clear, the retinal vessels normal in calibre; the disc rose-pink, and retina transparent; the region of the yellow spot was slightly more defined than in the normal eye; and the fovea centralis was a little redder in the right than the left eye. Next morning, the quantitative perception of light had gone from the left eye, leaving him totally without perception of light. Both my colleagues kindly examined the eyes independently, and corroborated my observations as to the apparent healthiness of the fundus. On the 29th, I ordered one drachm of unguentum hydrargyri fortius to be well rubbed into each arm, and a couple of drachms to be worn in the axillæ, spread on lint. The patient remained in the same condition until February 5th, when he first complained of a metallic taste in his mouth. Next day, his gums were distinctly spongy, and he said he could see the other beds in the ward indistinctly. On the 8th, he was allowed to get up, and could see well enough to find his way about the hospital. Daily ophthalmoscopic examination found the appearance of his fundus unchanged. At his own request, on February 10th, he was discharged, and at once resumed his work; his vision at that date was the same with both eyes—viz., $V = 1\frac{20}{40}$ c + 24 = $1\frac{20}{20}$. The field of vision in each eye was perfectly normal.

I need hardly say that the use of mercurial inunction in this case was purely empirical; and though we have the coincidence of symptoms of mercurialism and commencing restoration of vision, I do not consider that the cure was due to mercury. Somewhat similar cases of transient amaurosis have been treated by means of strychnia and bloodletting, and with an equally happy effect. I have waited for two years and a half (seeing the patient at intervals during that time), hoping that some circumstance might arise which would point to the cause of the affection; but the eyes at present, as they always have done, present a perfectly normal appearance to the ophthalmoscope, and have a refraction of + $\frac{1}{24}$. Should any of my ophthalmic *confrères* have observed a similar case, I would be much obliged for any suggestion as to the cause of the amaurosis and its rapid recovery.

CEREBRAL MENINGITIS: SUDDEN DEATH FROM CARDIAC THROMBOSIS.

By H. E. SPENCER, L.R.C.P.Ed.,
Resident Medical Officer to York Dispensary.

ON the morning of June 11th, I visited an anæmic, but well-grown and previously healthy girl, aged 15. She sought relief on account of an inflamed ankle, which she believed had been "twisted" by a slip ten days previously. I found the girl rather feverish and inclined to be sick; her foot and the lower third of the leg were hot and œdematous; but, as no symptom of any gravity was noticed, I did not very minutely examine the general state. The suspicion of a septic element in the case did occur to me, as the girl had been for two months acting as occasional nurse to another of my patients—a woman in whose legs some cellulitis had been set up. The next afternoon, an urgent summons to the case was sent during my absence; but, on visiting the case at the end of my rounds, I was much astonished to find that the patient was lying dead on the sofa, having expired about 4.30 P.M.

The friends stated that, during the preceding evening, the girl had begun to wander in her talk, and had continued more or less delirious during the night. In the morning, however, she was calmer, and persuaded her friends to let her be dressed and brought downstairs. The delirium came on, with intervals, during the day; and about half-past four, without previous dyspnœa or other warning, she "fainted", and in a few minutes was dead. There had been constant vomiting for about twenty hours. [The girl, who had the appearance of being eighteen or nineteen years of age, had menstruated regularly for eighteen months, the last time a fortnight before.]

Necropsy, twenty-four hours after death.—The body was well-nourished and muscular; rigor mortis was not well-marked; the lungs were normal; the heart was muscular and of normal size; the right auricle contained a firm fibrinous clot, evidently *ante mortem*, which sent a prolongation through a patent foramen ovale into the left auricle. [There had been no cyanosis.] The left auricle contained a large recent coagulum, which extended through the mitral orifice. The right ventricle was empty; the valves were healthy. The spleen was remarkably pale; the liver was also pale. The pia mater was everywhere hyperæmic; there were patches of lymph on its upper surface. The larger veins were markedly opaline. The convolutions were flattened; the adjacent sides of the Sylvian and other fissures were adherent. The brain generally was injected, except at the base; the ventricles were empty. No embola were found in the vessels. I was assisted in the examination by my colleague Mr. J. O. Horden.

I regret that the history is in so many respects incomplete; but, so far as an opinion can be based on the facts, it would appear that the cause of death was cardiac thrombosis, determined by the general anæmia.

In this connection, the pallid spleen and liver must be considered. The relation of the imperfect auricular septum to this event suggests another topic for reflection. I do not see any adequate cause for the meningitis, all the recognised ones being apparently excluded. The question of septicæmia seems to be an open one.

CLINICAL MEMORANDA.

PSORIASIS PALMARIS.

I CAN corroborate, from my own experience, the statement made in the JOURNAL of June 7th by Dr. McCall Anderson, that there are three affections of the palms and soles which closely resemble each other, viz., eczema rimosum, simple psoriasis palmaris, and the so-called syphilitic psoriaris palmaris, and that, therefore, no absolute statement can be made, as Dr. Spender suggests, that "there is no such thing as psoriasis palmaris except as a syphilide", although everyone will agree that simple psoriasis of the palm is exceptional. With regard to the syphilitic affection, there is one diagnostic point that has not been alluded to in the JOURNAL which is often a help in doubtful cases; and that is, that the syphilide almost invariably begins in the centre of the palm, while the two diseases which so closely resemble it do not as a rule. Even here, however, no absolute statement can be made. I have a patient at the present time attending the skin department of University College Hospital, with well marked simple psoriasis affecting the trunk and usual situations; and, since he has been under treatment, a thickened, scaly condition appeared on the ball of the thumb close to the centre of the palm, which has yielded to a strong application of cantharides. The patient is a robust, healthy-looking young man, without the least evidence of syphilis, and there were no patches of psoriasis on other parts of the hand. Two years ago, a man was attending the skin department with an eruption upon the palms of the hands, consisting of circular well-defined patches about one-third of an inch in diameter, covered with fine silvery scales. There were one or two on the sides and back of the fingers, but none elsewhere. Similar spots on other parts of the body would have been unhesitatingly pronounced to be psoriasis, and the eruption was not at all like its syphilitic namesake. He had had several previous attacks, always on the hands, strenuously denied syphilis, about which he had had previous inquiries, and the eruption was cured by treatment suitable for simple psoriasis.

H. RADCLIFFE CROCKER, M.D.

IN reference to Drs. Spender's, Liveing's, and McCall Anderson's very instructive papers on psoriasis palmaris, I may state that I am in the habit of recognising five distinct diseases that are wont to occur on the palm or sole without other parts being necessarily simultaneously involved, and which may present a not very dissimilar appearance—namely, eczema, psoriasis, syphilis, lichen ruber, and erythematous lupus. I have frequently met with psoriasis in this situation as part of the general non-syphilitic disease, often in gouty subjects, and with no coexisting eczema. There is also a form of palmar psoriasis to which the late Mr. Nayler first called my attention, and which, for the sake of distinction, he was in the habit of designating "non-specific palmar psoriasis". In these cases, the skin of the whole palmar surface of the hand, fingers, and thumb is red, thickened, and hard, and the natural furrows of the skin occupied by small white scales, so that the whole surface is mapped out with fine white lines. No cracks nor fissures are present, and the part is always dry and harsh, and generally hot and irritable. The condition may exist with or without psoriasis in other situations, and nearly always occurs in women. I lately saw a typical case. A girl, a teacher in a school, was admitted at the Hospital for Diseases of the Skin with psoriasis of the nails of both hands, and a few patches of the same complaint on the arms, the palmar aspects of whose hands were affected as described. The eruption in all parts had always been dry and scaly, and had existed two years. A rash which, by the patient's description, was probably psoriasis, had shown itself at intervals in other parts from an early age. There was no history of syphilis. Though in lichen ruber it is unusual to find the eruption only on the palms of the hands, I have seen it fade and disappear in other parts, while some evidences of it have remained on the palms.

WYNDHAM COTTLE, M.B., F.R.C.S., Savile Row.

IN hospital practice, I see numerous cases of all three varieties—namely, eczema palmaris, psoriasis palmaris, and syphilitic psoriasis. The differential diagnosis seems to me most easily made by the following characteristics.

Syphilitic palmar psoriasis may be diagnosed: 1. By its certain syphilitic constitutional history; 2. By the circumscribed appearance usually assumed in this eruption; 3. By the minute pearly glistening nature of the epidermic scales over a bright circus on the face; 4. By its obstinate duration unless specifically treated.

Psoriasis palmaris simplex is distinguished: 1. By its non-specific history; 2. By its more diffuse characters and non-symmetrical appearance; 3. By the split nature of the surrounding epidermis, and general desquamation of the skin; 4. By being usually referred to some habitual mechanical or chemical irritation, as in the case of barmen and others.

Eczema palmare is distinguished: 1. By its superficial desquamation, often accompanied by moisture, a distinctive sign of eczema; 2. By its almost invariable occurrence with gouty or rheumatic diathesis; 3. By its being amenable to treatment for the above-named affections, chiefly alkaline, and its non-influence by specific treatment.

One case nearly identical with that quoted by Dr. Anderson more especially occurs to me. A clergyman consulted me last year. He had been suffering for some years with a squamous affection of the palms of the hands. I prescribed the different preparations of mercury and tar, but with little or no avail. Vaseline and acetate of lead were most beneficial, as I have found in all these gouty skin-eruptions, combined with suitable constitutional treatment and dieting, without the use of stimulants, especially beer and alcoholic liquors, a poison to most skin-affections. He is now visiting the alkaline springs of Switzerland, from which, he informs me, he is getting much benefit.

JAMES STARTIN, Surgeon to St. John's Hospital for Skin-Diseases; Savile Row.

OTORRHŒA AND LIFE-ASSURANCE.

A PAPER by me was published in the JOURNAL, in 1876, on otorrhœa in relation to life-assurance, suggesting the importance of inserting some question touching pre-existing ear-disease in the examination forms. At the time, I received various communications from medical men on the subject; and since then, several patients have been sent to me, owing to the refusal on the part of different offices to accept them as good lives. I venture, therefore, to mention a form of question which has recently been adopted by the Western Counties and London Office, with which I am connected: "Have you ever been subject to headache, giddiness, epileptic or other fits, deafness, or long-continued discharge from either ear?" Since 1876, I have had under my personal notice three cases of persistent otorrhœa, and am cognisant of another, all of which terminated fatally. The first two occurred in hospital, and both the patients remained unconscious for a protracted period, suggesting, if any local guide had been afforded, the advisability of using the trephine. The third was a distressing case, as, from the young lady's previous health and spirits, her friends little anticipated her sudden and painful death. She had been under my care from time to time, but, whilst residing in the country, she was suddenly seized with severe headache, which was at first considered to be neuralgia, but it rapidly became almost unbearable; her mother wrote to me, describing her symptoms, and wishing to know if she should be brought to town. I fortunately telegraphed that a journey would be most dangerous, and wrote to her medical man, suggesting the possible advisability of making an incision over the mastoid process. I received, however, very shortly afterwards, a letter from him, stating that she had became suddenly unconscious, and, to his great distress, died in a few hours. I shall be obliged if any of the readers of the JOURNAL, connected with life-offices which may have adopted any form of aural question, will communicate the nature of the query either through the JOURNAL or to me.

LLEWELYN THOMAS, M.D., Surgeon Central Throat and Ear Hospital; Aurist Notting Hill Deaf and Dumb School.

A DELICATE SPECTROSCOPIC TEST FOR BLOOD IN URINE.

MOST people think that it is only necessary to examine urine containing blood before the slit of the chemical spectroscope, or in a cell beneath the micro-spectroscope, in order to get the absorption-bands of hæmoglobin. But, in some cases, something more is required, as an examination of a specimen some days ago taught me. It was the urine of a case of acute desquamative nephritis; slightly brownish in colour, turbid, and acid in reaction; no blood-corpuscles were to be found on microscopic examination. When it was put in test-tubes of increasing sizes before the slit of the spectroscope, no absorption-bands appeared; it was then filtered; the filtrate, which was of the colour of golden sherry, gave *only* the band of *urobilin*.*

* I have described this band, as well as the others mentioned here, in the *Dublin Journal of Medical Science* of June 1877.

The filtering paper, with a slightly brownish deposit upon it, was then cut up into pieces, and a portion digested in alcohol acidulated with sulphuric acid; placed before the slit, this solution gave the bands of *acid hæmatin*. Another portion was digested in alcohol to which some liquor ammoniæ had been added; and this solution, when examined, gave the spectrum of *alkaline hæmatin*. To this solution (that of alkaline hæmatin), I added ammonium sulphide, and found the bands of *reduced hæmatin*.

This test will be found of great value in those cases in which the blood is not present in the urine in a soluble state, as was evidently the case here. In the urine of two cases of scarlatinal nephritis, the spectrum was that of *methæmoglobin*, as it resembled exactly that got by adding a solution of potassium permanganate to a solution of blood, and also that of solutions of putrid blood.

CHAS. A. MACMUNN, B.A., M.D.Dub., Wolverhampton.

OBSTETRIC MEMORANDA.

BLEEDING IN PUERPERAL CONVULSIONS.

THE case published by Mr. Pollard, in the JOURNAL for July 12th, will do good service by calling attention to a fact, too much lost sight of in the present day, viz., that bleeding is a very valuable remedy in most cases of puerperal convulsions. About a year ago, I attended a case in which the value of bleeding was shown still more remarkably. In this case also, as in Mr. Pollard's, the withdrawal of thirty ounces of blood was followed by immediate and permanent relief of all the symptoms. When I was called in to the patient, a primipara, there were no symptoms of labour, and the convulsions had gone on for twelve hours before bleeding was resorted to. They had increased in frequency, until at last as many as three took place in an hour, notwithstanding that a full trial had been given to anæsthetics, in the form of hydrate of chloral and bromide of potassium; three half-drachms of the former and three drachms of the latter having been given. The bleeding appeared at once to produce a decided constitutional effect. The swollen livid face became pale, the breathing less stertorous, and the pulse soft and feeble instead of full and throbbing. From that time, the fits, which were recurring three times in an hour previously, only returned four times during the next ten hours, and were much mitigated in severity. Signs of labour also came on, and delivery was soon completed by the forceps.

JOSEPH GRIFFITHS SWAYNE,
Consulting Physician-Accoucheur to the Bristol General Hospital.

HÆMATEMESIS IN INFANTS.

I SUSPECT that the occurrence of this phenomenon is hardly so rare as Dr. Edis supposes in his memorandum in the JOURNAL of July 12th. At any rate, I have observed it a good many times, and always have traced the blood to a maternal source. The week before last I met with it in the child of a lady confined for the second time, after an interval of nine years. The same thing had happened in her former experience, and she was therefore not nearly so alarmed as her attendants. In this case, and in another which I can recall, there was no trace of excoriation of the nipples, however, and it would be a mistake to suppose that this is the sole cause of hæmorrhage from the breast. A tender point in the substance of the breast itself pointed to the source of the blood, and the coincident cessation of the hæmatemesis and of the mammary pain confirmed the diagnosis.

J. THORBURN, M.D., Manchester.

SURGICAL MEMORANDA.

THE TREATMENT OF SPINAL CURVATURE.

LIKE many other so-called new methods of treatment—the operation of laparo-elytrotomy, for instance—the mode recently advocated by several distinguished American surgeons of treating curvature of the spine by suspension and fixation, and by continuous extension, is only the revival of an old idea. In a curious old work, entitled *An Essay on Crookedness or Distortions of the Spine*, by Philip Jones, which was published in the year 1783, the above-named methods of treatment of spinal curvatures are clearly suggested. The book is dedicated to John Hunter, several of whose patients were treated by Jones's instrument, to which he gave the name of "apparatus spinalis extendens". The circumstance that led to the invention is described in the preface in the following words. "On attending a young, delicate, weakly lady, who was deformed, in the presence of a surgeon, he elevated the body by the head; and, during that state of elevation, I found her form became almost perfectly straight. I was then struck with the thought that, if she could be kept continually in this position, till she grew older and consequently stronger, every obstacle would be removed." Further on, he mentions that Dr. Hamel, in speaking of his instrument to his class in 1776, said: "This mechanical contrivance not only takes off the superincumbent weight, but extends the spine in a constant gradual progression." Again, he says: "Monsieur Vacher remarks that the principal object in these circumstances is to counteract the distortion by a gradual and constant extension of the spine. We must first restore the vertebræ to their natural situation, and keep them so by supporting the spine till it has acquired strength to resist a force that would otherwise increase the curvature."

Dr. Lee's spinal swing appears also not to have been unknown in those days; for, in the article on treatment, Jones remarks that "Some recommend the neck-swing. This is fixed to the top of the room at one end, and into the other is fastened the head of the child, suspending the body by the chin and hind head; in this situation, the child swings as long as it can bear it; but, though the spine will appear straight while the child is kept in that posture, it cannot continue so for above ten or fifteen minutes at one time. Nor is the screw-chair an invention which can boast of higher excellence; for this is nothing more than a swing screwed to the back of a chair in which the patient sits, and so fixed to the head, as in the other case, that the seat is scarcely felt; hence is the spine extended." Mr. Jones does not give a description of his instrument; but in *A Treatise on Diseased Spine, and on Distorted Spine*, by T. Sheldrake, published in 1816, I find the following mention of it. "Numbers of these machines have been made by a Mr. Jones, who calls himself the inventor of them; it is needless for me to examine the foundation of his claim to the invention, as I find the same machine described in *Mémoires de l'Académie Royale de Chirurgie à Paris*. It is there ascribed to a Mons. le Vacher, and has been made public near thirty years."

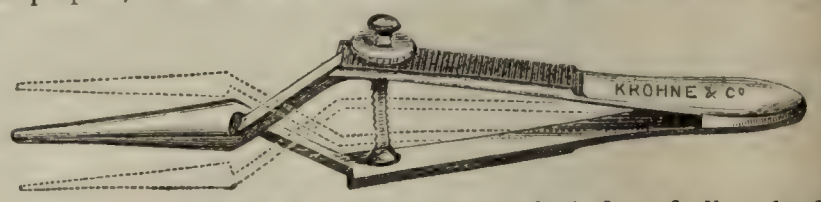
The treatment, then, or at least the idea of treating spinal curvatures by extension and fixation, and also by continuous extension, was conceived and recommended more than a hundred years ago.

E. CARR JACKSON, Surgeon to the National Orthopædic Hospital.

DILATATION OF PREPUCE VERSUS CIRCUMCISION.

PHIMOSIS is a tolerably common disease, and, in addition to being troublesome in itself, it not unfrequently leads to secondary troubles of considerable gravity. The remedy hitherto employed has been circumcision, which is no doubt efficacious and radical. In young children, it is perhaps the best remedy that we can adopt, especially when the prepuce, besides having a constricted orifice, is unduly long. But, every now and then, cases present themselves in which, for some reason or other, it is not desirable to perform circumcision. Thus, I remember that a child, who had been circumcised, almost bled to death. It turned out that the child was a "bleeder", and came of a family in which there had been several others with the same diathesis. In another case, acute tuberculosis rapidly succeeded on what in itself was a very successful operation; and the death was not unnaturally attributed to the operation. Diffuse cellulitis of the penis is not an uncommon complication after this operation in unhealthy, ill-fed, and badly cared for children.

I have therefore ceased to urge the operation on parents who have the slightest hesitation in giving full consent; and I adopt dilatation instead. I was consulted, two or three years ago, by a gentleman whose boy was suffering from congenital phimosis; the prepuce was not over long, but its orifice was exceedingly small. The gentleman altogether declined to have the boy circumcised. Under these circumstances, I determined to try what could be accomplished by slow dilatation. For this purpose, I had constructed the "dilating forceps" figured below.



The prepuce was adherent to the glans, and had, first of all, to be detached by means of a button-probe. The forceps having been inserted, the screw was slowly adjusted, and dilatation effected. It was completely successful. After the fourth dilatation—each of a half-hour's duration, on four consecutive days—the glans could be fully exposed, and there has been no relapse since. I have since tried the method in

a considerable number of cases in the Children's Hospital, and always with good results. Dilatation may, I think, be advantageously adopted in cases of phimosis, pure and simple. If the prepuce be very long, in addition to being tight, then it is better to remove it in the ordinary way. In the case of adults, it is sometimes disagreeable to submit to the operation; and, under such circumstances, a gradual and careful dilatation will be found serviceable.

Dilatation was advocated some years ago in the *Dublin Quarterly Journal* by Dr. Cruise of Dublin. He preferred "sudden dilatation", and figured an instrument with which to accomplish this result. I believe that gradual dilatation will be found as effectual, while it is certainly less painful; and bearing in mind the extremely distensile nature of the structures concerned, I venture to think that the method here advocated is the more physiological.

The instrument was made for me by Messrs. Krohne and Sesemann.

ROBERT WM. PARKER, Old Cavendish Street.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ST. MARY'S HOSPITAL.

CASES OF PARALYSIS OF CRANIAL NERVES.

(Under the care of Dr. BROADBENT.)

A SERIES of examples of paralysis of cranial nerves have recently been under treatment in the wards of St. Mary's Hospital. They appear to illustrate mainly the fact that such cases are more frequently due to syphilis than to any other possible causes of pressure upon the nerve. Disease implicating the nerve-nucleus itself appears to be extremely rare.

CASE I. *Paralysis of the Right Third Nerve: Double Optic Atrophy: Syphilis.* (Reported by Mr. KENNETH W. MILLICAN.) Charles C., aged 35, labourer, was admitted on April 16th, and discharged relieved on May 19th, 1879. This patient had a good family history. He had been in the army, and served in India, where he drank freely, but had enjoyed good health up to 1862, when he had a chancre, apparently indurated, but not followed by rash or sore-throat. About 1867, he suffered from continuous dull heavy pain in the occipital region, and the sight of the left eye began to fail. The head was shaved, and blisters were applied. In December 1878, pain came on in the right parietal region; the right eyelid began to droop, and the sight of this eye to fail. The pain shifted with change of position, being invariably most severe in the right upper parietal region when the patient lay on his left side, and in the left occipital region when he lay on the right side. There had been no vomiting nor retching at any time.

There was complete ptosis of the right eyelid; and, when the lid was raised, the eye was seen to be turned outwards. It could not be carried inwards beyond the median plane, or moved upwards or downwards. The pupil was fixed, but not very large. Vision was almost lost in the left eye, and in the right was impaired; the difficulty of seeing distinctly being, of course, greatly increased by the loss of accommodation and of movement of the eyeball caused by the paralysis of the third nerve. An object vanished when carried above or below the exact level of the eye. The face seemed rather expressionless; but there was no paralysis either of face or of limbs, though the grasp of the hands was not strong. Above the right eyebrow was an area an inch and three-quarters from above downwards by an inch in width, over which the pericranium was thickened, while sensation was almost lost, there being tenderness within the edge of the orbit just below. Tender patches were discovered by percussion in the right parietal and left occipital regions. On ophthalmoscopic examination, the left disc was seen to be unduly white, well defined, but with irregularity of the outer edge. The retinal vessels were distinct, but small. The right disc was scarcely so pale. The thoracic and abdominal organs were normal; but the second sound of the heart was reduplicated.

Iodide of potassium was given and carried to doses of twenty-four grains three times a day, but without much effect beyond relief of the headache.

CASE II. *Paralysis of the Left Third Nerve: Headache: Convulsions: Double Optic Neuritis: probable Congenital Syphilis, Recovery.* (Reported by Messrs. MILLICAN and NODING.)—Mary T., aged 30, governess, was admitted on March 21st, and discharged on June 20th, 1879. She was an only child. Her father and mother had died when she was very young. Acute rheumatism, not severe, four years ago, scarlatina, and measles, had been her only illnesses. Ten years since, she had begun to suffer from occasional attacks of severe frontal headache, with slight retching, attributed to biliousness. Six months since, they became worse both in frequency and intensity, and for six weeks they had compelled her to keep her bed; the recumbent posture, however, giving her no relief. About five months ago, she had a fit, which was said to have begun with swimming in the head and twitching of the fingers; these symptoms being speedily followed by loss of consciousness and violent convulsions, with foaming at the mouth and biting of the tongue. Afterwards she had one or two attacks of syncope, and once or twice lost her speech and felt faint and dizzy. A second fit, attended with convulsions and unconsciousness, followed the first at an interval of two months; and two months later a third—without, however, attacks of *petit mal* between the last two. From this time, the headache became continuous; the vomiting was distinctly cerebral in character; there were "hysterical attacks"—*i.e.*, unaccountable crying—from time to time; and the left eyelid began to droop.

On admission, there were all the indications of paralysis of the left third nerve. The lid could not be raised at all; there was external strabismus; loss of power to look upwards, downwards, or inwards. The pupil was larger than its fellow in moderate light, and failed to respond to light falling either on this eye or the right. There was total loss of accommodation for near vision. When both eyes were open, she saw double, the images varying in relative position in different directions; and, when either both eyes or the left alone were open, she felt giddy, the floor seeming to slope. Vision of the right eye was good. On ophthalmoscopic examination, double optic neuritis was found. The disc was recognisable only by the convergence of the retinal vessels; it was swollen, red, and vascular. There were no hæmorrhages in the retina, but white streaks. The veins were large and tortuous; the arteries scarcely visible. The persistence of good vision in spite of double optic neuritis, to which Dr. Hughlings Jackson has often called attention, was well illustrated in this case; it is, indeed, a matter of every-day experience.

Other points of interest to be mentioned are, that the soft palate hung loose and flaccid, and scarcely responded at all to irritation; and that the action of the heart was feeble, the first sound being scarcely audible at the base, the second reduplicated, and the aortic sound slightly accentuated. Pulse 68, full between the beats, but not strong.

A large irregular scar was present at the inner end of the left eyebrow, extending downwards upon the root of the nose. The history given of this was that a swelling formed there, which, after some time and the failure of various modes of treatment, was incised. No matter escaped; but it suppurated freely, and could not be got to heal, till at length collodion was applied. She was also taking medicine at the time. This is the history of a syphilitic node. The personal character of the patient was, however, irreproachable, and there was no evidence whatever of acquired syphilis. There was as little of the inheritance of this disease. There had been no infantile symptoms. The teeth, palate, and head were well formed. The result of treatment, as will be seen, gave support to the idea that the cause of the intracranial mischief was syphilis.

For some days after the patient's admission, she continued to suffer from headache and vomiting; and two slight fits were observed, consisting of loss of consciousness and jerking of both upper extremities, with slight distortion of the face. She herself knew nothing of their occurrence; which made it probable that convulsive attacks might have occurred more frequently than she had supposed. After the administration of iodide of potassium in moderately full doses, there were no more fits of any kind, the headache and vomiting ceased, the optic ischæmia subsided, and little by little the third nerve recovered. The ptosis disappeared; and the eyeball could be moved in all directions, though not by any means to the full extent.

CASE III. *Left Hemiplegia: Recovery: Paralysis of Right Third Nerve.* (Reported by Mr. NODING and Mr. H. C. JULER, F.R.C.S.)—Hugh M., aged 49, butler, was admitted on June 11th, and is still (July 9th) under observation. He had been in the army, but never had syphilis, and was always temperate. He was married, and his wife had had seven children and two miscarriages. He enjoyed good health till, in December 1878, while at supper, the fork suddenly dropped from his left hand, and very shortly he had to be put to bed on account of paralysis of the whole left side. There was not the least impairment of sensation. He was in bed three months, during which time he gradually recovered the use of his left limbs, so as to walk well and feed himself. They still, however, remain weak.

Three weeks since, severe pain came on in the right eyeball and over the entire head, which lasted three days, and persists in a less aggra-

vated form to the present moment, shooting from the occipital region forwards. The right eyelid has during the three weeks been gradually drooping, till now the eye is quite closed; and, when the lid is raised, it is seen that the entire third nerve is in some degree, but not completely, paralysed. It is unnecessary again to describe the symptoms of this paralysis. Vision is indistinct, and light gives pain. By the ophthalmoscope, the disc of the right eye is seen to be imperfectly defined and slightly swollen; the veins and arteries are small; there are no hæmorrhages; but near the periphery, to the inner side, a large patch of faint redness is observed.

It is rare to have three cases of paralysis of the motor oculi nerve within such a short period. With regard to the last of them, it would be premature to form a definite opinion either as to the nature or seat of the morbid change. If the left hemiplegia from which the patient had recovered, and the existing paralysis of the third nerve, own as cause the same lesion, the case would be an example of a rare form of cross paralysis, and the mischief could be localised with great precision in the right crus cerebri, where it would involve the motor tract from the left half of the cord after its decussation and the right third nerve.

In the second case, the more important symptoms were those of cerebral tumour, pain in the head, convulsions, vomiting, and double optic neuritis, the paralysis of the third nerve serving to indicate its situation—namely, the right side of the base of the brain. The convulsions, too, were such as are produced by disturbance at the base of the brain, rather than on the surface of the hemisphere, being general and attended with initial loss of consciousness.

It would not be justifiable to conclude that the disease was syphilitic because it yielded to iodide of potassium; but the history of the scar points in the same direction; and it seems on the whole probable that the lesion was gummatous exudation in the pia mater, or it may have been a node like that on the brow.

The first case, also, was probably syphilitic; but as there was atrophy of the optic discs, and thus no hope of restoration of vision, or prospect of such recovery as would enable him to return to work, he could not be kept in the hospital long enough for a full trial of treatment; and, when made an out-patient, he did not attend.

An interesting fact to which attention may be called, is the association of reduplication of the second sound of the heart with affections of the brain. It is mentioned in the notes of Case II, and was observed and noted in the first patient; in one of the cases which follow there was not only reduplication of the second, but of the first sound. This want of synchronism in the closure and tension of the aortic and pulmonary valves is very common in cerebral disease, and is at times more marked and more easily recognised than in mitral stenosis or any other condition, while it may persist throughout the course of a long illness. It is almost always associated with arterial tension; and it is no doubt due to arterial spasm, and to the resistance experienced by the left ventricle in consequence of this, and not to direct interference with the action of the heart. The arterial spasm is of course caused by the cerebral disturbance.

CASE IV. *Paralysis of the Left Ninth, Seventh, and Sixth Nerves, of the Motor Division of the Fifth, with Tenderness and impaired Perception of Impressions in the area of the Trigeminus: Inflammation of Eye: Death: Tumour of Base of Skull.* (Notes by Mr. BENSON.)—Antoinette B., aged 60, was admitted on May 14th, and died on June 1st, 1879. She had enjoyed good health till November 1878, when she began to suffer from excruciating pain, extending over the left side of the head and face, which had continued ever since. Two months before admission, she had considerable flow of dark blood from the nose, after which the sight of the left eye gradually failed, and in the course of about fourteen days was entirely lost. The left side of the face also became paralysed, and the patient was unable to swallow solid food, which remained on the back of the tongue.

When she came under observation, she was evidently suffering greatly from pain which she referred to the left side of the head and face, especially the brow and vertex. She said the head was heavy, and that she was obliged to carry it when not lying down. The left eye was permanently open, looked dull and inflamed, and was quite blind. It was turned inwards, could not be carried outwards at all, and had little movement in other directions (complete paralysis of the sixth, partial of the third, nerve). The left face also was paralysed, the mouth being drawn to the right, and the markings smoothed out; the eye did not close, but the corrugator supercilii acted slightly. The mouth was open, saliva dribbling, articulation indistinct. She was unable to breathe at all through the nose. The temporal and masseter muscles on the left side did not act when the jaw was closed (paralysis of the motor division of the fifth). The tongue deviated markedly to the left, and its left half was somewhat wrinkled and wasted, and was more absolutely motionless than in hemiplegia. It was much furred, and especially on the left side, which was also very dry. The patient was unable to swallow anything more solid than finger-biscuits dipped in milk, and lived mainly on milk; fluids, however, trickled out of the mouth, on account of the labial paralysis.

It was difficult to make out the state of sensation on the left side of the face. The patient, who was a French nun, had an idea that some operation would be practised upon her, and went into a panic when touched or examined. She did not feel slight contact or gentle pulling of the hair, but recognised moderate pressure, and at times apparently acute pain was produced by handling. She had perfect use of the arms and hands, but could not stand.

Nothing could be made out by the ophthalmoscope in the left eye, on account of disorganisation of its structures; in the right, the disc was at first little changed, but, later, became somewhat swollen. The heart's action was feeble, but regular; the sounds were normal. Pulse 92. Respiration and the respiratory sounds were normal. The urine was very copious, pale and clear, slightly alkaline, containing neither albumen nor sugar; specific gravity only 1006; later, 1012. The bowels were very constipated. There was no vomiting. Morphia was administered hypodermically at night, and a little iodide of potassium was given. The pain was greatly relieved, and she became more cheerful, but, after ten days, began to sleep more and take less notice; and, on June 12th, she gradually sank, Cheyne-Stokes' respiration being observed for about an hour.

Here the diagnosis lay between disease in the left half of the medulla and pons, and mischief at the base of the brain, which, to affect the cranial nerves from the hypoglossal to the fifth, would have to be of enormous extent. The probabilities, therefore, seemed to be greatly in favour of the former hypothesis. Paralysis of the sixth and seventh nerves is at once suggestive of lesion in their common nucleus in the floor of the fourth ventricle; and disease at this point would, if more extensive, reach the hypoglossal nucleus below, and that of the fifth above. The polyuria was again a possible result of lesion in the floor of the fourth ventricle, while weakness and want of control in the lower extremities were also what might be expected from disease in the medulla and pons. The diagnosis formed from these considerations turned out, however, to be wrong; and suspicions of more extensive mischief outside the medulla ought, perhaps, to have been suggested by the severe pain, and by the disorganisation of the left eye, though a possible explanation of the last named occurrence was paralysis of the fifth nerve.

What was found on *post mortem* examination, was an enormous tumour, destroying the whole of the central part of the base of the skull, from the posterior part of the cribriform plate of the ethmoid to the foramen magnum, absorbing also part of the roof of the left orbit, extending rather farther to the left than to the right side, and reaching the foramina of exit of the seventh, eighth, and ninth nerves on the left side, but not on the other, while it spread, also, along all three branches of the left fifth nerve, which were greatly enlarged. The new growth had invaded the pituitary body and tuber cinereum, and projected into the pharynx. It is not necessary to point out how this state of things explained the symptoms.

CASE V. *Paralysis of the Left Fifth Nerve: Optic Neuritis: Syphilis.* (Notes by Mr. MILLICAN.)—S., wife of a soldier, aged 27, was admitted February 18th, and discharged relieved on March 8th. She is still under observation (July 9th). She was married three years ago; till then was healthy. Her husband was under treatment for some time just after their marriage for rheumatic pains in his limbs and ulcerated sore-throat. She had never been well since her marriage; she soon had a rash on the chest and back. When pregnant with her first child, which was ultimately still-born, she suffered from pains in the limbs and partial loss of use of the right arm. About six months since—two months before the birth of her second child—she began to lose use of the left side of the face. She had double vision, and, later, violent neuralgic pains in the left side of the face, with sense of coldness in the head; finally, sensation was lost in the left face. She had also difficulty in swallowing, and was soon fatigued by talking, and suffered from giddiness.

On admission, she complained of pain in the head, loss of memory, failure of sight, and great impairment of smell and taste. There was complete loss of sensation over the left side of the face and head, except where branches from the cervical plexus reached this part; the conjunctiva was insensible; there was no sensation on the left half of the tongue or mucous membrane of the mouth. Paralysis and wasting of the temporal and masseter muscles on this side were present; there was also slight ptosis. The pupils were large and indolent; there was no distinct squint, but co-ordination of the two eyes was not perfect, vision being double. The optic discs were apparently normal, the retinal vessels small. There was obvious difficulty in phonation, the voice

being feeble. Too much air passed the glottis, the cords evidently not coming well together, so that she had frequently to take breath, and great effort was required to produce sound. The thoracic and abdominal organs were normal, but the first sound of the heart was distinctly reduplicated near the apex, the reduplication being lost at the ensiform cartilage; the second sound again was reduplicated at the base. This unusual double reduplication was not a fugitive and accidental phenomenon, but persisted.

The patient improved under the use of iodide of potassium, and quite lost her headaches, but sensation returned only to a slight degree, and is still very imperfect.

No comment on this case is required. The history of syphilis is unusually distinct. The lesion may be a node of the dura mater, or gummatous tumour in the pia mater; if the former, it cannot be at the sphenoidal fissure, or in the cavernous sinus, but must be farther back, since all the sensory branches of the fifth and its motor division are implicated. It may be mentioned that the child of this woman is plump and healthy-looking.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 2ND, 1879.

W. S. PLAYFAIR, M.D., F.R.C.P., President, in the Chair.

THE USE OF THE FORCEPS AND ITS ALTERNATIVES IN LINGERING LABOUR.

[*Concluded from page 54 of last number.*]

Dr. CLEVELAND said that he would have thought that it would have been scarcely necessary to devote three evenings to the discussion; but, after having heard so many differences of opinion, he had come to the conclusion that that idea was not well founded. He further thought that Dr. Barnes had shown great judgment in drawing up, with the care he had exhibited, the general propositions; and he thought that the last proposition, with the corollary attached to it, had not been sufficiently noticed. If it meant anything, it meant that the operation should not be lightly undertaken, that it should be well considered, and only be done by persons thoroughly skilled in the use of the instrument. The case was somewhat like that of a patient who had stone in the bladder. In such a case, the best thing was to have the stone removed, either by lithotomy or by lithotrity; but it would not be the best thing possible if the operation were not done by a skilful person; the patient might live a considerable time with the stone in the bladder, and be better off than if he had the operation performed. If some who had settled convictions at the commencement of the debate upon certain practical points had had those convictions somewhat disturbed by what they had heard from different authorities, still he believed that, on the whole, they would be pretty well agreed that in a case where the head was well in the pelvis, where there was lingering labour, where the patient was carefully watched and appeared to be kept up by suitable nourishment, if in such a case there were a thorough stoppage, no progress being made, and the uterus had evidently done its best, there could be no doubt that the use of the forceps was better than any of its alternatives. But between such a case as that and the contested point, where the os was not well dilated, and where arrest was above the brim, there appeared to be a large class of cases in which great service was done by the use of the forceps. There were cases in which the long forceps would reach the child and where the short forceps would not be of any avail. He had seen people waiting until the head came within reach of the short forceps, and a great deal of time had been lost, and a great deal of danger incurred. For many years, he had not used the short forceps, and had never found a case in which the long forceps would not answer both purposes. He thought it was very rare indeed that an operation was required for purely lingering labour, but he did not believe that in skilful hands any mischief was likely to accrue to the patient by the use of the instrument, if it were necessary to employ it.

Dr. DALY would reply to some of the figures of Dr. Roper. In 1,700 cases that had come under his private care during a practice of fifteen years, he had used the forceps in 10 per cent., and he had only lost two forceps cases. One was a case in which he put on the forceps for hæmorrhage, and in the other case the forceps had nothing at all to do with the death. He had been looking over the statistics of some medical men connected with the Society. A gentleman recently showed him his list of 260 deliveries. He had used the forceps in exactly 40 cases without a single maternal death and without a single still-birth. The great value of the forceps was that (speaking altogether of the low operation) it relieved the woman with perfect safety from hours of suffering. It might be said that there was a risk of laceration of the perinæum. According to his experience, chloroform obviated that risk. It was his rule to give a dose of ergot immediately before, and to put on the forceps if the ergot did not act. He had scarcely ever had a case of still-birth at the full time. With regard to the high operation, he had used the forceps before the os had been fully dilated thirty times, with only one fatal result, and that was a case of hæmorrhage. The conclusion he would draw from his experience was that, when the head was below the brim of the pelvis, there need be no limit to the frequency with which the forceps might be applied so as to save the suffering woman from unnecessary anguish, without increasing in any degree the risk to mother or child, and that it was no more unscientific to wait for days while a mammary abscess burst of itself, than it was to wait many days while the head passed when the child could be delivered at once by means of the forceps.

Dr. GRAILY HEWITT said that no better proof could be given of the utility of the Society than the opportunities it had afforded of discussing such subjects as the present one. One of the first papers read before it was by the late Dr. Tyler Smith, in which he spoke of the abolition of craniotomy from obstetric practice. [Dr. BARNES: When the child was alive.] The paper in question attracted great attention at the time, and Dr. Tyler Smith was much laughed at in certain quarters for bringing such a sentence before the Society at all; but much that they had heard, in the progress of the discussion, must tend to show that a practice which was then prophesied and inculcated had almost come about. It had been shown that the number of cases of craniotomy had become almost infinitesimal. He would only say a word or two respecting some of the questions raised by Dr. Barnes in his paper. One of these points was this: Does lingering labour occur so as to entail danger to the mother and child during the first stage of labour? With Dr. Hicks, he would answer that question in the affirmative. Dr. Roper seemed to indicate that cases of natural labour were being discussed; but one did not know whether a case was going to be one of natural or of unnatural labour. If the head were detained at the brim, the cause must be ascertained. It might be a slight arrest; or, on the other hand, it might be a case of extreme difficulty. It might be a case in which the head and the pelvis were very disproportionate indeed, and that would only be found out by a very careful examination. In a case where there was great disproportion, unquestionably harm would result; the membranes would be ruptured, and the patient would drift into the condition which has been so vividly described by Dr. Hicks and Dr. Roper. The second question was, Is the application of the forceps ever necessary or useful before the full dilatation of the cervix uteri? It had been his custom, in teaching midwifery, to lay a great deal of stress upon the definition of the termination of the first stage of labour. It had generally been held to be the full dilatation of the os uteri; but it was evident that the full dilatation of the os uteri might not occur, and yet the patient might have arrived at the end of the first stage of labour in cases where the membranes had been ruptured. If the head staid at the brim, there was nothing to dilate it; yet, if it were examined, it might be found that the os uteri was exceedingly dilatable, so as not to offer any obstacle to the passage of the head. The osseous difficulty was the principal thing, not the condition of the os uteri itself. It was not necessary to consider this point in defining the termination of the first stage of labour. He agreed with what had been said by several speakers as to the safety of women before the membranes were ruptured; but it was very different when the membranes were ruptured. Under such circumstances, regard must be had to the condition of the tissues and of the os uteri in deciding whether anything was necessary to be done. No doubt the number of cases in which the use of the forceps was necessary with the head above the brim was very few. Still, such cases did occur. With reference to the broad question as to the use of the forceps, he thought that a matter that was really more interesting to the members of this Society at large than the applicability of the forceps in the high operation. He sympathised very much with those who contended that the forceps should be very largely employed. There was no stronger reason to be given in favour of that view than this: it was confessedly necessary that gentlemen who engaged in the practice of midwifery should be competent to undertake severe operations. How were they to become capable of performing a confessedly difficult operation—namely, the high operation—with the forceps, unless they were perfectly familiar with and accustomed to the low operation? The dexterity they acquired or should acquire in the performance of the simpler operation would lead them to sufficient acquaintance with the subject to deal with the difficult and dangerous cases that would now and then necessarily come before them. He thought there was something to be said with reference to the method of applying the forceps. It did not follow that because the forceps had been applied the delivery

should be made to occur instantly. He thought that the opposite policy was responsible for a great deal of the contumely with which the application of the forceps had been visited. He had certainly seen cases where great harm had been done by the instantaneous delivery of the child in cases where the forceps had been applied. The forceps was intended simply to supplement the efforts of nature; to assist them.

Dr. SWAYNE (Bristol) said that, before the publication of Dr. Johnston's report as to the use of the forceps in the first stage of labour, he had often applied it in the first stage when the os was not fully dilated, but never when it was less than three inches in diameter. Since Dr. Johnston's report, he had used it six times in cases where the os was less than three inches in diameter, where the diameter varied from the size of a crown-piece to three inches. Five of these cases were primiparæ and one of them was a multipara. The result was favourable to all the mothers and children with the exception of one child, which was still-born, and which had the skin peeled off, showing that it had been dead for several hours; therefore the forceps could not have been responsible for the death. In all these cases, the membranes had been ruptured for some hours, and the os was not fully dilated, but it felt soft and dilatable. The labour appeared to be slow, not so much from the rigid os uteri as from the arrest of the head. This was very marked in one case—that of the multipara. He had attended her in two labours which were easy, because the children were small and females, but the third labour was a difficult one. The membranes had been ruptured four hours, and the os uteri remained about three inches in diameter. The child was arrested at the brim of the pelvis, from want of proportion between the head and the pelvis. The first stage was over—the uterus had expended its power in dilating the os, but the head did not descend. It was expending its power in forcing down the head. He was convinced that the bad symptoms resulting from a prolonged second stage would have arisen if the labour had been allowed to go on in any of these cases. He felt grateful to Dr. Johnston for having pointed out that the forceps might be used with safety where the os was not half dilated. His own experience led him to three conclusions. First, the use of the forceps was proper and safe before the os was fully dilated, when there was any arrest which prevented it from descending upon the os uteri; but in his opinion, the use of the forceps was improper when the delay arose simply from rigidity, and not from arrest of the head. Secondly, where the head was arrested at the brim of the pelvis, and the pelvis was normal and not irregular in shape, as a general rule the use of the forceps was preferable to turning. Thirdly, where the pelvis was irregular, and the head very high above the pelvis, turning was preferable to the forceps.

The PRESIDENT said he had frequently, on other occasions, had an opportunity of expressing his opinions on the subject to the Society, and he had also, in his work on midwifery, for the first time, he believed, in any systematic treatise on the subject published in this country, advocated a much more frequent use of the forceps in delivery than had been previously recommended. Whenever he had spoken or written on this subject, he had taken the greatest possible pains—he was afraid not always successfully—to point out that that recommendation was strictly limited to one particular class of cases—cases in which the head was arrested low down in the cavity of the pelvis or on the perinæum, and in which only a slight *vis à tergo* was required to effect delivery. He had always endeavoured to point out that the arrest of the head high in the pelvis was a very serious matter. As regards the alternatives, and especially the administration of ergot, he thought there was hardly any fact in medicine more certainly proved than the immeasurable superiority of the forceps in effecting delivery in retarded labour. Mr. Alderson had said that, when he commenced practice, he never used the forceps at all, or hardly ever, but that he used ergot very frequently. The result was, as he went on, he discarded the use of ergot and used the forceps very largely. Then he said that, in the first years of his practice, he used to have an enormous number of still-births, and in later years he never had any still-births at all. Of course, the obvious deduction from that was, that he ergotised his patients when he commenced practice and produced these still-births, which he saved by delivering with the forceps in the latter years of his practice. As regards the mother, Dr. Daly had properly pointed out, and the President had always insisted upon, the enormous gain to the mother of saving her many hours of horrible suffering and anguish. And, above all, there was the increased safety and rapidity of convalescence and the more satisfactory convalescence following a short delivery, which he believed to be a strong argument for the more early application of the forceps in simply retarded labour than had been customary. If he might make a criticism upon the debate, it would be to the effect that a great deal too much had been said about the application of the forceps before the complete dilatation of the os uteri. Probably the novelty of the subject, and the apparent boldness of it, had given undue prominence to it in the debates; but, as a matter of fact, obstetricians were not in the habit of using the forceps with an undilated os uteri to anything like the extent to which an outsider might suppose from listening to the debates. He would say that the cases in which it was necessary, or even contemplated, were of very great rarity. He did not think sufficient importance had been paid to the systematic application of pressure to the uterus as an alternative in cases of lingering labour. He believed there were few improvements in modern midwifery of greater value than the systematic use of uterine pressure, or expression of the fœtus, as it was sometimes called in Germany. It required a little custom and habit to know in what class of cases it was applicable, and how to apply it; but very great advantages might be derived from it. He had, over and over again, succeeded by expression, not in delivering the fœtus entirely—although he believed that even that was possible—but in pressing down the head from the brim on to the lower part of the pelvis, and thus converting what might have been a very difficult high forceps case into a perfectly simple low forceps operation. It remained for him to fulfil a very pleasant duty—that of offering to the gentlemen who had taken part in these discussions, especially to those who had done the Society the honour of coming from Ireland and Scotland, and distant parts of the country, cordial thanks for their kindness in favouring the Society with their experience.

Dr. BARNES: I think the interesting discussion we have had, and the eminent men who have spoken, testify to the importance of the subject, and are a complete answer to any doubt that may have been felt as to the utility of a discussion on the forceps. We have had a complete picture of what may be called the modern practice of midwifery with the use of the forceps, in contrast to the picture presented by a gentleman who went to sleep twenty years ago when they did not use the forceps, and who has come here and delivered a Rip van Winkle sort of speech, telling us that we are all wrong. The definition of the high operation appears not to be thoroughly comprehended. The terms "high" and "low" operation have been introduced by Dr. McClintock, but I should prefer to make a division into three operations. First, there is what may be called the low operation, performed entirely in the second stage of labour, when the head is in the pelvis; that I should prefer to call the intrapelvic application of the forceps. Then there is another class of cases a little higher up, where the head of the child is in the brim; that I should call the brim operation, as distinct from the low operation and also from the high operation, where the head is above the pelvic brim, which may be called the suprapelvic operation. As to the state of the os uteri in the advance of labour, as fitting it for the operation, we will discuss that by-and-by, when we come to speak of the dilatation of the os uteri in an imperfectly dilated uterus. There is a general consensus of opinion and practice as to the propriety of not letting the head lie in the pelvis very long. I should say that the practice mentioned by Dr. Daly and some others, of putting on the forceps as soon as the head is within reach, or nearly so, is not good practice. So long as the uterus is acting fairly without spasmodic action, the head advancing slowly and the parts relaxing, and you know that the patient will be delivered in a few hours without any great tax upon her powers, and so long as there is a quiet, regular pulse, I say it is not judicious to use the forceps. I quite sympathise with what Dr. Hewitt has said, that it is allowable to put on the forceps sometimes in cases where they are not absolutely necessary, with a view to acquire the skill requisite to enable the practitioner to undertake more severe operations. I see no great harm in that; but I should also generally concur in what Dr. Thorburn said, that we are not to put on the forceps for our own convenience, but solely under circumstances in which the instrument is required by the patient. But we must bear in mind that the country practitioner has the charge not of one patient only, but of a number of others, who have no resource but in him. Now, if he spend a great deal of time over a multipara, with the child's head in the pelvis, knowing that he can apply the forceps and deliver in a few minutes with perfect safety, and perhaps advantage, and knowing that he has an urgent case a little further off requiring instant attendance, I say he is justified in doing it. That is not regarding simply his own convenience, but the interests of his patients. We are not to look at a country practitioner in the same light as we should regard a practitioner in town, where we could put another person in charge and go on to the more urgent case. There are cases in which intervention is necessary. I am speaking now chiefly of intrapelvic cases where the child is delayed in the pelvis, and where expectancy is exhausted. As to the employment of ergot, I should like to dismiss that at once as an alternative to the forceps. I should, indeed, like to extend what I am going to say to the entire application of ergot, whether in intrapelvic, brim, or suprapelvic cases, although the impr-

priety of using ergot increases enormously as we ascend towards the higher cases. I can hardly refer to the evidence of Dr. McClintock, Dr. Bassett, and others who approve of ergot, without considerable diffidence. On the other hand, we know that Dr. McClintock does not rely so much upon the forceps as I do, and as many others do; that he has not acquired that confidence in the instrument that we have. He trusts to ergot, and I think he trusts to it too long. I was glad to hear several speakers object to it, and that our President, as a rule, does not approve of it. There is now a considerable amount of evidence showing that ergot is not to be trusted. Dr. Edis's argument is sound, that ergot should not be given when the patient is beginning to flag; for that is the time when ergot is most dangerous; that is the time when the woman is exhausted and wants help; and ergot does not help her, but the forceps will. That applies strongly to the arrest of the head in the brim or above the brim; it is just then that we cannot tell what difficulties may arise in the further progress of the head, and, if you give ergot, you may do mischief by rupturing the uterus or increasing exhaustion and pressure on the soft parts. Although we may be justified in giving ergot when the head is nearly on the point of being born, we are not justified in giving it in any of the higher cases. There is nothing that ergot will do in these cases that cannot be done more safely and effectively by the forceps. I say nothing as to the use of ergot in arresting hæmorrhage; nor will I dwell upon the question whether it injures the child or not. I believe there is a great deal of evidence to show that ergot is attended by larger fœtal mortality than the forceps in cases where one might be used instead of the other. With regard to the alternative of expression or squeezing out, I was rather glad to hear the emphatic protest against it from Dr. Atthill, and also from Dr. Roper. I do not gather from the President's observations that he entirely approves of it as an alternative *per se*, as the sole means of effecting delivery, but he recommends it rather to assist the forceps or other means. I was house-surgeon to a lying-in hospital nearly thirty-five years ago, under the late Dr. Bloxam, and I remember having impressed upon me the importance of expression or squeezing out or down in all stages of labour. His practice was to follow the child down even in natural labour, and *à fortiori* in every case where the forceps was put on, where craniotomy was resorted to, and where turning was effected. I have always adopted that plan with advantage. It reduces to a minimum the necessary *vis à fronte* traction, and in that way equalises the pressure, shortens the labour, and diminishes the danger. The same practice was adopted in my time at the Queen Adelaide Hospital with regard to the placenta as soon as the child was born, waiting perhaps two or three minutes in order that the patient might get a little recovery of strength. Nothing has astonished me more of late years than to see this plan raised into the position of an invention, with the name of a German professor attached to it. It is necessary to say a word or two upon the statement that it is especially in the second stage of labour that the free use of the forceps as a means of accelerating labour that would otherwise terminate naturally may be justifiable, but we must be careful not to apply this practice to the first stage of labour. We have heard the subject discussed in reference to the first question, "Does lingering labour occur so as to entail danger to mother and child during the first stage of labour?" Dr. Hicks answered that emphatically, "yes"; and Dr. Hewitt says "yes, I have not the smallest doubt of it". As to the statistics and arguments derived from the Rotunda Hospital in the time of Dr. Collins, or those which Dr. Roper adduces, what is the history of a number of cases of rupture of the uterus in the first stage? There is no disproportion, no contraction of the pelvis, no undue size of the child, and, in some instances, no malposition of the child; the uterus may be distended with fluid, and mischief may arise at that time; but it is far more likely to arise when the liquor amnii has gone off, and when we are getting a little perversion of the natural order of labour in the first stage, and when irregular forms of contraction and trismus are apt to come on. Then you get arrest of labour, because the uterus cannot act in its natural way; it compresses the child; it does not drive it on. If these cases are not treated properly, great mischief arises; the patient may recover from the labour, but she has afterwards a bad convalescence (perhaps she goes into septicæmia or fever), and she is in danger, and the child is in danger. I will say a word or two as to how to meet those cases. Expectancy is bad if trusted to alone. If you give opium, you can give some relief, chloral still more, chloroform still more; but there is a remedy beyond all these, and that is nitrite of amyl. There is nothing that allays uterine or other muscular spasms so well as that; in two or three minutes, you may subdue the trismus, relax the uterus, get on the forceps, and deliver the patient. The appeal to statistics is very misleading. Figures are heaped upon figures to prove that the forceps is free from danger. And these figures are used to show that the high forceps operation is safe. But the experience of the long forceps is really very limited. Statistics do not distinguish, but confound, different things. To illustrate this point, I appeal to the instruments in use. When we are talking about the free use of the forceps, we must bear in mind that almost all the evidence we have heard applies to the low operation, the intrapelvic operation, except in the case of Dr. Johnston, Dr. Hicks, and a few others who have had more extended experience. We have heard a Scotch professor telling us of the keynote being struck in Scotland, but we must remember that obstetric experience is a matter of population. It is not in Scotland that we are to look for opportunities of acquiring experience in midwifery of this difficult kind; it must be in the great centres of population—London, Manchester, Liverpool, Birmingham, Dublin; and it is in those towns that the longer forceps has come into use. If we want to practise the high operation, we must have the forceps long enough. The Scotch instrument is not long enough. Here is a specimen of the instrument used by Dr. Ramsbotham. It is something like the instrument of Dr. Simpson, which is a little longer. Dr. Simpson's has a double curve, which is a great improvement; but the double curve does not make the short forceps long. It will do for brim operations; but not beyond that. With regard to the argument based on the instrument itself, Dr. Simpson says: "Never apply the forceps until the os uteri is fully dilated, and until the head is in the pelvis." There is the practical commentary upon his forceps. We have an illustration of the same point in his celebrated papers upon turning in contracted pelvis. The reason why he turned was because he had not forceps long enough to get at the head. Here, in London, in Dublin, and in the larger towns, if the head be upon the brim of the pelvis, and accessible to the long forceps, we prefer trying this first. Although I admire his paper upon that subject, and often turn in cases of contracted pelvis, it has been where there is such a degree of contraction that the forceps will not drag the child through. Dr. Lever, who practised in London amidst a large population, contrived a long forceps for difficult cases. I have here also a specimen of a long forceps contrived by Dr. David Davis, who also worked in London. It is a singular instrument, with one long blade and one short one. His son, also, who, I am happy to say, is recovering his health, having similar work to do in London, contrived a beautiful pair of forceps, sixteen inches and a half long, with parallel shanks. You can use the instrument with both hands, so that you have enormous power, and can regulate your work with the utmost accuracy. In Manchester, a similar thing has been done by Dr. Radford, who has contrived a long forceps with parallel shanks. Dr. Roberton has done the same thing, but his instrument is not so good. I used short forceps in my early practice, but I soon gave it up, and I contrived the long forceps now used so extensively in Dublin, the colonies, and elsewhere. You can hold it with both hands, and distribute the force with accuracy, and it will fetch a head above the pelvis. The high operation, therefore, is an operation of English origin rather than Scotch. And we are perhaps following the French. I will not say anything more about the saving of infant life, because that has been dwelt upon by others. With regard to the evidence of damage in the first stage of labour to the mother and child, we have the statistics of Dr. Churchill, quoted as they have been by Dr. Kidd and others, as proving that no damage comes during the first stage of labour; but they are worth very little. I think that all those who have studied midwifery clinically will agree that there never was so much honest labour misspent as in the compilation of Dr. Churchill's tables, and never so many fallacies accepted as facts. We know very well that mischief may arise in the first stage of labour, and it is our business to anticipate it by the timely and judicious use of forceps. There are a number of cases where delay, occurring in the first stage of labour from premature escape of the liquor amnii, may be followed by this difficulty. Emmet, the greatest authority upon vesico-vaginal fistula, says that most cases are due to protracted labour, and might have been avoided by timely use of the forceps. This is my experience too. And if I might criticise the statement of Dr. Henry Bennet, that injuries of the cervix caused by the forceps are the frequent foundation of those troublesome diseases with which we are so familiar, I should rejoice as the result of my own observation that such injuries are far more frequent where there is a history of protracted labour not aided by forceps. Coming to the high operation, we are dealing with a matter of great and serious importance, and we are not to indulge so lightly in the use of the forceps as in the case of the head being delayed in the pelvis. There are two classes of cases of arrest of the head in the brim. There is the first class where the arrest is due to disproportion. Either the head is too large, or the pelvis is too small, or there is malposition. In those cases, we do not always know what the cause of arrest is until we have had time to observe and to put the patient under chloroform. Putting them aside, I admit that the cases which remain, in which there is no disproportion and no malposition, in which there is arrest of the head above the brim,

are not of very frequent occurrence, and that is the only class of cases where we still have it open to us to apply the forceps. Therefore I say again that the last proposition put forward, that the utility, the necessity, and the safety of the forceps become less frequent as we ascend above the pelvic brim, is untouched; and it has received confirmation from Dr. Hicks, and those who have experience entitling them to speak. With regard to craniotomy, I do not think we have evidence enough that the dream, the justifiable and scientific dream, of Dr. Tyler Smith, that craniotomy is on the point of abolition, is about to be realised. I do not think we have got so far as that. I never thought we should; but we have been tending towards it. That is one of the great evidences we have of the progress of scientific midwifery in this country, that we are diminishing craniotomy year by year. There is no possible record of experience that can now be adduced in the practice of the last ten years that could in any way parallel the evidence brought forward as to Dr. Robert Lee's practice. There is nothing to be compared with it, and I say that it is due to the extended use not only of the ordinary forceps, but of the long forceps. In former times, when the head was arrested at the brim of the pelvis, when the long forceps was not used, there was nothing for it but to perforate. Now the long forceps will reach those cases, and thus prevent craniotomy, just as the more frequent use of the forceps saves the child when it is lower down. I think that the alternative of ergot will gradually be exploded. It is not an alternative to the forceps in the cases where it is justifiable to use it. And craniotomy, as an alternative, will diminish more and more as we acquire more skill in the use of the forceps, as we improve the instrument and give it more power. At the same time, it is an instrument liable to abuse; but it is the glory of English midwifery to improve and to carry it up to the highest state of perfection; and the more we do that, the more we shall justify this country as the country where the forceps was invented.

Thanks were given to Dr. Barnes for his valuable paper.

[Dr. Braxton Hicks calls attention to the omission, in the JOURNAL of July 12th, of a remark made by him, which he thinks of some importance when judging between forceps and expectancy. It is this: that when the use of the forceps is necessary, we shall do no more than we were asking the uterus to do; because, unless the uterus is very tightly clenching the fœtus, we merely supplement the force which was wanting to overcome the obstacle, presumably but slight. If the force we put forth be too much for the tissues to bear, then it was wrong to ask the uterus to do it; and the alternative expectancy ceases to come under consideration. Turning or craniotomy come into competition.]

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, MAY 13TH, 1879.

ALEXANDER ROBERTSON, M.D., President, in the Chair.

Abscesses.—Dr. W. T. GAIRDNER showed a man aged 39, who, when seen by him first in the summer of 1876, was suffering from obscure pains in the lower dorsal region, with gradual emaciation. There was a deep-seated swelling in that region also, which was thought to be probably aneurism, and large doses of iodide of potassium were administered in that belief. In two hundred and thirty-six days of this treatment, the patient swallowed in all sixty-seven ounces seven drachms of the drug, with marked relief. But the swelling went on, and eventually showed itself to be an abscess, which burst into the bowel in April 1877. In May 1877, the tumour reappeared, with a high temperature and quick pulse, and in a short time relieved itself by bursting into the bowel and occasioning diarrhœal purulent stools. In June 1877, a large abscess in the right side of the neck appeared, and was opened—giving vent to pus and air; the sinus left after the opening closed six months later, and the patient was quite strong and well. In the autumn of 1876, the finger-ends began to be clubbed; but, in spite of that, and of a suspicion of mischief in the right apex, the health was now quite re-established.

Lithotomy: Transfusion: Recovery.—Dr. MACEWEN showed a man on whom he had performed lithotomy seven months before. The stone was a large irregular oxalate of lime calculus, and was removed with difficulty. Three hours after the operation, the patient became collapsed from severe hæmorrhage from the wound; and, attempts at restoring consciousness by stimulants failing, transfusion was resorted to. Eight ounces of blood, taken from the arm of another patient, were received into a tin bleeding-cup (previously warmed with hot-water), and were whipped with the prongs of a fork. With a clean warm brass syringe, this blood was then carefully injected into the median basilic vein of the fainting man's arm, every care being taken to avoid the entrance of air. In ten minutes, the conjunctiva became red and the pulse perceptible; two hours later, the patient fell asleep, and afterwards awoke refreshed. There was nothing peculiar to note in the progress of the recovery, nor was there any shivering after the transfusion.

Epilepsy in the Dog.—Dr. ROBERTSON showed the brain of a terrier bitch aged 3. It had been epileptic for eighteen months. For the first seven or eight months, every three or four weeks there had been general convulsions; Dr. Robertson had seen it in one of these, which affected the one side markedly more than the other. During the latter part of its illness, the seizures were much more frequent and of a different character. It would suddenly begin to turn round, which it did three or four times; its ears were drawn backwards; its mouth was open, and it put it near the ground. At the end of the fit, it gave a loud squeal and then ran away, coming against obstacles and falling over steps, as if it could not see. During the more severe convulsive attacks, it wetted and dirtied itself. In the intervals between the fits, it had become very stupid. Latterly, it had fallen off greatly in condition, and its hair had partially fallen out, particularly about the ears. At the necropsy, the dura mater covering the upper and lateral surface of both hemispheres was found lined with false membrane, which was partially united with it—leaving, however, a considerable cavity between them on the left side and a smaller one on the right side, filled with serous fluid. The left hemisphere was shrunken, being about a third smaller than the right. The wasting seemed pretty equally distributed throughout its whole extent. The difference in size was specially marked in the case of the corpora striata. At the base, on the left side, just outside the optic tract, there was a band of grey degeneration, about three-quarters of an inch in length and two lines in breadth.—Dr. JOHN YOUNG had noticed hereditary epilepsy in three generations of cats, two generations of which suffered also from puerperal mania two days after delivery.

Dipterous Larvæ, from the Arm of a Girl aged Nine Years.—Dr. JOHN YOUNG showed (for Dr. MCCALMAN of Appin) some larvæ, removed from a girl who, on December 17th, 1878, began to suffer severe gnawing pain in the left elbow. The elbow was swollen, but there was no history of injury. Temperature 100 deg.; pulse 96. In a week, the swelling had subsided under fomentations, and she was quite well; but, on January 17th, 1879, she experienced severe pain in the right forearm, with slight swelling. This increased, and extended to the upper arm, with moderate feverishness, and then subsided; but, on the twenty-third day, a larva was noticed making its way through the skin, at the junction of the lower third of the humerus with the middle third. Dr. McCalman pulled this larva out, and was then told by the patient that its exit was preceded by the formation of a small vesicle, which she opened with her finger-nail. Three days later, a dusky blue tract was made out, extending in a sinuous form from the middle of the forearm to the point of exit of the larva. The girl made a good recovery. The animal was an undoubted dipterous larva. There was no open wound nor flies at the time; and, therefore, the eggs might probably have been deposited in the skin some time before, and have migrated to the spot of exit.

Mitral Stenosis, without Heart-murmur.—Dr. GAIRDNER showed the heart of a lady aged 36, who was first seen by Dr. Hislop in the beginning of January 1879, and afterwards at intervals till the middle of February, when Dr. Gairdner saw her in consultation for the first time, as also on one subsequent occasion shortly before her death. She was a hale, florid, and every way healthy-looking woman, who had been under the cognisance of more than one well-qualified practitioner during the years of her married life (eight years married; five years a widow; six children), without any cardiac disease being ever detected. About midsummer in 1878, she complained of a feeling in her chest "as if she was about to burst", and she maintained that she had heart-disease. Her sister, father, and paternal aunt were reported to have died of similar affections. She had, moreover, had serious distresses and anxieties during her own married life; and it is probable, under these circumstances, that too little weight was attached to her own positive impressions. During the last three or four months of her life, she was the subject of the most aggravated type of cardiac dyspnœa and angina; even a few steps across the room were sufficient to cause extreme distress. The utmost, however, that Dr. Hislop was able to detect was some lesion, marked by an alteration in the quality of the first sound, probably about the mitral valve, but not definable in words. Dr. Gairdner was also unable to recognise any murmur, such as he was familiar with in such cases; and neither the first sound, as heard at the apex, nor the second, over the pulmonary artery, could be said to have any special significance. Violent spasms of cough, with expectoration almost constantly tinged with blood, formed a part of the symptoms. There was no history of rheumatism; but even from girlhood she alleged that she was "short-breathed", and for eight or ten years her breathing had gradually been becoming worse and worse. It seemed not impossible that the stenosis might have been even congenital; and only at a late period accompanied by fatty degeneration of the fibre of the heart. On *post*

mortem examination, the heart was found to be very flaccid, and the mitral orifice contracted, so as not to admit even the tip of the little finger; the segments of the mitral valve were united into a round smooth fibrous ring, quite devoid of any roughness or vegetations. The tricuspid orifice was slightly dilated; the heart-tissue extremely fatty and soft. The lungs were not diseased.

Mitral and Tricuspid Stenosis.—Dr. TALPADE showed the heart of a middle-aged woman who, ten years before death, had rheumatic fever, followed by remittent pain in the præcordium and occasional hæmoptysis. Seven months before death, dropsy of the legs appeared. When admitted to the Glasgow Royal Infirmary, there was great dyspnœa and an anxious facial expression. The pulse was soft and quick, but regular; the respirations 52. The apex-beat was in the fourth interspace, and a thrill was perceptible to the hand before the apex-beat; the cardiac dulness was ill defined. There was a murmur before the first sound, best heard at the apex, and also heard over the tricuspid area. Mitral stenosis was diagnosed, and, on *post mortem* examination, this was confirmed; but, in addition, the tricuspid orifice was found contracted into an oval ring, only admitting one finger. The mitral valve segments formed a ring even smaller, and, on the auricular sides of both mitral and tricuspid orifices were minute vegetations.

Aneurism of Arch of Aorta, perforating Wall of Chest: Galvano-puncture: Death.—Dr. GAIRDNER showed parts from this case, which was that of a person aged 42, admitted on December 11th, 1878, to the Western Infirmary. A prolonged course of rest, with regular treatment by iodide of potassium, having failed to arrest the course of the disease, and the aneurism bulging out more and more through the wall of the chest, it was decided to try galvano-puncture. Dr. McCall Anderson performed the operation on three occasions. After the first time (on January 20th), there was some sickness, and pain in the tumour, but there seemed to be a certain increase in solidity in the mass. The second application (February 18th) was without effect. The third (on March 12th) appeared to be the most successful; but a small abscess formed at the seat of the puncture, which afterwards oozed blood. The tumour enlarged and became diffused, and the patient died quietly six weeks after the last puncture was made. At the *post mortem* examination, by Dr. Foulis, a large aneurism of the transverse arch was seen to perforate the wall of the chest, at the second and third ribs, near their sternal end, causing a gap which admitted three or four fingers, and to bulge out on the surface of the chest under the skin. From this outer chamber the blood had burst into the subcutaneous tissue, all over the left side of the chest and axilla. The aneurism generally was filled with soft red laminated clot; but, at the aperture in the chest-wall, corresponding to the position of the point of the needle, there was a firm white laminated clot, as large as a hen's egg.—Dr. MCCALL ANDERSON said the case was in some respects unfavourable for galvano-puncture, though favourable in others. The patient was not robust, although very quiet and obedient, and there were chronic cystitis and irritability of the stomach, which led to vomiting after the first puncture. The aneurism was very large, and the galvano-puncture was resorted to late in the case. He was, therefore, not discouraged by the want of success.

Septic Ascites.—Dr. JOSEPH COATS showed (under the microscope) ascitic fluid, in which a bacterium was present. The case was primarily one of cirrhosis of the liver, with great ascites. Paracentesis was several times performed; and, after the last tapping, febrile symptoms developed, with high temperature, and the patient died in two or three days. A large quantity of turbid fluid was found in the peritoneal cavity; and in this, besides inflammatory cells, there was a peculiar bacterium. It was not the ordinary bacterium of decomposition, but a motionless form, which was much more distinctly beaded and was often in rather long chains. As the *post mortem* examination was made about twelve hours after death and the fluid examined immediately, the bacterium, which was found in enormous quantity, was probably present during life. The case was regarded as one of septic peritonitis, coming on after the last tapping. The other organs presented the changes usual in acute diseases with high temperature—namely, cloudy swelling and incipient fatty degeneration, which was demonstrated in the liver, kidneys, and muscular tissue of the heart.

Lesion of Surface of Brain.—Dr. ALEX. ROBERTSON showed parts from this case, which was that of a woman aged 46, admitted to the Town's Hospital on January 31st, 1879. She had suffered much from headache for about eight days previously. She walked into hospital, and there was no palsy. About eight hours after admission, she became stupid, and in four hours more had sunk into coma—retaining, however, a slight degree of power over the extremities. She died the same evening. On inspection, besides considerable congestion of brain and membranes and some serous effusion, there was adhesion of the dura mater and inner membrane to the surface of the brain, over a large part of the left parietal lobe, mainly over its central part, but extending to, and slightly implicating, the middle of the ascending frontal convolution. A section showed that the parts were united by yellow, firm cheesy-looking matter, and that the brain itself was involved in the centre of the area to the depth of about one-fourth of an inch. The cranial surface of the dura mater was healthy in aspect. The calvaria (also shown) was distinctly thickened over the diseased surface, and the diploë effaced. Dr. Robertson considered the disease to be probably syphilitic, and remarked that the case showed that serious disease of the affected part of the brain, apparently of considerable standing, had given rise to no very pronounced symptoms beyond a degree of pain, till suddenly, without seeming exciting cause, it induced a fatal congestion with effusion. The examination of the patient on admission had not, however, been such as would warrant the statement that there was then no motor or sensory defect. Attention was also directed to the localised hypertrophy of the skull, as an interesting feature of the case.

Large Cavity in Brain: Unusual Epileptiform Seizures (Auditory Epilepsy?).—Dr. ALEX. ROBERTSON also showed the parts from the body of this patient, a man aged 57, who had been insane for fourteen years; he entertained delusions about being pursued by people, and was very irritable. There was no paralysis. His mental state was not such as to admit of an accurate examination of his hearing, but there was no marked defect in it. For ten years, he was subject, at intervals of from three to six weeks, to attacks of the following character. Suddenly and without warning, he would begin to turn from left to right, moving on his right foot as a pivot, and going generally thrice round without stopping. He seemed always unconscious while the attacks lasted. If a seat were near, he would sit down at their close, consciousness being fully restored after a few seconds. Then he would rise, and say to the attendant standing by: "What 's wrong with you, man?" Should he happen to have anything in his hand when the attack began, he did not let it fall. Thus he has carried a pail of water round with him without spilling it. He was not subject to sickness or vomiting. Severe general convulsions preceded his death for three days. On inspection of the brain, the right ventricle was found to be expanded posteriorly into a large cavity, which involved all the cerebrum behind the ascending parietal convolution, and also the temporo-sphenoidal lobe. This cavity was filled with clear serous fluid. The convolutions investing it, though very thin, did not seem otherwise abnormal. The right auditory nerve was atrophied. The petrous bone was apparently healthy, but its interior was not examined. The heart was much atrophied; its valves were sound. The kidneys were granular. Dr. Robertson said that the fits were somewhat analogous to those which were produced by physiologists in the lower animals, by irritating the internal ear, and particularly the semicircular canals—having, therefore, relations to labyrinthine vertigo. He considered it uncertain whether their immediate source was in the centric disease, or in the ear itself and in connection with the wasting of the auditory nerve.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

WEDNESDAY, MAY 7TH, 1879.

J. W. F. SMITH-SHAND, M.D., President-elect, in the Chair.

Deformity of Limbs.—Dr. GARDEN exhibited the body of a new-born child, which presented a striking amount of deformity in the limbs, both upper and lower. The presentation at birth was an arm, and the delivery took place without assistance, the child being small. On the right hand there were but two fingers, and on the left three; and the right and left foot had one and two and a half toes respectively. There was dislocation also of the knee and ankle-joints.

Double Orbital Abscess in a Child.—Dr. GARDEN showed a case of double orbital abscess occurring in a child a few weeks old. When first seen, the appearance was that of a child suffering from purulent ophthalmia, the eyelids being closed, much swollen and protruded, and pus issuing from between the lids. On puncturing above the eyes, a large quantity of pus was discharged, and the eyes resumed their natural position to a great extent. There was exposed bone felt on introducing a probe through the wound above the left eyelid.

Modified Button-Suture.—Dr. OGILVIE WILL made some remarks on a modification of the button-suture which he had had made, and showed specimens in silver. (His paper was published in the JOURNAL of June 21st.)

Aneurism of Aorta.—Dr. URQUHART reported a case of aneurism of the aorta, which, on *post mortem* examination, was found to have obliterated the thoracic duct, to have caused slight abrasion of the bodies of the first and second dorsal vertebræ, and to have stretched the left pneumogastric and its recurrent branch. For many months, the chief symptom complained of was falling down of the head on the breast, as if the head had been forcibly drawn down by the sterno-

mastoid muscles. The head did not fall down on one side. It could be kept up for some time, and would then fall down suddenly. The frequency of falling down had been gradually increasing for four years, and seemed to have dated from an attack of erysipelas following the removal of some wens in the back of the head. The ordinary symptoms of aneurism were diagnosed about a year before death.

Chloroform-Poisoning.—Drs. BARCLAY of Banff and MACRAE of Macduff reported a case of chloroform-poisoning. The case was that of a printer aged 23, who, formerly healthy, became subject to spermatic emissions several times every night. After a time, he was admitted into the hospital at Banff, dejected and melancholy, soft and flabby, though fat. Treatment did not relieve the symptoms; and he left the hospital after four months' residence in it much as when he entered it. The day after he left, he procured four ounces of pure chloroform; and, between 9 and 11 P.M., he drank rather more than two and a half ounces of it. About 1 A.M. next morning, he was observed breathing very heavily, but this was not considered remarkable, and he was left till seven in the morning, when the smell of chloroform was detected, and a phial containing over an ounce of chloroform was discovered. On being seen by Drs. Macrae and Barclay, he was found lying in bed deadly pale, pupils dilated and fixed, and the corneæ insensible to touch; mouth open; breathing short, shallow, and at rather long intervals; the pulse not to be felt anywhere. The heart-sounds could not be heard even by the stethoscope. The trunk was warm; the extremities were cold. As the stomach-pump was contraindicated owing to lapse of time, and no amyl-nitrite was procurable, half a bottle of warm brandy with milk was injected into the bowel; sinapisms, friction, artificial respiration were all tried, and in an hour and a half colour began to return to the lips, and in another hour he could swallow. In the afternoon, he suffered from burning in the chest, thirst, and vomiting, and was relieved by ice and milk. Next day, he was sensible, and mentioned the dose he had swallowed. Vomiting continued. The bowels were constipated. On the next day, jaundice appeared, and depression of spirits increased, rendering a watch necessary to guard against suicidal attempts. The watchman slept a few minutes, however, and the patient went out and was discovered hanging dead shortly afterwards with three wounds in the throat. On *post mortem* examination, there were the usual marks of the cord in cases of death by hanging, and the wounds were slight. Fæces were on the thighs and legs. The penis was semi-erect, and with fluid marks about it. The cerebral veins were full of dark blood, and there were small effusions of blood among the muscles of the neck where compressed by the rope. Bloody frothy mucus was found in the pharynx, trachea, and bronchi. The right heart was very full of dark fluid blood; the left was empty nearly. The lungs were excessively congested, their dependent parts being in a state resembling pulmonary apoplexy. Parts of the lungs were of a bright carmine colour on the surface and on incision. Nothing abnormal was found in the stomach, except a few minute spots of effused blood under the lining membrane near the pylorus. The liver was large, pale, friable, and, when cut into, greasy and mottled. The gall-bladder was full of thick dark brown fluid; the walls were deeply reddened and duct-walls thickened.

Urinary Calculi.—Dr. BARCLAY showed fifteen urinary calculi removed by operation by him, and gave a short account of each of the cases.

Midwifery Cases.—Dr. SHEARER of Ballater read notes of a few midwifery cases occurring in his practice.—Case I. *Prolapse of the Gravid Uterus.* Labour had scarcely begun when the case was first seen. A fleshy mass of the size of a large turnip, consisting of the neck and part of the body of the gravid uterus, was found protruding beyond the vulva. The mass seemed to grow from the edge of the vulva, the entire vagina having been forced outside. The os of the size of a sixpence was in the centre of the mass, and was only beginning to open. Delivery was effected naturally in a few hours. The patient stated that she had had several children, and that the womb had come down shortly after the first was born, and had been getting worse each time since, and remaining beyond the vulva to some extent even when in the unimpregnated state. In this case, how did impregnation take place at all, the womb being constantly protruding so far as to cause great difficulty in walking? And how did she go on to the full time with the womb hanging down all the time?—Case II. *Tumour retarding Labour.* The patient was a healthy middle-aged strong woman in labour with her seventh child. Everything was natural, except that a flattened tumour about the size of a hen's egg, gristly and movable, situated in the hollow of the sacrum, advanced before the head, which was in the occipito-posterior position. The labour gradually changed to face-presentation, and, as the pains were strong and the pelvis roomy, successful attempts were made to push up the tumour, and then the presentation immediately changed back to the original, and the labour terminated easily. The tumour seemed to be remains of a large blood-clot, and in the impregnated state might very easily have been mistaken for a retroverted uterus.—Case III. *Puerperal Fever.* The patient, aged 35, had been always strong till lately. She had been accustomed to be at work a day or so after confinement. The labour (her fifth) was very easy and rapid. There was no hæmorrhage. She sat up in bed within twenty minutes of the delivery. Next day, she was very sick and feverish, but was relieved by oil, and then she got up for a considerable time in spite of injunctions to the contrary. She again became feverish, the temperature rose to 103°, the milk stopped, the lochia diminished, but were not offensive, and there was great prostration and tenderness over the womb. The limbs were not drawn up. In spite of stimulants and the use of permanganate of potash, she died on the fifth day. The death was from septicæmia, but the source of this was not discovered. The placenta came away entire.—Case IV. *Retained Placenta.* The case was seen eight hours after the delivery of twins, when the edge of the afterbirth was found protruding through the vulva. Though the entire mass seemed in the vagina, it could not be extracted easily. Ergot was given, and kneading the abdomen and cautious traction of the cord tried without effect. The hand was then passed into the vagina, and the neck of the uterus was found grasping a second cord and a piece of placenta one inch and a half in diameter. After some trouble, the hand was introduced into the uterus, and a second placenta easily removed. The placentæ were found each complete, and with a band about one inch and a half thick joining them. Regarding this case, the author remarked that it was curious to note that no hæmorrhage occurred. He had in some other cases of retention occurring since tried injection of warm water quickly introduced into the rectum, and found it useful.—Case V. *Occipito-Posterior Presentation requiring Forceps.*—This occurred in a strong healthy woman aged about 30, in labour with her third child. The head had for some time been well down in the pelvis, but was reported to have made no advance. The membranes had long been ruptured. The os was well dilated. While examining, a gush of meconium took place. Chin-flexion was tried without effect. The forceps was then applied, but not till after five or six attempts, the head keeping twisting round the first blade. After locking, the pains increased, and produced a partial but ineffectual revolution of the head, the head always returning to the original position between the pains. A good deal of traction was required to deliver. The case terminated as an occipito-posterior presentation, and the rotation forwards of the occiput never took place. The forceps was here used as a means of saving the child's life, and the child was born alive and began to breathe after a quarter of an hour's hard work at resuscitation. The difficulty of the case seemed to be owing to a slight contraction of the outlet.

THE CERTIFICATION OF PAUPER LUNATICS.

AT the annual meeting of the Poor-law Medical Officers' Association, held on the 3rd instant, a letter was read which had been sent to the Chairman, Dr. Rogers, by a gentleman residing in a West End union, in which the writer asserted that a practice had been for some time carried out in the union referred to, whereby the relieving officers obtained six shillings out of every guinea-fee allowed for certification of pauper lunatics; and that, in the few instances where medical officers resisted this extortion, recourse was had to a system of transference, whereby those who consented to share their fees with the relieving officers obtained a virtual monopoly of lunacy certification. The writer asked how such improper practices could best be exposed, with a view to their future prevention. The reading of this letter was followed by a gentleman rising and stating that which took place in his union, situated in the west-central district. It would appear that there every case of lunacy was, by the direction of the clerk, taken to one particular workhouse (there are three in the union); so that practically the medical officer of that special workhouse has the absolute monopoly of certifying all the pauper lunatics of the union, containing a population of 160,213 inhabitants.

The Council of the Association, we learn, intend to take this question into their consideration at their next meeting in July. It would be well, if similar practices prevail in other Poor-law unions, that medical officers aggrieved thereby should forward their statements to Dr. Rogers, or to the Honorary Secretary, Mr. J. W. Barnes, 3, Bolt Court, City. We feel that this matter can be very effectually dealt with; but, as the question is in the hands of Dr. Rogers and the Council of the Association, we will for the present abstain from any comment, beyond expressing our regret that members of our profession can be found to lend themselves to such proceedings.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 19TH, 1879.

THE CONTAGIOUS DISEASES ACTS.

WE have before us a letter from Dr. C. Bell Taylor to the Secretary of the City of London Committee for the repeal of these Acts, which we hear is being widely circulated, and is obviously intended to influence public opinion at this moment when the Select Committee of the House of Commons is sitting on this question. This letter at the commencement states: "There is only one disease of venereal origin which is of consequence or which can, on any plea whatever, be considered a matter of State concern, and that is the constitutional disease which we know as syphilis—true syphilis. And further on the author states that to combat true syphilis was alone the *professed* real object of the legislature. So far from this being the case, the Act expressly states that contagious disease means "venereal disease, including gonorrhœa". Dr. Taylor, however, finds it convenient, as regards the army, to limit the issue to secondary syphilis, because it is in this form of disease alone that the returns do not show a decided diminution. He gives, therefore, a table which shows that the admissions to hospital for secondary syphilis were increased from 23.39 per 1000 in 1866 to 27.4 per 1000 in 1876; but he omits to take any notice of the fact that, excluding fluctuations, there was no increase till after 1873, when Mr. Cardwell issued an order for the stoppage of pay to men in hospital for primary sores or gonorrhœa. Consequently, men with these complaints now try by every means in their power to keep off the sick-list, while those with secondary disease, which is not included in the order, apply readily enough. This is generally admitted to be the cause of the apparent increase in secondary syphilis since 1873. But apart from this, secondary disease is the least reliable form on which to found an opinion as to the efficiency of the Acts, as Dr. Balfour long ago pointed out, in consequence of the lapse of time after infection at which it may appear, and that disease contracted in one place makes its appearance at another.

Dr. Taylor makes no mention of the evident cause of the increase since 1873 above mentioned; nor does he say anything about the diminution in gonorrhœa shown by the returns, or the very marked decrease—nearly two-thirds—in primary venereal sores in the protected as compared with the unprotected stations. These he puts aside altogether. But, in point of fact, primary sores and their sequelæ are in reality quite as disabling to the soldier as the secondary affections, if not more so. These sores are liable, especially if not properly looked after, to be followed by suppurating buboes, acute inflammation causing phimosis and paraphimosis, phagedæna, and sloughing of the penis; any of which may confine a man to hospital for weeks or months, and some of them perhaps permanently destroy his efficiency. Even gonorrhœa, if neglected, is apt to cause affections of the testicle, entailing confinement for a longer or shorter period, and notoriously stricture, which, with its possible complications, forms one of the most formidable of surgical diseases.

With reference to the navy, Dr. Taylor entirely throws over his theory that secondary disease was the only form intended by the legislature to be influenced by these Acts, but takes an entirely different line, and publishes a table indicating the "number of men sick daily of *syphilis and gonorrhœa*". By this means, he is able to show that there has only been a diminution in the daily sick from 8.6 per 1000 in 1866 to 7.59 in 1877; but he keeps out of view altogether the fact that the increase is entirely owing to increase in the complaint which he considers so unimportant; viz., gonorrhœa. In fact, the number of daily sick from syphilis, taking primary and secondary together, has diminished from 7.7 per 1000 in 1866 to 4.42 per 1000 in 1877; while the amount of gonorrhœa recorded has increased from .9 in 1866 to 3.17 in 1877. Neither does he think it worth while to say anything about the explanation which has been given by the Naval Medical Department for this apparent increase of gonorrhœa. The explanation is, that before the Acts it was not the custom to place cases of gonorrhœa, unless severe ones, on the sick-list; but since the Acts the attention of medical officers has been more closely directed to these diseases, and a large number of cases have been brought under notice which would otherwise not have been seen.

The facts we have stated will enable our readers to judge of the manner in which the opposition to these Acts is being conducted.

THE DISCUSSION ON THE FORCEPS.

THE discussion on the use of the forceps and its alternatives in lingering labour at the Obstetrical Society of London has been a valuable one and will bear fruit. The general tendency on the part of the speakers, more especially on the part of those who have had the largest share of difficult midwifery, was to prefer the use of the forceps to ergot, whenever a choice lay between these two; and the extended use of the forceps as the best means of lessening resort to craniotomy; for example, the application of the long forceps to the head above a contracted brim, instead of perforation of the child's head or turning, as was the practice before the era of the long forceps. Indeed, nothing has ever been brought to light more clearly in any discussion, than has the fact that, in proportion as the long forceps has been improved by lengthening it and by adding the pelvic curve, so has its accompanying use supplanted or eliminated ergot, turning, and craniotomy. The result of this has been a constantly diminishing ratio of maternal and of fœtal mortality.

Another interesting point which has been brought out and emphasised in the discussion is the fact that, for the growth and development of the forceps, the murky atmosphere of the large manufacturing and densely populated towns, such as London, with its four million inhabitants, Manchester, Birmingham, and Dublin, has been more beneficial than the clearer atmosphere of sparsely populated districts, like Scotland. Indeed, it is only where large masses of human beings are crowded together under unfavourable hygienic and other conditions, that a large proportion of difficult labours from pelvic deformity and other causes is found. And so it is that the first long forceps appeared in England, and that to-day, when the long forceps is almost universally used in the large towns of this country and in Dublin, the short double-curved forceps of Simpson is still the most widely used in Scotland.

On the other hand, it seems fairly agreed upon, that the practice recommended by Dr. George Johnston of applying the forceps to the head above the brim before the os is dilated, and sometimes before even the membranes are ruptured, cannot be supported by the mass of obstetricians at large. Most of the speakers, and among them Dr. Graily Hewitt, endorsed the fourth proposition laid down by Dr. Barnes in his masterly address, that "in proportion as the head is arrested high in the pelvis, in the brim, or above the brim, the necessity, utility, and safety of the forceps become less frequent". Dr. Graily Hewitt admitted that the cases in which it is necessary to apply the forceps to the head above the brim do occur, but they are few. As regards Dr. Barnes's first proposition, that "in lingering labour, when the head is in the pelvic cavity, the forceps is better than its alternatives", the consensus of opinion was, as might have been expected, almost universal. It was generally agreed that, in such a case, the termination of labour by the application of the forceps was not only a simple and easy operation for the practitioner, but a humane and beneficial procedure for the mother and the child. In other words, the "low operation"—or, as

Dr. Barnes more precisely puts it, the intrapelvic operation—is now recognised as a safe and justifiable proceeding in all cases of lingering labour. Its chief alternative, ergot, has for some time been dying a natural death; and it was with considerable satisfaction that we heard Dr. Lombe Atthill state, in the course of the discussion, that its use is abandoned and even prohibited in the Rotunda Hospital. There is nothing that ergot can do that cannot be done more safely and effectively by the forceps. The use of ergot in the arrest of hæmorrhage is of course outside the discussion; no one denies its utility in this respect. The good results attending the substitution of the forceps for ergot are strikingly set forth in the experience of Mr. Alderson. When this gentleman began practice, he never, or at all events hardly ever, used the forceps at all, but he used ergot frequently. During this period, he used to have an enormous number of still-births. Gradually he cultivated the use of the forceps; and, as a natural result, his still-births diminished, until now, when he applies the forceps in all those cases where formerly he would have administered ergot, he has no still-births at all. Similar results to his have been observed in comparing the numbers of the still-births inside lying-in hospitals where the timely use of the forceps is secured, and those outside, where the midwives do not send for assistance, but give ergot.

The discussion has, we believe, given the *coup de grace* to the antiquated idea, prevalent in the days of Dr. Robert Lee, who performed craniotomy in one hundred and eighty-six cases and used the forceps in only fifty-three cases, that the forceps is a dangerous instrument. No instrument in the whole range of medicine has ever saved more lives and more human suffering than the forceps, the invention and perfection of which constitute one of the chief glories of English midwifery.

THE VIVISECTION DEBATE IN THE HOUSE OF LORDS.

THE debate in the House of Lords on Lord Truro's Bill for abolishing Vivisection does not call for much comment. So far as Lord Truro and Lord Shaftesbury are concerned, the inquiry of the Royal Commission might never have been held. They revived the old cry, and retailed the old charge of cruelty against foreign vivisectionists. They misquoted Professor Rutherford and Dr. Moxon in the customary fashion, to show what is not true, that Dr. Rutherford considered his own researches useless for application to man, and that Dr. Moxon considered them useless for any purpose, and therefore cruel and unjustifiable. They attacked the great physiologist Claude Bernard, whom all the nations of the world have recently united to honour, and whose name and fame will endure for many an age; while his contributions to knowledge, and the light they have shed upon the progress of the institutes of medicine will endure while the human race lasts and suffers and is healed by the aid of knowledge won by men such as the noble philanthropists insult while they gladly profit by their labours.

Lord Beauchamp, Lord Cardwell, and Lord Aberdare gave reserved sanction to the principles of the Act now in force, of which we have only to say that their support might well have been more generously worded, and was far below the standard which facts warrant. The admirable speech of the Bishop of Peterborough, obviously based upon the life-saving researches and labours of Mr. Spencer Wells, was the bright feature of the debate. The fact is, that investigations of a character to give pain have always been of minimum frequency in this country, and the Act in question was passed avowedly in the acknowledged absence of any proof whatever that there was or had been any abuse of experiment, or any purposeless or unjustifiable infliction of pain. It was passed to allay apprehensions which had been proved before the Commission and acknowledged by the Commissioners to be without any foundation in fact. In its operation, it has probably done nothing to lessen the number of painful experiments; for there is no reason to believe that they were ever less unfrequent than they now are. But, by the amazing delays, restrictions, and inconveniences which it interposes, it has, we fear, done something to discredit the search for necessary knowledge, to irritate and obstruct a class of benefactors to humanity who, more than most others, deserve encouragement and sympathy, and probably to put back England into a lower place in the hierarchy of science than should be occupied by the land of Harvey, Jenner, John Hunter, and Bell.

THE library of the Obstetrical Society will be closed during the month of August.

THE *Broad Arrow* mentions that six additional civil surgeons left for service with our forces in Zululand on the 10th instant.

SURGEON-MAJOR J. ADCOCK, M.D., of the Army Medical Department, is now discharging the duties of Principal Medical Officer in the island of Cyprus.

SIX cases of yellow fever, three of which have proved fatal, are authoritatively stated to have occurred at Memphis, from which place the inhabitants are still flying.

DURING the past eleven weeks, no less than 140 deaths from measles have been recorded in Islington, including 15 which occurred there last week.

THE recent low rate of mortality in the twenty largest English towns to which we last week draw attention still continues. The deaths referred to diarrhœa in these twenty towns were but 54 last week, against 352, 223, and 433 in the corresponding weeks of the three years 1876-7-8.

IN London, 1,179 deaths were registered, being no fewer than 326 below the average of the week, and giving an annual death-rate from all causes of 17.0, a lower rate than has prevailed in any week since the middle of September 1876. The deaths referred to diarrhœa in London were only 29, being 162 below the average of the week. The Registrar-General remarks that "so few deaths have not been referred to diarrhœa in London in the second week of July, since the memorable cold and wet summer of 1860".

ACCORDING to Dr. Frankland, the Thames water supplied to the metropolis during the month of June by the Southwark and Vauxhall, Grand Junction, and West Middlesex Companies was quite unfit for dietetic purposes on account of excessive pollution with organic matter.

"DR. FRANCIS JAMES HAMMOND, F.R.C.S., etc.", was on Saturday charged on a warrant, at the Bow Street Police Court, with having feloniously sought to procure miscarriage, thereby endangering the life of Ellen Saunders. He was remanded, Sir James Ingham refusing to admit him to bail. We do not find anyone of this name in the *Medical Register* for 1879.

THE Chancellor of the Exchequer has this week received a deputation which presented resolutions passed at a meeting held at St. Bartholomew's Hospital, protesting against the proposal in a Bill now before Parliament to charge a duty of 1 per cent. on the gross income of charities, as a contribution towards the expenses of the Charity Commissioners. In replying, Sir Stafford Northcote pointed out that the proposal was a much fairer one than any that had yet been made to meet the cost of the Charity Commission. He was not, however, sure that in detail it was the right mode of dealing with the question, and he was quite prepared to receive any suggestion upon the subject.

M. TROUVÉ of Paris has furnished us with documents which tend to show that the discovery of the electric polyscope, attributed in a recent number of the JOURNAL to Dr. Nitze, had in fact been some time previously anticipated by himself; and of this he forwards us conclusive evidence.

POISONING BY PIGEON-PIE.

THE Admiralty have issued a circular letter containing the results of the investigation they caused to be instituted into the recent poisoning of several men of Her Majesty's troop-ship *Tamar*, which resulted

fatally in the case of the steward. A careful analysis by Dr. Macdonald of Netley Hospital has failed to discover any mineral poison in the stomach of the deceased, and the medical men have come to the conclusion that "the case was one of choleraic diarrhœa induced by mephitic poisoning, possibly caused by a pigeon-pie, of which all the sufferers had eaten; for, although two officers had previously partaken of it without any ill effect, poisonous changes are known to take place in cold pies, and especially in those made with game, by simply keeping or lying by for some time. The symptoms in such cases closely resemble those narrated in the papers." Under these circumstances, the Lords of the Admiralty have decided to take no further steps in the matter.

PASS AND PLUCK.

FROM the annual report which has just been published by the Council of the Royal College of Surgeons of the number of candidates who have presented themselves before the Board of Examiners in Anatomy and Physiology during the collegiate year 1878-79, it appears that, out of 785 examined, 530 were successful, and 255 rejected. At the Court of Examiners during the same period, 509 were examined, of which number 345 received their diplomas of membership, and 164 were rejected.

THE CONTAGIOUS DISEASES ACTS.

SIR WILLIAM MUIR, K.C.B., Director-General of the Army Medical Department, was examined a few days ago by the Select Committee of the House of Commons on the Contagious Diseases Acts. His evidence tended to show that the operation of the Acts had proved beneficial to the health of the army, and that their discontinuance would certainly lead to an increase of sickness and loss of service among the troops.

NEW RULES FOR ADMISSION INTO THE FRENCH ARMY MEDICAL SERVICE.

A DECISION of the President of the French Republic, dated June 12th, 1879, has just been published, modifying the conditions of the competitive examination for admission into the medical service of the army in France. The regulations on which the admission by *concours* has been conducted of late years have been based on a presidential decision of October 1872. A higher standard of professional education is to be required in the examinations of the candidates for admission into the medical service during the present year, and is to be the rule for the future. The decision of the President is given in approval of a report on the subject by General Gresley, the Minister of War.

OPEN SPACES IN TOWNS.

THE following resolution of the Standing Committee of the Health Department of the Social Science Association on Gardens and Public Spaces within the Metropolis and other large Towns, has been presented to the Metropolitan Board of Works, by order of the Council: "That the attention of the Metropolitan Board of Works be drawn to the question of providing open spaces for recreation in London, and that, where new streets are to be laid out in the districts of the poorer classes, the Board should reserve a certain portion of the ground for the formation of such open spaces for recreation".

PRIZE ESSAY ON DIPHTHERIA.

A NOTICE, dated July 1st, has been published in the German medical papers by Professor von Langenbeck, stating that Her Majesty the German Empress and Queen of Prussia has, by autograph letter dated April 15th and addressed to him, been pleased to establish a prize of 2000 *marks* (£100) for the best work on diphtheria; and has named as adjudicators Professors Klebs of Prague, Liebreich of Berlin, von Nägeli and Oertel of Munich, Thiersch of Leipzig, and Virchow and Langenbeck of Berlin. The subject is formally declared to be "The Nature of Diphtheria, and the conclusions to be drawn from a knowledge of this with regard to the Treatment of the Disease". The prize can only be given for an essay in which important new facts are established respecting the essence of the disease (the nature of the infective material), and especially its spread and the means of preventing the same. The essays may be written in German, French, or English, and must be sent to Professor von Langenbeck (3, Roonstrasse, Berlin, N.W.) on on before December 15th, 1880. The adjudication of the prize will be made at the meeting of the German Surgical Congress in April 1881. Every essay must be denoted with a motto, and the name of the author must be sent in a sealed cover marked with a similar motto.

DEATH WHILST UNDER CHLOROFORM.

AN inquest was recently held at Mildenhall, in Suffolk, on the body of a girl aged 14 years, who had died at the St. Leonard's Cottage Hospital at that place, during an operation whilst under the influence of chloroform. The medical evidence showed that the girl was admitted for inflammation in the elbow-joint. Abscesses formed in the arm which required opening, and she had been twice chloroformed during the performance of operations. On the third occasion, when fresh abscesses had shown themselves, the chloroform was taken very easily and calmly, but the breathing soon became noisy and embarrassed, and the lips and face began to turn livid. The usual restoratives were applied without avail, and death ensued.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

AT the annual meeting, held on the 9th instant, the following officers were elected for the year ensuing. *President:* Dr. J. S. Bristowe. *Vice-Presidents:* Mr. J. Liddle, Dr. G. Buchanan, Dr. Thomas Stevenson, Dr. C. O. Baylis, Dr. W. H. Corfield. *Treasurer:* Dr. J. W. Tripe. *Secretaries:* Dr. J. N. Vinen, Mr. S. F. Murphy. *Council: Metropolitan Members:* Mr. G. P. Bate, Mr. F. M. Corner, Dr. T. O. Dudfield, Mr. H. Leach, Mr. S. R. Lovett, Dr. James Stevenson. *Extra-Metropolitan Members:* Dr. J. Adams, Dr. F. T. Bond, Dr. G. W. Child, Dr. A. Hill, Mr. E. L. Jacob, Dr. R. P. B. Taaffe.

INTRA-UTERINE THERAPEUTICS.

DR. CNOPF of Nuremberg (*Memorabilien*, part 5, 1879) has lately tried the experiment of treating rhachitis during intra-uterine life. The patient was a woman who had given birth to several rickety children. Both parents were seemingly healthy, but showed traces of rickets. Dr. Cnopf treated the woman with phosphates for several months previously to her delivery. A very well formed healthy male child was born, which did not present the slightest symptoms of rickets.

A RARE LESION.

AT a meeting of psychologists in Heidelberg, Professor Friedreich presented a patient who had been for the last three and a quarter years subject to clonic convulsions of the lips, the tongue, and the maxillary muscles. The lips were thrust forward, the tongue was rolled about in the mouth, the jaws opened and shut with great force, so that the tongue was frequently bitten. These convulsions continued even while the patient was asleep. The right pupil was enlarged; the pulse quick and somewhat irregular. Professor Friedreich thought that these convulsions were caused by a circumscribed lesion of the medulla oblongata.

MEDICAL EDUCATION.

AT an adjourned meeting of the Metropolitan Counties Branch, held on Wednesday evening last, the discussion on medical education was resumed. Mr. Macnamara, on behalf of the committee appointed at the previous meeting, stated that between three and four hundred replies to the queries that had been issued had been received; and presented an analysis of a portion of them. It appeared from this that there was a very large proportion of affirmative answers, both from medical teachers and general practitioners, to the first, third, and fifth questions. To the second, the answers from teachers showed a slight excess in the negative; while those from practitioners were considerably in the affirmative. The answers to the fourth question showed a majority from both sections, though less marked than in some of the other cases. On the sixth and seventh, there was a greater difference of opinion. Professor Huxley, who kindly attended at the invitation of the President, explained his views on the subject of professional education; after which the meeting

was addressed by Mr. Jonathan Hutchinson, Dr. Habershon, Mr. Morrant Baker, Dr. Pye-Smith, Mr. Maclaren, Dr. Burney Yeo, and the President. The meeting was again adjourned, in order that time might be given for the committee to make a complete analysis of the replies and to draw up a report.

IDENTIFICATION OF THE PRINCE IMPERIAL.

THE circumstances of the Prince Imperial's death have revived a question which has been somewhat neglected by lawyers and physicians—viz., the importance of the teeth as a means of identification of deceased persons. The late Prince Imperial had been so much disfigured, that identification would have been extremely difficult but that the Prince had had four small cavities in the first molar teeth filled with gold by Dr. Rottenstein of Paris, and had met with a slight accident, in April 1876, from a blow on the front teeth, which had made it necessary to file the teeth a little, in order to smooth the enamel. These constituted signs which are unalterable, even by ages; and, as careful dentists keep usually a record of such operations, they afford a means of identification which is unerring, and which, as in the present instance, was of great value, and might, under certain circumstances, be of the highest importance.

THE EDUCATION OF DENTAL PRACTITIONERS.

THE annual distribution of prizes to successful students of the Dental Hospital of London Medical School has for some years been presided over by distinguished surgeons; on consecutive years by Mr. Savory, Sir James Paget, Mr. Huxley, Mr. Le Gros Clark, and this year by Mr. Erichsen. Each President has in turn, after touching upon subjects common to prize-day addresses, given some account of the sort of training best fitted to secure competence in the dental practice; but no one has gone into the question more fully or more successfully than Mr. Erichsen. A summary of his views may be best given by using his own words. After stating that the power to grant a licence in dental surgery was conferred by means of the Dental Charter (1859) on the Royal College of Surgeons, he proceeded to say: "That licence has now been taken by between five hundred and six hundred dentists. The examination which is required by the College of Surgeons embraces all those scientific and practical subjects which it is necessary for the dentists to know; and although many dentists go beyond this and take the membership and even the fellowship of the College of Surgeons, I can scarcely look upon such extension of professional study as being necessary to the great body of your profession. In fact, in order to obtain the membership of the College of Surgeons, it would be necessary for the dental student to acquire an amount of technical surgical knowledge which would be utterly useless to him in after-life; and no time can be worse spent by a young man than in the acquisition of knowledge which he knows will be useless, and which he intends to throw aside and to forget as soon as he possibly can after he has obtained a diploma, for which alone he has sought to acquire it. I think, therefore, that the L.D.S. diploma may be considered amply sufficient as a guarantee of the professional position and competence of any man who holds it; and you may be sure of this, that the examination for this diploma, as for every other licence to practise, will not become less stringent as years go on." The opinion thus clearly expressed, in words which can not be misinterpreted, is in strict accordance with the experience of the vast majority of those who have devoted themselves to the practice of dental surgery, and may be accepted as conclusive. A detailed account of the dental curriculum will be found in a recent number of the JOURNAL.

SMALL-POX IN THE PORT OF LONDON.

THE manner in which the Corporation of the City has fulfilled the duties of sanitary authority of the Port of London has received and deserved the highest encomiums from those qualified to speak on the subject. It is, therefore, by no means reassuring to read of two cases of small-pox, occurring within a very short period of each other, being imported into the metropolis by incoming ships without detection by the port sanitary staff. About six weeks ago, a woman from Hamburg was landed at the St. Katherine's wharf with a child suffering from small-pox. The woman had come across in the overcrowded fore-cabin of the steamer with her child in a highly contagious state, and yet she was allowed on landing to travel about, with a number of other persons, to several places in a cart; and it was only when she was finally set down at Whitechapel, that the people of the house, seeing the state of affairs, sent for the district medical officer, who had the child removed at once to the Homerton Hospital, where it died. The other day, a very similar case was reported from Upper East Smithfield, whither a youth suffering from small-pox had been taken on landing from an Antwerp steamer at St. Katherine's Wharf. It is impossible to say how much harm these two cases may have done before their gravity was recognised; and the matter certainly seems to merit particular inquiry. For aught we know, cases like this may be occurring almost daily; and it is only right that the port authorities should be called upon to explain fully how these cases escaped their scrutiny.

THE NEW WARRANT FOR THE ARMY MEDICAL DEPARTMENT.

VARIOUS rumours are in circulation regarding the promised new warrant for the medical department of the army. In some quarters it is stated that the Treasury officials have made such strong objections to the expense which would be incurred in carrying out the provisions of the warrant as prepared in the War Office, that, if promulgated at all, the terms will be materially changed from those which have been anticipated. Under any circumstances, there seems to be but little prospect of the new warrant being issued in time for the competitive examination of candidates for commissions to take place in August, as was promised in the House of Commons by Colonel Stanley, and for which advertisements have lately appeared in the public press. It would, of course, be futile to expect candidates to come forward to compete for commissions without being informed of the terms on which the commissions are offered. We have already several times commented on the great delay which has been allowed to take place in the promised efforts to remedy the unsatisfactory state of the Army Medical Department. The seeming apathy of the ruling authorities in the matter is simply marvellous.

THE BEDOUIN ARABS.

IN Lady Anne Blunt's recent work on the Bedouin tribes of the Euphrates, there are some notes as to the physical condition of the Arabs that are medically interesting from more than one point of view. It seems that, in spite of their absolute temperance and constant open-air life, they decay prematurely. Well made and handsome in youth, at 40 their beards are grey; at 50, they are old; and the age of 60 is reached by few. From childhood up, they are in hard training, eating but once a day, and then sparingly; and sleeping on the ground. This ensures them high health and a full enjoyment of all their faculties, *at the time*, but uses the body rapidly; and a certain "staleness" follows, which the Bedouins acknowledge by withdrawing early from all unnecessary exertion. The reaction is quickly felt; men of forty complain of indigestion, rheumatism, etc., and of the first positive disease they die. In youth, ill health or defective powers are unknown; but a man who falls seriously ill has as little chance of recovery as the wild animal. Doctors do not exist, nor is there any knowledge of herbs. The sick is obliged to move with the tribe. He is set on a camel, and clings to it as best he can. In the tent, he lies surrounded by his friends, who—very Job's comforters—talk to him till he dies. Wounds too are often fatal, from want of knowledge or of quiet. The Bedouins have no great appearance of muscular strength, but they are singularly active and enduring. They are patient and humane, and seldom allow their passions to pass beyond control; one main reason being their sobriety. No drink stronger than "lebben", or sour milk, is known among them; and they look upon the use of all fermented liquors as disgraceful. Brutal crimes have no place in the catalogue of Bedouin sins. The women are in person proportionately taller than the men; the older of them often become fat and unwieldy; the younger do all the labour of the camp, fetching wood and water, setting and removing tents, milking,

and cooking. They live apart from men, except their nearest relatives, but have plenty of society amongst themselves. They seem to have good health and good spirits; but in mental qualities the women of the desert are usually far below the men, their range of ideas being extremely limited.

THE INFLUENCE OF TEMPERATURE ON DIARRHŒA.

THE contrast between the figures with regard to diarrhœa contained in the last three weekly returns of the Registrar-General, as compared with those for the corresponding weeks of last year, is sufficiently remarkable to merit particular notice. In the subjoined table will be found the facts as to the temperature, rainfall, etc., of the weeks in question, together with the number of deaths which have occurred from diarrhœa in the twenty large towns, in Leicester, whose diarrhœa mortality is usually abnormally high, and in London. The last week of the second quarter of 1878 will be remembered as terribly hot; and, after a certain lapse of time, the effects of this heat became apparent in a very great increase in the diarrhœa mortality. This year, there has been no such heat, and the weather has been unseasonably cold and wet. The results are seen in the figures subjoined. Last week, indeed, the deaths from diarrhœa in London, though showing an increase upon recent weekly numbers, were no fewer than 162 below the corrected average for the corresponding week of the last ten years. In fact, so few deaths have not been referred to diarrhœa in London in the second week of July since the memorable cold and wet summer of 1860. It is as yet too early to attempt to dogmatise on the contrast between the figures for 1878 and 1879, but the numbers certainly seem to show that the temperature and humidity of the atmosphere play a most important part in these fluctuations.

Deaths from Diarrhœa.

	26th Week.		27th Week.		28th Week.	
	1878.	1879.	1878.	1879.	1878.	1879.
Mean Reading of Barometer	29.88	29.61	29.80	29.56	29.80	29.57
Mean Temperature.....	70.7	56.5	60.1	56.5	61.9	56.0
Above Average	9.6	—	—	—	—	—
Below Average.....	—	5.2	1.2	5.1	0.3	6.4
Mean Temperature of Thames Water.	65.1	60.5	67.9	60.5	66.1	59.4
Mean Degree of Humidity	63	81	78	81	70	81
Rainfall in Inches	0.61	1.42	0.94	1.73	0 02	0.58
Registered Sunshine in Hours	73.9	27.3	21.6	46.8	33.3	16.9
Deaths from Diarrhœa:						
In twenty large towns	133	46	269	42	633	54
In Leicester	6	0	20	0	28	3
In London.....	72	21	145	13	249	29
Deaths in London:						
Above Average	—	—	11	—	53	—
Below Average	11	52	—	106	—	162
Under One Year.....	54	12	109	7	195	20
Between One and Five Years	10	6	29	3	39	2

PAYMENT AT METROPOLITAN MEDICAL INSTITUTIONS.

THE remarks contained in the following letter, from Sir Charles Trevelyan to Miss Chambers, may suggest some useful hints in the present state of transition of our metropolitan medical institutions.

"Mr. Gage Gardiner has sent me the papers returned herewith, requesting that I would give my opinion as to the best terms of admission to the Western Ophthalmic Hospital.

"Every course that can be adopted is open to some objection and attended with some difficulty, yet there must be some one better than the rest.

"I am entirely against all the alternatives suggested on the second side of the half-sheet of note-paper also returned herewith. There can be no diminution of the prevailing habits of mendicancy, or in the delays and uncertainties attending the present system of admission to hospitals, while privileges are attached to the possession of 'subscribers' letters'.

"The payment required should be equal for all, and should confer equal privileges. Any other arrangement would cause endless complications and just discontent.

"A single payment should entitle to attendance for the average period required for a cure. If this is a month, the payment should entitle to attendance for a month.

"Some able to pay the usual professional fees will, no doubt, avail themselves of this public charitable arrangement; for, although payment will be required proportioned to the means of the working-classes, it will still be, *in the main*, charitable. This must, I think, be accepted as a necessary consequence of having any such arrangement, and society will divide itself into those who indulge in the luxury of a private medical attendant, and those who, for any reason, have recourse to a public establishment.

"If it were not for the special nature of the assistance given at the Ophthalmic Hospital, I should say, without hesitation, that those who are not able or willing to make the fixed payments should be referred to the Poor-law Infirmary. This point should be inquired into; and if it is found that sufficient provision has been made in the neighbouring unions for treating diseases of the eye in the destitute poor, those who cannot, or will not, pay should be referred to the Guardians. Considering the greatly improved, and still improving, state of the Poor-law medical arrangements, I shall be surprised if they are found to be defective in regard to the remedy of such a common complaint among the poor as eye-disease.

"If, however, it should be necessary to make provision at the Ophthalmic Hospital for the destitute poor who ought to be provided for by the Poor-law, exemption from the fixed payment should not be admitted in their favour until the fact of their destitution be verified by the District Charity Organisation Committee.

"The medical officers of the institution are clearly entitled to such remuneration as can be afforded; and, after each quarter's or half-year's account has been made up, including among the receipts charitable subscriptions as well as patients' payments, the net balance should be divided among the medical officers in proportion to the number of cases respectively attended by them.

"It is stated that the number of patients has declined at the Ophthalmic Hospital, although at other hospitals the numbers of the like class of patients remain the same.

"This suggests consideration whether the machinery is not out of proportion to the service to be performed. My own conviction, derived from a close study of our metropolitan medical institutions for some years past, is that there is great waste of power from the unnecessary multiplication of similar institutions in the same part of town, and that economy and efficiency would both be promoted by concentration. This, in my opinion, should more particularly be in the direction of re-absorbing special into general hospitals. When the special hospitals for the treatment of single diseases were first instituted, the provision at the general hospitals for those diseases was in some cases insufficient; but a great deal has since been done to remedy this defect. I do not say that there is no longer any occasion for special hospitals. Perhaps one of each class in each large quarter of the metropolis might still be maintained with advantage; but, as a general rule, the best arrangement is the General Hospital, with its subsidiary system of self-supporting Provident Dispensaries for the working-class, and the Poor-law Infirmary for the destitute poor."

INFLUENCE OF COLOUR ON DEVELOPMENT.

THIS was the subject of a communication made by Professor Schenk at a recent meeting of the Imperial Royal Medical Society in Vienna. A number of observations having been made on the influence of darkness on the development of animals, Dr. Schenk was led to watch the ova of the frog under the influence of coloured glasses and coloured light. Both in the glass and in the fluid, the colours were ascertained by the aid of the spectrum-apparatus. The tadpoles which were hatched under red glass, which transmitted red light, were remarkably lively in comparison with those hatched under blue glass, though all the ova were taken from the same spawn. If the glasses were changed, the conditions of the animals was also altered. Dr. Schenk hence infers that colour exercised a peculiar influence on their temperament. If the fluid containing the tadpoles were shaken, very lively movements could be observed in those under the influence of red light, while those in the blue vessel moved about sluggishly; indeed, they might be taken for dead, if it were not that the blood still circulated in their capillaries, and that, when transferred to a red glass, they began to move about actively after two or three days. The experiments were varied by letting the light fall sometimes on the upper, and sometimes on the lower surface of the vessel. The results were, first, an irregular distribution of the pigment, as described by Auerbach, so that the lower half of the body was more deeply coloured than the upper; and secondly, an arrest of the later stages of development when the light fell on the lower surface of the vessel. Dr. Schenk also stated that

the formation of pigment was less distinct in the animals exposed to the blue or green ray, while those kept under the influence of red light had a darker colour.

INVERSION IN SUSPENDED ANIMATION DURING ANÆSTHESIA.

DR. CHISHOLM of Baltimore has administered chloroform in more than ten thousand cases without a single serious accident. He always gives a full dose of whiskey before the anæsthetic. Another point he insists on is that, in suspending the patient by the feet, we have the very best means of exciting and sustaining the vital organs, by sending blood, the natural stimulus, to the important nerve-centres; and that what would be otherwise very alarming symptoms during anæsthesia, well calculated to frighten terribly the inexperienced, soon disappear when the patient is placed in an inverted position. His hospital assistants are, he says, so familiar with these death-like appearances and their simple means of correction, that "instead of rushing about wildly for fans, hypodermics, batteries, and what not", they quietly elevate the feet, hanging the head downwards, with the chin pushed back, and confidently await restoration; invariably, inversion for one or two minutes produces the desired effect, and the operation can be proceeded with. This method of treatment was first brought forward by Dr. Marion Sims in these columns as a ready means of restoring animation when chloroform-syncope occurred; his experience being based upon a case in which he had operated conjointly with the late M. Nélaton, who employed this expedient.

SCOTLAND.

ARBROATH INFIRMARY.

THE annual meeting of the subscribers to the Arbroath Infirmary was held on Monday. The directors submitted a report showing that during the year 247 cases had been treated in the infirmary and 1,213 as outdoor patients. These numbers, greatly in excess of the yearly average, were largely due to the epidemic of typhus fever which had prevailed in the town. The Treasurer's report showed a considerable balance due against the infirmary. Dr. Monro sent in a letter resigning his appointment as one of the surgeons, and in his letter referred strongly to the "scandalous height" to which the abuse of the charity had reached in affording aid to those who ought not to have it. His resignation was accepted, and the Weekly Committee was instructed to inquire into the alleged abuse.

EDINBURGH UNIVERSITY.

AT a meeting of the University Court held on Monday, arrangements were approved of under which Professor Alleyne Nicholson of St. Andrew's has been appointed to conduct the class of Natural History during the illness of Sir Wyville Thomson. The Court agreed to recognise the following as teachers of medicine whose courses of lectures would qualify for graduation in terms of Ordinance No. 8, sec. vi (4): William Brown, M.B., Lecturer on Surgery, Dunedin, Otago; Johnson Symington, M.B., Lecturer on Anatomy, Edinburgh; William Craig, M.D., Lecturer on Materia Medica, Edinburgh; T. W. Drinkwater, Teacher of Practical Chemistry, Edinburgh; Rushton Parker, M.B., Lecturer on Surgery, Liverpool; Bryan C. Waller, Lecturer on Pathology, Edinburgh. The summer session terminates on July 25th.

HEALTH OF THE LARGE SCOTCH TOWNS.

DURING the month of June, in the eight large Scotch towns, there were registered 2,079 deaths; of these, 1,057 were males and 1,022 females. There were registered the births of 3,657 children, of whom 1,838 were males and 1,819 females. Of the deaths, 40 per cent. were children under five years of age. The ratio per town of children dying under five years of age is remarkable for its discrepancies. Thus, in Perth it was 16 per cent., in Greenock 35, in Aberdeen 36, in Edinburgh 38, in Dundee 40, in Glasgow 41, and in Paisley 42. The annual rate of mortality for all ages was in Aberdeen 16 per 1,000; in Glasgow, 19; in Edinburgh, Dundee, Greenock, and Perth, 20; in Leith, 23; and in Paisley, 30. Zymotic diseases occasioned 285, or 13.7 per cent. of the deaths; of these, whooping-cough caused 80, being most prevalent in Paisley, where 5.8 per cent. were due to it. Measles caused 40 and diphtheria 20 deaths; small-pox only 1. One hundred and nineteen deaths were due to cardiac disease, and 111 to nervous diseases. Phthisis caused 312 deaths, equal to 15.2 per cent. of the whole; inflammatory diseases of the respiratory organs, 418, or 20.1 per cent. Fifty-six deaths were due to violence, of which five were suicides. During the month, the barometric pressure was lower by .241 of an inch than the average of the previous twelve years; the mean daily temperature less by 2.4°; the mean humidity greater by 3, and the number of days of rain greater by six; the direction of the wind preponderating unusually towards the east and south-east.

MEDICAL EVIDENCE ON THE TRIAL OF A STUDENT.

AT the High Court of Justiciary, Edinburgh, on Monday, before the Lord Justice Clerk, John McWhirter, student of medicine, was charged with the crime of murdering a woman with whom he had been living. The medical evidence for the Crown was furnished by Drs. Samuel Moore and Dunlop of Glasgow, and Professor Simpson of Glasgow as an expert for blood-stains. The contention for the Crown was that death had been by strangulation, and not by alcoholic poisoning, and this was strongly asserted by Drs. Moore and Dunlop in their report and evidence. Drs. Littlejohn and Joseph Bell, as witnesses for the defence, were strongly of opinion that death was due to alcohol and not to strangulation, although the condition in which the woman was before death might have been aggravated by the tightening of the handkerchief round her neck. These witnesses placed great stress on the condition of the heart at the *post mortem* examination, as there was an absence of the distension of the right heart and of the contraction of the left heart such as occurred in all cases of death by strangulation. Ultimately, the jury found the charge not proven.

IRELAND.

THE only death from small-pox registered during the past quarter in any of the provincial town districts in Ireland was one which occurred in Londonderry.

THE Grand Jury of the County Armagh last week appointed Dr. J. Hodges of Belfast analyst for the county. There were four candidates.

FOR the purpose of increasing the general accommodation and construction of a fever hospital for contagious cases, a sum of £4000 has been advanced for the Castlebar Lunatic Asylum by an Order in Council.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE.

MR. P. J. HAYES, one of the surgeons of the Mater Misericordiæ Hospital, has resigned the office of Medical Registrar of this school, which he has held for many years, and is succeeded by Mr. J. Campbell, the lecturer on chemistry in the school. The Medical Faculty of the University have passed a vote of thanks to Mr. Hayes for the unvarying courtesy and efficiency with which, during a lengthened period, he discharged the duties of his onerous position as their Registrar.

HOW SMALL-POX IS SPREAD.

IN one of the Dublin police-courts last week, a lodger in a tenement-house was summoned at the instance of the Public Health Committee of the Corporation, the local sanitary authority, for holding a "wake" over the body of his son, who died from small-pox on the 16th ult. The wake was largely attended, and all present were freely supplied with drink. It was stated that four of the company were subsequently attacked with small-pox, from which disease one of the four had since died. For the defence, it was urged that the father of the deceased did not know that he had succumbed to an infectious disease. We are glad to observe, however, that the presiding magistrate would not accept this explanation. The pernicious custom of holding "wakes" over persons who died from infection, he said, so injurious to the community

at large, was daily carried out in Dublin; and, in imposing the full penalty permitted—namely, £5—he hoped some good effect would thereby ensue. We trust that, with the aid of the Roman Catholic clergy, who emphatically condemn "waking", and with the assistance of the increased staff of eight additional police-constables now at the disposal of the city sanitary authorities, active measures may be taken to stamp out this depraving and highly dangerous custom.

AN UNWORTHY MEMBER.

ACTING on the official information brought under their notice by their representatives on the General Medical Council, the King and Queen's College of Physicians and the Royal College of Surgeons in Ireland have removed from their respective rolls the name of one of their licentiates, named Murray, whose nefarious proceedings in connection with the coolie emigration traffic were about seven years ago before the public. The man was in practice in Australia. He purchased there a ship—the *Carl*—in which he made a voyage to Fiji, where he most inhumanly kidnapped a number of natives and flung them into the ship's hold. According to his own published confession, these unfortunate creatures threatening an *émeute*, he, the captain of his ship, and some of the crew, fired into the crowd of natives in the hold, killing and wounding seventy, all of whom, both dead and dying, were thrown overboard. On an inquiry being subsequently made into the affair, this humane surgeon turned Queen's evidence against his less guilty *employés*, and so unfortunately escaped being hanged. His name was afterwards removed from the *Medical Register*, in consequence of his non-compliance with the fourteenth section of the Medical Act. But as, from the course he cunningly adopted, he could not be convicted of the crimes of which he has acknowledged himself guilty, his name had to be restored to the *Register*. As both the Colleges which had the misfortune to qualify him for the *Register* have removed his name from their books, it follows that the General Medical Council will now be in a position to finally clear the profession from the foul stain of keeping the name of such a miscreant on its roll.

HEALTH OF DUBLIN: QUARTERLY REPORT.

DURING the quarter ended June 28th last, the births registered in the Dublin Registration District amounted to 2,567, being equal to an annual ratio of 1 in 30.6, or 32.6 in every 1,000 of the population. The deaths numbered 2,860, affording an annual ratio of 1 in 27.5, or 36.4 per 1,000 inhabitants; but omitting the deaths (97) of persons admitted into public institutions from localities outside the district, the rate was 35.1 per 1,000. The deaths appear to be 38 per cent. in excess of the average number for the June quarter; but although the mortality last quarter was excessive, yet it was not so to the extent the returns would indicate. This arose from 286 deaths of persons interred in the Dublin cemeteries, which occurred in the first quarter of the year, being included in the second quarter, a list of which were obtained by the Returns of Burials, provided for by Section 191 of the "Public Health (Ireland) Act, 1878". The number of deaths from zymotic diseases was 521, being 149 less than in the previous quarter, but 111 over the average number of the second quarter of the ten years 1869-78. Omitting 19 deaths of persons admitted into Dublin hospitals from localities outside the district, the seven principal diseases in this class proved fatal in 393 instances, being equivalent to an annual mortality of 5.0 per 1,000 persons; the death from small-pox numbering 118; scarlet fever, 81; fever, 77; measles, 60; diarrhœa, 29; whooping-cough, 21; and diphtheria, 7. Deaths from affections of the respiratory organs were above the usual average; they numbered 607, of which 447 were due to bronchitis, 112 to pneumonia, and 38 to lung disease unspecified. Convulsions caused 242 deaths, 238 being amongst children under five years of age, a number equal to 27 per cent. of the total deaths at that age. To heart-disease, 121 deaths were ascribed; paralysis, 47; apoplexy, 42; insanity, 29; and epilepsy, 22. Phthisis caused 359 deaths, or 12.6 per cent. of the deaths from all causes; mesenteric disease, 47; hydrocephalus, 60; and cancer, 44. The mean of the mean weekly temperature for the quarter was 49.4°, and the rainfall measured 7.495 inches.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following is a report from the Board and the Court of Examiners of the number of candidates who have presented themselves for the Primary and Pass Examinations for the Diploma of Member of the College during the collegiate year 1878-79, showing the number who have passed and have been rejected from each medical school during that period.

PRIMARY EXAMINATIONS.—1878-79.

Medical School.	Totals.	Number Passed.	Number Rejected.	Rejections per cent.
St. Bartholomew's	116.3	80.83	35.50	30.3
Guy's	94	77	17	18.0
University College	90.3	46.83	43.50	48.5
St. Thomas's	40	28.50	11.50	28.75
St. Mary's	39.50	24	15.50	39.2
London	39	31.50	7.50	19.2
King's College	35.50	23.50	12	33.8
St. George's	35	24	11	31.4
Charing Cross	26.50	17.50	9	34
Westminster	13	10	3	23
Middlesex	12.50	9	3.50	28
Manchester	40	20.50	19.50	48.75
Leeds	28	16	12	42.8
Birmingham	25.50	21.50	4	15.7
Liverpool	17.83	14.83	3	16.8
Cambridge	16	12.50	3.50	21.9
Bristol	13.50	7.50	6	44.4
Sheffield	10.50	7.50	3	28.5
Newcastle-on-Tyne	10	6	4	40
Dublin	8	4.50	3.50	22.8
Belfast	4	4	—	0
Cork	3.30	2.50	1	28.6
Galway	1	—	1	100
Edinburgh	32.50	21.50	11	33.8
Glasgow	10.50	8.50	2	19
Aberdeen	5.50	3	2.50	45.4
Toronto	4.50	2.50	2	44.4
Montreal	2.50	—	2.50	100
New York	2	—	2	100
Colombia	1	1	—	0
Bombay	2	1	1	50
Calcutta	1.50	—	1.50	100
Bengal	1	1	—	0
Madras	.50	.50	—	0
Berlin	1	1	—	0
Melbourne	1	—	1	100
Totals	785	530	255	32.48

PASS EXAMINATIONS.—1878-79.

Guy's	73	46	27	37
St. Bartholomew's	64.50	49.50	15	23.2
University College	62.83	40.3	22.50	35.8
St. Thomas's	46.58	35.83	10.75	23
St. George's	29.50	21.50	8	27.3
King's College	23.50	14.50	9	38.3
Middlesex	23.50	14.50	9	38.3
London	21	13.50	7.50	35.7
Charing Cross	14	9	5	35.7
St. Mary's	9.50	7	2.50	26.3
Westminster	5.25	4	1.25	23.8
Manchester	30	14	16	53.3
Birmingham	20	16.50	3.50	17.5
Leeds	12.50	9	3.50	28
Liverpool	11.91	5.6	6.25	52.4
Newcastle-on-Tyne	10	7	3	30
Bristol	8.50	7	1.50	17.6
Cambridge	5	3	2	40
Sheffield	4.3	2.3	2	46.2
Dublin	5.75	4.50	1.25	21.7
Belfast	.50	.50	—	0
Galway	.50	.50	—	0
Edinburgh	17.3	11.83	5.50	31.8
Glasgow	2.50	1	2.50	60
Aberdeen	2	2	—	0
Toronto	2.50	2.50	—	0
Bombay	1	1	—	0
Madras	1	.50	.50	50
Calcutta	.50	.50	—	0
Totals	509	345	164	32.22

Note.—In the above lists, candidates who are indicated by a fraction have received their education at more than one school of medicine.

CANCER HOSPITAL.—The annual report states that during the year exactly 1,000 new patients have been received, 323 being in-patients and 677 out-patients. The report recommends that the committee should add a new wing to the present building, which would give greater accommodation for the admission and supply the necessary facilities for the study of this disease.

SELECT COMMITTEE ON THE MEDICAL ACT (1858) AMENDMENT BILL (No. 3).

House of Commons, Friday, July 11th, 1879.

THE RIGHT HON. W. E. FORSTER in the Chair. Present: Dr. Cameron, Dr. Lush, Dr. O'Leary, Mr. A. Mills, Mr. Errington, Mr. Mitchell Henry, Mr. Wheelhouse, Mr. Maitland, Mr. Lyon Playfair, Sir Trevor Lawrence, and Lord George Hamilton.

Sir JAMES PAGET was called and examined.

By the CHAIRMAN: I am a member of the Medical Council, and have been so for three years. I am the representative of the Royal College of Surgeons on the Council. I was President of the College of Surgeons four years ago, and I have been a member of the Council of the College for twelve or thirteen years. The President of the College is elected annually. I have been lecturer for many years at St. Bartholomew's Hospital. With regard to the proposal for a conjoint scheme, I think its great advantage lies in its admitting a diminution of examining boards, and probably ensuring a higher standard of examination. I should prefer a conjoint board for each division of the kingdom. I think the purpose of an examination should be not merely to ascertain that a man is fit to begin practice, but that he has learned his profession as thoroughly as possible. The standard of examinations has been raised within the last fifteen or twenty years very distinctly in all places. Although some of the examinations are easier than others, I will not say that any of them are of an unsafely low standard. None of the visitors of the Council have reported them to be so. I think the examination at the College of Surgeons is quite high enough in all the subjects in which they examine—anatomy, physiology, pathology, surgery, and medicine; but they do not examine in chemistry, in materia medica, or in midwifery. Practically, however, the harm is not great with regard to midwifery, because very few persons indeed now practise with a single qualification. Still it is a great defect. The second qualification can be obtained from the College of Physicians or the Society of Apothecaries. Instruction in midwifery is given in the College of Surgeons of Ireland. It is because the College of Surgeons of England is very anxious to have examinations in this subject, that it has urged a conjoint scheme. For the last ten years we have been trying for a conjoint examination, if we might have this amongst other advantages. It is very difficult to increase the standard of examination anywhere, unless you can be sure that all the schools are prepared to teach up to that level and after the same manner. At the College of Surgeons there is the preliminary examination, which must be passed before anyone can be registered as a medical student; then he commences his medical studies, and at the end of two years he must pass an examination in anatomy and physiology. Having completed four years' study from the commencement, he passes an examination in surgery and pathology, and in medicine, unless he has a medical qualification from some of the authorised bodies. That has been the case, I think, for about the last fourteen or fifteen years. From the date of which I speak, a student who obtained the licence of the College of Surgeons must have been examined in medicine either at the College, or have received a medical diploma from some other body. If he get it from our College, he must undergo an examination closely corresponding with that of the College of Physicians. As to our primary examination, we find a little difficulty in our way in keeping up a high standard from the existence of other examining bodies. I do not think it affects a large number of students; but there are certainly instances in which students are advised of what are known to be easier examinations—advised, generally speaking, by their private teachers. They find they are not able to pass the primary examination at the College of Surgeons, and they go elsewhere, after going through a process of "cramming". With regard to the suggestion that it might be advisable for the Council itself to conduct the examinations, I think it would be damaging to the profession. The management of examinations is a management of constantly varying details. A number of meetings have been held of what is called a Committee of Reference as to the formation of a conjoint board. Of that Committee I am chairman, and I must say that it has settled in a few hours matters which would take days if they had to be settled by the Council. A Committee of the Medical Council might appoint examiners, in the same way as the College of Surgeons does; but it would have to spend an immense amount of time in drawing up regulations for the examiners to follow. It is expected that the members of the Council of the College will occasionally be present to inform themselves of the progress of the examinations; and they give more time than could probably be given by the members of the Medical Council, who come from very distant parts. Some of the former have been teachers in the very schools from which the students come. The proper function of the Council is to keep the examining bodies up to their duties. In Germany, every student passes a State examination, which is regarded as a method of safety. He is then competent to commence practice, which is supposed not to be the case with some of those examined by some of the German Universities. The Universities in Scotland do not accept any primary examinations, except their own; but the corporations of the Royal Colleges of Surgeons and Physicians of Edinburgh accept the primary examination of any other of the authorised bodies; therefore they accept ours or the primary examination of the Society of Apothecaries, but we do not accept theirs. We accept no primary examinations of other bodies. I have here a report presented only yesterday to the Council of the College, from which it appears that the number of first examinations for the year 1878-9 was 509, and the number that passed 345, showing that 164 candidates were rejected. The rejections range about a third, as a whole; and they are more numerous for the primary examinations than they are for the pass. If the Medical Council were to give a pass examination, leaving it to the different bodies to give an honour examination, it might lead to the disappearance of some of the present examining bodies altogether; and I think it would do a deal of damage to transfer the influence resulting from that to the Medical Council. The influence on medical education must be exercised by persons on the spot and connected with the schools. I took part in arranging the conjoint scheme for England. It was not brought into force independently of an Act of Parliament, because it was felt that the scheme would be very imperfect if the conjoint examinations were confined to England alone; and certainly one of the effects of the scheme would be to make the examinations more difficult. I am not prepared to say how the difficulties raised by the Scotch Universities to the conjoint scheme can be overcome; but I can hardly believe that the difficulties are greater there than in the United Kingdom. I am decidedly of opinion that, unless you can have a conjoint board in each kingdom, there would be difficulty in working the English scheme. I consider the constitution of the Medical Council a good one, as it embraces a sufficient number of those who have been most actively engaged in teaching and examinations, and who are still constantly employed. I have often thought it a theoretical objection, that each examining body, irrespective of its importance or its influence, sends a representative to the Council, with the exception of the Scotch Universities—not the least important by any means—which have only half the representation; but, when I look round at other places, I see that the objection is insuperable everywhere. I have often heard it proposed to the Medical Council that there should be representatives according to number; and, if it were so, the representatives of London ought to be equal to the representatives of Scotland. It has been thought necessary that each examining body should be represented on the Council, in order that there might be some one to defend it and look after its interests. I would not myself increase the functions of the Council. Sanitary matters would be much better looked after by voluntary associations than by any State body, unless it were provided that the Privy Council should appoint its own sanitary officers. I should consider it inadmissible to have such a body as that separate from the Government. It seems to me that professional interests are much better discussed in public meetings, where any member of the profession can go and state and defend his own views. If such matters were brought before the Council, much time would be diverted from the supervision of education. Take the case of medical officers of the army, for example: if that were brought before the Council, it could not be discussed in less than ten or twelve days, and then probably there would be no result. I have heard the objections that the Council has rather failed in its work for want of power and want of will to enforce that power; and it has always occurred to me that, if we had an ideal standard of perfection to which we could possibly attain, there might be some force in them; but, seeing that all these things have to be worked through examining boards and schools, there is of necessity a slowness of movement, as in all matters of education. It ought to be considered whether there is more done in any part of the kingdom for any other education, and I venture to say there is not a profession or a business in which the members are so completely educated as are the members of the medical profession. It is very difficult to say how much the Council has done, and how much has been done by the several examining bodies. Some seem to assume that the Medical Council does everything; others, that it does nothing. But all the examining bodies are more or less active in the promotion of medical education. It would be difficult to find a body more active in the promotion of medical education than the Royal College of Surgeons of England or the University of London. They have raised the standard of their primary examinations, I believe, beyond

what can be reasonably demanded of the schools. I believe that English practitioners are, as a body, more competent in their profession than those of Germany or any other country. I have been frequently brought into contact with very large numbers of practitioners in England; and, where I have been struck once by their ignorance, I have been struck twenty times by the amount of knowledge displayed. I do not think it can be said that the Medical Council are removed from sympathy with the general body of practitioners by virtue of their eminence, because they are brought into frequent contact with, and look to, general practitioners for their good opinion. With regard to direct representation, Mr. Simon's memorandum on that subject expresses just my view. It might perhaps lead to no harm if there were a few representatives of the profession on the Council, provided they were not very numerous; but I do not see that the advantage would be so great as to render it desirable to have direct representation of the whole profession. If they could be elected by any other means than those of a general election, it would be far better. The entire process would be very inconvenient, as there would be appeals to constituencies, canvassing expenses incurred, and the result would probably be the election of those who have the best organisation, and not those best adapted to the work of the Council. I do not suppose it would lead to the introduction of party interests to the Council, as they would be represented by the medical journals. The profession would not necessarily be divided into parties; but the medical journals might represent all that there was of party—the BRITISH MEDICAL JOURNAL on the one hand, and the *Medical Times and Gazette* and the *Medical Press and Circular* on the other. I can suppose a plan might be adopted whereby every one of the licensing authorities could send a representative elected directly or indirectly by a very large portion of its members. There is a very great deal of difference in the constituencies of examining bodies, which I think might be equalised. That difference mainly arises from the constitution of those bodies who do not give representation to their own members. I consider it far better that the Crown should appoint representatives of the general body of the profession. There would be very little difference probably between a Council of twenty-four members or one of twenty-eight or thirty members—practically no difference.

By Mr. MITCHELL HENRY: Superintending examinations implies that considerable influence can be exercised directly or indirectly. With regard to the formation of a conjoint scheme, the Medical Council should have the power directly or indirectly of compelling. The rule is a good one that examiners should not hold office more than five years, and it is very generally found that good examiners are elected. With a conjoint scheme of education for each part of the United Kingdom, I would still have the special examinations for the army and navy competitive. There has been a raising of the standard of qualification of late years, not merely in what is called practical knowledge, but in that scientific knowledge which makes a man constantly able to learn. It should be the duty of the examining bodies to ensure that teaching shall be given in such a way that a man shall not pass an examination by any unfair means of examining or obtaining knowledge which he would lose again in a month. The result of competition amongst medical schools in all parts of the kingdom is probably a safeguard to the public that the examinations are good, and the mode of teaching satisfactory. With regard to the stringency of examinations, three years ago the Medical Council issued a very copious set of regulations which were to be observed by the examining boards; but those recommendations, as far as I know, were either previously observed or have been observed since. There may be a few exceptions, but not of any importance. I do not remember that there was any sufficient defect in the examining boards at that time to render compulsory power on the part of the Council desirable.

By Sir TREVOR LAWRENCE: There is no university or corporation by which persons unfit to practise are qualified or licensed. Examinations are now much more varied and practical than they used to be. There is very little foundation, I think, for the statement of Dr. Waters that representatives of corporations are more likely to look after the pecuniary interests of corporations than the interests of the profession generally. How can the members of corporations profit pecuniarily, seeing that the fees are devoted to educational purposes? The meetings of the Medical Council do not occupy more than four hours a day for ten days a year. The proposed affiliation of medical men to corporations I regard as an important moral safeguard. So far as I have seen, I am not aware that the recommendations of the College have been disregarded. I believe the *Medical Register* is now accurate, though it was not so eight or ten years ago. It is now perhaps as accurate as it can be made. The difficulty is that it is not compulsory on anyone to send notice of change of residence or "notice of death". I myself would not accept a position on the Medical Council or anywhere else to transact business with which I was not acquainted; and if poor-law or sanitary matters are to be represented by a central board at all, they must be represented by those who have made themselves competent to deal with such subjects. I consider the Medical Council quite competent as it is to deal with all questions of education.

By Mr. WHEELHOUSE: The primary examination of the College of Surgeons in England is more difficult than that of other medical bodies. A conjoint scheme might be instituted in this country without the action of Parliament; but there is a very general feeling that a conjoint scheme for England alone would not accomplish so much improvement in the education of the profession as to make it desirable to incur the risk of sending students to places where there were easier examinations. It is not improbable that if a conjoint scheme be not made compulsory, England will adopt one. The cost of education ranges from 90 to 120 guineas in the medical schools in London. It is certainly less in Scotland and Ireland. The cost of pass examinations in England is also higher than in Scotland or Ireland, assuming that a student in England has to obtain a double qualification. In Ireland and Scotland, it is not necessary to pass a double examination; but there is a partial conjoint scheme in Scotland in which the greater number of students obtain the double qualification. In England, a man taking the double qualification has to pay two sets of fees, which is not the case in Scotland. The instances in which a small fee would attract a man to any particular corporation are very few. The Apothecaries' Hall in London grants its licence for £6, and the College of Surgeons its diploma of membership for £20. The College of Surgeons could not give a licence to practise in medicine or as an apothecary, and all Poor-law medical officers require that double qualification. Under the conjoint scheme, successful candidates would receive the licence of the Royal College of Physicians, the membership of the Royal College of Surgeons, and the licence of the Apothecaries' Society; and would, therefore, be fully qualified practitioners. The preliminary examination under the conjoint scheme would remain as it is. No one can be registered as a student without passing such an examination.

By Dr. CAMERON: I think a State examination would in England be a very ill-conducted one, and is, therefore, undesirable. The conjoint scheme might probably lead to the disappearance of some of the examining bodies, and I think two or three of them might be spared. One of the recommendations made by the visitors, to the effect that a much more prominent position should be assigned to physiology, has been adopted. I think it would be a good thing if the Council visited the schools. I proposed it; but they rejected the proposition because they had no authority, and they had already exceeded their authority in making recommendations. It is no part of the Act that they should do that; and, as a distinguished member of the Council objected, there was not the least power to compel a school to receive them.

By Dr. PLAYFAIR: In the Bill, there is no power to give any part of the fees to universities; only to corporations.

By Dr. CAMERON: The fees paid at the College of Surgeons last year in reference to primary examinations were £1,855, and in final examinations £2,814. The examiners in medicine received £220. Roughly speaking, the total fees to examiners would be about £5,000, and the other expenses of examinations about another £1,000.

By Dr. O'LEARY: I could not form any idea of the surplus funds in the hands of the College. [The Registrar showed the witness a paper.] They appear to amount to £28,000. Some of the examinations in Ireland and Scotland are not so high as they might be; but I am not aware that any of them are what can be called unsafe. I think there is a rule that students must attend more courses of practical anatomy in Ireland than in either Scotland or England; but I cannot say whether it is so in physiology. Medical education, I believe, costs less in Ireland and Scotland; but I cannot say positively.

By Mr. MILLS: Of course I attach some importance to numerously signed memorials for direct representation, whose principle was in some form recognised by at least four or five of the Bills introduced into Parliament prior to 1858. Last year, a resolution was proposed by Sir William Gull and seconded by myself, that the constitution of the Council needed revision. That was on July 3rd. The question was fully considered at the last meeting of the Council, and a very large majority decided that revision was not desirable. I cannot say whether or not any Medical Bill would be likely to pass that did not provide for direct representation; I cannot guess what Parliament will do. Three Governments in succession have decided against it. The Government that passed the Medical Bill was Conservative; the Government that proposed the next Bill was Liberal; and the Government that proposed the third Bill was Conservative. Unless there is some legislation, we shall be, as we have been for the last ten years, very greatly injured in the

progress of medical teaching. Speaking generally, I approve of the Government Bill of this year, which is a reproduction of the Bill of last year. I should greatly regret the addition to the Council of half a dozen representatives of the profession. I do not think that direct representation would bring the best men to the Council. I think it would be better to remain as we are and not have any legislation, rather than introduce the principle of direct representation. I am even prepared to sacrifice the conjoint scheme rather than admit the principle of direct representation. The source of revenue of the Council is not of the nature of a tax, as persons entering the profession get the advantage of being registered for life.

By Dr. PLAYFAIR: The Medical Council has never had the power to regulate the curricula of medical study, and has more than once declined to ask for it. I disapprove of such extensive powers being given to the Council as the present Bill proposes. Clause 19 distributes the whole of the proceedings of examinations amongst the corporations alone, giving the Universities nothing. It will not in any degree affect the Universities of England, but it certainly will those of Scotland, and of Ireland, to-, probably. I would not say there was general contentment with the condition of any of the Universities. I do not apprehend that the conjoint scheme would take away the power of examining boards to grant licences or their supervision over education. The Government scheme perhaps would. There is no absolute necessity under this Bill that should induce men to go through the corporations. I think the weaker corporations would go to the wall. If the conjoint scheme were adopted, more than 95 per cent., I should say, would proceed to one of the corporations or universities and get an honorary degree. It has never been necessary for simple registration that anyone should obtain honorary degrees. A person could get registered with the licence of the Apothecaries' Society for a very low fee, and that gives him liberty to practise. I have never yet seen an instance of lowering down in the examinations. The medical profession is in a better condition in England than it is in the rest of the world, but that is no reason why we should be satisfied with it. I do not believe there will be any pulling down or damage done to any one of the examining boards by the conjoint scheme, although the opinion in Scotland was that there would.

By Dr. LUSH: All I aimed at in the motion I seconded at the Council was, that there should be an inquiry as to the expediency of a revision of the constitution of the Council, there being so much expression of opinion that it should be altered. I do not see why we should widen the basis of representation; the less we are like political parties in the matter of representation the better.

The Committee then adjourned.

Tuesday, July 15th.

The Committee again resumed its sittings; the Right Hon. W. E. FORSTER in the Chair. The other members of the Committee present were Dr. Lyon Playfair, Mr. Arthur Mills, Mr. Errington, Dr. O'Leary, Dr. Cameron, Mr. Wheelhouse, Mr. Mitchell Henry, the Hon. E. Plunket, and Mr. Dalrymple.

Sir DOMINIC CORRIGAN of Dublin was called, and, in answer to the Chairman, said he was a member of the General Medical Council; he was the representative of the Queen's University in Ireland. He had been a member of the Council since its formation. He was not in favour of a conjoint scheme of examination. His principal objection to it was, that it was not practical; his next objection to it was, that it would open three portals to the profession instead of one, and would create a good deal of professional jealousy; that was to say, it would substitute three examining bodies, one for each country; and would give rise to national jealousies and dissensions, which would be a great misfortune. In his opinion, it would in no way diminish the evils of the present system. It would be just as bad to have three examining or licensing bodies as nineteen, which was the number now in existence. He would himself prefer only one examining body. It seemed to him that, in all the discussions which had taken place about examination-schemes and professional status, there had been one interest completely ignored, and this was the public interest, which to his mind was the most important of all. Yet, while proposals were made in favour of this interest or that, and complaints were made about the injury done to one professional interest or another, the public interest did not seem to be taken into account at all. That was the great defect of the Bill now under consideration; it would not benefit the public. He was not quite satisfied with the present state of things, but he was disposed to leave matters as they were. If any legislative change were to be made, his idea on the subject was that the public should have full liberty to employ whomsoever they liked, irrespectively of their qualifications. If a man who could pay for it preferred the advice of a "quack", he should have liberty to employ one; this was to say, the "quack" should have the legal right to demand payment for his services, which he has not at the present time. In the case of State institutions, however, established for poor people who were unable to pay for such medical advice as they required, he would take care that none but duly qualified physicians or surgeons were appointed. In workhouses, dispensaries, or hospitals supported by the rates, he would insist upon the appointment of properly qualified medical men; and, to secure that, he would have an examining board such as existed in connection with the army and navy. He would have all persons seeking public appointments in connection with such institutions examined by that board; and, if they passed the examination, he would not ask where they got their education or their degree. Let them get their education or their licence where they liked. It was the duty of the State to see that those who were unable to get proper medical advice for themselves should not be left unprovided for; but beyond this he did not think the State should go. A general *Medical Register* was not necessary, although it would be of great use to the public in helping them to protect themselves. Excepting the appointment of an examining board for candidates seeking State appointments, he would not make any change in the present system; he would leave it alone. Referring next to the General Medical Council, witness said he certainly was not satisfied with the present constitution of that body, nor did he always approve of the way in which they dealt with questions affecting the public interests which had been brought under their consideration. In 1859, he called the attention of the Council to the action of one licensing body, who advertised that for £10 they would grant a licence to practise in medicine without any examination. That was the College of Physicians in Edinburgh; but he did not wish to refer to any institutions by name. He proposed that the College should be deprived of its authority to give licences; but the Council refused to accept his proposition, and let them off on their promise not to do it again. Nothing of that kind had since occurred; but the fact was, that they sold so many licences at the time, that they could find no more purchasers. In the course of the discussion in 1859, he had made use of a phrase which was very much censured at the time; he called the discussion in the Medical Council "a battle of shops", and it had continued so ever since. Each member of it seemed to have only one idea, and that was to protect his own university or the other corporation which had elected him. As an instance of the way in which this Council conducted its business, he might mention a circumstance which took place only last year. On the 4th of July, the Council referred to its Executive Committee the question as to what changes it might be desirable to make in the constitution, in order to give more direct representation to the profession. Week after week and month after month passed by, and the Executive Committee slept on the matter, and up to the sitting of the Council in October they had presented no report; in fact, they had taken no steps in the matter whatever, notwithstanding that promises had been made to the Government on the subject. Under such circumstances, he submitted a resolution that the Council should take the matter in hand themselves. To that an amendment was proposed declaring that the discussion of the constitution of the Council was premature; and this was carried, and his resolution set aside. In answer to an inquiry as to what changes he would make in the constitution of the Council, Sir Dominic Corrigan said his ideas on the subject had been embodied in a letter which had been published last year. He would reduce the number of members to nine, to be elected as follows, viz., three by the Universities, three by the corporate bodies, and three by the general practitioners of the United Kingdom, each country being equally represented. He would have no Crown nominees; he did not think the Crown had any interest in the matter; but he would give the Government the right to nominate the President. As for the objection to giving each division of the kingdom an equal share of the representation, he did not think the question of population ought to be considered in the matter. It was not an element which could be combined with the medical profession. He was in favour of direct representation; but, if there were to be direct representation and Crown nominees as well as representatives of the different licensing bodies, the Council would become unwieldy and unmanageable. By direct representation, the Council would secure the services of men best acquainted with the general wants of the profession and of the public, whose interests are not now sufficiently considered. With an examining board such as he had suggested, before whom all candidates for official appointments would have to appear and prove their qualifications, the public, or he would rather say that portion of the population who were unable to select medical advisers themselves, and who were, to a certain extent, the children of the State, would be properly protected. Under the present system, there was no such examination for public appointments, and there was often great danger of persons obtaining them not being properly qualified. What was wanted was a special test-examination for such appointments, not the mere diploma given by any of the different licensing bodies. One great advantage of direct representation

would be to introduce men to the Council who had a practical knowledge of the working of the profession, instead of men who, by their occupations or scientific studies, were really ignorant of what was going on in the world around them.

By Mr. ARTHUR MILLS: He had not heard the suggestion that the object of those seeking to get direct representation was to counteract Scotch influence on the Council; if he had, he would not have paid any attention to it. He would not say what were the motives of those who desired direct representation; he hoped they were influenced by a desire to improve the character of the Council, but he could not answer for other people; he could only say that, in his opinion, there ought to be direct representation. He did not see that any evils would arise from medical men engaging in election contests such as would take place under that system. If members of Parliament had no objection to their merits being canvassed in the public press at election time, he saw no reason that medical men should object to it.

By Mr. ERRINGTON: As regards medical practitioners generally, he was in favour of free trade in the profession, except, as he had already said, in the case of State appointments. At the Medical Council, the majorities in favour of the conjoint scheme were not so large as in 1870. He supposed opinions on the question had altered since the scheme was first mooted. He held that a man had a perfect right to change his opinions. A man who always adhered to the same opinion was not worth consulting. In his own opinion, there would be great difficulty in carrying out the conjoint scheme. It would establish a minimum standard of examination, which would either be so high that candidates could not pass, or so low that it would deteriorate the status of the profession; because a man who passed the examination would have no object in going any further; he would consider himself as fully qualified, and would have no motive to raise himself any higher in the profession; on the other hand, with an examining board, such as he proposed, to test the qualification of those seeking for public appointments, there would be a direct incentive to attain to a standard above the minimum which a conjoint scheme would establish, and the result would be that the poor would have the benefit of more skilled advice than at present.

By Dr. O'LEARY: In Ireland, there was no law to enforce the registration of medical students. It was not possible to do so because, in the Queen's University, students were admitted without any preliminary examination. It was the same at Trinity College, Dublin; a student could join the medical class on the payment of five shillings, without any examination or without being an undergraduate. As regards the system of giving students certificates for attending lectures, he attached no value to it whatever. He had himself signed hundreds of such certificates on the representations made to him by the secretary of the lecture-class, but he would not undertake to say that the students were always present at the lectures. As for medical education, he would allow every institution to teach as it liked. He would have no inspection of education whatever, but he would have an efficient method of examination. He would have an entrance examination, and two or three subsequent examinations, and these he would make the test of proficiency in preference to certificates. Asked as to whether the system would not lead to "cramming", witness said he would like to know what "cramming" meant. Under a proper system of examination, no "cramming" would enable a student to pass. Any attempt to "cram" him at the last moment would choke him. He would allow young men to get their information wherever they could. Reverting to the question of direct representation, he said he did not think its adoption would lead to too much desultory discussion. The men elected would not be such good speakers. He saw no objection to reporters being present at the meetings of the Council. At first, the Press was not admitted, but an account was prepared by the secretary, whose reports were found to consist mostly of his own speeches, to the exclusion of every one else's. After that, official reporters were engaged, but their reports were so long that nobody read them. Ultimately, the regular reporters of the press were admitted, and they reported only what was worth hearing, and left out the rest. He saw no objection to the presence of reporters. Under a conjoint scheme, the electoral body choosing the Medical Council would be likely to grow smaller. He could not undertake to say what the Scotch licensing boards would do if a conjoint scheme with three separate boards were established. His objection to the conjoint scheme was that it would not work, and would provoke national dissensions. Some of the licensing bodies were trading companies, and the electoral body by which a representative was returned to the Council were not always licentiates; they were persons who held shares in the Association. That was the case with the Apothecaries' Hall. Its members were not medical practitioners; they practised as apothecaries, and supplied medicines, and made up prescriptions for medical men. In Ireland, the apothecaries were a very useful public body. He could not say which interest, the commercial or the professional, was represented on the Council. In any new scheme of legislation, he would not disturb the present licensing boards; he would not meddle with them at all. So far as Dublin was concerned, the medical requirements of the population seemed to be very well supplied, but he would not go so far as to say that the people generally had the benefit of the highest medical skill in the Irish metropolis. It was true that some of the most eminent men in the profession in Dublin filled positions of consulting surgeons and physicians to the hospitals; but it did not follow that the patients had always the benefit of their services. A man might be for weeks in hospital without seeing the consulting authority. As a general rule, however, he agreed that the poor of Dublin were, through influence or charity, able to get such medical advice as they required. A man's position in the medical profession was determined by the public; but whether it was by a process of natural selection or not, he would not undertake to say; nor could he answer the question as to whether an Act of Parliament could be framed defining a man's grade in the profession. He did not speak of "grades" when he suggested the appointment of an examining board for examining candidates for public appointments. Such a board existed for ascertaining the qualifications of medical men in the army and navy. Something in the direction had been done by the Poor-law Board, which, while it recognised all existing diplomas, insisted that a candidate for appointments under the board should have a double qualification—that was to say, he should hold a licence from the College of Physicians and the College of Surgeons, or one from either, with a qualification from the Apothecaries' Hall. Instead of such a system, he would insist upon them having a certificate from an examining board specially constituted for the purpose; and that, without such certificate, no person seeking an appointment in connection with a State-supported institution should be eligible for office. As the poor were in this matter unable to choose for themselves, properly qualified medical men should be chosen for them, as proposed by Mr. Errington's Bill. He would not make the examination a competitive one—it would be an examination as to their fitness—a test of efficiency. As regarded the Irish hospitals supported by State grants, in Dublin their position was exceptional and peculiar. The aid which they received from the State was originally given as a kind of compensation for injuries caused by the Act of Union. Any new enactment with regard to public institutions generally which did specially except those hospitals would interfere with the operation of an existing Act of Parliament. He did not think it necessary to interfere with them, because, under the system by which they were governed, none but the most highly qualified men could get appointed in connection with those institutions. In the event of an examination board being appointed, its operations should, of course, be prospective. In answer to further questions, the witnesss recited the regulations for the entrance of students to the medical school at Trinity College, Dublin, and said that the position of that school was exactly the same as that of the other private school of medicine in the Irish capital.

By Dr. CAMERON: In Germany, degrees were conferred upon certificates of attendance at lectures, and the result was a great deal of quackery in Germany. At all the fairs and other places of resort, one met with hundreds of persons professing to cure all sorts of diseases. He did not know of any university in Germany which insisted upon examination. All they required were certificates of attendance at lectures, and these could be bought without any attendance at all. In France, a custom prevailed of granting minor certificates, which authorised the holders to practise in a particular part of the country. It was, he believed, given by the State, not by any licensing body. He was aware that the Medical Council had succeeded in persuading certain licensing authorities to insist upon registration; but he did not think they would be able to induce such bodies to make each candidate pass in medicine and surgery; in fact, they had no power—they could merely issue a recommendation on the subject.

By Mr. WHEELHOUSE: I see no objection in allowing persons who may be considered undesirable practitioners to carry on their business; as I have already said, I think there should be free trade in the medical profession, except so far as official appointments are concerned. It would not be desirable that unqualified persons should be permitted to be placed on the *Register* as practitioners, if the *Register* be intended for the protection of the public. I would not give the Council any powers of compulsion in its present constitution.

The witness was further examined by two or three other members of the Committee.

The Committee again adjourned.

The Ashburton and Buckfastleigh Cottage Hospital has become entitled to £500 under the will of Mrs. Larpent of Luesdon, near Ashburton.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SECOND SESSION, 1879.

Thursday, July 17th, 1879.

DR. ACLAND, President, took the Chair at 2 P.M. All the members of the Council were present.

President's Address. — The PRESIDENT addressed the Council as follows.

The Council has been necessarily summoned at this time, since to-morrow the President's term of office will expire.

Several other matters require your attention. Returns from some of the licensing bodies will be laid before you in answer to your inquiries made in March last concerning the study of ophthalmology, and of gynæcology, including obstetrics.

These returns, together with some other papers, notably a communication from the Branch Council of Ireland, and a resolution to be proposed to you concerning preliminary education, will tend to raise again the whole subject of the duration and manner of medical teaching in all departments. Many who took part in the former discussions on this subject are not with us. Brodie, Stokes, Green, Syme, Lawrence, Parkes, Rumsey—all gone; Quain (the surgeon), Allen Thomson, Lister, Cæsar Hawkins, George Paget, Sharpey, Embleton, yet with us; and several others who were prominent in the older elaborate discussions on education, cannot now state their views in Council. It will not, then, be surprising if the present members of Council should desire, at this or an early opportunity, to consider what has been the result of the recommendations which occupied the attention of the Council for so many years up to the present time.

Various correspondence regarding colonial and foreign practitioners will remind you how urgent it is that the Government should come to some conclusion with reference to this subject, already delayed ten years. The letters and reports from the Governor-General and the Privy Council of Canada, and one from the University of Adelaide, demand especial attention.

A person convicted ten years ago of a grave misdemeanour, and removed from the *Register*, seeks to have his offence condoned and to be replaced. The case of one now on the *Register*, but expelled from two licensing bodies to which he is attached for circumstances of the gravest character, will come before you for judgment. This induces me to say here that, though some exceptions are still made to the general in its relation to the local *Register*, we are assured by the Registrar that the various errors which had crept in some years ago are wholly corrected and removed. The *Dentists' Register* comes into operation in August. A list of various minor registers, showing that part of the present work of the office, will be submitted to you.

After various modifications, the Government Medical Act Amendment Bill passed the House of Lords, and has been read a second time in the House of Commons. In compliance with a strongly expressed wish, the Government had agreed that a Select Committee of the House of Commons should be appointed to inquire into the constitution of the Council. But as it appeared that the Bill would be opposed at every stage unless that Committee had a more extended function, the Committee was appointed to consider, not only that single point, but the whole of the Bills now before the House—viz., the Government Bill, Mr. Childers's and Mr. Mills's Bill, Dr. Lush's Bill, and Mr. Errington's Bill.

The Committee has taken evidence already from many persons. The questions put to the witnesses have had reference to almost every department with which the Council has to deal—to its functions, its powers, its work, its income, its expenditure, and also to its constitution.

It was my duty, when I was summoned, to lay before the Committee the sixteen volumes of Minutes with their index, the various reports on education and on the visitations of examinations, with all such other papers as seemed likely to give real information as to the work and the manner of working of the Council.

The history of the construction of the Medical Act of 1858, and the amending Bills which have followed and have not become law, was fully entered into by Mr. Simon, who in another capacity had much to do with them, and the income and expenditure were set forth by the Senior Treasurer.

A question has been much discussed whether the Council should exercise direct and absolute control over the details of the general, scientific, and practical education, as far as regards medicine, in all the universities and all the corporations and schools in the country. This question is often too lightly put and too hastily answered. We may take a single instance. Thinking men are not even now decided whether the average general practitioners—that is, by far the largest number of the profession—will best begin their difficult studies with a private practitioner or in a complete medical school. Is it not possible that both ways are good? Is not contact with the daily life of a skilful upright man a discipline of itself, in some respects the best a student can have? Yet is there not a risk of his falling into the hands of one neither skilful nor upright, and of acquiring low views of his profession for life? And, on the other hand, with regard to so-called medical schools, is the standard and tone of all (metropolitan or provincial) on at all the same level of culture, of science, and of practice? Under these circumstances, are we to seek to force the several methods of preparation and of study into one precise groove? or shall we allow, and even encourage, that diversity which is promoted by freedom, by opportunity, by national taste, and even by personal interest, so long as it stands the supreme test of a good final examination of real fitness in respect "of the knowledge and skill requisite for the practice of the profession"?

I am very well aware that these plain and often reiterated questions may appear to some persons outside the responsibility of this Council too commonplace for calm inquiry and careful decision. Some would settle them at once by a majority of votes, and would endeavour to impose the verdict of that majority on the leaders of thought, whether in our universities, in our great colleges of surgery and of medicine, or in the great private schools attached to hospitals, Royal or self-supported. But those who have paid attention to the modern changes and the great progress of the science and art of medicine and of surgery know full well that general education and medical knowledge are in a state so transitional, that they will long require constant watchfulness and care, and much interchange of thought and experience between the teachers and examiners of the various schools in this and other countries. The reports of the Council on Professional Education in the year 1869, and the report of the Teachers' Association in the year 1870, and the increasing demand that more time shall be devoted to great and special subjects, such as experimental physiology or ophthalmology, are quite sufficient to prove this.

Therefore, looking at the subject matter of medical education, at the difficulty, extent, and yearly growth of biological research; at the largeness of the interests of the national health; at the extent of preventive and legal medicine; at the problems connected with the natural history of disease; at the vast array of fact in the domain of modern pathology; at the improvement in the means of diagnosis and of the apparatus of therapeutics; even at the knowledge we are obtaining of the results and need of good nursing, and the training required for it—one cannot but feel that a future of the deepest interest lies before this Council, considered as a great educational institution, if only it can be saved for some years to come from the distraction which is forced upon it from without—such, I mean, as is caused by discussions on the machinery for performing its duties and on the merits of its own constitution, with which clearly it has, as long as it exists, nothing to do, and by which, as a fact, it has been disturbed and hampered in its diliberations for a period as long as the siege of Troy.

It would ill become me to trespass on your time with further observations in this direction. In the circumstances under which I address you, they will be, perhaps, thus far pardoned. It has seemed well that we should all be reminded how vital it is for the cause of medical education that the legislature should pronounce, without further delay, whether there is or is not to be a system of combined examinations approved by this Council, or whether each one of the existing licensing bodies is to feel that its present examining board is to be permanently maintained, with the corresponding responsibility of securing by some means a complete pass examination. Every other educational question pales in importance before this; for, in the present state of public opinion, examinations necessarily guide the average, and to a great extent the higher, education.

When we look back on the first few years of the existence of the Council and compare them with the later years, we cannot fail to be struck with the great advance which has been made towards a complete and comprehensive view of the needs of society in relation to medicine, and of the extent to which special interests are subordinated to the national wants. The progress of natural science, the additions to the resources of healing, and the abolition of unnecessary restrictions, engage the common thoughts of the medical profession; and a new and constant diversity of suggestion and endeavour maintains among us a vigorous life. The whole profession of the present day, its teachers and its examiners, and I may add its actual students, are keenly alive to the misfortune which attaches to the instances, happily more and more

rare, of men who are able to evade by ingenious contrivances the regulations of the licensing bodies and the recommendations of the Medical Council. Though, in a country like ours, diversity of opinion is sometimes too loudly expressed, yet that very diversity has here at least tended to create a harmony of aim and an unity of spirit before the existence of this Council unknown, and a genuine desire for the advancement of sound knowledge and beneficent practice in medicine, equally throughout the British dominions.

It was resolved that the President's address be entered in the Minutes. The Business and Executive Committees were elected; Mr. Simon taking, in the latter, the place of Sir James Paget, who withdrew on account of pressure of engagements. A report of the Executive Committee respecting the salary of the Registrar was adopted. The communications from the licensing bodies in answer to the obstetric and ophthalmic memorials were ordered to be entered on the Minutes. A Committee was appointed to prepare a new edition of the standing orders. The Council decided to transfer elementary mechanics from the list of optional to that of compulsory subjects of examination. After some other business had been transacted, the Council adjourned. A report of the proceedings will be given in next week's JOURNAL.

THE ASSOCIATION MEDAL FOR DISTINGUISHED MERIT.

WE have very great pleasure in announcing that, at a meeting of the Committee of Council of the British Medical Association, held at 161A, Strand, on Wednesday, July 9th, 1879, Alfred Carpenter, M.D., President of the Council, in the chair, it was moved by Dr. SIEVEKING, seconded by Surgeon-General MACLEAN, and resolved unanimously:

"That, in consideration of the extraordinary professional services rendered by Surgeon-Major James Henry Reynolds, M.B., V.C., at Rorke's Drift, Zululand, South Africa, on the 22nd and 23rd January, 1879, in his constant attention to the wounded under fire, in consideration of his eminent bravery in voluntarily conveying ammunition across an open space under a heavy cross-fire; and also of the remarkable intelligence, coolness, and tact evinced by Surgeon-Major Reynolds under circumstances of great danger—the Gold Medal of the British Medical Association 'for Distinguished Merit' be and hereby is awarded to him."

THE SELECT COMMITTEE ON THE CONTAGIOUS DISEASES ACTS.

THE first public sitting of this committee was held on the 4th instant, when there were present, Mr. Massey, in the chair, Mr. Cavendish Bentinck, General Shute, Colonel Alexander, Mr. Kavanagh, Viscount Crichton, Mr. Tremayne, Sir H. Holland, Mr. O'Shaughnessy, Mr. Stansfeld, Sir Harcourt Johnstone, Mr. Shaw-Lefevre, and Mr. Ernest Noel.

Sir WILLIAM MUIR, Director-General of the Army Medical Department, was the first witness examined. His evidence threw little light upon the effect of the Contagious Diseases Acts in reducing venereal diseases, as the questions put to him were mainly directed to ascertaining the ratios of sickness and invaliding from those causes among the army generally. Little of his evidence contrasted the condition of the troops in the stations under the Acts with those not so situated. But the returns put in by the Director-General showed a steady diminution of the entries for primary syphilis throughout the army at home, while it is notorious that, at the stations not under the Acts, no such fall has been observed.

Inspector-General LAWSON's examination was resumed, and occupied the sitting of the 10th and a great part of that of the 16th instant. Witness was first asked as to primary syphilis, and explained that the primary sore itself was by no means always a simple affair, being liable to be complicated with phagedæna and consequent destruction of tissues, as well as with suppurating buboes, which also might be attended by serious results. About one-third of the cases of primary syphilis were followed by constitutional symptoms. The apparent increase in the number of cases of gonorrhœa since the Acts came into operation, was attributed to the fact that, previous to the Acts, many simple cases of gonorrhœa were not reported at all. On being asked as to whether voluntary hospitals would be effective in preventing disease, Dr. Lawson was of opinion that they would be quite ineffective, and pointed out that the plan had failed when tried from 1864 to 1866. The reduction of disease due to the Acts had been very considerable. Between the four years 1860-63 and 1870-73, the reduction of primary syphilis had been 14 per 1,000 in places not under the Acts, whereas, in stations under the Acts, the reduction had been 78 per 1,000, giving a difference of 64 per 1,000 in favour of the latter. The statistics since 1873 could not be trusted for the purpose of comparison, because an order of the then Secretary for War came into force at the end of that year, and entailed loss of pay on soldiers suffering from primary syphilis. Thenceforth, men concealed their early disease, and a sudden diminution of entries for primary syphilis took place; for this reason simply indicates a more complete registration of the whole number attacked. Notwithstanding this, the ratio for primary sores in 1874-78 had been lower in the districts under the Acts than in those not under them, in the proportion of thirty-seven to ninety-four. The stoppage of pay applied exclusively to soldiers suffering from primary sores, and not to those suffering from constitutional syphilis. Thus the number of cases of secondary syphilis would be apparently increased, by reason that the first entry of such cases would be as secondary syphilis, and not as primary sore, because the disease had been concealed in its primary stage. Cases of constitutional syphilis were not distinguished in the returns made for showing the operation of the Acts, because the long interval which occurred between the primary and secondary stages rendered it impossible to show in what station, protected or unprotected, the disease in question had been contracted. Men contracted this disease at one station and developed the constitutional symptoms at another; therefore, to prevent confusion, only the primary consequences which appeared to show the effects of the Acts in a short time after contagion were registered. The periodical examination of prostitutes was a most important element in the successful working of the Acts. If this were abandoned, prostitutes would not present themselves voluntarily, unless their disease caused them pain or rendered them incapable of following their occupation. Concerning the importance and severity of gonorrhœa, Dr. Lawson remarked that swelled testicle was a frequent complication; other complications such as inflammation of the bladder, were not so common, but occurred in neglected cases. Induration was proof that a sore was syphilitic, but some cases of non-indurated sores were apparently followed by constitutional symptoms. Dr. Lawson stated that greater precautions against contagion were taken by the men in some regiments than in others. The chief means consisted in ablution immediately after coitus; if ablution were deferred until returning to barracks, it would probably be too late.

In answer to a question from an hon. member, Dr. Lawson stated that a young man was considered more sensitive than older men to the gonorrhœal contagion; therefore a regiment composed of young soldiers would be more invalided by gonorrhœa than another of which old soldiers formed a large part of the strength.

Reverting to the examination of prostitutes, Dr. Lawson expressed his regret that the difficulty of obtaining competent female surgeons to examine the prostitutes would render it impossible to make this change. The examination of soldiers was limited to examining those who entered a protected district from furlough, or from an unprotected station.

Mr. BARR, medical officer of the Lock Hospital, Aldershot, was next examined. He stated that he had been in charge for upwards of eleven years. When he went to Aldershot, in 1868, the condition of the women was most miserable. Some of them lived in drains, under hedges, in holes in the sand, in stables. In 1868, there were at least three hundred prostitutes in Aldershot. Very few had decent lodgings. He had himself seen women creeping from drains and from the soldiers' huts. Prostitution at the age of fifteen was common in 1868. Now there was probably no girl under seventeen, and very few under nineteen. The condition of the women had quite changed since the Acts came into operation. At first, the women used to come very dirty to examination, their language was disgusting, and their behaviour generally very bad. At the present time, the women came up clean and orderly, and bad language was very rarely heard. In reply to a question as to whether prostitutes would voluntarily remain in hospital until cured, Mr. Barr was of opinion that ninety-nine out of a hundred, if otherwise healthy and strong, would leave as soon as their more urgent symptoms had been relieved, and utterly regardless of consequences, as was repeatedly the case at Portsmouth, during the Permissive Act of 1864. Illustrative of the prevalence of disease eleven years ago at Aldershot, his return showed that six-eighths of the three hundred prostitutes were admitted to hospital. The character of the disease was, at that time, most severe, and the patients in many cases were covered with vermin. Though the number of prostitutes in Aldershot was now only one hundred and forty-five, the proportion of diseased among them was nearly as great as formerly, in consequence of the continual influx of strangers, many of whom were severely infected before they arrive. Mr. Barr laid great stress on the hindrances which had prevented the success of the Acts from being even greater than it was proved to have been. Among them, most especially, were the limited

area of the operation of the Acts, the constant change of troops at the camp, importing disease from unprotected places, frequent concealment of disease by soldiers, clandestine prostitution, which still existed, though greatly reduced, as shown by the diminution of illegitimate births, and the improved respectability of the women of the labouring classes living near Aldershot; lastly, want of careful examination of soldiers. Notwithstanding these drawbacks, the total of sick persons was very much diminished by the operation of the Acts, and the severity of their affection greatly mitigated. Some horrible instances of deformity and suffering caused by syphilis among his patients were narrated by Mr. Barr, who expressed his conviction that the value of the Acts was amply proved, and their extension most desirable.

The next sitting will take place on Monday, the 21st instant, when, besides Mr. Barr, Surgeons-Major Lane, Myers, and others will be called.

THE CORONERS' BILL.

THE special Report of the Select Committee of the House of Commons on the Coroners' Bill was published this week.

"Your Committee in going through the Bill have framed their amendments on the assumption that the office of coroner is not to be abolished or merged in any other jurisdiction. They have taken some evidence as to the working of the Scotch system of dealing with those cases which in England come under the cognisance of the coroner. As in Scotland there is an elaborate machinery maintained at the cost of the State for the investigation and prosecution of crime, and as in England and Wales such a system can hardly be said to be in operation while the cost of the coroner's inquisition falls on the rates, it has not seemed to your Committee expedient to inquire into the desirability of assimilating the English practice to that of Scotland. They are, however, of opinion that valuable suggestions as regards the medical investigation into the cause of death may be derived from the Scotch system; and since the Bill as amended by your Committee enacts a legal qualification for the office of coroner, it becomes important to make some improved provision for a satisfactory medical investigation in all cases in which an inquest is or may be necessary. With this view, your Committee recommended that the coroner should, where practicable, nominate one or more competent medical men, to be approved by the Secretary of State, to act within his district; and that in all cases in which notice is given to the coroner of a death which calls, or may call for, an inquest, such notice should be accompanied or be closely followed by the report of the medical man, or of one of the medical men, so nominated. Your Committee further recommend that, for the purpose of insuring that *post mortem* examinations, or other medical investigations which may be requisite for the purposes of an inquest, should be conducted efficiently, the coroner for each district should nominate one or more competent medical men, to be approved as aforesaid (being either the same as those nominated for the purpose of making the said report to the coroner, or others), by one of whom in all cases the requisite *post mortem* examination should be made, unless the coroner, with the approval of the Secretary of State, should in any particular case otherwise order. Your Committee consider that the double investigation which now takes place before the coroner and the magistrates, in cases where a person is accused of a crime in relation to a death upon which an inquest has been held, is a cause of needless expense and inconvenience; and they are of opinion that, though it may not be feasible to avoid it in all cases, yet that if a system of efficient salaried legal coroners were established throughout the country, it might be possible to confer upon them the powers of a stipendiary magistrate, and thus obviate the evils referred to. To carry this out, it would no doubt be requisite to consolidate the areas of many coroners' districts."

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Changes in the Faculty of Medicine.—Chloroform and Ether as Anæsthetics.—Treatment of Metrorrhagia.—Bovine Meat.—Statues in France.—The Godard Prize.—Rabies in Paris.—Incubation of Hydrophobia.

IN less than three months, the Faculty of Medicine of Paris has sustained a great loss in the deaths of Professors Tardieu, Chauffard, and Gubler, each eminent in his way, and all three most deeply regretted. Dr. Brouardel has been appointed successor to M. Tardieu in the chair of Medical Jurisprudence; Dr. Bouchard successor to M. Chauffard in the chair of General Pathology; and Dr. Hayem has been appointed *pro tem.* to the chair of Materia Medica and Therapeutics in the room of Professor Gubler. The three newly appointed professors are tried men, and eminently qualified to fill their respective chairs.

A long discussion was lately carried on at a meeting of the Clinical Society of Paris on the relative merits of chloroform and of ether as anæsthetic agents. M. Panas took up the subject, and, referring to his own experience, believed that, for surgical operations, ether was preferable to chloroform. He related a case in which he operated with M. Gosselin on a patient at death's door, and administered ether instead of chloroform, and no accident ensued; from which and many other cases M. Panas concludes that ether is a safer anæsthetic than chloroform.

At the same meeting, a discussion on the treatment of metrorrhagia was introduced, and, among the various manipulative measures that were referred to, preference was given to plugging the cavity of the neck of the womb, which had several advantages over plugging the vagina in such cases. It stopped the blood more effectually, the patients bore it better, and there was less chance of putrid absorption. Each speaker recommended his own plan; but that adopted by M. Panas seems to me the best. It consists of introducing into the cavity of the uterine neck a pledget of cotton-wool rolled up to about the thickness of a goose-quill and steeped in a solution of the perchloride of iron of the *Codex*, to which is added one part of water to present its caustic effects. This being done, he introduces a ball of cotton-wool and places it in the posterior *cul-de-sac* of the vagina, where it not only forms a support to the uterine plug, but it absorbs any liquid that may escape through it, and thus protects part of the vagina (which is covered with the peritoneum) from the corroding effects of the perchloride of iron and the acrid discharges from the womb.

At a recent meeting of the Société Industrielle du Nord de la France, M. Delaporte-Baujard read a paper on the Relative Value of the Meat of Oxen, Cows, and Bulls, in which he endeavoured to show that the quality of the meat depends on the quality of the animal itself, and not on its sex. For meat to be good, it must be nutritious, agreeable to the taste, and easy to masticate. Butchers generally sell ox-beef at a higher price than the meat of bulls and cows. This should not be tolerated, as the meat from the latter may be as good as that from the ox, provided the animal is not too old and not overfatigued by work, as this renders the meat dry, hard, leathery, and little nutritious, as is observed with the meat of oxen driven great distances to be killed. Experienced butchers are well aware of this fact, and they therefore allow the animals to rest a few days, in order to enable them to recover their normal condition before they are slaughtered. As regards the nutritive quality of the meat, M. Delaporte-Baujard remarks that it is not the piece reputed to be the most tender that is the most nutritious, but it is that which is compact and red; and if people choose the tender parts of the animal, such as the fillet and breast, it is because these parts are more agreeable to the taste and more easily masticated. One of the reasons why the flesh of the bull is considered of inferior quality is, according to the same author, that the animal is of adult age, full of energy and vigour, and the flesh is more compact, owing to the nearly entire absence of fat in it. It is, however, all the more nutritious on that account; but, as some people cannot or will not eat it, it can be utilised for the making of *bouillon* or beef-tea. If the bull be young, and slaughtered just before he attains puberty, the meat will be found more agreeable and more nutritious than veal, and at the same time more succulent and more tender than beef taken from animals placed in precisely similar conditions and brought to the same degree of fattening. As for the flesh of cows, if the animal be not too old or worn by lactation, it is better than the generality of beef sold in butchers' shops; and this is so well known in agricultural districts that, when a cow provides but little milk, or is sterile, she is delivered to the tender mercies of the butcher.

Among the Municipal Council of Paris, there is at present a mania for pulling down old statues and replacing them by new ones. I shall not refer to the motives by which the Council are actuated; suffice it to say, their acts sometimes deserve the gratitude of all well-thinking minds. A report has been recently submitted by M. Dumas to the Academy of Sciences, with reference to certain instruments and chemical apparatus that belonged to M. Lavoisier, the celebrated chemist who, on a most frivolous accusation, was guillotined in 1794. The Municipal Council of Paris seem to have been moved by the perusal of the report, and they have consented to the raising of a statue to the memory of the unfortunate *savant* whose untimely death deprived France and the whole civilised world of his talented services. He it was, it will be remembered, that created modern chemistry, and, at the age of twenty-three, he was awarded by the Academy of Sciences the prize offered for "the best mode of lighting the streets of Paris". Another statue to an eminent man is also to be raised in Paris. It is to the memory of Dr. Pinel, the celebrated alienist, to whom is due the introduction of mild measures in the treatment of the insane. The site chosen is on the grounds of the Salpêtrière Hospital, to which he was for a long time physician.

Dr. Gustave Lebon, to whose works I referred in my last, has been awarded the Godard prize by the Anthropological Society, for his memoir on the Difference of the Human Brain in both Sexes.

At a clinical lecture at the Hôtel Dieu, Professor Sée made some very interesting remarks on the significance of herpes labialis in cases of pneumonia. This eruption, he stated, generally appears from the third to the fifth day of the pulmonary affection. It cannot be considered a critical eruption, as the lung-symptoms continue, and the fever, on the contrary, is increased; the latter subsiding with the cure of the pneumonia, which takes place on the seventh or eighth day. In the latter case, the urine, which during the course of the disease contained large quantities of urea, now becomes "jumenteuse" (resembling the urine of the mare); that is, it contains uric acid, indicating the decline of the disease. Even this latter phenomenon he does not consider a critical evacuation, as it is simply an effect of defervescence, or a favourable turn towards recovery. Professor Sée does not believe in the humoristic doctrine, nor in the critical evacuation of the peccant humours of the body. According to him, the herpes labialis occurring in pneumonia has no other value than one of prognosis, as it is a favourable sign, from which a physician may with certainty prognosticate a favourable termination. But, as it happens that the fever increases after this, the friends of the patient, losing confidence, call in another doctor, generally a homœopath or other quack; and, as the case generally gets well in two or three days afterwards, the homœopath gets the credit of the cure. This, added Professor Sée, is one of the means by which homœopathy gets the upper hand of allopathy.

According to an official report made to the Minister of Agriculture by M. Leblanc, one of the veterinary surgeons attached to the Prefecture of Police, the number of cases of rabies brought to the notice of the Prefect of Police for the year 1878 was 511. Of this number, there were 440 dogs, 68 bitches, and 3 cats. Of the 511 cases, 390 presented the furious form, and 121 the mild form, or that in which the animal shows no tendency to be aggressive. One hundred and three persons were bitten by rabid animals; of these, sixty-seven were adults and thirty-six children; and the mortality reported was thirty, or about one in three—the proportion already established by previous reports. While there were 441 rabid dogs reported for last year in Paris, there were only 70 in the suburbs. The report urges the adoption of repressive measures to reduce the risks to a minimum; and for populous cities or towns, among the measures proposed by M. Leblanc are heavy taxation on dogs, and the slaying of those found in the street without an owner or without a collar bearing the name and address of their master.

An example of the long period of incubation of hydrophobia has just been met with in Paris in the person of a publican's wife, who was bitten a year ago by her own dog. The wound was immediately cauterised; and the dog, which was examined by a veterinary surgeon, was declared to be rabid and was destroyed. For a few days, the woman suffered from fits of shivering and pain in the head, which she attributed to fear. When, however, the symptoms had passed off, she thought no more about the incident. About the middle of last week, she was seized with a severe headache; and the following day, distinct symptoms of hydrophobia having set in, she was taken to the Beaujon Hospital, where she died in three days.

Up till now, no certain remedy has been found for the cure of this terrible malady, and the reason is simply this: when a remedy is applied, it is generally too late, as absorption of the poison takes place with the rapidity of lightning; as is also the case with snake-bites. The only remedy that offers any chance of success is cauterisation or excision; but, for these operations to be effectual, they must be performed *immediately* after the bite of the rabid animal. I must, however, observe that by cauterisation here is meant the actual cautery, or red-hot iron, and not the potential cautery of strong alkalies or of nitrate of silver, which are considered next to useless in these cases. But, as some time must elapse, even if it be a few minutes, between the inoculation and the application of the cautery, a veterinary surgeon proposes the operation of cupping; and, if an apparatus be not at hand, one might be extemporised for the occasion with an ordinary wine-glass; and the scarifications may be made with a penknife. The veterinary surgeon, whose name I regret I have not been able to ascertain, suggests that this remedy and the mode of its application ought to be made as publicly known as possible. It ought to be known as a household remedy, as it can be applied by anybody in anticipation of the arrival of a medical man, who can then complete the treatment. By this means, no time is lost, and many a precious life may be saved.

It is certainly wonderful to what varied uses electricity is applied now-a-days. At a recent meeting of the Agricultural Society of Paris, M. Bella proposed it as a means of taming horses; and in his report he stated that, of all the means hitherto employed for reducing vicious horses to subjection, none are to be compared to electricity; and, in order to effect this, it is sufficient to pass a weak electric current into the mouth of the animal each time he becomes unruly. Under the impression of the shock, however mild, the horse is completely subdued. The apparatus employed is an electro-magnectic machine contained in a small box known by the name of Clark, and the wires of which are made to communicate with the bit in the horse's mouth. From M. Bella's experience, a horse, however vicious, when once subdued in this way, becomes as quiet as a lamb. He is not prepared to explain the *modus operandi* of this novel mode of taming horses; but he has applied it to some of the most vicious and intractable horses known in and about Paris with the most complete success.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTY-SEVENTH ANNUAL MEETING.

THE Forty-Seventh Annual Meeting of the British Medical Association will be held at Cork, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1879.

President: R. W. FALCONER, M.D., F.R.C.P., D.C.L., Consulting Physician to the Royal United Hospital, Bath.

President-Elect: DENIS C. O'CONNOR, A.B., M.B., Professor of the Practice of Medicine in Queen's College, Cork.

An Address in Medicine will be delivered by ALFRED HUDSON, M.D., M.R.I.A., Regius Professor of Physic in the University of Dublin.

An Address in Surgery will be delivered by WILLIAM S. SAVORY, M.B., F.R.C.S., F.R.S., Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.

An Address in Public Medicine will be given by ANDREW FERGUS, M.D., President of the Faculty of Physicians and Surgeons of Glasgow.

The business of the Association will be transacted in Six Sections.

SECTION A.: MEDICINE.—*President:* Andrew Clark, M.D., F.R.C.P. *Vice-Presidents:* James Little, M.D.; William Townsend, M.D. *Secretaries:* George F. Duffey, M.D., 30, Fitzwilliam Place, Dublin; Benjamin Spedding, L.R.C.P.Edin., 17, Cherry Mount, Belfast.

SECTION B.: SURGERY.—*President:* Professor W. K. Tanner, M.D. *Vice-Presidents:* W. Mac Cormac, F.R.C.S.Eng.; J. Cooper Forster, F.R.C.S.Eng. *Secretaries:* J. G. Curtis, F.R.C.S.I., 7, Camden Place, Cork; N. J. Hobart, M.D., 33, South Mall, Cork; Stephen O'Sullivan, M.D., 6, Camden Place, Cork.

SECTION C.: OBSTETRIC MEDICINE.—*President:* George H. Kidd, M.D. *Vice-Presidents:* W. J. Cummins, M.D.; Alfred Wiltshire, M.D. *Secretaries:* Professor R. J. Kinkead, M.D., Galway; Fancourt Barnes, M.D., 39, Weymouth Street, London.

SECTION D.: PUBLIC MEDICINE.—*President:* T. W. Grimshaw, M.D. *Vice-Presidents:* H. J. Littlejohn, M.D.; C. Meymott Tidy, M.B. *Secretaries:* J. L. Notter, M.D., Netley; James Martin, L.K.Q.C.P., Portlaw, County Waterford.

SECTION E.: PSYCHOLOGY.—*President:* J. A. Eames, M.D. *Vice-Presidents:* Henry Rayner, M.D.; Herbert C. Major, M.D. *Secretaries:* Oscar T. Woods, M.D., Killarney; Ringrose Atkins, M.D., Waterford.

SECTION F.: PHYSIOLOGY.—*President:* Henry Power, F.R.C.S. *Vice-Presidents:* Professor John J. Charles, M.D.; Reuben J. Harvey, M.D. *Secretary:* W. H. Allchin, M.B., 34, Wimpole Street, London.

Secretary to the Physiological Museum: C. Y. Pearson, M.D., Cork.

Secretaries to Museum Committee: T. Gelston Atkins, M.D.; C. Harvey, M.D.

Honorary Local Secretary: Professor H. MACNAUGHTON JONES, M.D., St. Patrick's Place, Cork.

Honorary Assistant Local Secretaries: RINGROSE ATKINS, M.D. Waterford; D. C. O'CONNOR, jun., L.R.C.P. & S.Ed., 2, Camden Place, Cork.

TUESDAY, AUGUST 5TH, 1879.

10 A.M.—Meeting of Committee of Council.
11 A.M.—Meeting of the Council of 1878-79.
3 P.M.—General Meeting. President's Address; Annual Report of Council, and other business.
8 P.M.—Reception by the President of the Association and the Local Reception Committee at Queen's College.

WEDNESDAY, AUGUST 6TH.

9.30 A.M.—Meeting of Council of 1879-80.
11 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—Reception by the Mayor, Corporation, and Citizens of Cork.

THURSDAY, AUGUST 7TH.

9 A.M.—Meeting of the Committee of Council.
10 A.M.—Third General Meeting. Reports of Committees.
11 A.M.—Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 8TH.

10 A.M.—Address in Public Health.
11 A.M.—Sectional Meetings.
1.30 P.M.—Concluding General Meeting.
4 P.M.—Garden Party by Reception Committee at Queen's College.
8 P.M.—Concert by the Reception Committee.

Arrangements have been made for providing a Subsection of Ophthalmology and Otology in the Surgical Section. Mr. Jonathan Hutchinson, F.R.C.S., has consented to take the Chair. Dr. James Patterson Cassells, of Glasgow, will act as Honorary Secretary for Otology; and Mr. H. R. Swanzy, of 23, Merrion Square North, Dublin, and Mr. Edward Nettleship, of 4, Wimpole Street, London, will act as Secretaries for Ophthalmology.

There will also be a Subsection of Dermatology in the Section of Medicine. Professor McCall Anderson has consented to take the Chair, and Mr. Malcolm A. Morris, 63, Montagu Square, Hyde Park, W., London, and Dr. Walter Smith, 34, Lower Baggot Street, Dublin, will act as Honorary Secretaries.

SECTIONAL ARRANGEMENTS.

SECTION A.—MEDICINE.

The following subjects have been selected for discussion in the section.

1. "On the Value of Mountain Air in the Treatment of Phthisis." Drs. Henry Bennet, Clifford Allbutt, Berkart, Cuming, and Roberts have notified their intention of taking part in the discussion.

2. "Alcohol in Fever." Drs. James Little, Macnaughton Jones, Tibbits, Balthazar Foster, Norman Kerr, Gairdner, Wade, and Cuming will read papers and take part in the discussion on this subject.

3. "Tracheotomy in Croup." Drs. Wm. Squire and Corley, Mr. R. W. Parker, Drs. William Thomson, Cuming, John Moore, and Mr. William Stokes will read papers and take part in the discussion.

The following papers are also promised for this section.

ALLBUTT, T. Clifford, M.D., and JACOB, E. H., M.B. Simple Dilatation of the Stomach, and its Treatment.
BEARD, George, M.D. (New York). Inebriety and allied Nervous Diseases in America.
COLLIE, Alexander, M.D. The Cold Bath in the Treatment of Enteric Fever.
CUMING, James, M.D. A Case of Diplegia.
DONKIN, Horatio, M.B. Some cases of Abnormally High Temperature.
DRYSDALE, Charles R., M.D. Syphilitic Albuminuria.
ELLIOT, Robert, M.D. Some rare and inexplicable Nervous Affections.
FOTHERGILL, J. Milner, M.D. Diagnostic Ceremonial.
HARKIN, Alex., M.D. Chlorate of Potass in the Hæmorrhagic Diathesis.
HAYDEN, Thomas, F.K.Q.C.P.I. Certain Varieties of Cardiac Neurosis.
HOWIE, James M., M.B. The Power of Alcohol to Prolong Life in Wasting Disease.
JAGIELSKI, Victor, M.D. The Effect of Koumiss upon the Urine in Health and in Disease.
LUSH, W. Vawdrey, M.D. A Case of Embolism into the Right Axillary, Left Brachial, and Right Middle Cerebral Arteries: Recovery.
MAC CORMAC, Henry, M.D. Tubercle and Tubercular Disease: their Genesis and Origin.
MACKENZIE, Morell, M.D. Laryngeal Phthisis.
RENFREW, R., M.D. Diphtheria; with special reference to Treatment.
SAUNDBY, Robert, M.D. Albuminuria.
SMITH, Walter, M.D. The Bismuth-test for Grape-Sugar.
SQUIRE, William, M.D. The Influence of Treatment in the Cure of Rheumatic Fever before and since the employment of Salicylic Acid.
TIBBITS, Edward T., M.D. The Modern Theory of the Action of Digitalis.

Subsection of Dermatology.

A discussion on "Lupus, its Varieties and Treatment", will be opened by Mr. Jonathan Hutchinson. Mr. Cottle, Mr. Johnson, Mr. Malcolm Morris, Mr. Balmanno Squire, Mr. Startin, Dr. Stowers, Dr. E. H. Bennett, Dr. W. G. Smith, and Dr. Thin will take part in the debate. The following papers will be read in connection with this subject.

ANDERSON, T. McCall, M.D. The Use of Iodide of Starch in the Treatment of Lupus Erythematodes.
SQUIRE, Balmanno, M.B. The Treatment of Lupus by Linear Scarification.
STARTIN, James, Esq. Lupus, and its Treatment by Caustics.
STOWERS, J. HERBERT, M.D. On Lupus.

The following papers will also be read in this subsection.

FARQUHARSON, Robert, M.D. The Use of Arsenic in Skin-Diseases.
FINNY, J. Magee, M.D. 1. Purpural Hæmorrhagia. 2. Hydroa after Iodide of Potassium.
FOX, T. Colcott, M.B. On the Neurotic Origin of Lichen Planus.
MOORE, Charles F., M.D. Notes on Erythema Nodosum.
MORRIS, Malcolm A., Esq. 1. On Scarification as a New Remedy in Skin-Diseases. 2. Some Remarks on Molluscum Contagiosum.
SANGSTER, Alfred, M.B. On so-called Hydroa.
SMITH, Walter G., M.D. 1. On a peculiar Moniliform or Varicose Condition of the Hair. 2. On Favus: a Case of Infection traced to a Cat, with Specimen.
THIN, George, M.D. On Cancerous Ulcers of the Skin.

SECTION B.—SURGERY.

The special subjects for discussion in this section are:

1. "Subcutaneous Osteotomy." The discussion will be opened by Mr. William Adams. The following gentlemen will take part in the discussion: E. H. Bennett, M.D.; John Fagan, Esq.; Rushton Parker, Esq.; Dr. A. Ogston; and William Mac Cormac, Esq.; and papers in connection with this subject are promised by the following members.

BRODHURST, Bernard E., Esq. On an Operation for Genu Valgum, with some Remarks on Osteotomy.
GANT, F. J., Esq. Subcutaneous Osteotomy below the Trochanter.
JONES, Thomas, M.B. Short notes of a dozen Cases of Subcutaneous Osteotomy.
MACEWEN, William, M.D. Antiseptic Osteotomy.
PARKER, Robert W., Esq. Subcutaneous Osteotomy in Young Children.

2. "The Diagnosis and Treatment of Joint-Diseases in their various stages." Dr. Lewis A. Sayre of New York will open the discussion. The following gentlemen have promised to take part in the discussion on the subject: E. H. Bennett, M.D.; E. D. Mapother, M.D.; and Rushton Parker, Esq.

Papers are also promised by:

FAGAN, John, Esq. Notes on the Treatment of Disease of the Wrist-Joint, with Report of a Successful Case of Excision in a Child Six Years Old.
GANT, F. J., Esq. On Excision of the Knee-Joint under special circumstances.
JOHNSON, Z., Esq. On the Free Opening of Joints.
JONES, H. Macnaughton, M.D. Exhibition of Cases illustrative of Operative Interference in Diseases of the Hip, Knee, and Ankle-Joints.
MAC CORMAC, William, Esq. A Case of Excision of the Shoulder- and Elbow-joints for Gunshot Wound in the same Arm, with final Result.
STOKES, William, M.D. On Resection in Joint-Disease.

3. "Treatment of Aneurism by Electrolysis." A paper on this subject will be read by Dr. Herbert Tibbits. The following gentlemen have promised to take part in the discussion: Joliffe Tufnell, Esq.; T. Clifford Allbutt, M.D.; and Balthazar Foster, M.D.

The following communications on various subjects are also promised.

ANDREW, Edwyn, M.D. A New Method of Using Ice, especially in Operation.
BARTON, John K., M.D. Remarks on a Case of Phagedenic Ulceration.
BENNETT, E. H., M.D. 1. On Comminuted Fracture of the Upper Third of the Femur. 2. On Colles' Fracture. 3. An Analysis of the Varieties of Compound Fracture.
FAGAN, John, Esq. 1. Will exhibit some Splints, which he thinks are novel, and believes to be good. 2. Morbid Specimens.
HAYES, J. R., M.D. Case of Removal of entire Right Parietal and half of Fronta Bones, the result of Burn: Treated by Skin-Grafting: Recovery. (The patient will be exhibited.)
HILL, Berkeley, Esq. On the Effect of Stricture near the Meatus in causing Subpubic Contraction of the Urethra.
JOHNSON, Z., Esq. 1. On a Special and Peculiar Treatment of Varus (to be illustrated on a living example, if possible). 2. On a Special Treatment of Nævus. 3. On a Splint and Foot-piece (original), to be exhibited.
MCDONNELL, Robert, M.D. The Intravenous Injection of Blood and other Fluids.
MELDON, Austen S., Esq. The Intravenous Injection of Milk.
OWEN, Edmund, Esq. Remarks on the Cause of Eversion of the Limb after Fracture of the Neck of the Femur.
PARKER, Rushton, Esq. On Amputation through the Femoral Condyles by the Methods of Lister and Stokes.
SHINKWIN, Thos. C., M.D. Fracture of the Sternum, illustrated by Cases.
SPANTON, W. D., Esq. The Immediate Care of Inguinal Hernia by a new Instrument, illustrated by Cases. (The operation, on a living subject, will be performed, if possible, at one of the local hospitals.)
STEELE, Charles, Esq. On Chair-supports for Spinal Curvatures.
TEEVAN, W. F., Esq. One Hundred Cases of Operation for Stone in the Bladder.
THOMSON, William, M.D. On Dupuytren's Fracture.
WHEELER, W. J., M.D. Fracture of the Patella; and the Reports of several Cases treated by the Writer's Splint. (Exhibition of splint, and of a specimen of bony union of the patella.)

Subsection of Ophthalmology and Otology.

Ophthalmology.—The following are the subjects for discussion.

1. "The Treatment of Glaucoma." The discussion will be opened by Mr. Power of London; and the following papers will be read.

COWELL, G., Esq. On Glaucoma.
TAYLOR, C. Bell, M.D. Sclerotomy and Iridectomy in Glaucoma.
DE WECKER, Dr. Sclerotomy in different forms of Glaucoma.

At the conclusion of the discussion, Dr. W. A. Brailey will demonstrate some preparations illustrative of the Pathology of Glaucoma.

2. "Examination for Colour-Blindness." The discussion will be opened by Mr. Swanzy of Dublin. A paper on the subject is promised by Professor Cohn of Breslau.

3. "The Use of Eserine, Pilocarpine, Gelsemine, Duboisin, etc." The discussion will be opened by Professor Macnaughton Jones.

4. "Treatment of Detached Retina." The discussion will be opened by Mr. T. Shadford Walker of Liverpool.

5. "Tobacco and Alcoholic Amblyopia." The discussion will be opened by Dr. Hirschberg of Berlin.

6. "Diphtheritic Ophthalmia." The discussion will be opened by Mr. Nettleship.

Dr. Loring (New York) and others have expressed their willingness to take part in the discussions on the above subjects.

The following gentlemen have also promised communications.

BROWNE, Edgar A., Esq. Some Clinical Aspects of Optic Neuritis.
FITZGERALD, C. E., M.D. On Knapp's Peripheral Division of the Capsule in Cataract-Extraction.
GLASCOTT, C. E., M.D. Report on the Results of the last Two Hundred Cases of Cataract Extraction by the modified Linear Operation.
JONES, H. Macnaughton, M.D. Eye-Dressings after Operations.
TAYLOR, C. Bell, M.D. 1. Synopsis of several hundred Cases of Cataract Extraction. 2. Therapeutic Use of Electricity in certain cases of (so-called) Amaurosis.
WOLFE, J. R., M.D. 1. How to obviate the Complications which render Cataract-operations precarious. 2. The injurious effects of Tea-drinking Habits upon the Nutrition of the Eyeball.

Otology.—The following subjects will be discussed.

1. "The Therapeutic Value of Intratympanic Injections of Medicated Fluids in the Catarrhal Affections of the Middle Ear." Dr. Cassells will open the discussion on this question, and the following gentlemen have promised to take part in it: Dr. Weber-Liel of Berlin; Dr. Schuster of Aix-la-Chapelle; Dr. Bonnafont of Paris; Professor Macnaughton Jones of Cork; Mr. Lennox Browne of London; Dr. Kirk Duncanson of Edinburgh; Mr. W. Douglas Hemming; Dr. F. M. Pierce. Dr. Weber-Liel will also give a practical demonstration of the use of his "Koniontron" for intratympanic fluid injections.

2. "On Tinnitus Aurium." Dr. Laurence Turnbull of Philadelphia, U.S.A., has promised to open the discussion on this question, and the following gentlemen will take part in it: Professor Macnaughton Jones of Cork; Mr. Lennox Browne of London; Dr. Kirk Duncanson of Edinburgh; Dr. Alexander Ogston of Aberdeen; Mr. W. Douglas Hemming of Bournemouth; Dr. Weber-Liel of Berlin; Dr. Bonnafont of Paris; Dr. Schuster of Aix-la-Chapelle; Dr. Woakes; and Dr. F. M. Pierce. Dr. Weber-Liel will demonstrate practically his method of operating in tenotomy of the tensor tympani muscle. He will also demonstrate the use of his ear-microscope on the cases of patients. The following papers on the subject are promised.

HEMMING, W. D., Esq. On the Forms, Causes, and Treatment of Tinnitus Aurium.
SEXTON, Samuel, M.D. (New York). On Tinnitus Aurium.
TURNBULL, Lawrence, M.D. A Table of 164 cases of Tinnitus Aurium.

The following papers are also promised for this department.

CASSELLS, James Patterson, M.D. 1. On the production of Artificial Deafness, and its bearing on a theory of the Etiology and Evolution of Ear-Diseases (illustrated). 2. Ear-Disease and Life Assurance. 3. On Aural Exostoses; and on a new Operation for their Removal (illustrated).
MCKEOWN, William A., M.D. 1. On the Treatment of Relaxed Membrana Tympani. 2. On Aural Gymnastics.
PIERCE, F. M., M.D. Auditory Exostoses.
TURNBULL, Charles S., M.D. (Philadelphia). 1. Inflation of the Middle Ear in cases of Cleft Palate, both before and after Staphyloraphy. 2. Chloroform-Vapour in Inflation of the Middle Ear
WOAKES, Edward, M.D. Throat-Deafness associated with Paresis of the Palato-Tubal Muscles.

SECTION C.—OBSTETRIC MEDICINE.

The subjects for discussion in this section are:

1. "Intra-uterine Medication." The discussion will be opened by Dr. W. S. Playfair. Dr. Tilt, Dr. Cordes, Dr. Henry Bennet, Professor Dill, and Dr. Byford will join in the discussion. The following papers will be read in connection with this subject.

BATTEY, Robert F., M.D. Intra-uterine Medication by Iodised Phenol.
DILL, R. F., M.D. Intra-uterine Medication.
PLAYFAIR, W. S., M.D. Intra-uterine Medication.
TILT, Edward J., M.D. Remarks on Intra-uterine Surgery.

2. "Hæmorrhage from the Genital Organs during Pregnancy and Parturition." The discussion will be opened by Dr. Macan, and the following gentlemen have signified their intention of taking part therein: Professor Macnaughton Jones, Dr. Robert Barnes, Mr. Lawson Tait, Dr. Lombe Atthill, Dr. Henry Bennet, Dr. Malins, and Dr. Edis. The following paper is promised.

MADDEN, T. More, M.D. The Prevention and Treatment of *Post Partum* Hæmorrhage.
WALTER, William, M.D. The Treatment of *Post Partum* Hæmorrhage by the Intra-uterine Injection of Warm Water.

The following papers are also promised for this Section.

ATTHILL, Lombe, M.D. Inversion of the Uterus.
AVELING, J. H., M.D. The Treatment of Chronic Complete Inversion of the Uterus, with cases illustrating the advantages of the direct method of applying gradual Elastic Pressure.
BARNES, Fancourt, M.D. A case in which Phlegmasia Dolens simultaneously attacked both legs and the left arm.
BARNES, Robert, M.D., F.R.C.P. A Case of Inversion of the Uterus.
BATTEY, Robert F., M.D. A *résumé* of the Results of a series of Operations for the artificial production of the Change of Life in Women.
BYFORD, W H., M.D. The Treatment of Fibroid Tumours of the Uterus by Ergot.
CHAMBERS, Thomas, F.R.C.P.E. A Case of Fibroid Tumour of the Uterus.
COPEMAN, E., M.D. The Treatment of Severe Sickness during Pregnancy.
EDIS, Arthur W., M.D., F.R.C.P. Acquired Sterility: its Cause and Treatment.
HAYES, J. R., M.D. A Case of Extra-uterine Fœtation.
HOWIE, J. M., M.B. A Fatal Case of Autogenetic Puerperal Septicæmia, in which the Symptoms appeared previously to Delivery.
KERR, Norman, M.D. Warm Water Injections in *Post Partum* Hæmorrhage.
LYSTER, C. E. M.D. The Treatment of Subinvolution of the Uterus.
MALINS, Edward, M.D. Treatment of Conical Cervix of the Uterus.
MILLER, Hugh, M.D. Puerperal Mortality in Lying-in Hospitals.
WILTSHIRE, Alfred, M.D., F.R.C.P. A Case of Tetanus during Pregnancy: Recovery.

SECTION D.—PUBLIC MEDICINE.

The special subjects selected for discussion are:

1. "The Influence of Drinking-Water in originating or propagating Enteric Fever, Diarrhœa, Diphtheria, and Scarlatina; to be illustrated, as far as possible, by instances which have come under the personal observation of the speaker." The discussion will be opened by Andrew Fergus, M.D., and the following members have promised to read papers and take part in the discussion: Edward Ballard, M.D.; Alfred Carpenter, M.D.; and C. Meymott Tidy, M.B., F.C.S.

Papers in connection with this subject will also be read by:

HUDSON, Robert S., M.D. Facts illustrative of the Spread of Enteric Fever and Diarrhœa by the Agency of Polluted Drinking-Water.
KERR, Norman S., M.D. Typical Cases of Enteric Fever, Diarrhœa, Scarlatina, and Diphtheria, from Drinking-Water.
NOTTER, J. Lane, B.A., M.D. On the Value of Chemical and Microscopic Analysis in its relation to this question.

2. "How are we to deal, by isolation or otherwise, with Convalescents from Acute Infective Diseases, so as to limit the spread of Disease?" The discussion on this question will be opened by John W. Moore, M.D., F.K.Q.C.P. The following members have promised to read papers and take part in the discussion: Francis Vacher, L.R.C.P., and Arthur Ransome, M.A., M.D.

Notice of papers to be read are given by the following gentlemen.

BERNARD, A., M.B. Reasons why the Contagious Diseases Acts ought to be extended to all Seaports.
BONNAFONT, Dr. (Paris). Hygiene.
CARPENTER, Alfred, M.D. The Dual Requirements necessary for the Production of Enteric Fever: A consideration of the Fallacies which are based upon a narrow view of the Germ theory.
CHAPMAN, John H., L.K. & Q.C.P.I. On the Sanitary Arrangements of Dwellings.
DRYSDALE, Charles R., M.D. The Mortality of the Rich and Poor.
HART, Ernest, Esq. Sanitary Districts and Sanitary Administration under the Public Health Acts, with Maps and Tabular Statements.
NOTTER, J. Lane, M.D. The Experimental Study of Disinfectants.
ROGERS, Joseph, M.D. The Grievances of the Poor-law Medical Officers in the United Kingdom, with Suggestions for their Removal.

SECTION E.—PSYCHOLOGY.

The special subject for discussion in this Section is:

"What can be done for the Prevention of Insanity?" The question will be arranged under the following heads: (*a*) Ascertaining and Classification of Causes; (*b*) The Legitimate Prevention of Hereditary Transmission; (*c*) The influence of bad Sanitary Conditions; (*d*) The Effect of the Teaching of Elementary Physiological Principles.

The following papers are also promised.

ATKINS, Ringrose, M.D. 1. The Treatment of Hysterical Hemianæsthesia by Metals. 2. Softening of the Bones amongst the Insane.
MAJOR, Herbert C., M.D. The Histology of the Brain in Apes.
SEGUIN, E., M.D. The Psycho-Physiological Training of an Idiot Hand.
TUKE, D. Hack, M.D. Intemperance in Study.

SECTION F.—PHYSIOLOGY.

The following papers are promised.

CHARLES, J. J., M.A., M.D. 1. The propagation of Nervous Impulses. 2. The Circulation of Blood through the Lungs.

SPECIAL NOTICES.

All the steam-packet companies will convey goods to the Museum and for the Sanitary Exhibition free of charge.

Any persons requiring description of tours in South of Ireland can have same on application to the Honorary Local Secretary.

Intending visitors are requested to communicate with Professor Macnaughton Jones as soon as possible, stating whether they will bring ladies with them.

Reception and waiting rooms for ladies will be provided in Queen's College and in the City.

FRANCIS FOWKE,
General Secretary of the British Medical Association.
161a, Strand, London, July 17th, 1879.

WEST OF IRELAND BRANCH.

THE first general meeting of this Branch will be held at the Queen's College, Galway, on Thursday, July 24th, at 6 P.M.

The members will dine at the Railway Hotel at 8 P.M.

Business of Meeting.—To elect President, Vice-President, and Council.

Any member desirous of reading a paper, will please communicate with

R. J. KINKEAD, *Honorary Secretary.*
Galway, July 14th, 1879.

ABERDEEN, BANFF, AND KINCARDINE BRANCH.

THE annual meeting of this Branch will be held in Aberdeen, on Saturday, July 19th, at half-past One o'clock.

Further particulars will be given by circular.

A. OGSTON, J. URQUHART, } *Honorary Secretaries.*

Union Street, Aberdeen, June 26th, 1879.

WEST SOMERSET BRANCH.

THE annual meeting of this Branch will be held at the Luttrell Arms Hotel, Dunster, on Thursday, July 24th, at 5 o'clock.

Dinner at 6 o'clock: THOMAS CLARK, Esq., President.

The President invites the members of the Branch to lunch at One o'clock, and afterwards to visit with him Dunster Castle, the Church, and Minehead.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, July 1st, 1879.

METROPOLITAN COUNTIES BRANCH.

THE twenty-seventh annual meeting of this Branch will be held at the Ship Hotel, Greenwich, on Friday, July 25th, 1879, at 4 P.M.

At 6 P.M., the members will dine together; JOHN WOOD, Esq., F.R.S., in the Chair. Tickets, 14s. each (inclusive of attendance, and exclusive of wine). Members intending to be present at the dinner are specially requested to give notice to the Secretaries on or before July 22nd.

ALEXANDER HENRY, M.D., WM. CHAPMAN GRIGG, M.D., } *Honorary Secretaries.*

57, Doughty Street, W.C., July 1st, 1879.

BORDER COUNTIES BRANCH.

THE annual meeting of this Branch will be held at the County Hotel, Carlisle, on Friday, July 25th, at One o'clock.

Gentlemen intending to read papers are requested to give early notice thereof to one or other of the Secretaries.

RODERICK MACLAREN, JOHN SMITH, } *Honorary Secretaries.*

Carlisle, June 24th, 1879.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held at the office of the Association, 161A, Strand, on Wednesday, July 9th, 1879—Present: Dr. CARPENTER (President of the Council) in the Chair; Dr. Falconer, President; Mr. Husband, Treasurer; Dr. Clifford Allbutt, Mr. A. Baker, Mr. T. W. Barron, Dr. M. De Bartolomé, Mr. E. C. Board, Dr. L. Borchardt, Dr. C. Chadwick, Dr. J. Ward Cousins, Mr. G. Callender, F.R.S., Dr. A. Davidson, Dr. E. L. Fox, Dr. B. Foster, Mr. R. S. Fowler, Dr. C. Harrison, Surgeon-General Maclean, C.B., Mr. F. Manby, Mr. F. Mason, Mr. E. Morris, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. W. Procter, Dr. A. Sheen, Dr. E. H. Sieveking, Dr. A. P. Stewart, Dr. Shettle, Dr. W. F. Wade, Mr. C. G. Wheelhouse:

The minutes of the last meeting were read and found correct.

Read letters of apology for non-attendance from Dr. Arlidge, Dr. Duffey, and Dr. Waters.

Read letter from Lancashire and Cheshire Branch on the Coroners' Bill.

Also letter and resolutions on the question of the present position of Infirmary Surgeons in Ireland who are also Medical Officers of Goals.

Resolved: That both communications be referred to the Parliamentary Bills Committee.

Read letter from the profession at Cambridge intimating their desire to invite the Association to hold the Annual Meeting of 1880 in that town, and from Liverpool for either 1880 or 1881.

Resolved: That the Committee of Council having heard with much satisfaction the probability of an invitation from Liverpool to hold the meeting of the Association in 1881 in that town, all feel assured that such invitation will be equally satisfactory to the members of the Association.

Read letter from Professor Humphry, stating that a deputation from Cambridge would wait upon the Council at the meeting to be held at Cork.

The President of Council placed before the Committee of Council the suggestions for the conduct of Annual Meetings, and suggested several modifications.

Resolved: That the consideration of the proposed regulations with regard to the conduct of the Annual General Meetings be deferred to the Annual Meeting of 1880, and that the notice of the proposal at Cork in the JOURNAL be withdrawn.

Resolved: That the ninety-one gentlemen whose names appear on the circular convening the meeting (and the supplementary list), be and they are hereby elected members of the Association.

Read letter from the West of Ireland Branch, enclosing a copy of the proposed by-laws of that Branch.

Resolved: That the by-laws be approved, and the recognition of the West of Ireland Branch be confirmed.

Resolved: That the Committee of Council desire to welcome very cordially the West of Ireland Branch as an important addition to the Association, and they trust it may be the means of extending the Association in the West of Ireland, and also of increasing the friendly intercourse with the Scotch and English members of the profession. The thanks of the Association are hereby given to Professor Kinkead for his great assistance in founding the Branch.

Read minutes of the Journal and Finance Committee and the Office and Printing Subcommittee of to-day's date.

The minutes of the Journal and Finance Committee contain a report of the examination of the quarter's accounts, to the amount of £2,817 19s. 1d.; and a resolution recommending that Dr. Roy's report upon Pleuropneumonia be sold to members of the Association at 6d. and non-members 1s. per copy.

The minutes of the Printing and Office Subcommittee contain report upon the contract for the paper for the JOURNAL for the ensuing twelve months.

Resolved: That the minutes of the Journal and Finance Committee of to-day's date, together with the minutes of the Printing and Office Subcommittee, also of to-day's date, be received, approved, and the recommendations contained therein carried into effect.

Read minutes of the Scientific Grants Committee of the 8th instant.

The minutes of the Scientific Grants Committee contain the recommendation of grants to Dr. Ferrier and Dr. Gerald Yeo, £50; Dr. Newman, £10; Dr. Malcolm Morris, £10; Dr. McKendrick, £50.

Resolved: That the minutes of the Scientific Grants Subcommittee of the 8th instant be received and approved, and the recommendations carried into effect.

Resolved: That the President, President of Council, and the Treasurer be appointed the Subcommittee to draw up the draft Annual Report.

The Committee of Council then considered the report of attendances, a copy of which is as follows:

Report of Attendances of the Twenty Elected Members of the Committee of Council.—Meetings, five, viz., August 9th, October 9th, 1878; January 8th, April 16th, and July 9th, 1879. Dr. Alfred Carpenter (President of Council), Dr. Clifford Allbutt, Dr. L. Borchardt, Dr. B. Foster, Dr. E. L. Fox, Mr. F. E. Manby, Mr. F. Mason, Dr. E. H. Sieveking, Dr. W. F. Wade, Mr. C. G. Wheelhouse, five attendances; Dr. J. T. Arlidge, Mr. G. W. Callender, F.R.S., Dr. E. Morris, Mr. R. H. B. Nicholson, Dr. A. P. Stewart, four attendances; Dr. C. Holman, three attendances; Mr. Reginald Harrison, Surgeon-General Maclean, two attendances; Mr. Jonathan Hutchinson, one attendance; Dr. Robert Farquharson, none.

The names of Dr. Holman, Mr. Reginald Harrison, Mr. Jonathan Hutchinson, and Dr. Robert Farquharson were struck off in accordance with by-law 28.

Dr. Carpenter, one of the twenty representatives elected last year, having been since appointed President of Council, six vacancies were declared.

Resolved: That the remaining fourteen gentlemen be nominated for election for members of the Committee of Council for 1879-1880, together with six to be added, viz.: Dr. Clifford Allbutt; Dr. J. T. Arlidge; Dr. L. Borchardt; Mr. G. W. Callender, F.R.S.; Dr. B. Foster; Dr. E. L. Fox; Mr. F. E. Manby; Mr. F. Mason; Dr. E. Morris; Mr. R. H. B. Nicholson; Dr. E. H. Sieveking; Dr. A. P. Stewart; Dr. W. F. Wade; Mr. C. G. Wheelhouse.

Ten gentlemen having been proposed, as the six to be added to the fourteen already nominated, a ballot was taken; and the following appearing to have the greatest number of votes, and the majority of votes of those present, were declared to be nominated: Dr. Bradbury, Cambridge; Dr. Lyster, 20, Belvedere Road, Liverpool; Mr. Arthur Jackson, Sheffield; Dr. T. L. Rogers, Rainhill, Prescott; Dr. G. H. Philipson, Newcastle-on-Tyne; Mr. Stear, Saffron Walden.

Dr. Sheen and Mr. Fowler acted as scrutineers.

It was moved by Dr. Sieveking, seconded by Dr. Wade and Surgeon-General Maclean: That, in consideration of the official professional services rendered by Surgeon-Major James Reynolds, M.B., V.C., at Rorke's Drift, Zululand, South Africa, on January 22nd and 23rd, 1879, in his constant attention to the wounded under fire; and in consideration of his eminent bravery in voluntarily conveying ammunition across

an open space, under a heavy cross-fire; and also of the remarkable intelligence, coolness, and tact evinced by Surgeon-Major Reynolds, under circumstances of great danger; the Gold Medal of the British Medical Association (for distinguished merit) be, and is hereby, awarded to him.

LANCASHIRE AND CHESHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of the Lancashire and Cheshire Branch was held at Lancaster, on Wednesday, June 25th, 1879: present, Dr. LESLIE JONES in the Chair, fifty-five members, and ten visitors.

The Chairman introduced the President-elect, Mr. CHRISTOPHER JOHNSON, who took the Chair and delivered an address on the Influence of Tradition on Medical Progress. A vote of thanks for the same was proposed by Mr. LUND, and carried by acclamation.

Report of Council.—The HONORARY SECRETARY read the report of Council and financial statement, as follows.

"The Council of the Lancashire and Cheshire Branch has again to congratulate the members on the prosperous condition of the Branch. Last year, it numbered 711 members. Of these, 15 have died, 23 have resigned, and 5 have been struck off the roll for non-payment of the subscription. But during the year 72 members have joined, so that at the present time it contains 740 members. Your Council has to regret that death has removed many old and valued members during the past year; amongst them, three who have long taken an active part in the management of the Branch. To Dr. Vose of Liverpool, formerly President of the Association, and to Dr. Wilkinson of Manchester, who was President of the Association at the time of his death, this Branch has been deeply indebted for the kindly and active interest so long shown in its affairs and progress; whilst to the untiring energy of Dr. Steele of Liverpool, Secretary of the Branch for many years, and subsequently its President, has been due much of that marked prosperity which the Branch has for the last few years enjoyed.

"In 1877, the experiment was tried of holding an intermediate meeting in addition to the ordinary annual meeting. The success which attended the first meeting at Oldham augured well for the success of future gatherings; and your Council has had pleasure in noticing that the three intermediate meetings held during the past year at Stockport, Bury, and Northwich, have seemed to give much satisfaction to the members attending them. Your Council feel specially indebted to Dr. Bird of Stockport, Mr. Parks of Bury, and Mr. Williams of Northwich, for the trouble they took in making arrangements for the meetings; and to Drs. Gamgee and Roberts, and Mr. Hutchinson, for the valuable addresses given at them.

"Your Council has followed carefully the various phases assumed by Medical Reform during the past year, and has presented petitions in favour of the Association Bill brought in by Messrs. Mills, Childers, and Goldney, which provides for the direct representation of the profession in the Medical Council.

"Your Council has also watched the course of legislation relating to the office of coroner; and finding that, in the Coroners' Bill now before Parliament, there is a provision by which medical men are compelled in certain cases to give evidence without remuneration, has sent a protest against the clause containing it to all the members of Parliament in Lancashire and Cheshire, and to the members of the Select Committee appointed to consider the Bill. Your Council has also advocated the adoption of a wider basis for legislation with regard to the duties now performed by coroners than that on which the Bill now before Parliament has been founded.

"Your Council has also had under consideration the attempts now being made in many towns to make medical men pecuniarily responsible for reporting the existence of infectious disease coming under their care, and has appointed a subcommittee to aid the medical men in any towns in Lancashire and Cheshire, where attempts of this kind are made, to resist them.

"Your Council regret that Dr. Leech has been compelled to resign the office of Honorary Secretary of the Branch.

"The financial condition of the Branch is quite satisfactory, as shown by the following statement.

"*Financial Statement for the Year ending December 31st, 1878.*—Balance in hand January 1st, 1878, £21 10s. 4d.; subscriptions received since, £85 2s. 6d.; balance of grant to Duration of Infection Subcommitee, £2; making a total of £108 12s. 10d. The expenses of the Branch during the year have been £75 6s. 2d., leaving in the hands of the Secretary a balance of £33 6s. 8d."

It was moved by Mr. MEACHAM, seconded by Mr. FRASER, and resolved—"That the report of the Council now read, and the financial statement, be received and adopted."

Vote of Thanks.—It was proposed by Dr. ASPINALL, seconded by Mr. FOX, and resolved—"That the best thanks of the meeting are due to the retiring officers and Council for their services during the past year."

Secretaries.—It was proposed by Mr. LUND, seconded by Mr. REGINALD HARRISON, and resolved—"That Dr. A. Davidson of Liverpool be elected General Secretary of the Branch; and the following gentlemen Local Secretaries: R. C. Brown, M.B., Preston; C. J. Cullingworth, Esq., Manchester; W. Garstang, M.D., Blackburn; W. Hall, Esq., Lancaster; J. Taylor, Esq., Chester."

Representatives in the General Council.—The following were elected as representative members of Council: J. Atkinson, Esq., Crewe; F. J. Bailey, Esq., Liverpool; G. B. Barron, M.D., Southport; R. Beales, M.D., Congleton; J. D. Bird, M.B., Heaton Chapel; L. Borchardt, M.D., Manchester; H. Briggs, M.D., Burnley; W. Macfie Campbell, M.D., Liverpool; C. J. Cullingworth, Esq., Manchester; P. M. Deas, M.B., Macclesfield; J. Dreschfeld, M.D., Manchester; J. H. Ewart, Esq., Manchester; J. Farrar, Esq., Morecambe; W. H. Fitzpatrick, M.D., Liverpool; J. H. Gornall, Esq., Warrington; A. Hamilton, Esq., Ashton-under-Lyne; J. Hardie, M.D., Manchester; J. Harker, M.D., Lancaster; R. Harrison, Esq., Liverpool; F. A. Heath, Esq., Manchester; R. Hopwood, Esq., Staleybridge; L. Jones, M.D., Blackpool; C. E. Lyster, M.D., Liverpool; W. McEwen, M.D., Chester; F. B. Mallett, M.D., Bolton; W. H. Manifold, Esq., Liverpool; H. Colley March, M.D., Rochdale; G. W. Mould, Esq., Cheadle; J. Parks, Esq., Bury; Chauncy Puzey, Esq., Liverpool; D. Lloyd Roberts, M.D., Manchester; T. L. Rogers, M.D., Rainhill; J. Ross, M.D., Manchester; H. Simpson, M.D., Manchester; F. P. Weaver, M.D., Frodsham; C. White, Esq., Warrington; W. Whitehead, Esq., Manchester.

Council of the Branch.—The following were elected as ordinary members of Council: Essex Bowen, M.D.; W. Carter, M.B.; L. Fisher, M.D.; T. R. Glynn, M.B.; A. Godson, M.B.; J. Haddon, M.D.; W. R. Heath, Esq.; J. M. Howie, M.D.; J. Lambert, M.D.; D. Little, M.D.; W. McCheane, Esq.; J. Dixon Mann, M.D.; A. Ransome, M.D.; E. Rayner, M.D.; P. W. Stark, M.D.; A. W. Stocks, Esq.; W. H. Sutcliffe, Esq.; G. Thomson, M.D.; A. T. H. Waters, M.D.; E. Waters, M.D.

Next Annual Meeting.—It was proposed by Dr. LLOYD ROBERTS, seconded by Mr. MOULD, and resolved—"That the next annual meeting of this Branch be held at Manchester; and that E. Lund, Esq., be President-elect, and Drs. Atkinson and Leech Vice-Presidents-elect."

The late Prince Imperial.—It was proposed by Dr. O'SULLIVAN, seconded by Mr. MOULD, and resolved—"That a respectful vote of condolence be sent to Her Majesty the Empress Eugénie on the recent loss of her son the Prince Imperial."

Communications.—The following communications were made.

Dr. Davidson: A Case of High Temperature, with Pigment in the Blood.

Mr. Lund showed casts of a Case of Distorted Knee treated by Dr. Ogston's Method.

Dr. Shuttleworth: Some of the Cranial Characteristics of Idiocy.

Mr. J. Farrar: A Case of Ascites tapped sixty-five times: with exhibition of patient.

Dr. Lloyd Roberts showed some specimens of Extra-uterine Fœtation.

Dr. Mitchell Banks: The Removal of Fibrous Nasal Polypi.

Dr. Harker: Obstruction of the Air-Passages.

Messrs. Harvey and Reynolds of Leeds showed new Drugs and Instruments.

Lunch was provided by the President for the members of the Branch.

Dinner.—In the evening, the members of the Association dined together at the County Hotel; the High Sheriff, the Mayor of Lancaster, and several other gentlemen connected with the town, being present as invited guests.

SOUTHERN BRANCH: SOUTHAMPTON DISTRICT.

A MEETING of the district was held at Dr. Trend's on May 20th, at 8 P.M.; Surgeon-General LONGMORE, C.B., in the Chair.

Officers.—Professor De Chaumont was elected President, and Dr. T. W. Trend Honorary Secretary. Surgeon-Major Boileau, M.D., was elected a member of the Council, *vice* Surgeon-Major Porter, who had gone to Afghanistan.

Discussion at the Annual Meeting of the Association.—Dr. F. DE CHAUMONT made some observations on the questions proposed for discussion at the Public Health Section of the British Medical Association to be held at Cork in August. He pointed out that it sometimes happened, from want of preparation, that discussions were apt to be desultory and unproductive; and he desired to call attention to these ques-

tions, and to invite members in possession of any special experience to come forward with short papers, or to contribute personally to the discussions. On the first question—viz., the Influence of Drinking-Water in Originating or Propagating Enteric Fever, Diarrhœa, Diphtheria, and Scarlet Fever—he pointed out the state of our present knowledge, and the direction in which information was desired. Citing some of the most marked instances of such apparent propagation, he showed that there was, on the whole, good evidence in the cases of diarrhœa and enteric fever. On the other hand, there was some evidence in the case of diphtheria, although not of a satisfactory character. As regards scarlatina, the evidence was at present far from being conclusive. At the same time, propagation might well take place if the peeling process were allowed to go on in such a way as to permit the scattering of epithelium. In that way, poison might, under some circumstances, get into water, particularly as microscopic examination showed the frequent presence of epithelium in water exposed to contamination from house-sweepings and refuse. What was wanted was information containing accounts of carefully diagnosed cases of disease, with analyses, chemical and microscopic, of the drinking-water which might have caused them; or at least a careful inquiry into the possibilities of its general or specific contamination. On the third question—how to deal with convalescents from acute infectious diseases, so as to prevent the spread of disease—Dr. De Chaumont pointed out that the difficulty lay in the doubtful periods of incubation, and the question how long a patient remained a centre of infection. In eruptive diseases, this could not be less than the time required for complete desquamation; he strongly advocated oil for anointing such cases throughout, as a means of preventing the dissemination of epithelium.

BORDER COUNTIES BRANCH: SPRING MEETING.

THE spring meeting was held at the King's Arms, Melrose, on May 22nd, 1879; Dr. GILCHRIST, President, in the Chair. There were present nine members and eight visitors.

The late Dr. Reeves.—Dr. CAMPBELL moved, Dr. MACLAREN seconded, and it was unanimously resolved: "That this society express its sense of the loss it has experienced by the death of Dr. Reeves, the President-elect; and that this resolution should be sent with the condolence of the society to his friends."

President-elect.—Dr. Maclaren of Carlisle was unanimously elected in room of the late Dr. Reeves.

Representatives of the Branch on the General Council.—The following gentlemen were elected: H. Barnes, M.D.; J. A. Campbell, M.D.; T. F. I'Anson, M.D.; W. Marshall, M.D.; and John Smith, M.D.

Representative on the Parliamentary Bills Committee.—Dr. Taylor of Penrith was unanimously elected.

Papers.—The following papers were read:

1. On the Treatment of Excitement by Sedatives and otherwise. By Dr. Campbell, Garlands Asylum.
2. Epileptiform Neuralgia, and the Use of Nerve-Stretching in Medical Practice. By Dr. Grainger Stewart, Edinburgh.
3. The Period of Adolescence Psychologically Considered. By Dr. Clouston, Morningside Asylum.

Dr. Campbell also gave Notes of a Case of Melancholia with Elephantiasis of the Leg. He afterwards exhibited some pathological specimens.

Before and after the meeting, several of the members visited Abbotsford and Melrose Abbey.

Dinner.—The members and their friends dined together at 4 P.M.; Dr. Gilchrist in the chair, and Dr. Maclaren in the vice-chair.

UNIVERSITY OF VERMONT.—Dr. William Darling, F.R.C.S.Eng., the Professor of Anatomy in the University of New York, has just had the honorary degree of Doctor of Laws of the above institution conferred on him.

BEQUESTS.—The following medical institutions have received portions of a sum of £5000 bequeathed by the late Baron Rothschild to Christian charities:—St. George's Hospital, £500; London Hospital, £1000; Evelina Hospital for Children, £500; Hospital for Sick Children, £300; Bournemouth Sanatorium, £50; Metropolitan Convalescent Home, £50; Seaford Convalescent Home, £50; Margate Sea-Bathing Infirmary, £50; Ventnor Convalescent Hospital, £50; Eastbourne Convalescent Home, £50; Royal Bucks Infirmary, £500; Hertfordshire Infirmary, £150; Hospital for Women, £200; and Hospital for Diseases of the Chest, £100.

TWO FISKE FUND PRIZES, of two hundred dollars each, have been awarded to Dr. O. C. Wiggin of Providence, for an Essay on the Artificial Feeding of Infants, and to Dr. C. E. Banks of Portland, Maine, for an Essay on Cholera Infantum.

MEDICO-PARLIAMENTARY.

HOUSE OF LORDS.—Tuesday, July 15th.

Cruelty to Animals Bill.—Lord TRURO, having presented a large number of petitions against vivisection, proceeded to move the second reading of this Bill, which he stated was for the purpose of supplying a defect in Martin's Act, which applied only to domestic animals, and to put a stop to vivisection.—Earl BEAUCHAMP said the question had been most fully discussed after the report of the Royal Commission, and Parliament had deliberately decided upon the system of licence which now prevailed, and he should object very strongly to make any alteration in that law until it had a fairer trial than had yet been accorded to it. He moved the rejection of the Bill.—The Earl of SHAFTESBURY supported the Bill, which he said had become necessary from the failure of the Act of 1876. He believed the practice of vivisection was as unnecessary as it was cruel. He looked upon the lowest animals as beings for the treatment of which we were answerable to Almighty God. He cordially supported the second reading of the Bill.—The Bishop of PETERBOROUGH said that, after giving much consideration to the question, he had come to the conclusion that the guarded practice of vivisection under the existing Act was for the benefit of human life; and that to introduce a system of licences would be injurious by removing the safeguards that now existed, and tend to produce the very cruelties that the Bill was intended to put an end to.—The Earl of CARNARVON expressed his opinion that, if the Act of 1876 were fully carried out, it would be so effectual that there would be no necessity for the introduction of the Bill.—Viscount CARDWELL, having been Chairman of the Commission, should give his unhesitating support to the amendment of the noble lord opposite. He quite admitted that the Commission were not scientific men or connected with the medical profession, but at the same time they certainly approached the subject wholly unprejudiced in favour of vivisection, and if they had not paid a proper regard to the medical evidence they never would have come to the unanimous report which they had, and the existing Act would not have been passed. With regard to the operation of the Act, he thought it had been satisfactory; and said that the report of the Inspectors under the Act had proved conclusively that many of the experiments had been absolutely painless.—Lord ABERDARE, although at one time President of the Society for the Prevention of Cruelty to Animals, must oppose the Bill, which he regarded as so ill-considered and so hastily drawn that it would actually put a stop to vaccination.—After a few words from Lord WAVENEY, who thought that the Bill contained some elements of good, their lordships divided, when the numbers were: For the second reading of the Bill, 16; against, 97—81. The amendment was accordingly agreed to, and the Bill rejected.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology, at a meeting of the Board of Examiners, on the 8th, 9th, and 10th instant; and, when eligible, will be admitted to the pass examination.

Messrs. Ashley Bird, F. J. Baildon, E. S. Scott, H. N. Everard, W. Y. Orr, and A. P. L. Wells, students of the Edinburgh School; E. T. A. Boyton, A. G. Southcombe, O. J. Garrett, A. G. Viljoen, and T. W. Bagshaw, of St. Bartholomew's Hospital; J. W. C. Herbert, William Wallers, and John Priestley, of the Manchester School; F. J. Burman, T. H. Smith, and F. W. Smailes, of the Leeds School; J. C. C. Cleaver, W. F. Cleaver, and W. H. Henderson, of Kingston, Canada; S. C. Mukhopadhyay, J. A. Williams, and J. C. Castor, of the Aberdeen School; E. L. Prowde, and John Waldy, of the Newcastle School; Howard Bendall, and H. B. Strong, of University College; H. E. Deane, of the Middlesex Hospital; H. W. Murray, of the Dublin School; Harry Adcock, of the Liverpool School; R. F. Benham, of St. George's Hospital; F. W. Price, of the Birmingham School; J. B. Lawford, of McGill School; John Hill, of the Charing Cross Hospital; C. T. Griffiths, of Guy's Hospital; R. G. Style, of the Sheffield School; Thomas Wilson, of the Glasgow and Westminster Hospitals; John Mason, of the Cambridge School; and H. E. Sieveking, of St. Mary's Hospital.

The following gentlemen passed on the 11th instant.

Messrs. H. L. Holt, W. L. Cranstone, and W. W. Baxter, of University College; A. R. Oakley, and H. H. Back, of St. Bartholomew's Hospital; T. R. Pickthorn, and G. T. H. Thomas, of St. George's Hospital; G. E. Seon, of St. Thomas's Hospital; T. F. W. Rowlands, of Guy's Hospital; Edward Hazel, of the Middlesex Hospital; J. W. C. Cook, of the London Hospital; and G. R. R. Paine, of St. Mary's Hospital.

The following gentlemen passed on the 12th instant.

Messrs. T. M. Kendall, Benjamin Bertram, Mannell Mitchell, W. H. Evans, Frederick Bass, and Edward Morse, of St. Bartholomew's Hospital; H. E. Kuggs, H. M. Curtayne, William Case, and L. B. Claremont, of University College; A. W. Fairles, and F. H. Butler, of St. Mary's Hospital; Henry

Teevan, of the Middlesex Hospital; Charles Rooke, of the Westminster Hospital; C. R. C. Lyster, of the Charing Cross Hospital; C. S. Harper, of Guy's Hospital; W. B. Richards, of the Cambridge and London Hospitals; and Robert Ritson, of St. George's Hospital.

The following gentlemen passed on the 14th instant.

Messrs. J. S. Hill, Robert Boxall, J. W. Inger, J. A. R. Stollmeyer, and Evan Jones, of University College; J. C. Edison, Edward Knight, and T. R. Atkinson, of St. Bartholomew's Hospital; P. C. Smith, and H. O. Trevor, of St. Thomas's Hospital; J. W. Harrisson, of St. George's Hospital; Edward Roberts, of Guy's Hospital; C. E. Goddard, of King's College; St. D. G. Walters, of the Cambridge School; and Alfred Tilly, of St. Mary's Hospital.

The following gentlemen passed on the 15th instant.

Messrs. W. B. C. Duble, A. H. Chalmers, R. D. Batten, and H. G. Shore, of St. Bartholomew's Hospital; A. C. Wallace, Alfred Pocock, and T. G. Hockridge, of St. Thomas's Hospital; Frank Gravely, Edward Wilson, and H. J. W. Martin, of University College; J. F. Williams, and C. A. Wigan, of the Charing Cross Hospital; A. K. Gale, of the London Hospital; St. George Reid, of St. George's Hospital; and J. J. Tomney, of Guy's Hospital.

The following gentlemen passed on the 16th instant.

Messrs. E. G. Ochiltree, F. O. Y. Roosmale-Cocq, and Edmund Da Costa, of University College; Hele Bate, and E. C. H. Van Busen, of St. George's Hospital; Llewellyn Roberts, and W. A. Farebrother, of the Charing Cross Hospital; G. T. Smith, and G. A. C. Fletcher, of St. Bartholomew's Hospital; R. J. A. Durant, of St. Thomas's Hospital; A. C. Kemble, of the Westminster Hospital; and James Allen, of the Aberdeen School.

At these examinations, fifty-six candidates out of the 180 examined having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months, including nineteen who had an additional three months. For the pass examination for the diploma of membership of the Royal College of Surgeons, which was commenced this day, Friday, 225 candidates have entered their names, against 196 at the corresponding time last year.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BILLERICAY UNION—Two Medical Officers of Health. Salary, £60 per annum for Western District, and £50 per annum for Eastern District. Applications not later than July 29th.

*BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon at the Western Branch. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Diplomas and testimonials to be sent to the Chairman on or before Monday, August 4th.

*COTON HILL INSTITUTION FOR THE INSANE—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications immediately.

*EVELINA HOSPITAL FOR SICK CHILDREN—House-Surgeon. Salary, £70 per annum, with board, lodging, and washing. Applications on or before July 25th.

*KING'S COLLEGE—Professor of Comparative Anatomy.—Demonstrator in Physiology. For particulars, apply to the Secretary.

*LEEDS AMALGAMATED FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION—Assistant Medical Officer. Salary, £120 per annum. Applications on or before August 2nd.

*LINCOLN COUNTY HOSPITAL—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to be made on or before August 11th.

LIVERPOOL NORTHERN HOSPITAL—House-Physician. Salary, £80 per annum, with board and residence. Applications not later than July 24th.

*MIDDLESEX HOSPITAL—Physician and Surgeon; Assistant-Physician and Assistant-Surgeon.

QUEEN'S HOSPITAL, Birmingham—Resident Accoucheur. Applications not later than July 23rd.

*ST. MARYLEBONE GENERAL DISPENSARY—Obstetric Physician and third Honorary Physician. Applications not later than July 21st.

*ST. MARY'S HOSPITAL, Paddington—Resident Registrar. Salary, £100 per annum.

*SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Two Assistant House-Surgeons. Salaries, £65 and £50 per annum, with board, lodging, and washing. Applications on or before August 1st.

*UNIVERSITY COLLEGE HOSPITAL—Medical Officer to the Skin Department. Applications on or before July 21st.

*VICTORIA HOSPITAL FOR CHILDREN—House-Surgeon. Salary, £50 per annum, with board and lodging. Applications on or before July 26th.

*WEST LONDON HOSPITAL, Hammersmith—Assistant-Surgeon. Applications, with testimonials, on or before July 25th. Particulars of the appointment may be obtained on personal application.

*WILTS COUNTY LUNATIC ASYLUM—Assistant Medical Officer. Salary, £110 per annum, increasing £10 a year up to £150 with board (save beer), residence, attendance, and washing. Applications to Dr. Cooke, at the Asylum, on or before July 23rd.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

HARVEY, Alfred, M.R.C.S., appointed Junior Resident Medical Officer to the Royal Free Hospital, *vice* J. Scott Battams, M.R.C.S.Eng., resigned.

SMART, David, L.R.C.P., appointed Surgeon to the Surrey Dispensary, *vice* A. Gardiner Brown, F.R.C.S.Ed., resigned.

WILLIAMS, W. Roger, M.R.C.S., appointed Demonstrator of Anatomy at University College.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

FRY.—On the 9th instant, at Swansea, the wife of J. Farrant Fry, L.R.C.P.Lond., of a son.

DEATH.

*TERRY, Septimus, M.R.C.S.Eng., Staff-Surgeon H.M.S. *Charybdis*, while on his journey home invalided, in the Red Sea, on board the P. and O. Company's steamer *Lombardy*, aged 40, on July 3rd.

DR. WILLIAM THOMAS EDWARDS, of Cardiff, was elected a Fellow of the Royal College of Surgeons on the 10th instant, his diploma of membership bearing date December 1842.

MALVERN COLLEGE.—On Wednesday, the 9th instant, the annual speeches were delivered by the pupils of this school, and the prizes distributed to the successful students by Earl Beauchamp, Chairman of the governing body. Previously to distributing the prizes, Lord Beauchamp commented on the great value of a thorough education, and especially of such independent and searching examinations at the hands of university examiners as those to which the school was subjected. A long list of honours was read out by the headmaster.

A CASE OF HYDROPHOBIA.—At the meeting of German psychologists in Heidelberg, Professor Friedreich reported a case of hydrophobia in a lad aged 14, which had come under his notice. The stage of incubation had lasted for ten months, and the outbreak of the disease seemed to have been determined by the lad's having begun again to practise on the violin, which he had neglected since he had been bitten. Dr. Friedreich is of opinion that the state of incubation might have lasted longer, as the virus had doubtless remained in a dormant state in some part of the body till, by some accidental circumstance, it penetrated into the organism.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The quarterly court of the Society was held on Wednesday, July 9th, at 8 o'clock; Sir George Burrows, Bart., President, in the Chair. Sixty widows and fourteen orphans were receiving grants amounting to £1296. Three orphans on the Copeland Fund were voted £6 each. The expenses of the quarter amounted to £47 : 17. Two additional widows and two orphans were admitted as recipients of grants; the death of one widow and the marriage of another were reported. Two new members were elected, and two deaths of members were announced. A memorial was read from the Midland Branch of the British Medical Association, asking the directors to extend the benefits of Society so as to embrace the midland counties. The directors resolved that "The Court of Directors regret that at present they do not see the possibility of extending the operations of the Society in the mode suggested by the Midland Branch of the British Medical Association. The court will, however, be happy to receive any definite propositions from the Midland Branch which will tend to make their application more feasible." At the suggestion of the President, it was resolved that the hour of future meetings should be changed from eight o'clock to five P.M.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 18 in every 1,000 persons living. It was 17 in London, 18 in Edinburgh, 22 in Glasgow, and 22 in Dublin. The highest rates of mortality in the twenty English towns were the following: Salford, 20; Sunderland, 20; Manchester, 20; Leicester, 20; Bradford, 20; Bristol, 21; Hull, 21; and the highest rate, 25, in Newcastle-upon-Tyne. The highest zymotic rates in these towns were 3.5 in Sheffield (scarlet fever and whooping-cough), 4.1 in Bradford (measles), and 4.5 in Bristol (whooping-cough). There were only 54 deaths from diarrhœa in all these towns. In London, 1,179 deaths were registered, or 326 below the average, giving the unusually low annual death-rate of 17.0. There were 4 deaths from small-pox, 67 from measles, 38 from scarlet fever, 11 from diphtheria, 36 from whooping-cough, 12 from different forms of fever, and 29 from diarrhœa; altogether 197 deaths from these diseases, being 176 below the average, and equal to an annual rate of 2.8 per 1,000. The 29 deaths from diarrhœa were as many as 162 below the average. The deaths from small-pox were 4, the lowest number returned in any week since the beginning of December last. At Greenwich, the mean temperature of the air was 56.0 deg., being 6.4 deg. below the average. The general direction of the wind was westerly; the horizontal movement of the air averaged 15.8 miles per hour, which was 5.5 above the average. Rain fell on each day of the week except Friday, to the aggregate amount of 0.58 of an inch. The duration of sunshine during the week was equal to 15 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Annual General Meeting.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

DR. HARRIS (Redruth).—Our metropolitan correspondent is quite correct. The gentlemen mentioned by him are not in the *bonâ fide* practice of their profession in this metropolis.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

LUNACY LAW REFORM.

SIR,—The last two articles in the BRITISH MEDICAL JOURNAL on Lunacy Law Reform are calculated to bring discredit on all who have the care and treatment of the insane in private asylums. I am no more in favour of private asylums, as such, than the writer of the articles in the JOURNAL, but I would hardly apply the terms "adventure" to institutions which have done, and are doing, great good; or "private speculators" to their proprietors. The author of these phrases admits that Mr. Dillwyn's Bill would at once and for ever settle the troubled state of affairs relating to private asylums, if it could be carried. He, however, raises a series of objections, in the shape of one-sided facts, to the Bill, and concludes with a suggestion of his own, which he thinks would do what is required.

The objections might have been raised by an amateur casual, engaged on the "penny-a-line" principle, instead of by one who seems thoroughly conversant with his subject. For instance, he objects to a profit of 30 or 40 per cent. being made by those who undertake the care and treatment of the insane. Would he, on the same principle, object to a physician receiving 30 or 40 per cent. profit on the cost of the paper used for a prescription? Does he consider lunacy doctors unworthy to receive any remuneration for their knowledge of the disease they treat? When he has answered these questions, I shall know how to deal with the other objections he takes to the present state of private lunacy.

His own remedy for existing evils is the publishing of the accounts of private asylums along with the commissioners' reports—surely the last flicker of a softened brain-cell, or he does not believe what he writes; I hope, for his own sake, the latter. Would asylum proprietors capable of acting dishonestly be likely to publish honest accounts?

The BRITISH MEDICAL JOURNAL has done much to fan the flame that has sprung up to destroy private asylums, and, in so doing, has not scrupled to insult members of the Association who treat the insane; but if no better remedy than that given in Article IX on Lunacy Law Reform can be found for existing defects, truly "a mountain has been in labour and brought forth a mouse". Yours truly,

W. G. BALFOUR.

13, Finsbury Square.

*** The best comment on this strangely worded communication may perhaps be found in the following extracts from the evidence of Dr. William Balfour, given before the Select Committee on Lunacy Law, 1877.

"*Question* 3,185. Do you consider that, when persons have been received into a private asylum, they are detained in some cases longer than they ought to be? *Answer.* I do.—*Question* 3,186. You think there are more detained wrongfully than admitted wrongfully? *Answer.* I do.—*Question* 3,187. Will you state in what way this arises? *Answer.* Private asylums are the property of individuals who derive large incomes from keeping them; it is the interest of the proprietor to have as many good-paying patients as possible in his house; it is not his interest to get rid of patients who pay well. As the law now is, it is, as nearly as possible, impossible for any person to get out of a private asylum without the sanction of the person who signed the application, should the person who signed the application be unwilling to apply for the discharge; there are thus two things against the persons getting out, the one is the desire of the medical officer to so keep them in the house, the other is the unwillingness of the relative or the person who applied for the admission to take him out.—*Question* 3,279. As a matter of practice, do you consider the proprietors of asylums are generally willing to give such pay as will secure them good attendants? *Answer.* They take men as cheaply as they can get them; the cheaper they can get attendants into the asylum, the better for them, because it is so much more gain. The proprietors of some private asylums have recently increased the pay to secure the best attendants."

SIR,—Last Thursday, a man was brought into my surgery who had been taken with an epileptic fit. Shortly afterwards, a policeman appeared, and sanctioned my attendance. Now, the inspector refuses me a certificate, on the ground that the sick man was first brought in by a bystander, and not a policeman. Kindly let me know if I can claim a certificate of attendance, and oblige yours truly,

M.B., M.A.

London, July 14th, 1879.

LARGE GALL-STONE PASSED PER ANUM.

SIR,—About the middle of June last, I was called in a great hurry to see Mrs. B., a lady living close by. I found she had been confined a fortnight before, and for a week previously had been obliged to keep her bed on account of excessive pain in the back (attributed to the impending labour), and constant diarrhœa of a pale yellow colour. For several days, she had "felt something in the back passage", and at last succeeded in "hooking out with her fingers" from the anus a huge stone, measuring five inches in circumference, four inches in diameter, and weighing five drachms. The patient has had a large family, and, with the exception of shortness of breath (due probably to a fatty heart) has enjoyed good health. The urine is normal. She is not, and never has been, jaundiced, and at the time of writing, is well and about her household duties. The marvel is that a stone of such magnitude should have passed spontaneously, with so little disturbance to the general health. I have seen several gall-stones of large size which have been discovered on a *post mortem* examination, but never any approaching one of this magnitude. The stone is now in the possession of my friend Dr. Ord for examination, etc.—I am, sir, yours truly,

CARR HOLSTOK ROBERTS, L.R.C.P.L., M.R.C.S.E., L.S.A.

4, Cambridge Terrace, Westbourne Park, 9th July 1879.

NITRO-GLYCERINE.

SIR,—It would appear from experiments made by Dr. Murrell, that the effects of nitro-glycerine are very similar to those produced by nitrite of amyl—viz., quickening of the heart's action, throbbing of the head, and flushing of the face; and I would therefore suggest that a trial be made of it in those cases where the nitrite has already been proved to be beneficial, such as sea-sickness, poisoning by hydrate of chloral, and excessive inhalation of chloroform. The most convenient preparations are those made by Martindale of New Cavendish Street.—I am, sir, your obedient servant,

F. P. ATKINSON.

Kingston-on-Thames, July 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

FUCUS VESICULOSUS.

SIR,—"Anti-fat", now much advertised as a remedy for obesity, is stated to be an extract from the *Fucus Vesiculosus*. Some who are paying expensively for the remedy may be surprised to hear that the *Fucus Vesiculosus* is here largely used as a food for pigs, and that it in no way interferes with their growth. It will require a number of well reported cases to convince me that what fattens a pig will make a Christian lean. I have myself visited a stye to verify the fact that it was really the *Fucus Vesiculosus* which the pigs were getting.—Yours truly.

Portrush, Ireland, July 5th, 1879. A. T. CARSON, M.D.

MR. SWANZY's letter has been forwarded to the President of Council.

SOI-DISANT PROVIDENT DISPENSARIES.

SIR,—The accompanying letter from Sir Charles Trevelyan shows what use some of the promoters of *soi-disant* dispensaries make of the arguments used in favour of real provident dispensaries. It is therefore, I think, especially desirable that the promoters of the movement in favour of the establishment of a metropolitan medical association should carefully guard against being confounded with the proprietors of these "self-supporting" dispensaries, which are as different as possible from provident institutions. May I also venture timidly to suggest that it would have been as well if the committee appointed at the meeting in Cannon Street Hotel had contained at least one medical man who had some practical experience in the working of provident dispensaries?—Your obedient servant, H. NELSON HARDY.

"8, Grosvenor Crescent, S.W., July 5th, 1879.

"Dear Mr. Nelson Hardy,—An improper use has been made of my name in the advertisement you have sent me headed 'The Deptford and Greenwich Dispensaries". It is true that in various deliverances, written and oral, I have used the words attributed to me in the advertisement, or other words to the same effect; but on these occasions I always spoke of *real provident dispensaries*, at which the poorest person can obtain advantages equal to those enjoyed by the richest, by making small periodical payments, in health as well as in sickness, on the principle of mutual assurance. I certainly never used the words in the advertisement, or anything like them, in reference to the establishment advertised, which is not a provident dispensary at all, but only a cheap doctor's shop. I am grateful to you for having called my attention to the matter, and beg that you will make any use of this reply you may think proper. I will read the account of the London and Manchester Industrial Assurance Company at leisure.—Very truly yours, C. TREVELYAN.—H. Nelson Hardy, Esq."

DENTAL INQUIRER.—If "Inquirer" propose at any time to practise dental surgery only, or if he propose to teach any branch of dental surgery, he should have his name enrolled in the *Dentists' Register;* but any person registered in the *Medical Register* can use the title of dentist or dental surgeon. We would suggest that "Inquirer" should read the Dental Act, which may be obtained of any bookseller at the cost of a few pence.

SMOKING AND THE TEETH.

SIR,—Strange though it may appear, I smoked my first cigar in the year 1829, I at the time having attained the ripe age of ten years. It would take up too much of your space to explain how this came to pass; let it suffice that the said cigar was a Cuba of ancient fashion, with a straw inserted in it as a mouthpiece. From that time to this I have smoked with very little intermission; in France, "caporal"; in Italy, the villanous "tobacco della regia"; in Germany and Holland, "Varinas Knaster"; in England, returns, birdseye, shag, negro-head, Cavendish, etc. On October 13th of this year, I shall attain (*volente natura*) my sixtieth year. With the exception of a sunstroke while in Italy, I have not had cause to keep my bed for a day; my present health is good, I seldom walk less than eight to ten miles a-day; I have never experienced any of the horrors attributed to the use of the naughty weed, and though my ivories (not pearls of course) are somewhat brown where the toothbrush will not quite penetrate, still they are sound, and those I have not, have been lost by accident, not from decay.—Yours truly,

V. POULAIN, M.D., M.R.C.S.E.

MILITIA SURGEON.—We presume, in the instance which has been mentioned to us from Canterbury, a civil medical gentleman not a militia surgeon is employed to attend the militia staff. We certainly think the militia surgeon ought to be employed in the absence of an army departmental surgeon. A question might well be asked in Parliament in order to obtain an explanation on the subject; and we have no doubt that if one of the medical members of Parliament have the subject put before him he will ask the required question of the Secretary of State in order to obtain such explanation.

BLOODLETTING IN DISEASE.

SIR,—As an evidence of the change of treatment of disease, I was much interested by being informed by one of the largest importers of leeches, that formerly he sold at least thirty thousand leeches a-week, and now he only sells about three thousand, and these principally go to Scotland.

During my apprenticeship to the late Hopkin Prichard (who was well known in Glamorganshire as an intelligent and successful practitioner), leeching and bleeding were daily and extensively practised, if not to the ultimate benefit of the patients, most certainly to their immediate relief. I can never forget the first man I ever saw bled; he came into the surgery hardly able to breathe from pleurisy, asking to be bled; as the blood flowed, his breathing became easier, and he walked away in comparative comfort, expressing his gratitude for the relief given.—Faithfully yours,

Hastings, July 5th, 1879. D. HOADLEY GABB.

DR. MURPHY's letter has been communicated to the Local Secretary, Professor Macnaughton Jones.

A CENTENARIAN.

SIR,—Under this heading (July 12th), F.R.C.S. relates the case of a lady who is said to have reached the age of one hundred years and eleven months. The one conclusive proof in all instances of exceptional longevity is a verification of the baptismal certificate. Will F.R.C.S. kindly take the trouble to ascertain *where* and *when* Mrs. Hartshorne was baptised? Is he acquainted with Mr. Thoms's work on *Human Longevity*?—Your obedient servant,

July 12th, 1879. J. D.

T. H. G. (Chelsea).—We do not prescribe.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

CONGENITAL TORTICOLLIS.

SIR,—May I ask the advice of the readers of your JOURNAL upon the following case? It is one of congenital torticollis, due to spasmodic contraction of the left sterno mastoid muscle. The child is seven weeks old, and apparently in good health. No reason can be assigned, save that the labour was protracted and the presentation a breech.

1. Should section of the muscle be delayed on account of the age? and is there any other treatment which may be first tried before proceeding to operative measures?

2. Which is the better and safer plan, dividing from before backwards, or the reverse?

3. Do any subsequent ill results arise from the operation, as unbalanced action of the muscle of the opposite side, or return of the spasm in the affected muscle, if the after-treatment by extension be employed?

Although the writer has seen section of the spinal accessory nerve performed, he has never been fortunate enough to witness section of the sterno-mastoid, so that the experience of those who have will prove of service to yours faithfully,

West Brighton, July 7th, 1879. HENRY E. PRICE, M.B.

JUSTITIA ET VERITAS.—The questions are of a difficult character, and could only be answered at great risk except by a medico-legal expert, after examination *tactu et visu*.

THE CASE OF MR. MILLERCHIP.

SIR,—Would you kindly publish the subjoined.

	£	s.	d.
Dr. Marion Sims, Paris	5	5	0
Mr. Moore, Reading	0	5	0
Sir Henry Thompson	2	2	0
Dr. E. Whittle, Liverpool	1	1	0
Collected by Mr. Knott, Portsmouth:—			
Dr. Green	0	10	0
Mr. Knott	0	10	0
Mr. J. P. Way	0	5	0
Mr. Vardy	0	5	0
Mr. A. L. Bentham	0	5	0
Mr. Blackman	0	5	0
Mr. Morley	0	5	0
Mr. Walsh	0	5	0
Mr. Wallis, Brentwood	1	1	0

The total received up to date amounts to £49 11s.; £30 of which has been paid over. I have still several promises to come in.—Yours obediently,

Dean Street, July 16th, 1879. JOSEPH ROGERS.

SCIENCE OF ALCOHOL.

SIR,—Will you allow me to ask in the JOURNAL where I can find a reliable and accurate account of the physiological and pathological effects of alcohol; and also a full discussion of the question of its uses—medicinal and dietetic—both from the side of total abstainers and of those who approve of its use in moderate quantity?—Yours truly,

J. G. A.

CALF VACCINE-LYMPH.

IN answer to Dr. Habgood's inquiry respecting the source from which to obtain the above invaluable article, Dr. T. Wilson (formerly of Alton, Hants) begs to state that he will resume the work very shortly in South Staffordshire, and hopes to be able to furnish the profession with a regular and unlimited supply of calf-vaccine. Due notice will be given in the journals when it can be obtained.

MR. J. P. PURVIS says that pure vaccine from the calf can be obtained from the Association for the Supply of Pure Lymph, 3, Hemmings Row, Charing Cross, W.C.

FOREIGN DEGREES.

SIR,—Can you inform me if there be any continental university, except Brussels, that grants the degree of M.D. (examination in English)? My knowledge of German is enough to get on in an ordinary way, but not for writing or passing an examination.—Yours, etc., X. L.

URINARY SPECTRE.

SIR,—In your issue of July 5th, your correspondent T. D. tells how his nitric acid gave a dense white precipitate with every specimen of urine submitted to the test, but that, when he procured fresh nitric acid, no precipitation occurred. T. D. suggests that there must have been some impurity in the specimen of nitric acid first employed. Allow me to give a statement of a recent experience. A few days since, a medical man consulted me in just such a difficulty as T. D. has described, and brought the bottle containing the suspected nitric acid, which had not quite been emptied. The bottle bore no label, and the fumes of the liquid were those of nitric acid, but the specific gravity was evidently high, and I determined that the first search should be for mercury. The acid having been diluted, a few drops of solution of iodide of potassium gave a copious precipitate of iodide of mercury, proving that the so-called nitric acid was, as suspected, the acid pernitrate of mercury. The label had been destroyed by corrosion, and its owner, at the time, forgot that such a liquid had been in his possession.—I am, etc.,

PHARMACIST.

THE METRIC SYSTEM.

AN American medical paper, *The Medical Tribune*, writes: In future, *The Medical Tribune* will employ the metric system, in its formulas and calculations. The civilised world has generally adopted it, and we propose to continue with that class of the human race. It is high time to do away with the scruples, drachms, and ounces, and the confusing ciphers (ʒ ℥) of apothecaries' weight. The unit of weight is the *gram*, equivalent to 15.433 grains. Contributors reporting cases or formulas will help us by conforming to the new scale.

DEPILATORIES.

SIR,—In answer to your correspondent's inquiry, I can confidently recommend the method of permanently removing superfluous hairs suggested by Dr. Buckley of New York, and described by him in the American *Archivez of Dermatology* for October 1878, vol. iv, No. 4. Although it is impossible here to give the details of the operation, I may mention that a small three-sided straight needle is inserted into each hair-follicle simultaneously with the removal of the hair with forceps, and rotated several times until the hair-follicle is broken up and inflammatory action produced. To ensure that the inflammation excited is sufficient to destroy the follicle and papilla, the needle may be dipped into carbolic acid or some other agent.—I am, sir, yours obediently, J. HERBERT STOWERS, M.D.

London, June 1879.

The Dilatation of Strictures.

Sir,—I have often thought that the passage of a bougie into a strictured urethra is in some measure impeded by the pressure of the fingers on the glans during the operation. The exertion of a very slight "pinch" on the healthy urethra closes it, and arrests the flow of urine; and it seems to me that, in this manner, the instrument is rather arrested in its progress by the fingers of the opposite hand. A few years ago, I had a small contrivance made for me by Messrs. Krohne and Sesemann, consisting of a hollow metal tube two inches long, ending in a broad lip or flange, and fitted with a wooden plug. The tube is passed into the canal as far as the lip of the instrument (which overlaps the mouth of the urethra and arrests further progress), and the plug is withdrawn. The bougie is now passed through this tube, and whatever pressure is employed externally by the fingers for purchase, has of course no effect on the bougie; whereas all the pressure exerted by the operating hand is expended mainly on the stricture. The tube must be of sufficient calibre to admit the bougie easily.

I have now used this little instrument with advantage in many cases, and therefore take the liberty of directing attention to it.—I am, etc.,

Albert Street, Regent's Park, June 23rd, 1879. Louis Lewis, M.D.

Small Elastic Bands as Surgical Appliances.

A convenient and inexpensive surgical appliance will be found in the small elastic (pure India-rubber) bands, sold mostly by booksellers and stationers. A band one-sixteenth of an inch in thickness, three-fourths of an inch wide, and about three inches in length, doubled, stretched, and put about the wrist-joint, answers an admirable purpose as a tourniquet for amputation of any portion of the hand, especially where a small compress is placed under the band and over the radial artery at the wrist. A similar band could be used to good advantage in amputations of the foot, by placing it about the ankle-joint or just above it. In amputations of the fingers or toes, a much smaller band will answer every purpose, so far as a bloodless operation is concerned. This method of bloodless operation has been used in the amputation of a finger near the carpo-metacarpal joint, with the loss of scarcely a drop of blood.

Severe Itching.

Sir,—A patient of mine, towards the end of her first pregnancy, became affected with intolerable itching, which no treatment, local or constitutional, served to relieve, and latterly the only rest she got at night was obtained by means of opiates. She had no jaundice. After delivery, the itching ceased, but returned in a day or two in a form as severe as before. Having seen Professor Douglas Maclagan's note on the use of pilocarpine in the Journal of June 14th, I gave my patient one-third of a grain of nitrate of pilocarpine with the most happy results. It produced profuse sweating and salivation, a good sleep, and entire cessation of the itching. Owing to circumstances, I thought it better to give the medicine by the mouth in this case, but it was only half-an-hour in producing its characteristic effects, and the itching disappeared soon afterwards; a second dose was not needed.—I am, yours truly,

A Country Doctor.

July 1st, 1879.

Treatment of Obstinate Constipation.

Sir,—In your issue of June 7th, you mention a prescription recommended by Dr. Macario to be given in certain forms of obstinate constipation. I have just tried it in the following case, and it acted very well when most other ordinary remedies had failed.

A girl, aged 17, was admitted here on the 12th June last, suffering from amenorrhœa. Her bowels not having acted for three or four days, a simple enema was ordered, and her bowels were well opened. From that time up to the 27th, her bowels did not act, but menstruation came on on the 21st, after the administration of aloes and myrrh. On the 27th, she was ordered the following pill, at 7 P.M. ℞ Pulveris ferri sulphatis gr. 1½; aloës Socotrinæ gr. ¾; pulveris rhei gr. ¼; extracti belladonnæ gr. 1¼. (This is Dr. Macario's pill.) On the 28th, her bowels not having acted, she was ordered another pill at 12 noon, to be followed by a third at 7 P.M. These were administered; and about 9.30 P.M. on the 28th, she passed a copious motion, containing some hard scybalous lumps. On the 29th, the pill was repeated at 11.30 A.M.; and this morning (30th), at 3 A.M., her bowels were thoroughly moved again.

This case seemed to me to be just one of those in which Dr. Macario says he has found this prescription most useful—viz., in cases of constipation arising from nervous troubles, hysteria, etc., and a sedentary occupation. This patient, I may mention, has been a victim to obstinate constipation for a year or more.—I am, sir, yours obediently,

E. C. Cripps, M.R.C.S., L.R.C.P.

Highgate Infirmary, N., June 30th, 1879.

Matico as a Hæmostatic.

Sir,—I happened to read a letter in the British Medical Journal for June 28th, headed "Hæmorrhage", where the treatment adopted was the use of the liquor ferri perchloridi. The result was eminently successful; but this preparation is an exceedingly unpleasant one to use in the mouth, and I would therefore call attention to the leaves of the "matico" plant, which have been used with good results as a hæmostatic for a long time. The proper means of using them being unfamiliar to many, I would repeat that the leaves should be soaked in warm water for a few minutes, and then the *under side of the leaf* applied to the wound, or twisted into a spiral and inserted in the socket, if from tooth-extraction. This is unfailing and clean.

M.R.C.S., Dental Surgeon.

June 30th, 1879.

A New Name.

Sir,—I read recently in a paper particulars of a recent medical congress at Berlin, where one Dr. Winckel described a new disease that had lately broken out with great fatality at Dresden. The symptoms were difficult respiration, froth on the lips, and an extraordinary change in the blood, which becomes dark brown and of a syrup-like consistence, only flowing from the wound under strong pressure. Convulsions soon set in, and the child (for the complaint appears to confine itself entirely to children) dies in about thirty-two hours from the commencement of the attack. What, however, was the point I thought would most interest your readers is the name proposed to be given to it: "Cyanosis afebrilis icterica perniciosa cum hæmoglobinuriâ". Now, after this, can any say, "There is nothing in a name"?—Yours, etc.,

W. A. Satchell, F.R.C.P.Ed.

June 28th, 1879.

Severe Pain following Herpes.

Sir,—I believe E. E. will find more relief from the external application of belladonna—*e.g.*, extract of belladonna, or the plaster of belladonna—than from any other plan of treatment; but, although after a time this will effectually allay the pain, the prognosis as to the ultimate recovery is extremely unfavourable.

Five-and-twenty years ago, I read in the Journal a communication from an old practitioner which I thought at the time was, if not actually incredible, at any rate very curious, not to say improbable; but subsequent experience has confirmed the statement then made. The "old practitioner" said that, when herpes occurred in persons of the age of sixty and upwards, they suffered considerable pain for several weeks after the eruption had disappeared, and then pined away and died without any other apparent cause or any symptom of visceral disease. So far as my experience extends of the disease when it attacks old men, it abundantly confirms that of the writer; females, though they have no immunity from shingles, do not appear to succumb to it, though they do not escape the pain. I have an exact recollection of two old women who had shingles a few years ago, and are alive and well now. I saw one of them yesterday, and she was as well as a woman of seventy years could expect to be; but I remember several old men who have drooped and pined away; drifted, as it were, into a listless and apathetic state after the subsidence of the pain, and died after a few months without any symptoms of any typical disease of the viscera. Except that there was no marked emaciation, the cases have had more analogy to atrophy than any other known form of disease or decay. The disease or state of decay is certainly very curious, and I have not seen any reference to it in any of the standard works on practical medicine which I have consulted, but it is certainly worthy of the attention of pathologists.—I am, sir, faithfully yours,

J. H. Shorthouse, M.D.

Croydon, July 1st, 1879.

Sir,—In reply to E. E.'s query in your impression of the 28th June, I would suggest, if large doses of quinine and iodide of potassium, with colchicum wine, have been unsuccessfully administered, a phosphorus pill (1-30th of a grain) immediately after each meal, and iron and quinine with tincture of gelseminum. ℞ Ferri et quiniæ citratis grs 30; tincturæ gelsemii ℥ii; syrupi zingiberis ℥vi; aquam ad ℥viii. M. Signetur: An eighth part one hour after meals, in a wineglassful of water, three times a day. Such line of treatment has been very successful in my hands. Morphia injected hypodermically may prove useful; but it has very much disappointed me in several cases in which I have given it a fair trial used in this way. Sometimes I have seen good effects from belladonna plaster. For the constipation, nothing better than the daily use of Hunyadi János water can be recommended.

Should E. E adopt my suggestions, perhaps you will kindly allow him to record the result in the Journal.—I am, yours, etc.,

Wright Hutchison, M.D.

We are indebted to correspondents for the following periodicals, containing news reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir Trevor Lawrence, London; Dr. G. H. B. Macleod, Glasgow; Dr. J. Burdon Sanderson, London; Dr. E. Waters, Chester; Surgeon-Major Boileau, Netley; Mr. Wickham Barnes, London; Dr. J. B. Gill, Hastings; Mr. J. A. Williams, Enfield; Dr. F. M. Pierce, Manchester; Mr. J. Unsworth, Liverpool; Mr. W. A. Budd, Exeter; Mr. James Startin, London; Mr. T. D. Acland, London; Mr. Thomas Adams, Ashburton; Mr. W. T. Black, London; Mr. Tomes, Caterham Valley; Dr. Dudfield, London; Mr. Richard Davy, London; Dr. Joseph Coats, Glasgow; Dr. Broadbent, London; Dr. Stephen Mackenzie, London; Mr. J. Lewis, Birmingham; Mr. Groves, London; Mr. J. H. Parry, Bristol; Dr. Joseph Rogers, London; Mr. Charles E. Hardyman, Cardiff; Dr. Thompson, Leamington; Dr. Tripe, Hackney; Mr. Dobbin, London; Mr. J. W. Banford, Rochdale; Our Glasgow Correspondent; Mr. W. Bower, Metheringham; Dr. R. M. Simon, Manchester; Mr. Rushton Parker, Liverpool; Dr. Herman, London; Dr. Ridge, London; Mr. H. G. James, Beverley; Dr. Meadows, London; Dr. Charles Williams, Ashby-de-la-Zouch; Our Dublin Correspondent; Dr. Jukes Styrap, Shrewsbury; Dr. W. Martyn, Wimbledon; Dr. Mitchell Bruce, London; Our Paris Correspondent; Dr. J. Farrant Fry, Swansea; Mr. Burtt, Ilminster; Dr. Murphy, Dublin; Dr. Robert Liveing, London; Dr. Lush, M.P., London; Dr. Scriven, Duffield; Mr. Amery, Swansea; Dr. Haddon, Manchester; D. B.; Dr. Currie, Lydney; Mr. J. B. Blackett, London; A. Unit; J. D.; Mr. J. E. Owen, Plymouth; Dr. E. H. Bennett, Dublin; Mr. Berkeley Hill, London; The Secretary of Apothecaries' Hall; W.; Mr. F. K. Curtis, Canterbury; The Registrar-General of England; Dr. T. W. Barron, Durham; Dr. H. Macnaughton Jones, Cork; The Registrar-General of Ireland; Our Own Correspondent, Port Chelmsford; Dr. Whittle, Liverpool; The Secretary of the Consumption Hospital; Mr. J. P. Purvis, Greenwich; Scrutator; X.; Deputy Surgeon-General Shillingford; Dr. Galabin, London; Sir Charles Trevelyan, Bart., London; Dr. J. K. Spender, Bath; Mr. Sykes, Mexborough; Dr. Sheen, Cardiff; M. Trouvé, Paris; Dr. Richards, Winchester; Dr. Wallace, Greenock; Dr. Renfrew, Glasgow; Mr. Ingpen, Putney; Mr. Swanzy, Dublin; Mr. H. W. Thomas, Birmingham; Mr. A. G. Sandberg, London; Mr. H. Terry, Northampton; Dr. E. Jacob, Leeds; Dr. Braxton Hicks, London; Our Edinburgh Correspondent; Mr. J. B. Sincock, Bridgwater; Dr. Wiltshire, London; Dr. Malcolm Morris, London; Mr. Arthur Cooper, London; Dr. Ashburton Thompson, London; Mr. H. A. Reeves, London; Mr. Arthur Barker, London; Mr. Dacre Fox, Manchester; Dr. Copeman, Norwich; Dr. Gairdner, Glasgow; Mr. Bierman, Richmond; Dr. Walter, Manchester; Mr. Carr H. Roberts, London; Dr. Brabazon, Bath; Mr. Manby, East Rudham; Dr. Seguin, Paris; Dr. Pierce, Manchester; Dr. Macfie, Glasgow; Dr. Russell, Birmingham; Mr. W. Pratt, Newtown; Dr. James Thompson, Leamington; Mr. G. Eastes, London; Dr. Fancourt Barnes, London; Mr. T. M. Stone, London; The Secretary of the Medical Society of London; Dr. Hewson, Coton Hill; Mr. Jonathan Hutchinson, London; The Secretary of the Obstetrical Society; Mr. J. A. Hedges, Leighton Buzzard; Mr. J. Brock, London; Dr. Clifford Allbutt, Leeds; etc.

REMARKS
ON
GENERAL EXFOLIATIVE DERMATITIS.

BY
E. BUCHANAN BAXTER, M.D., F.R.C.P.,
Professor of Materia Medica and Therapeutics in King's College, London; Physician to the Evelina Hospital for Sick Children; Assistant-Physician to King's College Hospital; etc.

[*Concluded from page 82 of last number.*]

THE next table (Group B) comprises six cases in which general exfoliative dermatitis occurred in persons subject to one form or other of constitutional eczema, or manifested itself as an actual generalisation of a previously restricted eczema.

That these cases of exfoliative dermatitis are substantially identical with those of the first group can hardly be doubted. Several of the writers from whom I have drawn mention some form of eczema among the patient's medical antecedents, without apparently suspecting, at any rate without recognising, any connection between it and the general dermatitis. Others, again (Magee Finny, Erasmus Wilson), see it quite clearly, and lay stress upon it. Yet both alike are attracted by the term "pityriasis rubra", and, consciously or unconsciously, bear witness to its identity with the primary form of the disease.

That there is such a thing as "psoriasis universalis" is generally admitted; but it is very rare. I have never been fortunate enough to see it. The two cases in Group C, however, show that a general exfoliative dermatitis, closely resembling that already described, may supervene on ordinary psoriasis. The identity of the process with that described above is, indeed, fully recognised by M. Guibout; Dr. Fagge's case, on the other hand, presents certain special features (limitation of scaly patches, absence of previous history of psoriasis) which render its true place less assured.

The next case I have to record is one of considerable interest. That lichen ruber may become generalised and occupy entire regions, or even the whole surface of the body, is expressly stated by Hebra, and admitted by dermatologists in this country. The increasing rarity of such cases is probably due to the more general recognition of the curative power of arsenic in this disease. But though universal redness, with infiltration of the integument, with rhagades about the flexures and atrophy of the nails, are described by Hebra, he speaks of the surface as being "covered by numerous thin scales", without distinctly specifying continuous and profuse exfoliation. He gives no cases; and I have not succeeded in coming across any complete record of an example of *Lichen ruber universalis* in the various works I have searched for the purpose.* Accordingly, I have been unable to find any exact parallel to the following case.

CASE IV. *Lichen Ruber, passing into General Exfoliative Dermatitis: Emaciation and Failure of Strength: Recovery under Treatment: Death, during Convalescence, caused by Typhus (?).*—P. P., aged 7, was brought to me at the Evelina Hospital for Sick Children on November 25th, 1872. His mother stated that he had passed through a second attack of scarlet fever some months before; he peeled all over; no dropsy followed. His health had always been good. There were no skin-diseases in the family; no evidence of syphilitic taint. The present illness began three weeks ago, when his face was noticed to be "a little scurfy". At the same time, spots were observed on his back.

He was a well-nourished and healthy-looking boy of fair complexion, with silky hair. The skin of the face, neck, and ears was of a uniform tawny red hue, and somewhat infiltrated; the cuticle was coming off in large white flakes. The infiltration extended well into the external auditory meatus on both sides, and involved the eyelids. The scalp was thickly covered with small silvery scales, no healthy skin being discoverable between the hairs. The hair of the scalp, as well as that of the eyebrows and eyelashes, appeared normal, and did not come out easily when pulled. The back was occupied by a very large patch, extending from the neck above to the upper border of the buttocks below, and to some distance from the middle line on each side. It was tolerably symmetrical in relation to the spine. The affected area was coated with large white papery squames, about as thick as foreign notepaper. On stripping them off, the cutis was seen to be greatly infiltrated, and of a dull red, almost coppery hue; its surface was areolated, showing, plainly enough, that the patch was made up of a vast number of closely-aggregated or confluent papules. Round the edges of this scaly patch, especially below, where the eruption was most recent, were scattered many discrete papules in groups of from six to a dozen. These papules were of a brighter and more vivid red, polygonal, with flat tops and precipitous sides, large, extremely hard; they were just beginning to get scaly. The skin between them was quite normal; they were not cinctured by any areola, their redness being strictly confined to their own proper substance.

The rash extended, with much the same characters, round the chest to the front. Over the sternum, it formed a scaly patch; round the nipples and on the abdomen, it was papular, the papules being either solitary or agminated. It passed downwards along each side of the scrotum, to join a symmetrical scaly patch on the lower border of the gluteal region.

The armpits were thickly covered; the upper arm had many papules on its flexor surface, which grew thicker and became scaly at the bend of the elbow. From the elbow to the wrist, the forearm on its ulnar aspect was scaly on a bright-red infiltrated base. On the flexor surface, towards its lower end, the papules coalesced; over the wrist, the skin was fissured. The palm of the hand was bright-red and glossy; the cutis was stiff, and had lost its natural pliancy; the epidermis coming off in scales of considerable size. The interphalangeal flexures were deeply fissured. On the dorsal aspect of the hands and fingers were many papules, discrete and confluent. The nails were unaffected. The thighs were nearly free from eruption. Just below the patella was an oval scaly patch, not unlike psoriasis. Behind, there were two long scaly streaks over the inner and outer hamstring tendons. The soles of the feet were bright red, infiltrated; no desquamation, no fissures. The redness and infiltration extended over the dorsal surface of the toes, but not over that of the foot or the ankle. The nails were normal.

The rash was everywhere absolutely dry. The mucous lining of the mouth and throat was normal. There was no anæmia; no glandular enlargement; no fever or constitutional disturbance. The urine contained no albumen. There was hardly any itching, but a good deal of burning and tingling was felt.

A week later, the following note was made. "The boy looks decidedly thinner and weaker than he did. The colour of the infiltrated patches is decidedly less vivid, a yellowish or brownish under-tint being everywhere blended with the red. The infiltration itself is less marked than it was. The isolated papules have, for the most part, coalesced with the larger patches; those which retain their independence have lost some of their characteristic hardness and abruptness. No fresh ones have come out. Nails still normal. Desquamation very profuse. When the boy's shirt is taken off, a shower of large papery flakes tumbles out of it. His mother says that his sheets are filled with them in the morning."

Dr. Fagge, who was then my colleague, kindly saw the patient with me, and expressed his opinion that the case at this stage might be called one of "acute psoriasis".

On December 12th, the redness and infiltration were observed to be subsiding. The desquamation was still very abundant; but the scales were small and branny. The nails were beginning to show signs of having taken part in the morbid process; the basal portion of every nail being quite soft and fibrous.

December 19th. The redness was limited to the palms and soles. The stiff unyielding skin was now much cracked about the feet and hands, and behind the ears.

January 2nd, 1873. The skin was everywhere supple, though the abundant furfuraceous desquamation masked the progress of improvement. The rhagades were healed. Even the skin of the hands, which had been as tough as bacon-rind, was now quite pliable, though still o a dusky-red hue. The boy was alarmingly thin and weak.

February 20th. The rash was quite gone. Those parts of the skin which had been infiltrated were still dry and slightly scaly. The scalp was still covered with branny scales. The nails were being shed. The boy was emaciated and pulled down, but he began to take his food better than he did.

I never saw the patient again. About the middle of March, he was attacked by fever, which his medical attendant diagnosed as typhus; whatever it may have been, it killed him in a very few days. His skin-disease does not appear to have returned.

From November 25th to January 30th, he was treated with warm baths and inunction of ointment of benzoate of zinc, and took Fowler's solution internally. During February, he had cod-liver oil only. As he was an out-patient, his temperature was taken at rare intervals, and always in the morning; it never exceeded 100°.

* The poverty of medical literature in fully reported instances of rare forms of skin-disease is lamentable. One reason for this may perhaps be found in the bewildering confusion of nomenclature which has, until lately, deterred a majority of the profession from the study of the subject.

GROUP B.—EXFOLIATIVE DERMATITIS SUPERVENING ON ECZEMATOUS AFFECTIONS.

No.	Sex; Age; Reference. Name given.	Previous History.	Integument.	General Symptoms.	Treatment.	Result, etc.
9.	Female, 64. H. von Hebra, *Vierteljahrsch. f. Derm.*, 1876, p. 508. "Pit. rubra universalis."	While attending for eczema impetiginodes of scalp and behind ears, she became ill and feverish. Two days later, skin universally reddened and slightly swollen. A week later, desquamation had begun.	Universal redness, with shedding of small whitish scales.	Feeble and broken down.	*External:* Oils and salves; baths; tar lotions.	Left the hospital two months after admission with her eczema cured, while the pityriasis remained *in statu quo*.
10.	Male, 20. E. Percheron, "Dermatite exfoliatrice aiguë"	Up to the age of 15, subject to eczema of scalp, breaking out annually, and associated with enlargement of cervical glands. Skin usually dry. Present illness began with redness on thighs and about neck, followed by puffiness of face and extremities, with sore-throat and fever. By the tenth day, the redness had become universal, and two days later he began to peel.	On admission (14th day), face red, puffy, shining, like commencing erysipelas. Branny desquamation all over head; yellowish scabs behind ears and in palpebral commissures. Body red all over, peeling in large papery squames. On hands and fingers, these squames are raised, by liquid effused under them, into huge flat blebs. Feet in same state as hands; considerable itching and tingling, especially at night. 27th day: Oozing of viscid liquid on hands, arms, thighs; profuse exfoliation; conjunctivæ injected; puffiness has subsided. 39th day: Hair and nails all coming off. 49th day: Exfoliation persists; moderate ectropion of lower lids. 86th day: Desquamation becoming furfuraceous and less abundant; infiltration subsiding; hair and nails beginning to grow again. 120th day: Profuse weeping (eczematous) from legs. 157th day: Gaining flesh; branny desquamation still goes on from palms and soles. 209th day: Renewed exfoliation from extremities. 245th day: Discharged; not yet free from branny desquamation; nails mostly normal, some thickened and fibrous; hair restored, but rather thin; skin pigmented in parts.	Very great constitutional disturbance; Much fever of remittent type; pseudo-membranous exudation on fauces and lips; occasional subcutanous abscesses; œdema of extremities; effusion into both knee-joints; bed-sores; mitral murmur, which disappeared as the eruption subsided; paralysis of extension of right leg. This got quite well in time. Emaciation at one time alarming.	*External:* tar lotions. *Internal:* Quinine; arseniate of soda: various symptomatic remedies during the long progress of the malady.	Three months after his discharge, was quite strong and well, without either mitral murmur or any residual paralysis.
11.	Male, 68. Erasmus Wilson, *Dis. of Skin*, 6th ed. "Pityriasis rub. universalis", "eczema foliaceum", "pityriasis foliacea".	For twenty years he has suffered from dry scaliness, with fissures on both palms. In May 1864, the desquamation was very profuse; had "erysipelas" of face and head. In January 1866, feet similarly affected: three months later, the entire surface of the body was red.	Universal redness and profuse exfoliation; hands glazed and fingers rigid; no fissures or moisture; little pruritus; nails thickened, rough, uneven; hair not mentioned.	Feels well, but pulse =110.	Not stated.	Gradual return to normal at the end of two months. Slight glutinous exudation (suggestive of eczema) on trunk and inner side of limbs.
12.	Male, 28. Erasmus Wilson, *Lect. on Ekzema*, 1870. "Dermatitis exfoliativa", s. "ekzema exfoliativum"	Ekzema erythematosum in small patches on lower limbs for six months. Sudden chill after being wet through. Universal redness and heat of skin for one week, followed by exfoliation of cuticle.	Redness vivid and universal; profuse exfoliation of large squames all over body; skin tight; eyes staring; no moisture: rhagades in flexures, with blood-scabs. Nine weeks later, exfoliation still profuse, but skin paler and less infiltrated.	Alternate sensation of chilliness and burning heat. Several boils formed. General stiffness and soreness. Confined to bed four weeks. Thirst; pulse 110.	*External:* Unguentum zinci benzoati; carron oil with carbolic acid. *Internal:* Quinine and sulphate of magnesia.	Three months from onset, has nearly repaired his strength. Redness and exfoliation still persist on scalp, and about eyes, nose, and mouth. Nails were all dedetached at the roots, whitish, and undergoing separation.
13.	Female, age not given, but mother of 15 children. Magee Finny, *Dublin Journal*, March 1876. "Dermatitis exfoliativa", or "pityriasis rubra".	Twenty years ago, began to suffer from moist eczema on forearms, which subsequently invaded the lower extremities also. Severe menorrhagia 4 years ago, ushered in the change of life: the eruption then changed its type; it ceased to "boil water", and grew scaly. The scaliness had become universal twelve months before admission.	Universal vivid redness, fading to a yellowish tint on pressure. Universal desquamation: branny on scalp and face, elsewhere in large papery squames; exceedingly profuse. Feeling of stiffness about joints; partial ectropion; conjunctivæ much injected; no rhagades or moisture anywhere; no pain or itching; sensation of burning heat, and feeling "as if the skin would crack". Skin is slightly thickened, red, and glossy, when scales are stripped off. Hair and nails not mentioned.	Chief complaint is of debility. Pulse 90. Temperature (once taken) 99°. Urine febrile; no sugar or albumen.	*External:* Olive oil. *Internal:* Liquor arsenicalis ℥lv, increased to ℥vij, three times a day, combined with iron, quinine, and strychnia.	Eight weeks under treatment. Recovered completely, except for a few small scales on the face.
14.	Male, 64. Blachez, *Gaz. Hebdom.*, 1875. "Dermatite exfoliatrice généralisée."	Mother had chronic eczema. Has suffered himself repeatedly from eczema behind the ears, with pityriasis on scalp and chest. In October 1869, acute eczema broke out on both arms; it grew dry and scaly; in the latter part of December, became generalised.	Universal redness, and very profuse exfoliation; much itching; skin under squames occasionally a little moist; hands stiff, swollen, and tender; double ectropion; nails dropped off.	Gradually increasing weakness; eyes became severely inflamed; profuse night-sweats. No sugar or albumen in urine. Suffered much from boils and abscesses.	Alkalies; arsenious acid in pills of one centigramme *ter die*; took 100 of them; then phosphorus, 3 milligrammes *per diem*.	The disease lasted 12 months, at the end of which time he was carried off by acute pneumonia. The desquamation had become furfuraceous, and his strength had improved considerably.

The last case on my list is in many respects anomalous, and I hesitate in assigning a place to it. Its very singularity, however, makes it worthy of being put on record; and it will serve to introduce a few remarks concerning exfoliation supervening on pemphigus.

CASE V. *Acute Bullous Eruption, coming on Ten Days after Birth, and passing into General Exfoliative Dermatitis: Recovery.*—E. H., three weeks old, was brought to the Blackfriars Hospital on November 16th, 1876, by his mother, a thin, dark-complexioned, healthy-looking

young woman. She had one other child, who had never suffered from any skin-disease, or indeed from any disease at all. The present infant appeared in perfect health till ten days after he was born, when he became "red all over"; a small bleb then appeared in the left groin, increased in size, and burst. Similar blebs sprang up elsewhere over the body, and burst on attaining the size of a five-shilling piece; the largest, at least three inches across, was on the back. They were all filled with a clear liquid. The child did not snuffle; he took the breast freely and had no difficulty in swallowing. The entire surface of the body was of a deep red colour; but the reddened and slightly infiltrated sodæ arseniatis, three times a day. On the 23rd, the dose was reduced to half-a-minim.

It would be rash to dogmatise concerning the true nature of the above case. "Acute pemphigus foliaceus" is the term one might be tempted to apply to it. But certain features in its clinical history, such as the extreme rapidity of its course and its favourable termination, are out of keeping with what knowledge of pemphigus foliaceus I have been able to acquire. Sherwell's case, an abstract of which is given in Group D, approaches it more nearly than any other with which I am acquainted.

GROUP C.—EXFOLIATIVE DERMATITIS SUPERVENING ON PSORIASIS.

No.	Sex; Age; Reference. Name given.	Previous History.	Integument.	General Symptoms.	Treatment.	Result, etc.
15.	Male, 51. Guibout, *Union Médicale*, 1874. "Herpétide maligne exfoliatrice."	Began to suffer from ordinary psoriasis at the age of 36. This lasted till he was 47; then exfoliative dermatitis set in suddenly, and lasted six weeks. He recovered, and the psoriasis resumed its course. A second attack of dermatitis commenced on April 15th, 1874.	Universal deep redness of skin, with very profuse exfoliation of large papery squames.	Great feebleness and emaciation; life in great danger.	*External:* Various emollient applications. *Internal:* Arsenic; wine & tonics.	Several months later, his skin had returned to its normal state, and he had regained flesh and strength
16.	Male, 8. Fagge, *Catalogue of Skin Models at Guy's Hospital*, "Psoriasis acuta. Eczema".	Rheumatic fever two years before. A fortnight before admission, a "pink stain" appeared round the eyes and on the palms of the hands. Pink regions grew scaly. Disease spread to the back and other parts.	Large scaly patches in psoriasis-positions and elsewhere. Besides these, scattered red papules, some coated with white scales. A very large proportion of the cutaneous surface seems to have been involved. No infiltration; little itching and no pain. Rash everywhere dry but for a few bleeding fissures.	Heart, lungs, and urine normal. Temperature not given.	Not stated.	Scaly patches extended themselves. Thin skin under scales became inflamed and fissured, with profuse discharge. Pulse grew rapid, weakness increased, & death ensued three weeks after admission.

GROUP D.—EXFOLIATIVE DERMATITIS SUPERVENING ON PEMPHIGUS.

No.	Sex; Age; Reference. Name given.	Previous History.	Integument.	General Symptoms.	Treatment.	Result, etc.
17.	Girl, aged 7. Sherwell, *Arch. of Dermatology*, January 1877. "Pemphigus foliaceus."	Began as a papulo-vesicular rash on chest and abdomen, diagnosed to be eczema. In three weeks' time, had covered the whole trunk: exfoliation was taking place on chest and belly; eczematous oozing in flexures. A couple of days afterwards, small bullæ, surrounded with a red areola, began to appear, and the exfoliation became general.	The culminating point of the disease was reached in about a month from its commencement. At this time, the surface was universally affected; the cuticle peeling freely in large lamellated scales, somewhat everted and curled at their edges; the underlying cutis being of a purplish hue, not much infiltrated, and only slightly excoriated here and there, the excoriated parts exuding a trifling quantity of viscid fluid. Dorsum of tongue studded with circular abrasions: once, an unruptured bleb was seen there.	During first fortnight, serious marasmus. Temperature 102°; pulse 120; sense of chilliness. No albumen in urine.	*External:* Tepid alkaline baths. *Internal:* 1. Arsenic, iron; 2. Quinine; 3. Cod-liver oil.	From time to time, a sparse crop of easily ruptured and partially abortive bullæ, mostly confined to trunk and extensor surfaces of limbs; these exacerbations were accompanied by an increase both of constitutional disturbance and of exfoliation. Two months and a half after the disease began, the patient was said to be improving.
18.	Female, 43. Fagge's Catalogue, No. 205. "Pemphigus foliaceus."	Under Mr. Hutchinson in 1866 for many months with ordinary pemphigus, which was completely cured, but subsequently returned.	In Guy's Hospital in 1870. Exfoliation universal; large scales, thin, turned up at edges, "like flaky pie-crust"; underlying surface bright-red and moist; secretion very scanty, and did not stiffen linen; cutis not infiltrated; irritation slight. In several places, remains of small bullæ; no unbroken ones seen. Nails not affected.	Mucous membranes not affected; urine normal; general health good.	*External:* Lotio carbonis detergens. *Internal:* Arsenic.	Eleven months in hospital under Dr. Wilks. Some improvement, but not cured.

cutis was only visible about the flexures, on the buttocks, and between the thighs, where the parts were always moist. Elsewhere, it was concealed by greyish, flaky squames of large size, about as thick as note-paper. The desquamation was as abundant on the face, scalp, palms, and soles as on the trunk. There was not a single bleb to be seen; on the back, however, there was a large circular area, covered with desquamating cuticle, which was said to correspond to the largest of the bullæ mentioned above.

On November 23rd, the deep red colour of the skin had disappeared, except in the fold of the buttocks and about the neck, where it resembled ordinary intertrigo. The rest of the surface was simply rosy, with a decided tinge of yellow. Instead of the thick, flaky squames, there was an abundance of small branny scales. This furfuraceous desquamation was universal, and included the palms, soles, and hairy scalp. The hair and nails appeared unaffected. There were no blotches or condylomata. No snuffling. "The boy is thinner than he was; he continues to take the breast freely; his bowels have been relaxed by the medicine. No fresh blebs have appeared."

The little patient's progress was henceforth uninterrupted. The branny desquamation continued on the head for some time after the rest of the skin had returned to its normal condition. Several of the nails were shed from the toes and fingers.

From the 16th to the 23rd of November, he took one minim of liquor

The term "pemphigus foliaceus" has been applied by different authors to two conditions, between which it is necessary to distinguish, and whose mutual relations it is not easy to determine. On the one hand, it has been used to designate the later stages of ordinary pemphigus in broken-down subjects, when the blebs, instead of being tense and full of liquid, are abortive and shrivelled; on the other, it has been applied to a severe form of the disease, in which profuse exfoliation of the cuticle over the whole or a large part of the body is the dominant symptom, the exudation of liquid under the squames being reduced to very insignificant proportions. Sometimes, indeed, when the liquid is distinctly stated not to stiffen linen, it is difficult to avoid the suspicion that it may be the ordinary secretion of the sudoriparous glands, acquiring a peculiar fœtid odour from its imprisonment and decomposition under the partially adherent squames. It is only in the latter sense that the term pemphigus foliaceus is employed here. In this form, it closely resembles the exfoliative dermatitis with which we have been dealing. The resemblance has even forced itself upon the notice of observers who would scarcely be disposed to admit the identity of the two affections. When Sherwell's case (No. 17), for instance, was brought before the Dermatological Society of New York, his diagnosis of "pemphigus foliaceus" was universally accepted; but its very close similarity to "pityriasis rubra" was insisted on by more than one speaker. The photograph appended to Dr. Sherwell's paper, indeed,

might be taken as a fair representation of exfoliative dermatitis. In this connection, too, it is interesting to note that Devergie's two cases (7 and 8 in my summary) are called by him "pityriasis rubra, *se transformant en pemphigus*". Again, in his description of the case of pityriasis rubra (No. 5), Mr. Hutchinson says, after giving a summary of the main clinical features of the disease: "pemphigus foliaceus probably nearly fits with these points, the chief difference between it and pityriasis rubra being in the form of the eruption".

A comparison of all the above cases, which I have brought together for purposes of mutual illustration, lends considerable likelihood to the view that the general exfoliative dermatitis which occurs as a primary disease is substantially identical with that which occasionally breaks out in the course of certain more familiar cutaneous affections; and that many, if not most, of the cases recorded under the names of *eczema squamosum universale*, *eczema foliaceum*, *psoriasis diffusa seu universalis*, *lichen ruber universalis*, *pemphigus foliaceus*, *etc.*, are examples of one and the same morbid state. The relation of Hebra's pityriasis rubra to exfoliative dermatitis has already been discussed; and the cases in Groups A and B are sufficient to corroborate my statement as to the inadequacy of any criteria hitherto suggested for their discrimination. The insuperable difficulties in the way of distinguishing the various forms of exfoliative dermatitis from one another are well illustrated in the valuable monograph of Percheron. (*Etude sur la Dermatite Exfoliatrice:* Paris, 1875.) After giving a most elaborate account of his own case (No. 10 in my tables), he is at infinite pains to mark out the characters which differentiate it from generalised psoriasis, from pemphigus foliaceus, from pityriasis rubra, and so on. This he succeeds in doing, but as regards his own case only; in other words, *the differences between exfoliative dermatitis and those secondary affections from which he seeks to distinguish it are not more definite or more important than those which may be traced between one case of primary exfoliative dermatitis and another.* The diagnosis is really retrospective; based on the history of the antecedent eruption and on that alone, in the vast majority of cases.

The immense services rendered to dermatology by the analytical method of the Vienna school have led to undue neglect of the attempts at synthesis which have been made from time to time in France. These attempts were, no doubt, often premature; and some of them have justly been forgotten. But the practical importance of acknowledging the intimate relationship subsisting between constitutional eczema (including pityriasis), psoriasis, lichen ruber—and, I would venture to add, pemphigus (the "relapsing pemphigus" of Mr. Hutchinson)—can hardly be exaggerated. It may be pathologically inaccurate—it is certainly unnecessary—to regard them as the outward manifestations of a latent "dartrous" or "herpetic" diathesis, if we mean anything more by such language than to symbolise the existence of certain common characters. The grouping is essentially clinical, not pathological. Looked at in this light, it is not merely allowable—it is indispensable—unless we choose to shut our eyes to obvious facts. After all, it must not be forgotten that of the intimate pathology of all these affections we are wholly ignorant—as ignorant as we are of their causation. We really know no more about them than we can gather from watching the local changes in the skin from their first beginnings through their maturity and decline, and studying the effect of remedies upon them. From such observation, we learn that all the members of the group are non-communicable; that they show a tendency to be symmetrical, to spread, and to relapse; that they are often hereditary; that they are connected by a number of transitional or intermediate forms; that they do not leave scars; that they are beneficially affected by tar and arsenic. Let us suppose for one moment that we knew nothing of syphilis anterior to the development of secondary eruptions. Would their polymorphism counterbalance in our minds the cumulative evidence derived from their relation to mercury, the existence of transitional forms between them, etc.? Should we not feel justified in inferring their connection with a common cause; or, at any rate, in grouping them together under a single head? Botanists were successful, after all, in forming natural orders of plants before the Darwinian theory came to substantiate and elucidate their classification.

If the natural affinity between the constituent members of the dartrous group be admitted, it ceases to be wonderful that they should occasionally issue in one and the same process. Indeed, the possibility of their doing this is a further token of their intimate connection with one another. Looked at from this point of view, general exfoliative dermatitis is no longer a mere curiosity; it assumes an intelligible position, both giving and receiving light. Even if the generalisation I have attempted to advocate (and considerations of space debar me from producing all the evidence which tells in its favour) rests on too narrow a foundation, I am quite sure that its adoption as a provisional hypothesis will conduce to a more fruitful study of the clinical history of exfoliative dermatitis, and to a better understanding of its nosological position.

It may be convenient, in conclusion, to throw the more important points which this paper is designed to illustrate into a series of propositions.

1. General exfoliative dermatitis is characterised by the two features embodied in its name: universal or very extensive distribution; profuse and continuous shedding of all epidermic structures. The subordinate characters, on which it has been attempted to found distinct categories of exfoliative dermatitis, are none of them constant. Thus, the state of the cutis may vary from simple hyperæmia to brawny infiltration; the nails may escape or be completely destroyed; the surface may be quite dry, or there may be some cracking and oozing in the flexures, or the papillary body may exude a little fluid under the epidermic squames, etc.

2. General exfoliative dermatitis may occur, as a substantive disease, in a previously healthy subject. It may occur, and commonly does occur, in persons suffering from, or liable to, certain constitutional forms of skin-disease. When any one of these maladies becomes generalised, invading the whole, or nearly the whole, integument, it tends to merge its special features in those common to all varieties of exfoliative dermatitis, whether of primary or secondary origin.

3. The rare disease known as pemphigus foliaceus cannot always be distinguished from general exfoliative dermatitis supervening on other skin-affections. That relapsing pemphigus tends, however seldom, to pass into this form, is an additional argument in favour of its being related to the "dartrous" group; pemphigus foliaceus being to ordinary pemphigus what exfoliative dermatitis is to ordinary eczema or psoriasis.

4. There is reason to believe that the pityriasis rubra of Hebra is only a chronic form of exfoliative dermatitis, with the most acute varieties of which it is connected by a series of transitional phases.

5. When allowed to run its course without interference, general exfoliative dermatitis often tends towards a fatal issue. This may be speedy or the reverse. In the former case, it is preceded by rapid emaciation and loss of strength, with diarrhœa, albuminuria, fever of a remittent type, and pulmonary œdema; in the latter, death may be caused by some intercurrent malady (*e.g.*, pneumonia).

6. The prognosis in cases of general exfoliative dermatitis is always grave (especially in children). Its gravity appears to be proportionate to the extent of surface involved; to the depth to which the skin is affected (amount of infiltration); to its rate of progress; to the resistance offered to specific remedies. It should be borne in mind that, even in the most chronic forms of the disease (pityriasis rubra of Hebra), exacerbations may occur, during which the patient's life is placed in jeopardy.

7. As regards treatment, it is certain that oily applications are to be preferred to baths and lotions. Internally, the administration of quinine in the more acute, of arsenic in the more chronic, phase of the affection has often proved beneficial. In certain cases, however, the disease offers a most obstinate and successful resistance to the latter remedy. [This may sometimes be explained by the impossibility, owing to accessory conditions, of bringing the system fully under its influence. But this explanation does not cover all the cases in question.] The failure of strength often necessitates the use of stimulants; the loss of flesh, the administration of cod-liver oil. It is very important to guard against the accumulation of even small quantities of secretion under the epidermic squames, where they undergo decomposition and may acquire infective properties. Neglect of this precaution is probably one cause of the occasional outbreak of multiple boils, and even abscesses.

METRORRHAGIA AND ITS TREATMENT BY PLUGGING THE CERVICAL CANAL.

By HENRY BENNET, M.D., The Ferns, Weybridge.

IN the JOURNAL for July 19th, the Paris correspondent, in reporting a discussion on the treatment of menorrhagia, which took place at the Clinical Society of Paris, presents as a novelty the proposal of M. Panas to meet severe metrorrhagia by plugging the cervical canal itself, instead of the vagina. As I have been in the habit of resorting to this treatment for above a quarter of a century, and believe that I was the first to suggest and describe it in the fourth edition of my work on *Uterine Inflammation*, published in 1861, I send a brief extract (page 422), not so much from a desire to claim the priority of what really is a most valuable addition to therapeutics, but because I wish to draw the attention of the profession to its thoroughly practical character.

"In those cases in which, as we have seen, the hæmorrhage persists after the entire removal of local disease, owing to enlargement of the uterus, to the presence of a small unrecognised polypus or uterine tumour

in the cavity of the uterus and its neck, or to the mere hæmorrhagic habit, I have for many years resorted, with encouraging success, to plugging *the os uteri itself*, instead of the vagina. It occurred to me that the usual plan of filling up and distending the vagina by pieces of sponge or a handkerchief was a clumsy, painful, and inefficient mode of opposing mechanical resistance to the exit of blood from the undeveloped uterus, when its orifice could so easily be brought into sight. Acting on this idea, I have in many instances brought the cervix uteri into view, and passed inside the os two or three small pieces of cotton, tied to a piece of thread, which I wedge in firmly, covering the whole cervix with two or three larger pieces left in close contact with it on the withdrawal of the instrument. In nearly all the cases in which I have resorted to this plan, I have easily arrested the hæmorrhage. Indeed, this modification of the usual plan appears to me so simple and so consonant with common sense, that I cannot but think that it will be often adopted in severe cases. In the ordinary operation of plugging the vagina, that canal has to be distended by a large mass of sponge or linen, soaked with clotted blood, which often interferes with the functions of the bladder and rectum, is invariably a source of great discomfort to the patient, and is not always efficient. By the plan I describe, the end proposed is much more effectually compassed, with scarcely any annoyance to the patient beyond that which the use of the speculum occasions.

"Owing to the natural contractility of the cervical canal, and the pressure of fluids behind, if the cotton be not well pushed in it is soon forced out. The plug may be left without renewal twenty-four or even thirty-six hours; but, in the latter case, it is generally expelled spontaneously. A small piece of sponge may be used, and is more likely to remain *in situ* owing to its expansion; but as it must necessarily be very small, it is more likely to be permeated by blood. If sponge be used, great care should be taken to extract the piece passed into the os, to which a small piece of thread should always be tied, as the os uteri might not be able to expel it alone, owing to its mode of expansion.

"Plugging the os uteri in the way described is by far the most effectual way of arresting the hæmorrhage which precedes and accompanies abortions, when, as sometimes occurs, it resists the usual treatment, and becomes alarming. The following case will illustrate this mode of treatment and its marvellous efficacy. A healthy lady, thirty-two years of age, came up from the country to consult me. She had been married twelve years, had had five living children, and subsequently four miscarriages. Each miscarriage had been attended with gradually increasing hæmorrhage. On the last occasion, she nearly lost her life, and was greatly alarmed at the idea of again becoming pregnant. She presented uterine symptoms which led me to discover the existence of extensive ulcerative disease of the cervix uteri; no doubt connected with one of her pregnancies, and the cause of the miscarriages. I cured the disease, and sent her home. A few months afterwards, she became pregnant; and, in her alarm, again came up to town to be near me, although I rather dissuaded her from the step, which I did not consider necessary. At about the termination of the third month of pregnancy, I was sent for one night with the intimation that flooding had set in. I went immediately; and, on my arrival, found the patient pale, all but pulseless, and lying in a large pool of blood. The hæmorrhage had commenced at half-past twelve; it was only two, and yet her state was alarming; the hæmorrhage was continuing profusely, and the loss had already been very considerable. I at once placed the patient on her back, to facilitate manipulation (with half a dozen candles on a table at the bottom of the bed), introduced a large conical speculum into the vagina, and, with the speculum-forceps and large pieces of sponge, rapidly cleared the speculum, which was full of clots and fluid blood up to the brim. This accomplished, I got the os uteri into view; found it rather open; from its orifice, a stream of blood was flowing as rapidly as from an open vein. I at once pushed in several pieces of cotton tied to threads, holding one down by the sound, whilst the next was being introduced, to prevent it from being washed away, and then packed firmly the upper third of the speculum with cotton around and over the cervix. Lastly, I slowly removed the speculum, forcibly supporting the cotton packing inside with the forceps to prevent its being displaced. I had the mass of blood in which she was lying removed. In the course of about twenty minutes, the colour began to return to the face, and the pulse began to be more perceptible, and, in a few hours, she was nearly herself again, although very weak. There was not subsequently the slightest hæmorrhage; it was permanently checked. Twenty-four hours after, I removed the plugging, and did not reapply it. No fresh loss of blood was experienced; and the next day, after a few uterine pains, a diseased ovum was expelled. This lady afterwards rallied in a few days. After the last previous abortion, she was ill for months."

The above extract from my work (1861) gives so full and complete an account of this mode of treatment, and of the manner in which I usually carry it out, that there is very little to add. I would remark, however, that I use dry cotton only, and no styptic or caustic solution whatever. The perchloride of iron is totally uncalled for, unnecessary; for the plugging is in the cervical canal, and the hæmorrhage all but always proceeds from the uterine cavity. The treatment is as simple as corking a bottle. If the cork be well pushed in, no water (blood) can come out; the hæmorrhage is arrested in a few minutes, and the patient rallies all but immediately. I have had many similar cases since this was written, and no longer fear hæmorrhage in the undeveloped or slightly developed uterus. The process also appears to be entirely devoid of risk or danger. I have never had a bad symptom. The same cannot be said of uterine injections. The wife of one of my colleagues at Mentone died of tetanus after the injection of perchloride of iron into the uterus, to arrest hæmorrhage in early pregnancy. She would probably have lived, had plugging of the cervical canal been resorted to as above.

THE WEATHER AND HEALTH AT CANNES DURING THE SEASON 1878-79.

By WILLIAM MARCET, M.D., F.R.S.

THIS last winter on the Riviera turned out a disappointment so far as its weather was concerned, especially to those who had formed an opinion of the Mediterranean coast from the exceptionally fine character of the previous season. The number of days fine and wet registered from March 1878 to April 1879, compared with my records (two seasons at Nice and four at Cannes) for the previous six winters, is as follows.

	Days Fine.		Days Rainy.		Rainfall.	
	1872-78.	1878-79.	1872-78.	1878-79.	Corresponding Six Months.	Inches.
November ..	.. 19.0	15	8.8	14	For	
December ..	.. 18.5	12	9.0	13	1876-77	20.47
January ..	.. 21.7	17	5.8	12	1877-78	11.43
February ..	.. 21.2	12	4.2	12	1878-79	32.92
March ..	.. 21.0	22	7.7	9		
April ..	.. 18.2	12	10.7	16		

Although the rainfall has been this last season equal to that of the two preceding winters put together, with a comparatively small number of fine days, I believe I am correct in stating that the health of Cannes has in no way suffered from the inclemency of the weather. Indeed, patients have, as a rule, done well; there has been no epidemic; and the sanitary condition of the place has been particularly good.

As to the atmospheric humidity, a circumstance having a direct bearing on the health of the visitors at Cannes, if we adopt the readings of the dry and wet bulb thermometers at 9 P.M. as yielding the mean degree of moisture for the twenty-four hours (which I find, from observations made at 9 A.M., 2 P.M., and midnight, to be fairly correct), the mean relative humidity of the winter 1878-79, compared with that of the last four years at Cannes, will be as follows (saturation = 100).

	1874-78.	1878-79.	Rainfall. 1878-79.
November	71.4	70.8	7.154
December	74.3	73.8	3.721
January	71.1	74.7	4.204
February	70.3	7.80	3.118
March	73.5	76.8	7.555
April	75.2	75.1	7.166
			32.918

This shews a considerable increase of moisture, especially for January, February, and March. Still, compared with London, where the atmospheric humidity (as stated in the daily weather reports of the Meteorological Office) was nearly always very near to saturation, there is a considerable balance in favour of Cannes.

The degree of atmospheric moisture on the Mediterranean coast must be taken into account with reference to health. When the air is very dry, as happens during westerly and north-westerly winds, not only do the skin and throat often feel unpleasantly dry, but, by increasing the evaporation from the skin and lungs, a degree of cold is produced occasionally proving anything but harmless.

The following instances may give an idea of the influence of dry air on the human body. At 9 A.M. on the 9th of November last, the morning was cloudless and the air clear, after a gale of wind during the night. The dry bulb thermometer showed 52.2°, and the wet bulb 41.4°; the difference being 11.2°, which means that 11.2° of heat were being taken up from the mercury to convert the moisture covering the wet bulb into vapour. If the damp breathing surface of the

lungs be roughly considered in the light of a wet bulb thermometer, it will be obvious that the moisture of the lungs took that morning nearly 11.2° of heat from those organs to be converted into vapour.

Some years ago, during the month of August, I happened to bivouac at the foot of a high perpendicular cliff near the Otemma glacier, in Switzerland, at an altitude of about 9,000 feet above the sea. As I lay down to rest, there was nothing over my head but a sky speckled over with the brightest stars. The night was calm, but very cold—indeed, much below freezing; and, although my party was supplied with blankets, the dry frosty atmosphere, as it reached the lungs, was productive of very great discomfort. Supposing the temperature of the air to have fallen to 20° Fahr., which is probably not exaggerating the degree of cold, and a difference of 12° to have occurred between a dry and wet bulb thermometer, the cold produced in the lungs must have been, approximately, but little if at all less in its degree than that which would have attended the breathing of air at 8° saturated with moisture. It was only, in the present case, after making a thick woollen wrapper into a respirator, and getting head and all under the blankets, that I could have a few moments' sleep. On the following occasion, I was able to make a more correct estimation of the amount of heat taken from the lungs by dry air.

In July last, on the summit of the Peak of Teneriffe, 12,200 feet above the sea, with a very high atmospheric temperature and a difference between the dry and wet bulb thermometers which must have exceeded 20° Fahr., I found experimentally that I exhaled a mean of five grains of water per minute, exclusively of the moisture naturally present in the air breathed. Now, according to Herschel (*Meteorology*, p. 51), every grain of water evaporated carries off with it sufficient heat to raise 960 grains 1° Fahr.; therefore the five grains of water exhaled per minute in my case represented an amount of heat carried away sufficient to raise 4,800 grains, or rather more than two-thirds of a pound, of water by 1° Fahr. per minute. At the seaside, on the Island of Teneriffe, the loss of water from the lungs was very much less. (*Proceedings of the Royal Society*, April 1879.)

I have had under my care for several seasons at Cannes a lady who is subject to cardiac neuralgia, with at times a weak and intermittent action of the heart. When the dry westerly (north-west) wind, known as "the mistral", blows, her cardiac symptoms usually set in and she becomes very weak, the temperature of the body showing a fall of one or two degrees below its normal condition. This patient is exceedingly susceptible to the action of cold, and, from the middle of winter till the spring has fairly set in, she is usually more or less ailing. As soon, however, as the weather becomes warm, her energy and vigour return, and she appears again as a person in good health. The influence of the dryness of the air in this case towards lowering the temperature of the body, through its action on the lungs and heart, is most clearly marked. In vain have I tried to dampen the air of her bedroom. A spirit-lamp and boiler failed to create impression on a hair-hygrometer, unless placed close to the steam. I am, therefore, led to conclude that it is not easy to moisten perceptibly the air of a room by the generation of steam with the ordinary means, and that this process is more uncertain in its action than is usually supposed.

It may be safely assumed that whatever favours evaporation from the lungs also facilitates the emission of carbonic acid. Dry air, therefore, will prove beneficial in assisting the lung-tissue to part with the carbonic acid which diffuses through it from the blood, while damp air will exert an opposite tendency. I have very little doubt that a ready evaporation from the lungs, together with an increased formation and a more free evolution of carbonic acid, are the main circumstances which account for the beneficial effects of high mountain-stations upon some cases of phthisis. They also go far to explain how it is that the inhabitants of mountainous districts beyond a certain altitude are not liable to consumption.

To return to the climate of last season at Cannes, the temperature of the air was decidedly lower than usual. This is shown from the following table.

	Cannes (under a screen, near Seaside).				London.
	Maximum.	Minimum.	Mean.	Mean of last Four Months.	Minimum.
November	56.1	44.0	50.1	54.4	35.2
December	49.0	38.8	43.9	50.9	30.8
January	53.7	43.5	48.6	49.3	28.6
February	56.2	43.6	49.9	48.4	33.8
March	58.4	46.0	52.2	50.7	34.5
April	60.6	47.6	54.1	56.0	37.2
Means.. ..	55.5	43.9	49.8	51.6	33.4

The minimum thermometer under a screen, though freely exposed to the changes of atmospheric temperature, does not give the actual degree of cold which would be felt by anybody out in the open air at the time, as the cold from *radiation* is not registered under these circumstances. A minimum thermometer remaining all night on the grass would, on the other hand, yield an extreme degree of cold, greater than that which would be experienced by a person in the open air. I have attempted, by taking the mean of the readings of the two thermometers, to obtain an idea of the temperature of the open air three or four feet from the ground. By observing on every successive day from April 27th till May 16th, 1879, three minima—viz., one placed on a table in the open air from three to four feet above the ground, a second on the grass, and the third inside the screen—the mean for the thermometer on the table freely exposed to the air was 46.5°, and that for the minima under the screen and on the grass combined 45.3°, the difference being only 1.2°. It may, therefore, be concluded that the method appears to apply approximately in connection with monthly means. Rather wide differences occurred at times in single observations. The means for the minima on the grass and under the screen, taken collectively, yielded the following figures, which may, I believe, be accepted as the approximate mean lowest temperature felt in the open air.

	1878-79.	1876-78.
November	39.0	45.7
December	33.9	41.3
January..	38.7	38.5
February	38.9	38.8
March	40.1	39.7
April	43.5	46.5
	39.0	41.8

Therefore, the mean lower temperature of last season, as felt at night or early morning by a person in the open air, was lower than in the two preceding seasons by 2.8° only; while the means for each month, taken separately, never fall to the freezing-point. It is interesting to remark that the mean lowest temperature, as shown in this last table, for January and February, in the two preceding seasons, was much the same as in January and February for 1878-79 respectively, notwithstanding the fact that the weather was beautiful in 1876-77 and 1877-78, and wet and bad in 1878-79.

The maximum temperature in the rays of the sun was observed daily with a thermometer (black bulb *in vacuo* by Casella) placed nearly three feet above the ground. The mean monthly readings were as follows.

	Black Bulb Readings.	Black Bulb, *minim* maxima for Solar Radiation.	London, Camden Square; G. T. Simons, Esq.		Excess for Cannes.
			Black Bulb Readings.	Solar Radiation.	
November	97	41	44.9	8.6	32.4
December ..	87	38	38.2	17.0	21
January	91	37	35.8	15.2	21.8
February ..	101	45	43.0	10.8	34.2
March	105	47	49.4	13.7	33.3
April	118	57			

This excess of solar radiation for Cannes over London is very interesting; and throws much light on the cause of the comparatively high temperature at Cannes. The direct solar heat is thus found to be much higher at the southern station than in London. In such a winter as we have just had, this excess of temperature shows the great value of Cannes as a health-resort for people living in London, and indeed everywhere in the United Kingdom. The cause of this increased temperature is, to some extent of course, the more southern latitude; but I believe it to be mainly a drier state of the atmosphere, there being a degree of atmospheric humidity much lower at Cannes than in London. It follows that, while in London the heat of the sun's rays is absorbed in winter to a very great extent before it reaches the earth, a similar absorption occurs in a much smaller degree in the southern station.

Cold and damp air, like dry air, exerts an influence towards lowering the temperature of the body; but, while dry air promotes the expiration of carbonic acid by increasing the evaporation of moisture from the lungs, cold damp air interferes in every way with the exit of the carbonic acid from the blood at the lungs, that acting indirectly as a cause of pulmonary irritation. While in the dry light air of Davos the blood becomes rapidly purified at the lungs of the carbonic acid it contains, in England the heavy, damp, and cold air opposes itself to the free passage of carbonic acid through the lung-tissue. At Cannes, although under a heavy atmospheric pressure, the warm and dry air breathed must assist towards the free emission of carbonic acid at the lungs, without exerting the influence which must result from the cold

mountain air towards the contraction of the pulmonary capillaries and a certain degree of interference with the pulmonary circulation.

Although we had no snow this last winter at Cannes, there was much more ice than usual. The effect of the sea as a source of heat was interesting to note; the mud and road-puddles being on several occasions frozen a few hundred yards from the shore, while soft and free from ice at the immediate seaside.

The temperature of the surface of the Mediterranean, taken daily at Cannes during the last six winter months, yielded the following monthly mean:

	1878-79.	1874-78.
November	58.3	61.2
December	56.6	57.6
January	55.4	56.1
February	55.7	55.5
March	58.1	56.3
April	58.4	59.5
Mean for the season	54.2	57.7

Hence it will be seen that the temperature of the sea at its surface was less available than usual towards checking the fall of temperature of the air; still, while the mean atmospheric temperature for the winter was 49.8°, we find that of the sea higher by 4.4°; so that the store of heat from the preceding summer taken up by the Mediterranean certainly assisted towards the maintenance of a comparatively mild winter temperature of the atmosphere.

The following table gives the number of days the wind blew last winter at Cannes, the notes being taken at 9 A.M. and 2 P.M.:

	Calm.		Light to Fresh.		Strong to a Gale.	
	9 A.M.	2 P.M.	9 A.M.	2 P.M.	9 A.M.	2 P.M.
November	17	9	8	16	5	5
December	13	14	13	12	5	5
January	18	6	10	20	3	5
February	18	8	4	15	6	5
March	18	1	12	26	1	3
April	11	1	15	21	4	9

Different localities at Cannes are far from being exposed to the wind in the same degree: a great many of them are sheltered from the dry westerly wind; and at some places hardly any wind at all may be felt, while a gale is blowing at sea. The mistral, or north-west wind, is, I understand, stronger and more frequent at Toulon and Marseilles than at Cannes.

Many people in England form an idea of the character of the air on the Riviera from that of the Atlantic seaside in the South of England; they compare it with that of Torquay or Bournemouth, or consider it perhaps somewhat like that of the Scilly Islands. This is quite a mistake; Cannes and the Riviera cannot compare with any place on the British coast. The climate is much drier, and the weather finer, with much more sunshine. A residence at Cannes, selected some little distance from the seaside, and somewhat above the sea-level, exerts a bracing influence, though not equal to that of Brighton or Hastings in the summer or early autumn. Such a climate has a decided influence towards equalising the circulation, and thereby checking congestions leading to hæmorrhage. As spring weather sets in, however, cases of hæmoptysis are occasionally met with; and I am in the habit of advising those who have suffered from pulmonary hæmorrhage to leave Cannes about the end of April. A residence at some sheltered place in Switzerland, such as Bex or Montreux, before moving further towards the British Channel, is I find attended, as a rule, with much benefit. Nothing, however, is so pleasing as the fine, fresh, bracing air of the British Isles, that welcomes one home like an old friend.

THE THERMAL SPRINGS OF ROYAT, LA BOURBOULE, AND CHÂTEL-GUYON.

By G. H. BRANDT, M.D., Oporto.

This interesting group of mineral springs, situated in the middle of France, Department of Puy-de-Dôme (Auvergne), is remarkable for the great value of the distinct therapeutic action possessed by each of them. These three thermal stations possess waters of determined chemical properties; those of Royat are characterised by the large percentage of lithia they contain in combination with various salts, and iron and manganese, constituting a tonic alkaline water. La Bourboule springs are, no doubt, the most remarkable of all the known mineral waters in Europe, their chief characteristic being that they are the strongest arsenical waters yet analysed. Châtel-Guyon possesses the only laxative waters in France; and they can compare favourably with the numerous springs in Germany and Hungary.

My object in bringing before the profession the importance of these three springs is, firstly, because little as yet has been said about them in England; and, secondly, to show the valuable therapeutic agents we have at our command to combat almost with certainty three classes of diseases, all of which are most intractable to the usual methods of treatment at present in use. Few diseases have been so thoroughly investigated as gout; in this class of disease, British authors have shown themselves pre-eminent, no doubt in some measure owing to its prevalence in England, and to the fact of many distinguished members of our profession having been themselves victims to the malady. Among the numerous authors, there is one whose name heads the list. Dr. Garrod has thoroughly worked out the subject, and all agree with his conclusions. His practical experiments have shown that there exists a solvent for the gouty deposits of urate of soda, and that that solvent is lithia; this question being settled, it remains to find out the best method of applying the remedy to the disease, so as to obtain the best results. Two conditions are requisite for carrying out this purpose; first, to place the patient in the most favourable conditions for treatment; secondly, to apply the remedy in its most potent form. To carry out the first indication, all, I believe will agree, that a healthy locality, with interesting scenery, rather a high temperature, where exercise can be taken in the air on flat ground, so as to encourage a free action of the skin, are most favourable conditions. To obtain the second indication—that of introducing the remedy under its most active conditions—few, if any, will deny that natural waters, containing the remedy in combination with other adjuncts prepared by nature, and offered to us under a proper temperature for external and internal use, are conditions we cannot obtain with all the wonderful chemical knowledge we possess; and why? Because there exists in these products of nature an active principle, invisible, imponderable, impalpable, which we cannot detect; and which gives power, action, animation, and certain virtues, which man can but poorly imitate and never equal.

Royat.—The numerous experiments made by competent observers, on thousands of patients under treatment at Royat, prove that the action of these thermal springs, applied in various forms and in a methodical way, are not only most beneficial in that obstinate disease called gout, but also in all the forms of the diathesis which modern pathologists have described under the name of "arthritism". I hope, by the end of next season at Royat, to be able to publish some interesting observations on the effects of mechanical *massage* on arthritic patients whilst under the influence of the mineral waters.

La Bourboule.—The mineral thermal springs of La Bourboule were known several centuries ago, as we see by a description, in 1540, of a rudimentary bath, in which patients from an infirmary in the hamlet of La Bourboule used to bathe. Owing to the small supply of water, the reputation of these springs did not extend much beyond the limits of the locality; and it is only within the last twenty years that their value has been justly appreciated, owing chiefly to the efforts of Monsieur Perrière, a most active and industrious man, who, by continued labours, discovered the great source to which he gave his name. This source affords an immense supply of water, at a temperature of 140 deg. Fahr., each quart containing over one-tenth of a grain of metallic arsenic, or one-third of a grain of arseniate of soda. Two other springs (Sedaignes and La Plage) of water of the same kind, at a moderate temperature of 91.4 deg. Fahr. and 86 deg. Fahr., afford about one hundred gallons per minute. These secondary springs have a great importance at La Bourboule, as they serve for graduating the temperature of the water from the great spring (Perrière). The advantages of reducing the temperature of a hot mineral water with water of the same kind, but of a lower temperature, are obvious; nothing is lost by evaporation, and it retains unaltered its active principles. These waters are employed as a drink, douches, lotions, inhalations, and pulverised as a spray. According to M. Lefort's analyses, these waters, when properly bottled, keep for a considerable time without losing their principal properties, owing to the small quantity of iron and organic matter they contain. Besides chloride of sodium, bicarbonate of soda, and arsenic, these waters contain other substances—such as iron, lime, silica, etc.—so admirably combined, that Dr. Gubler compares them to a true mineral lymph. Strange to say, the extraordinary cures performed by these waters for so many years only attracted the attention of chemists in 1852, when Thénard, surprised at their marvellous effects, investigated the cause, and discovered the presence of arsenic in a medicinal dose. Since then, a new era began for La Bourboule, and it now possesses one of the finest and most complete establishments in Europe.

The diseases in which arsenic, in the shape of arseniate of soda, plays such an important part are anæmia, chlorosis, certain forms of cutaneous diseases, malarial cachexia, chronic syphilis; and last, but not least, in

struma and all its varieties; in tuberculosis, and in certain forms of lung diseases in lymphatic individuals, affected by a slow form of phthisis, where circumscribed indurated spots are detected by percussion and auscultation—in fact, where caseous deposits or internal scrofula exist—these waters are most valuable, and very many successful cases have been recorded. Dr. Dobell, in his recent work on *Loss of Weight, Blood-spitting, and Lung-Disease*, refers to the good effect of arsenic observed by himself, quoting other authorities in favour of it. If we look back to remote periods, we find that the value of arsenic has been recognised by great observers, from Diascorides down to Trousseau, de Haen, and particularly Isnard. Arsenic has been considered as one of the most potent tonics and alteratives known, and, being found in combination with other mineral products prepared in nature's laboratory, is no doubt the most perfect form of preparation. La Bourboule is situated at about two thousand five hundred feet above the level of the sea, in the centre of France, and in the midst of a most fertile and picturesque country. It thus enjoys a most exquisite climate, the air being pure and bracing, without being irritating; the place is provided with every comfort that an invalid can possibly require; these are advantages which must contribute largely to the efficacy of treatment.

Châtel-Guyon.—The thermal springs of Châtel-Guyon are the only laxative waters in France, and deserve special notice from their peculiar action. Situated at about four miles from Riom (railway station), on the borders of the Sardou, in a most picturesque part of Auvergne, full of interesting curiosities and pleasant promenades, it is a most inviting place. These waters owe their laxative properties to the presence of chloride of magnesium; several springs exist, of which some are used as baths. The diseases specially treated at Châtel-Guyon are obstinate constipation of the bowels, dyspepsia, congestion of the liver, and particularly cerebral disorders in which intestinal derivatives are indicated. For some years past, Dr. Barraduc has obtained most satisfactory results in cases of obesity.

The place affords excellent accommodation at very reasonable prices. It will be observed that I use the term "laxative" intentionally; for the action of these waters is not purgative in the common acceptance of the word, and differs essentially from the purging waters of Hungary and Germany; for these act like any common solution of sulphate of magnesia, purging the patient and leaving his ailment as it was before. The waters of Châtel-Guyon are laxative, and require to be administered in a methodical way to obtain the desired effect. The patient ought to take one or two glasses of the water before meals and *at meals;* if necessary, this quantity may be increased to three or four glasses *per diem*, until a free and regular action of the bowels takes place; this should be kept up for ten or twelve days, when the water may be gradually left off. It will be interesting to know the result of experiments now being carried out on dogs, at the École Pratique in Paris, as to the *modus operandi* of these waters. According to the last analyses, these waters owe their peculiar action to the large percentage of the chlorides of magnesium and sodium.

SURGICAL MEMORANDA.

THE TREATMENT OF SPINAL CURVATURE.

MR. E. CARR JACKSON is mistaken (see BRITISH MEDICAL JOURNAL, July 19th) in dating the treatment of spinal curvature by extension and hanging only one hundred years ago; for it is more than two hundred years since it was put into practice by Glisson, an English Fellow of the London College of Physicians. One can hardly take up any German surgical manual, which treats of orthopædic surgery, without coming across Glisson's swing being mentioned as one of the methods of treatment of spinal curvature. (See *Handbuch der Chirurgischen Praxis* of Dr. von Bruns, Professor of Surgery at Tübingen, vol. ii, pages 1217-1223). In the BRITISH MEDICAL JOURNAL of February 9th, 1878, I published a letter describing a similar apparatus to that of Dr. Sayre, which is found in several orthopædic institutions on the Continent. I cited those of Dr. Klapsch, Professor of Surgery at Breslau, and of Dr. Schildbach at Leipzig, where the gallows has been used for many years past. I also mentioned that Glisson was an English physician, who published a work *De Rachitide*, a second edition of which is dated 1660. The first edition was published in 1650, and was in Latin; but it was translated into English, in 1651, by Culpepper. In addition to other treatment, Glisson recommended (see English edition, 1651): "artificial hanging of the body.....which is performed by the help of an instrument usually made with swathing bands, first crossing the breast and swung under the armpits, then above the head and under the chin, and then receiving the hands by two handles, so that it is a pleasure to see the child hanging pendulous and moved to and fro by the spectators. This kind of exercise is thought in many *waies* conducible in this effect; for it *helpes* to restore the crooked bone, to erect the bended joynts, and to lengthen the short stature of the body; it is rather a pleasure than a trouble to the child. Some, that the part may be more stretched, hang leaden shoes upon the feet and fasten weights to the body, that the parts may the more easily be extended to an equal length."

It is curious that, at Dr. Schildbach's Institution, I saw bags of sand, weighing several pounds, attached either to one hip or the other of the patients, according as one side of the trunk was required to be more extended.

I may remark that much unnecessary confusion is caused by speaking of cases of spinal caries (Pott's disease), and of spinal lateral curvature (scoliosis), indiscriminately, in reference to treatment by Sayre's plaster bandage and suspension. These diseases must be considered separately in properly appreciating the effects of Sayre's method, which is undoubtedly the greatest improvement yet effected in the treatment of spinal caries; while it is still an open question whether it is as successful in lateral curvature.

BERNARD ROTH, F.R.C.S., Brighton.

CLINICAL MEMORANDA.

A RARE CAUSE OF ŒDEMA.

A RETIRED merchant, fifty-six years old, who is suffering from a very slight paralysis of the legs and occasional failing of memory, for which I had attended him from time to time, sent for me on account of symptoms of dropsy. I found his legs nearly double of their natural size, the skin of the abdomen œdematous up to the umbilicus, and the abdomen itself occupied by a large tumour, extending in the median line from the symphysis to the pit of the stomach. The whole of the pelvis was filled by a tense tumour, which fluctuated on pressure from above. He did not complain of scarcity of urine. I sent for a catheter, and evacuated nine pints of clear acid urine. For a few days, the bladder filled again to some extent; but the œdema began to diminish, and was gone at the end of a week. The daily introduction of the catheter and faradisation; iron and nux vomica internally; injections of permanganate of potash while the urine was offensive and alkaline, as it turned immediately after the first catheterisation, have restored the bladder to its normal condition.

A. HESS, M.D.

INFANTILE DIARRHŒA.

I HAVE read Dr. Carey Coombs's article in the JOURNAL of July 5th, and I have no doubt that the facts which he states as the cause of the epidemic of infantile diarrhœa, which occurred in the town of Castle Carey last summer, are correct. From my own experience, I find that there is always more or less of an epidemic of infantile diarrhœa during the hot summer months amongst infants who are brought up by hand, especially amongst the children of the lower orders, the occurrence of which I believe to be almost entirely attributable to causes which, to a great extent, are preventable. The most common cause without doubt is, that sour milk is given to the infants; another, and no less frequent one is, that the feeding-bottles are never properly scoured out, so as to remove every trace of milk from the bottle after the infant has fed. If the same bottle be used two or three times without being previously well washed out, the milk will very likely be rendered sour, especially in the hot summer, when a very short period suffices to turn milk sour, and will assuredly cause diarrhœa and mortality amongst infants brought up by hand. I believe these to be the causes *par excellence* of infantile diarrhœa, from the fact that these epidemics rarely occur amongst the children of the well-to-do, where more care is taken to observe scrupulous cleanliness in the feeding-bottles, and in the use of milk which has not turned. May not the reason that the diarrhœa was arrested by the substitution of condensed milk for ordinary cows' or asses' milk (in Dr. Coombs's cases) be explained from the fact that the large quantity of sugar which is contained in the former renders it perfectly free from any acid, which probably might have existed in the cows' milk with which the children were previously fed? I have observed that diarrhœa hardly ever occurs in infants who are fed upon condensed milk, excepting, of course, the disorders of the alimentary canal, the result ot dentition; and I believe that this freedom from the disease is entirely due to the fact that the condensed milk never turns sour. In infants who must be brought up by hand, I have seen such good results from its use that I much prefer it to ordinary cows' milk, providing I find by experiment that it agrees with the child's stomach. Another great advantage is its uniform quality.

WILLIAM ALEXANDER BUDD, L.R.C.P., etc., Exeter.

GENERAL COUNCIL
OF
MEDICAL EDUCATION AND REGISTRATION.

SECOND SESSION, 1879.

Thursday, July 17th, 1879.

DR. ACLAND, President, took the chair at 2 P.M. All the members were present.

President's Address.—The PRESIDENT delivered an address, which was published at page 106 of last week's JOURNAL. It was moved by Mr. SIMON, seconded by Dr. PYLE, and resolved: "That the President's address be entered on the minutes."

Business Committee.—On the motion of Dr. ANDREW WOOD, seconded by the Rev. Dr. HAUGHTON, the Business Committee was appointed, to consist of Dr. Andrew Wood (chairman), Dr. Aquilla Smith, Dr. Leet, Dr. Haldane, and Dr. Pyle.

Executive Committee.—A ballot having been taken, the following were found to be duly elected: Dr. Pitman, Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, Dr. Quain, and Mr. Simon.

Payment of Expenses under the Medical and Dentists' Acts.—A report from the Executive Committee was read, containing the following resolutions.

"(1.) That, as there are certain expenses which cannot be kept distinct, viz.—salaries; house-expenses; postages, and various incidental expenses—these expenses be apportioned as follows: the General Council to pay one-half; the English Branch Council to pay one-fourth; the Dental Registration Fund to pay one-fourth. (2.) That, as regards the expenses which can be kept distinct, they be apportioned as follows: the fees to members of the Council for attendance at meetings of the General Council, and of the Executive Committee, shall be borne in proportion to the time occupied in the General and the Dental business respectively; the expenses of printing, on account of the General and Dental business, shall be borne as incurred by each department respectively."

Also, the following resolutions respecting the Registrar's salary:

"(1.) That an additional honorarium of fifty guineas be given to the Registrar, on account of extra duties connected with the Dental business, to be paid out of the Dental Registration Fund. (2.) That, in consideration of the additional duties devolving on the Registrar, in consequence of the passing of the Dentists' Act, his salary be £600 a year; whereof, pursuant to the foregoing resolution, one-half shall be borne by the General Council, one-fourth by the English Branch Council, and one-fourth by the Dental Fund; the payment of the salary to date from the passing of the Dentists' Act."

It was moved by Dr. ANDREW WOOD, seconded by Dr. AQUILLA SMITH, and agreed to: "That the foregoing report be adopted, and be incorporated with the standing orders, and that the standing orders be altered to accord therewith."

Revision of the Standing Orders.—It was moved by Dr. ANDREW WOOD, seconded by Sir JAMES PAGET, and agreed to:

"That a committee be appointed to prepare a new edition of the standing orders, and to report thereon to the General Council, the committee to consist of the following members: Dr. Aquilla Smith (chairman), Dr. Andrew Wood, Dr. Quain, and Mr. Simon."

Ophthalmic and Obstetric Memorials.—Communications from the Universities of Dublin and Edinburgh; from the Royal College of Physicians in Edinburgh; from the King and Queen's College of Physicians in Ireland; from the Royal Colleges of Surgeons of Edinburgh, England, and Ireland; from the Faculty of Physicians and Surgeons of Glasgow; and from the Apothecaries' Society of London and the Apothecaries' Hall in Ireland, with reference to the memorials on ophthalmic surgery and midwifery, were presented, and were ordered to be received and entered on the minutes. It was further resolved, on the motion of Dr. HUMPHRY, seconded by Mr. TEALE: "That the answers from the licensing bodies in regard to ophthalmology and midwifery, which have been already received, or which may be hereafter received, be referred to a committee, to report thereon to the Council at its next session; the committee to consist of the following members: Dr. Humphry (chairman), Dr. Andrew Wood, Dr. Aquilla Smith, Mr. Simon, and Mr. Teale."

Elementary Mechanics: its Place in the Curriculum.—Mr. SIMON proposed: "That the subject of 'elementary mechanics of solids and fluids—meaning thereby mechanics, hydrostatics, pneumatics, and hydraulics'—be no longer recommended by the Council as an optional subject of preliminary education, but be recommended as one of the subjects 'without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered', it being understood that the examination in this branch of knowledge may be passed either as preliminary or as first professional; and that it be referred to the Executive Committee to amend to this effect Subsection 6 of Section 4, and Subsection 1 of Section 23 of the edition for 1879 of the Council's standing *Recommendations*."

The subject had been placed among the optional subjects of preliminary education by a hasty resolution of the Council in 1877; the resolution to make it compulsory having been lost only through the temporary absence of the seconder. The necessity for making such elementary knowledge compulsory would be obvious, if one considered the practical value of mechanics, hydrostatics, and pneumatics in the study of anatomy and physiology; and the necessity of such knowledge in the performance of the duties of medical officer of health. He hoped the Council would correct the oversight that had been committed.

Dr. FERGUS seconded the motion; which, after some remarks from Mr. Turner, the Rev. Dr. Haughton, Mr. Macnamara, Dr. A. Smith, Sir W. Gull, Dr. Rolleston, Dr. Humphry, Dr. Pitman, Mr. Teale, and Dr. Storrar—a principal point in the discussion being at what stage the examination should take place—the resolution was carried *nem. con.* in the form given above.

Preliminary Education and Examination.—It was moved by Sir WILLIAM GULL, seconded by Dr. ROLLESTON, and resolved:

"That the answers from the medical licensing bodies to a letter sent to them by the Executive Committee, in regard to the preliminary education of medical students, adjourned from the last meeting of the General Council, be referred to the Branch Council in each division of the kingdom, for report thereon to the Council at its next meeting, in order to a full consideration of the subject at that time."

British Practitioners in the Colonies.—Communications from the Colonial and Privy Council offices, with legal opinions thereon by Messrs. Jenkins and Ouvry, and an application from a Canadian practitioner, in regard to registration in Canada, referred to the General Council by the Executive Committee, were ordered to be received and entered on the minutes. Among the documents, was a petition from the College of Physicians and Surgeons of Ontario to his Excellency the Governor-General of the Dominion of Canada, dated March 7th, 1879, asking him to submit the case of the petitioners, as set forth in their memorial, to Her Majesty's Government, and to recommend that those portions of the Medical Act passed by the Imperial Parliament which affect Canada and interfere with the rights of self-government and self-legislation conferred upon her Parliament and the legislatures of her several provinces by the British North America Act (1867) may be repealed. Among the grounds of this request were the following.

"The effect of permitting persons registered on the *Medical Register* of Great Britain to register in Ontario without complying with the rules of your petitioners' Council will have a most harmful effect on the progress of medical science in this province.....Physicians and surgeons are distinct professions in the United Kingdom, but, being registered in the *Medical Register* of Great Britain, a physician or a surgeon can, under the provisions of the Imperial Acts, register in Ontario, and so become entitled to practise in all branches of the profession in that province, although only licensed to practise in one branch in the United Kingdom.....A number of diseases are necessarily treated differently in Canada and in the United Kingdom on account of differences, climatic and physical; so that, in the interests of the public, it is necessary for medical students and professional men to receive a practical medical education in Canada, or undergo an examination as to the fitness to deal with such distinctive diseases.....A grave injustice will be done to those institutions which resigned their licensing rights in favour of the petitioners if the qualifications of the various licensing bodies in Great Britain and Ireland shall, through the medium of the British *Medical Register*, entitle persons holding the same to practise medicine in the province.....The Imperial legislation referred to is practically in opposition to the spirit of the British North America Act, which assumed to leave the people of Ontario to deal with their civil rights."

The petition was supported by a report of a Committee of the Canada Privy Council, which stated—

"The Committee cannot help thinking that these Imperial Acts" (the Medical Act of 1858 and the Act to amend the Law relating to Medical Practitioners in the Colonies, 1868) "were passed without the attention of Parliament having been called to the fact that they infringed upon the legislative powers conferred upon the provinces and the Dominion, and feel assured that on the subject being brought before the notice of Her Majesty's Government, steps will be taken for the repeal of the objectionable provisions. It is obvious that if this legislation be permissible with respect to the medical profession, it might with

equal propriety be extended by the Imperial Parliament to every profession, trade, and occupation in Canada, and would thus be subversive of the rights of self-government graciously conceded to the people of the Dominion."

The legal opinion of Mr. Jenkyns on the subject was to the following effect.

"The petition of the College of Physicians and Surgeons of Ontario is based on an entire misapprehension of the law. The Act of 1858, which was in force at the time when the College of Physicians and Surgeons of Ontario was established, and when the Canadian Federation Act was passed, gave to practitioners registered in the *Medical Register* of the United Kingdom a right to practise throughout the Queen's dominions.

"The Act 31 and 32 Vic., cap. 29, relaxed the law in favour of the colonies by allowing a colonial legislature to require registered United Kingdom practitioners to be registered in the colonial *Register*, but it preserved the right of those practitioners by allowing them to claim registration as of right. Under this Act, if the Ontario legislature require medical practitioners registered in the United Kingdom to be registered in Ontario, the Ontario Registrar is bound to register them; but otherwise the Ontario Registrar is not obliged to register them, although unable to prevent their practising without being registered. .....The Privy Council of Canada omit to notice that at the time the Act of 1858 passed the Ontario College did not exist. Nor are the Privy Council correct in stating that the Act of 1868 is a greater interference with their self-government than the Act of 1858, because the Act of 1868 does not compel a colony to register United Kingdom practitioners, but authorises a colonial legislature to do what it could not do under the Act of 1858—namely, require a registered United Kingdom practitioner to be registered in the colony. To preserve the rights conferred by the Act of 1858, it was necessary to provide that if the colonial legislature itself requires such registration it shall not take away those rights, and shall be bound to register such a practitioner without further examination. The interest of Canada would appear to be to maintain the privileges given by the Act of 1858, as, if the pending Bill passes, a holder of an Ontario diploma will be able to be registered in the United Kingdom *Register*, and thus be able to practise under his Canadian diploma throughout Her Majesty's dominions."

The documents having been referred by the President to Mr. Ouvry, for his opinion thereon, he stated that he thought the question might be left where Mr. Jenkyns had put it; that the suggestion of the Ontario College that English registered practitioners are not fit to practise in Canada was peculiar, especially as legislation was contemplated to admit Canadian practitioners here; that the Government must consider the matter as an Imperial question, affecting the relation of the mother country with her colonies; and that it would be a thing to be lamented if, from any action on the part of the colony, freedom to practise should be done away with or limited.

Alleged Irregularity in Registration of Medical Students.—At the meeting of the Council on March 26th (see BRITISH MEDICAL JOURNAL, April 5th, p. 523), a letter was read from Mr. W. B. Eames, asking to be permitted to present himself for examination before the Royal College of Surgeons in Ireland; and it was resolved that the attention of the Council of that College be called to the recommendation of the General Medical Council authorising the Branch Councils to admit special exceptions to the regulations. The reply of the Irish College of Surgeons was to the effect that "the Council of the Royal College of Surgeons in Ireland cannot agree to the recommendation of the General Medical Council to the effect that they should refer to the Branch Council for Ireland the decision as to the exceptions to be permitted in the case of students who may produce certificates of professional subjects antecedent to that of preliminary education. Since the foundation of this College, evidence of having passed a preliminary examination has been a *sine quâ non* to enable candidates to present themselves for any of our professional examinations; and the vast majority of our students, as a matter of fact, do pass such examinations previous to commencing their professional studies. From time to time, however, exceptional cases crop up, and upon these cases the Council cannot consent to resign into other hands than their own the right of adjudication."

In the letter of Mr. Eames, it was stated that, "according to the rules of the College of Surgeons, Ireland, a student gets credit for all professional studies prior to his passing an Arts or preliminary examination; and the consequence of this is that the Irish students put off their registration; all that is required by the College being that they should, upon presenting themselves for examination, have their necessary professional certificates, with certificate of having passed the preliminary at some date prior to going in for examination".

Dr. ANDREW WOOD moved and Mr. TEALE seconded, tha the correspondence on the subject be received and entered on the minutes.

Mr. MACNAMARA said that, in the Royal College of Surgeons of Ireland, no one could present himself for the professional examination until he had passed a preliminary examination. In the great majority of cases, the latter examination was passed before the commencement of professional study; but sometimes there were exceptions. The College felt competent to decide on such cases, and did not feel disposed to surrender its rights. The desire of the College was to meet the wishes of the Council. The preliminary examination of the Irish College of Surgeons included Greek, which the Medical Council allowed to be optional. He called attention to the fact that boys of fourteen or fifteen years were allowed to pass the preliminary examination and enter on their professional studies. How much would they know of their preliminary training at the age of twenty-one? One reason for allowing the College to deal with exceptional cases was, that it strengthened the hands of the examiners in cases where there was a manifest deficiency in preliminary education.

Dr. FERGUS asked whether any Royal Charter could override the Medical Act of 1858; whether any other body than the Branch Councils had power to admit exceptions; and whether the Royal College of Surgeons of Ireland enforced the regulation that forty-five months must be passed in professional study after registration as a student.

Mr. MACNAMARA said that there was nothing in the Act of 1858 which gave a right of overriding charters. The Irish College did not require registration; all that was required was proof of four years of professional study.

Mr. SIMON said that the Royal College of Surgeons in Ireland had acted in good faith; but they had committed a very serious fault, and the Council should deal seriously with it. The Irish College certainly had rights; but the recommendations of the Council as to what was required for a complete course of study must be fulfilled. The position of the College of Surgeons of Ireland in this matter was not worthy of its character.

The Rev. Dr. HAUGHTON said that the offence was not so very serious as it appeared to be. There was no doubt that the College of Surgeons of Ireland required more than forty-five months of professional education; the only question was as to the date of registration of the student. With regard to the preliminary examination, it was a mistake to require it to be passed at once. There should be a special curriculum of zoology, botany, and other subjects.

Mr. MACNAMARA said that the College of Surgeons in Ireland were most anxious to carry out the recommendations of the Council; but they must use their own judgment as to those which they could not fulfil.

Sir JAMES PAGET said that the present discussion was a very useful lesson to the Council to be cautious as to the subjects on which they issued recommendations. They should insist on the preliminary examination being passed before the commencement of professional study, and, if necessary, go to the Privy Council on the matter. But they could not do this with regard to a recommendation, for instance, that only one course of lectures in each subject should be attended.

Dr. WOOD's motion was carried.

Sir WILLIAM GULL moved—

"That the Council of the Royal College of Surgeons in Ireland be informed that, in the opinion of this Council, the continued non-compliance with the recommendations of this Council in respect of the 'Preliminary Examination prior to Registration', as stated in the Secretary's letter of April 1879, is much to be regretted; and that this Council trusts that the Council of the Royal College of Surgeons in Ireland will reconsider their action in regard to the matter in question."

Mr. SIMON seconded this motion; and, after some remarks from Sir D. CORRIGAN, the Rev. Dr. HAUGHTON, Dr. FERGUS, Dr. ANDREW WOOD, Dr. HALDANE, and Mr. MACNAMARA, who promised that the resolution would receive most respectful consideration on the part of the Council of his College, it was put to the vote and carried.

Friday, July 18th.

Dr. ACLAND, President, took the chair at 2 P.M.

Registration of Medical Students.—Mr. MACNAMARA moved—

"That it be the duty of the Branch Registrars in the several divisions of the kingdom to register, at the commencement of each session, the names of all students, and the hospitals and lectures for which they may have entered; and that it be strongly recommended to each of the licensing bodies not to accept any certificate for attendance on hospitals or lectures, unless such shall be certified to them by the Branch Registrars as having been duly entered in these registers on or before the last day fixed in each division of the kingdom for the commencement of the session."

He said that the resolution was connected with the proceedings of the previous day, and had a bearing on the intention of the Royal College of Surgeons of Ireland to attend to the regulations of the Council respecting the registration of students. The only difference between the Council and the College was, whether the College or the Branch Council should decide in exceptional cases. It was very possible for a student to be registered on having passed his preliminary examination, and, as far as he understood, every condition of the Council's recommendations would be fulfilled if he came up for final examination at the end of four years. But in the first year the student might not attend lectures; or he might not enter until after Christmas. The College of Surgeons in Ireland could not insist on the rule as to *bonâ fide* commencement of professional study; if they did so, the students would only go elsewhere. In the University of Dublin, Dr. Haughton had established a daily roll-call; the result of which had been to ensure a good *bonâ fide* attendance. But in other schools in Dublin, the attendance might not be so satisfactory. There should be no difficulty in carrying out his proposal in any of the medical schools. Students sometimes entered to courses of lectures, and afterwards disappeared; and, in Dublin, some entered at a late period, and the certificates of their having attended the courses of lectures were—most innocently—accepted by examining boards in other parts of the kingdom. The Council should assist the Irish bodies in trying to improve medical education. The resolution which he proposed had been approved by the Council of the Royal College of Surgeons of Ireland, who earnestly hoped that it would be adopted.

The Rev. Dr. HAUGHTON seconded the resolution. He was well aware of the existence of the abuses mentioned by Mr. Macnamara. The entrance books of the University of Dublin were closed on November 25th; but it was a matter of notoriety that some of the private schools admitted pupils at later dates; and the English and Scotch corporations accepted these certificates, trusting to the good faith of the Dublin teachers.

Dr. ANDREW WOOD said that the reform should begin where the evil lay. It was the duty of the Irish bodies to see that certificates were granted for *bonâ fide* attendance, as was done in Scotland. He suggested that the College of Surgeons in Ireland should adopt a regulation similar to that in force in the College of Surgeons in Edinburgh, requiring the lecturers to call the rolls of their classes a certain number of times during each course.

Dr. ROLLESTON would trust more to the returns from the examining boards as showing the relative merits of the schools, than to enforced attendance on lectures. The Scotch plan did not ensure that a student should attend lectures with profit.

Sir D. CORRIGAN said that the private medical schools in Dublin were among the best advocates of advanced education. The roll-call was quite ineffectual, and the only benefit of it was that it partially relieved the lecturer from the task of lecturing. It ensured that a man was sitting in the lecture-room; but not that he was receiving instruction. When he was a student in Edinburgh, he used to read Scott's novels while at lecture. In Germany, there was no enforced attendance on lectures; and yet the students learned their business.

Dr. AQUILLA SMITH thought that Mr. Macnamara's proposal was impracticable. It would throw much work on the Branch Registrars, and would not ensure regular attendance at the schools. Calling rolls was useless; he would rather leave it to the students to find whether a lecturer was a good teacher.

Mr. TEALE said that the roll of students was called in the Leeds School. It was true that only secured bodily presence; but many of the students were resident with medical men in the town, and it was an advantage to them to be able to give a reason for being obliged to be present at the lecture.

Dr. QUAIN thought that the Council could not look after medical education better than by looking after the examinations. It was a cruelty to oblige students to attend some teachers.

Dr. STORRAR said that the examining bodies should not require such a large amount of lectures. The University of London required attendance on only five courses for the degree of M.B.; but, as a matter of fact, candidates brought certificates of attendance on a much larger number.

Sir WILLIAM GULL hoped that the time would come when all lectures would be simple demonstrations. The student should be made to show, when he came to examination, that he knew his work.

Mr. MACNAMARA having replied, the motion was put to the vote and negatived.

Mr. MACNAMARA required that the names and numbers of those who voted for and against the motion respectively, and of those who did not vote, be taken down. *For*, 2: Mr. Macnamara, Rev. Dr. Haughton. *Against*, 18: Dr. Pitman, Sir James Paget, Mr. Bradford, Dr. Rolleston, Dr. Humphry, Dr. Pyle, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Dr. Pettigrew, Dr. Aquilla Smith, Dr. Leet, Sir Dominic Corrigan, Dr. Quain, Sir William Gull, Mr. Simon, Mr. Teale. *Did not vote*, 3: The President, Dr. Fergus, Dr. Hudson. *Absent*, 1: Mr. Turner.

Certificates of Attendance.—The Rev. Dr. HAUGHTON moved—

"That the Council do proceed to inquire what precautions are taken by the several medical authorities and corporations to secure that the certificates accepted by them from the several medical schools and hospitals guarantee a definite amount of attendance on the part of the holder on lectures, dissections, laboratory work, and hospital work; and are not merely receipts for money paid without inquiry into the actual attendance of the holder of such certificates."

He agreed with Sir W. Gull in hoping that the great mass of lectures would be abolished, and their place supplied by practical teaching. Fifty years ago, books were scarce, and lectures were required to supply the deficiency; but now the attention of lecturers should be confined to matters not to be obtained in books. This had been carried out in the University of Dublin. But there were six other medical schools in Dublin which competed with the University professors; and hence the University had extended the principle of free trade to them and to the clinical hospitals. There was, however, no system of expurgation of lectures recognised in the medical schools. There were two classes of certificates given in the medical schools and hospitals of Dublin; one did not give any guarantee as to attendance; in the other, it was certified that the student had attended so many lectures.

Mr. MACNAMARA seconded the motion.

Sir D. CORRIGAN agreed with Sir W. Gull and Dr. Haughton that properly conducted examinations were the only means of testing the knowledge possessed by students. The examiners should be changed from time to time; and each student should pass at least three examinations.

Dr. A. SMITH was desirous of ensuring the attendance of students on lectures; but Dr. Haughton's proposal would not fulfil that object. The Council should not accumulate recommendations which would be disregarded by the examining boards.

Dr. STORRAR said that the recommendation represented the opinion of the Council as to what was necessary for efficient training for the medical profession.

Sir JAMES PAGET said that any rules that the Council might make could be evaded. The certificates of attendance must be judged of according to the names of those signing them; and if there were any teachers who did not act as gentlemen, but signed falsely, the blame rested with them. He had great confidence in good final examinations, and believed that they should be thoroughly practical; but that was not enough. A man was imperfectly educated unless he had some education in principles; he was not fit to practise unless he were fit to study. Some things could only be tested by oral and written, and not only by practical, examinations.

Dr. HUMPHRY said it must be remembered that the examinations, as regulated by the Council, must only be a test of minimum knowledge. He thought lectures were not valueless. Students should be led to cultivate the faculty of acquiring knowledge from them as well as from books. Compulsion pressed most on the inferior men. He gave two courses of lectures; attendance on one of these was voluntary, and it was well attended by the diligent students. He would call attention to the resolution of the Council recommending frequent class-examinations.

Dr. QUAIN said that, if lectures were attractive, there should be no need to make them compulsory. If made compulsory, they would not be attractive.

After some further remarks from members of the Council, the resolution was negatived.

The Rev. Dr. HAUGHTON required that the names and numbers of those who voted for and against the motion respectively, and of those who did not vote, be taken down. *For*, 6: Mr. Macnamara, Dr. Leet, Rev. Dr. Haughton, Mr. Simon, Mr. Teale, Dr. Hudson. *Against*, 12: Dr. Pitman, Sir James Paget, Mr. Bradford, Dr. Rolleston, Dr. Storrar, Dr. Haldane, Dr. Andrew Wood, Dr. Scott Orr, Dr. Aquilla Smith, Sir Dominic Corrigan, Sir William Gull, Dr. Fergus. *Did not vote*, 4: the President, Dr. Humphry, Dr. Pyle, Dr. Pettigrew. *Absent*, 2: Mr. Turner, Dr. Quain.

Removal of Names from the Register.—A certificate of the conviction of Adam Addison for manslaughter having been read, the Council directed the Registrar to erase his name from the *Medical Register*.

Communications were read from the King and Queen's College of Physicians in Ireland and the Royal College of Surgeons in Ireland, in regard to the case of James Patrick Murray, stating that they had removed his name from their lists of licentiates, and called on him to

return his diplomas, in consequence of his conduct in the case of the *Carl*.

A letter from Mr. Murray to the Council having been read, Mr. OUVRY was requested to state his opinion in regard to the law of the case. He said: "I think, on the true construction of the twenty-eighth Section of the Medical Act (1858), that the Council is empowered to erase the name of James Patrick Murray from the *Medical Register*, on the ground that he no longer possesses any qualification for registration."

It was resolved: "That, the King and Queen's College of Physicians of Ireland, and the Royal College of Surgeons in Ireland, having signified to the Council that the name of James Patrick Murray (Lic. R. Coll. Surg. Irel. 1860, Lic. K. Q. Coll. Phys. Irel. 1860) has been struck off the roll of Licentiates of these Colleges, the Council direct the Registrar to erase his name from the *Medical Register*, in conformity with Section xxviii of the Medical Act, he no longer possessing any qualification for registration."

Election of President.—The PRESIDENT addressed the Council as follows.

"It is my duty to inform the Council that the President's term of office has now expired. I will not occupy your time with many words to express to you my grateful acknowledgment for the confidence you have reposed in me, and for the unceasing kindness with which you have accepted my endeavours to carry out your wishes for the last five years. In addition to this sincere expression of my gratitude, I wish to record that my duty towards you could not have been discharged but for the great experience and constant care of the Chairman of your Business Committee, Dr. Andrew Wood, and for the ability, zeal, and industry of your present Registrar. And now I leave the chair and retire from the Council, that you may elect a President."

On the motion of Dr. ANDREW WOOD, seconded by Dr. AQUILLA SMITH, Sir James Paget took the chair. Strangers were desired to withdraw.

It was moved by Sir WILLIAM GULL, Bart., seconded by Dr. ANDREW WOOD, and unanimously agreed to:—

"That Dr. Acland be elected President of the General Medical Council for a term of five years."

Dr. ACLAND, having been informed of the decision, soon afterwards re-entered the room, and took the chair.

Restoration of Names to the Register.—It was moved by Mr. MACNAMARA, and seconded by Dr. PITMAN:—

"That, in all questionable cases, where persons whose names have been removed from the *Register* under Section xiv of the Medical Act (1858) seek restoration, the Executive Committee, before complying with the request, shall put themselves in communication with the medical authorities whence the qualifications were originally derived."

The further debate on this motion was adjourned.

Saturday, July 19th.

Dr. ACLAND, President, took the chair at 1 P.M.

Executive Committee.—Sir James Paget was elected a member of the Executive Committee in the place of Mr. Simon, who requested to be excused from serving at present.

Restoration of Names to the Register.—The discussion on the motion proposed by Mr. MACNAMARA was resumed; and after remarks from Dr. A. Smith, the President, Dr. A. Wood, Dr. Rolleston, Dr. Humphry, Sir W. Gull, and Sir D. Corrigan, it was adopted in the following form.

"That in all questionable cases, where persons whose names have been removed from the *Register* under Section xiv of the Medical Act (1858) seek restoration, it is desirable that the Executive Committee should without delay put themselves in communication with the medical authorities whence the qualifications were originally derived."

The Standing Orders.—The following report of the Committee on the standing orders was read; and, on the motion of Dr. AQUILLA SMITH, seconded by Mr. SIMON, was ordered to be received, entered in the minutes, and adopted.

"The Committee, appointed for this purpose on July 17th, beg to report that they have met and resolved that, in their opinion, it is necessary to completely revise and amend the present standing orders. As this is a work which will necessarily occupy much time, the Committee propose to defer their full report until a further meeting of the Council.

"The Committee feel that it would be a great advantage if the following suggestion be adopted as a standing order:—

"'That the Executive Committee continue in office for a period of one year from the date of its appointment, or, if the Council be not sitting at the time when the year expires, until the first day of the next meeting of the Council.'"

Alleged False Certificates of Attendance on Lectures.—On the motion of Dr. PITMAN, the PRESIDENT asked of the Rev. Dr. Haughton the following question:—

"Whether, if his knowledge were not confidential, he would give the Council the name of the medical school to which he yesterday referred, as having given untrue certificates of attendance on lectures."

The Rev. Dr. HAUGHTON answered that, in his statement referred to in Dr. Pitman's question, he had alluded to one Dublin school and one Dublin hospital, and that he regretted that he was unable to name the school or hospital, in consequence of having obtained his knowledge *ex informatâ conscientiâ*, from the confessions of former students of Trinity College, Dublin.

It was moved by Sir WILLIAM GULL, seconded by Mr. SIMON, and agreed to:—

"That the Branch Council for Ireland have its attention drawn to a statement made by a member of this Council, to the effect that certificates of attendance have been issued in a Dublin school to students who have not given such attendance, and that the Branch Council be requested to inquire into this matter, and to report thereon to this Council at its next meeting."

The Dental Curriculum.—The following communication from the Royal College of Surgeons in Ireland, in answer to a letter sent pursuant to the General Council's resolution of the meeting on March 26th, 1879, was read.

"With reference to the dental curriculum, this Council have agreed to accept the general regulations as laid down by the General Medical Council, but they cannot accept that portion of the regulations relating to the examination of candidates *sine curriculo*, up to August 1881, whereby the examination of candidates for their licence would be confined to residents in Ireland. This, in their opinion, could not be justified by what has hitherto been, and still is, the practice in regard to medical and surgical qualifications, or which obtained in England at the time the qualification in dental surgery was instituted by the Royal College of Surgeons of England."

On the motion of Dr. ANDREW WOOD, seconded by Mr. MACNAMARA, the Dental curriculum, as adopted at the previous session of the Council, was altered so as to allow the Colleges of Surgeons in Scotland and in Ireland to admit to examination *sine curriculo*, up to August 1881, persons not resident in those parts of the kingdom respectively.

It was moved by Sir WILLIAM GULL, seconded by Dr. ROLLESTON, and agreed to:

"That the Council of the Royal College of Surgeons of England be requested to reconsider their determination as to the admission of candidates for a dental qualification *sine curriculo* up to August 1881."

Foreign and Colonial Certificates in Dentistry.—The following report of the Executive Committee on foreign and colonial certificates in dentistry was read, and, on the proposal of Dr. HUMPHRY, seconded by Dr. STORRAR, was ordered to be received, entered in the minutes, and adopted.

"Thirty-four applications have been received for the registration, under Section 10 of the Dentists' Act (1878), of certificates of dentistry from the following institutions: Harvard University, New York College of Dentistry, Baltimore Dental College, the American University of Philadelphia, Pennsylvania College of Dental Surgery, Philadelphia Dental College, Ohio College of Dental Surgery, the University of Naples, the University of Macerata, the University of Liége, the Royal College of Dental Surgery of Ontario, and the Dental Association of the Province of Quebec. Of these applicants, all but four are already registered under Clause (c) of Section 6 of the Dentists' Act (1878). The diplomas from Harvard University, two in number, have been registered in the foreign dentists' list, in accordance with the resolution of the Council. In the University of Naples, there are no educational requirements; in the other institutions, there is no preliminary examination in general examination, two years only of professional study are required, and the examination in each is conducted solely by the teachers and officers of the institution. The Committee, therefore, having regard to the requirements of candidates for any of the diplomas in dental surgery in the United Kingdom—which comprise a preliminary examination and four years of professional study—cannot recommend to the Council that the certificates of these institutions should be entered in the *Dentists' Register*."

Executive Committee.—Dr. AQUILLA SMITH moved, Dr. ANDREW WOOD seconded, and it was resolved:

"That the powers and duties heretofore delegated to the Executive Committtee be vested in the said Committee until the expiration of its term of office."

Votes of Thanks.—The following votes of thanks were unanimously passed:

"That the cordial thanks of this Council are eminently due, and are

hereby tendered, to Dr. Andrew Wood, for his services as Chairman of the Business Committee during the present session of the Council."

"That the cordial thanks of the Council are due, and are hereby tendered, to the treasurers, Dr. Quain and Dr. Pitman, for their services."

"That the thanks of the Council are hereby cordially tendered to Dr. Acland, the President, for his efficient services during the present session of the Medical Council."

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SALT AND SON'S NEW POCKET URINARY TEST-CASE.

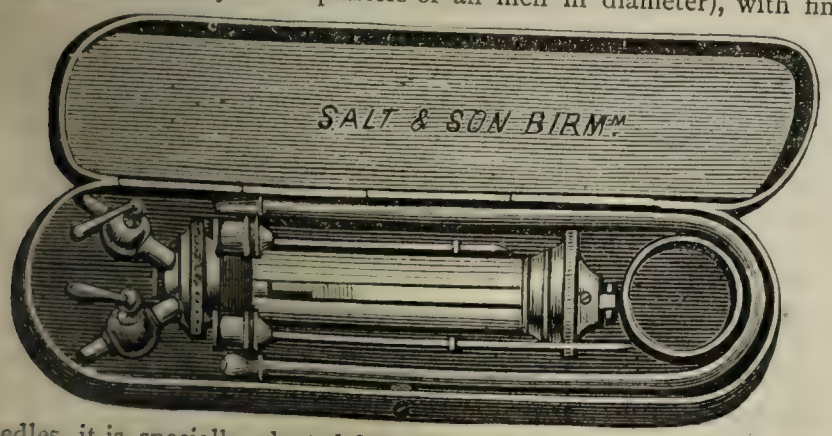
THIS case, which has been submitted to our notice by the makers, we consider a great improvement; it is elegant in appearance, convenient in size, and contains, as will be seen, all that is necessary for ordinary clinical work. The case is made of aluminium, opening like a *porte-monnaie;* and is divided into compartments for the following articles; viz., (A) spirit lamp; (B) nitric acid tubes hermetically sealed and in a gilt case; (C) caustic potash pilules in vulcanite bottle inclosed in gilt outer case, each pilule being one test; (D) urinometer and test-glass; (E) test-tube and vulcanite stoppered bottle for acetic acid or Fehling's solution; (F) turmeric paper; (G) litmus paper.



The various appliances are conveniently arranged, and occupy but little space, and the complete case seems likely to be found extremely useful. The illustration is drawn to a scale of two-thirds size.

NEW MINIATURE ASPIRATOR FOR EMPTYING SUPERFICIAL ABSCESSES.

MESSRS. SALT AND SON of Birmingham have lately introduced a modification, illustrated below, of Dieulafoy's aspirator. Being very small (only three inches by three-quarters of an inch in diameter), with fine



needles, it is specially adapted for superficial abscesses on the face and neck, where it is important to avoid a scar, and for those occurring in the cervical glands of delicate children, also for evacuating the collection of fluid in cases of "housemaid's knee".

It is neatly made, perfect in action, and inclosed in a small engraved aluminium case; and will, we think, be found a very acceptable instrument.

OUR CONFESSIONAL.

MAGNO INGENIO, MULTAQUE NIHILOMINUS HABITURO, CONVENIT ETIAM SIMPLEX VERI ERRORIS CONFESSIO; PRÆCIPUÈQUE IN EO MINISTERIO, QUOD UTILITATIS CAUSA POSTERIS TRADITUR; NE QUI DECIPIANTUR EADEM RATIONE, QUA QUIS ANTE DECEPTUS EST.—(Celsus *De Medicina*, Liber viii, cap. 4.)

THE long list of successes and of more or less meritorious and brilliant conduct of difficult cases to a satisfactory termination, which is weekly accumulated in our columns, might easily lead the superficial observer to the conclusion either that, as a rule and almost invariably, success is the reward of medical exertion, or that nothing is to be learnt from failures. Now and then, of course, we are enabled, by the wise courage and candour of contributors, to record failures in fact and blunders in act. The fact is, however, that reports of failure, the warning recital of blunders, and the candid confession of faults, would form an element of immense importance and invaluable instruction in medical chronicles. We have opened "a confessional", in which the main element which may attract to it confessors, if not penitents, is the inviolable anonymity which will be preserved in respect to it. In this way, we very earnestly invite the reports of mistakes, errors of omission and commission, and statements of special mortality, in medical, surgical, and obstetrical practice. We are assured that such records will be found to be of singular value; and, as in this manner they can be put forward without undue sacrifice or the possibility of ungenerous abuse of confidence, we may hope that they will become more frequent than heretofore.

A CASE OF CRANIOTOMY.

I HAVE watched with considerable interest to see what remarks would be called forth by "A Case of Craniotomy" in your "Confessional" of May 3rd; and I am indeed surprised to find that the only comment made on it has been to inform the "Young Practitioner" how he might most effectually complete the bloody work. A very similar case I saw to-day in the practice of a friend, induces me to offer it to your readers as an example of better practice. The woman had been all night in labour; head at the brim; os dilatable, but not dilated. The pelvis was narrowed by the projecting promontory of the sacrum. Her previous labours had been as follows: One craniotomy; one forceps attempted, but ended by craniotomy; one forceps successful; and one turning successful. In the present case, we turned, and delivered a living child. I believe, as was long ago pointed out by Sir James Simpson, that turning is to be preferred to the long forceps when the head is at the brim, for this obvious reason. The posterior diameter being usually the one which is too narrow, the pressure of the forceps tends to widen the head in the very diameter in which it needs to be narrowed; whereas, when the head is pulled through by the neck, it elongates and flattens laterally, the sacrum making a groove in it, and so it slips through without difficulty. I consider it unjustifiable to perforate the head of a living child lying at the brim, instead of attempting delivery by version.

Parsonstown, May 30th, 1879. A. WALLACE, M.D.

THE PLACENTA IN ABORTION.

Now that this subject is being discussed in the "Confessional", I should like to add a word against the "do-nothing" practice that has been supported lately, particularly by Mr. Cox. For the present, putting aside the dangerous view of the case, look at it thus. No sooner is the fœtus expelled than the functions of the placenta at once cease, and it becomes nothing more than a foreign body, which has no business in the uterus any longer, and consequently if it do not come away at once, it ought to be removed. If it do nothing worse, it keeps up a certain amount of uterine action, and so the pain which might have ceased is kept up. And as, even in birth at full time, one knows how very soon the mouth of the uterus becomes so contracted that there is often a difficulty in inserting the hand should it be required, so much the more should the uterus in abortion be emptied as early as possible. Of course, the smaller and more rigid the passage becomes, so does the difficulty of expulsion increase. Again, until the uterus is emptied of all its contents, one can never be sure of what may follow; and when one considers the great danger to the patient, should septic poisoning supervene, I submit that one has not the slightest right to leave such a loophole for it. A few stray cases where nothing has been done are no justification for a dangerous practice. I cannot help thinking that were any of the gentlemen who believe in the "do-nothing" treatment to be called to one of these cases that had been attended by a midwife and not by a qualified practitioner, and fatal consequences were to ensue, they would at once condemn the practice. The case quoted by Dr. D. M. Williams alone shows how dangerous may be the consequences to the mother. HERBERT L. BERNAYS, M.R.C.S., etc.

Old Charlton, S.E., June 22nd, 1879.

FRACTURE OF THE THIGH DURING LABOUR.

IN your issue of the 24th May, I notice, amongst "Our Confessionals", a letter signed M.R.C.S., with the above heading. I had a similar case two years ago, when using the blunt hook. I immediately put the thigh in four small splints, and bandaged it, taking care to relax the bandages as required, either for swelling or from the exceeding rapid growth of the child during the past few weeks. The fracture united in a short time, and now the little fellow runs about without any lameness.

F.R.C.S.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, JULY 26TH, 1879.

THE NEW UNIVERSITY.

SOMEWHAT tardily, the London, Leeds, and Liverpool schools of medicine are taking action in the matter of the proposed Charter, which will confer on the Victoria University, of which Owens College, Manchester, will be the seat, degree-giving powers in medicine. Since we pointed out the probability that the equilibrium of medical graduation will probably be greatly disturbed by the addition of this great attractive force to the Owens College, Manchester, the eyes of the teachers of London and of the neighbouring provincial schools in Lancashire and Yorkshire have been opened to the import of the new state of things about to be created, and to the probable gravitation of students to the degree-giving centre which, as we have foretold, has excited alarm and hostility. The consequence has been the circulation of a memorial among the medical teachers of the English schools, of which the text runs as follows.

"*To Her Majesty's most Honourable Privy Council.*

"We, the undersigned teachers in the London and provincial medical schools, consider it undesirable that the power of conferring degrees or licences to practise medicine or surgery should be granted to the proposed Victoria University, on the following grounds: 1. That there already exists nineteen such corporations; 2. That the competition arising out of this number of licensing bodies is detrimental to the public and the medical profession, as tending to lower the standard of medical qualification; 3. That the Manchester School of Medicine has no superior claims over other schools in London or the provinces which can entitle it to such a special distinction as that of conferring degrees to practise medicine or surgery."

We were informed last week that the memorial was hastily got up, but that more than one hundred and fifty signatures have been already sent in. The list of signatures includes the names of Professor Paget of Cambridge; Mr. Luther Holden, President of the Royal College of Surgeons and Senior Surgeon to St. Bartholomew's Hospital; Dr. Alfred Carpenter, President of the Council of the British Medical Association and Lecturer on State Medicine at St. Thomas's Hospital; Dr. G. Johnson, F.R.S., Senior Physician to King's College Hospital; Mr. Callender, F.R.S., Surgeon to St. Bartholomew's Hospital; Dr. Wilson Fox, Senior Physician to University College Hospital; Dr. Bristowe, Senior Physician, and Mr. Sydney Jones, Senior Surgeon, to St. Thomas's Hospital; Dr. A. W. Barclay, Senior Physician, and Mr. G. D. Pollock, Senior Surgeon, to St. George's Hospital; Dr. S. O. Habershon, Senior Physician, and Mr. J. Cooper Forster, Senior Surgeon, to Guy's Hospital; Dr. E. H. Greenhow, F.R.S., Senior Physician to the Middlesex Hospital; Mr. Christopher Heath, Dean of the Faculty of Medicine in University College; Dr. Wadham, Dean of the School of St. George's Hospital; Mr. A. Clark, Dean of the School of the Middlesex Hospital; and one hundred and fifty others from London and the English provincial schools, including Leeds, Sheffield, Birmingham, and Liverpool.

We are not surprised at this; we are only surprised that so little foresight has been exercised in this matter, and that the teachers have taken the alarm so late. It is well known that we have of late years very urgently pressed upon the English teachers in medical schools, and especially upon the metropolitan teachers, the duty incumbent upon them in the interests of their own students and of medical science and education, of some more complete and concerted scheme of teaching, and something more nearly approaching collegiate perfection of teaching arrangements and University dignities of graduation. The conflicting private interests of schools, the hampering obstruction involved in the association of a private adventure school, aiming at ambitious completeness in connection with each hospital, and the false but inevitable sequence which has made lectureships the steppingstone to hospital appointments and "consulting practice", have combined to paralyse any action on the part of either metropolitan or provincial schools to this end.

That which they have refused to do for themselves as a whole, one medical school is doing for itself separately. The fact that the power to confer degrees in medicine and surgery on the students will be a great distinction and a valuable consideration to Owens College, Manchester, is undoubted. But it is equally plain that it will be as well able to train such students, and will have as good facilities for conferring respectable degrees as say the Queen's and Dublin Universities in Ireland, the Universities of Glasgow or Aberdeen in Scotland, and of Durham, not to mention Cambridge, in England. As to the metropolitan schools, they ought not to have any voice in the matter. The students of London schools have every facility for graduating at the University of London; and if that University have not fulfilled its functions, it is because the schools have not chosen to exert the power which they could easily put forward to modify the governing body and the degree-giving regulations of that University. The University of London has chosen to hold itself apart from and above the reach of students educated in London. The influence of the great personages, lay and medical, who sit upon the Senate, has been directed to remove it above competition with the licensing corporations; and the absence of any direct relation with or representation of the London schools in the University has resulted in the present divorce of the mass of medical students of London from the University of London, which should be their Alma Mater. That is their own affair; they are only beginning to realise now the damage which has been inflicted when they see that the erection of a northern university, which will probably understand its duties in another and more catholic manner, will affect the interests of London. As to the suggestion that the degrees of the Victoria University will "lower the standard of medical qualification", it is a purely gratuitous reflection upon the regents of that University, upon the Privy Council, and upon the General Medical Council, which there is really nothing to justify. Looking to the existing standard of a great number of bodies, it is certainly a very bold and imaginative statement.

We are not to be understood as denying that the provincial schools and the metropolitan schools have cause for anxiety in this matter. We are, on the contrary, persuaded that they have, and rejoiced that they are at last awakened to it. They have reason to be anxious; but their students have some reason to rejoice. It will undoubtedly be a serious anomaly if the students of Manchester, like the students of Newcastle, have as ample facilities for acquiring the social and professional distinction of University degrees of Bachelor and Doctor of Medicine and Master of Surgery at the close of their stated period of professional study, on terms such as those on which the students of Scotland, and Ireland, and of at least one school of medicine in England, obtain the degrees, with which in after-life they settle down to practise in the same localities with them. But this does not point, in our view, to any refusal to Manchester of facilities of her just claim to obtain which she has satisfied the Crown and the cabinet, and her ample power and intention to use rightly and for the common good. It does point, however, to the justice of the extension of like facilities to all the schools and parts of the kingdom which can put in equal claims; and we think that the medical schools of Liverpool and Leeds may justly claim to have a share in the benefit thus conferred on and by Manchester, while the London schools may fairly be told to settle the matter among themselves with the University of London, in which their influence, if they choose to employ it, is indirectly overwhelming.

THE GENERAL MEDICAL COUNCIL.

THE brief session of the General Medical Council which was held last week was comparatively devoid of interest, beyond the principal object for which it was summoned—the election of a President—none of the great subjects which ordinarily come under its cognisance being brought forward for discussion.

After the delivery of the President's address, the Executive Committee was appointed. Sir James Paget, who had been a member of the Committee, asked to be excused from again serving, on account of the pressure of his engagements, and Mr. Simon was elected in his place. On the last day of the session, however, the President informed the Council that Mr. Simon had requested to be relieved from the duty; and Sir James Paget, who had expressed his willingness to serve if elected, was unanimously appointed. The Executive Committee, therefore, consists of the same members as before.

The memorials presented at the previous session by teachers of ophthalmology and obstetric medicine had been sent to the licensing bodies for their opinions, and replies from ten of them had been received. These were remitted for report to a Committee of the Council, with power to deal with such replies as may be received from other licensing bodies.

The Council, on the motion of Mr. Simon, took a very judicious course in amending a mistake which, through hasty action, they had committed in 1877. They then decided, by a narrow majority, that "elementary mechanics" should be an optional subject of preliminary education. They have now decided that it shall be compulsory, but have relaxed the recommendation with regard to passing the preliminary examination before the commencement of medical study, so far as to allow the candidate's knowledge of the subject to be tested either at the preliminary or at the first professional examination. This recognition of the importance of this branch of physical science is an improvement; but it is to be hoped that, as the opportunities of acquiring a knowledge of elementary mechanics increase, the Council will in time see their way to insisting on the examination in this subject being *bonâ fide* preliminary to the commencement of professional study.

The answers from the licensing bodies respecting preliminary education, which have been for some time before the Council, were ordered to be sent to the Branch Councils for report, with a view to full discussion at the next meeting of the Council.

An important correspondence respecting the status of British practitioners in the colonies was laid before the Council, and ordered to be entered on the minutes; but no further action was taken. It appears that the College of Physicians and Surgeons of Ontario desire to have the privilege of re-examining practitioners who have already been placed on the *Medical Register*. This, if allowed, would be a serious impediment to the recognition—which is desired by many, and for which provision is sought to be made in the Medical Acts Amendment Bill—of the foreign and colonial diplomas held by persons seeking to practise in this country.

An alleged irregularity on the part of the Royal College of Surgeons in Ireland afforded ground for some discussion. It is one of the recommendations of the Council that the preliminary examination must be passed before a medical student can be registered as such; but that exceptions may be allowed by the Branch Councils. The Irish College, however, claims the right of deciding in exceptional cases—which its representative, Mr. Macnamara, stated to be really very few—without reference to the Branch Council. The Council, on the proposal of Sir William Gull, decided on sending a gentle remonstrance to the Council of the Irish College, asking them to "reconsider their action in the matter".

A rather desultory discussion on the means of ensuring attendance on lectures and hospital practice took place on two motions brought forward by Mr. Macnamara and the Rev. Dr. Haughton. Mr. Macnamara's resolution was intended to secure evidence that a student, on his entrance in the Medical Students' Register, had actually commenced professional study; and Dr. Haughton moved for an inquiry into the precautions taken to secure the *bonâ fide* character of the certificates of attendance given by the teachers in the medical schools and hospitals. In the course of his remarks, he alluded to a hospital and a medical school in Dublin as issuing certificates of attendance which were not in accordance with fact. On being interrogated on the subject on a subsequent day by Dr. Pitman, he replied that he had received the information, under the seal of secrecy as to name, from certain graduates of the University of Dublin. The matter was thereon referred for inquiry to the Branch Council for Ireland. The proposals both of Mr. Macnamara and of the Rev. Dr. Haughton were negatived by large majorities.

The Council removed from the *Register* the name of Adam Addison, who had been convicted of the manslaughter of a woman on whom he attempted to procure abortion; and that of James Patrick Murray, who had been expelled by the Colleges of Physicians and Surgeons in Ireland on account of his atrocious proceedings in the case of the *Carl*, as described by our Irish correspondent last week. A letter from him to the Council was read, in which he pleaded for mercy, endeavouring to put himself in the position of a persecuted individual. He had also appeared, in answer to a summons, before the Council of the College of Surgeons in Ireland.

After dealing with the two offenders, the Council proceeded to the election of a President, when Dr. Acland was reappointed for the usual term of five years.

A portion of the time of the last day's sitting was occupied with dental business. The Council removed the restriction in the curriculum which limited the power of the Colleges of Surgeons in Scotland and Ireland, in respect of dentists in practice *sine curriculo* before 1878, to those actually residing in those divisions of the kingdom respectively in which the Colleges are situated; and passed a resolution requesting the English College to reconsider their determination not to admit candidates under like conditions. A report was presented from the Executive Committee on applications for registration of various foreign certificates in dentistry, and was adopted, the report being unfavourable to the claims in the majority of cases.

THE Leeds School of Medicine has forwarded a memorial to the Privy Council, identical with that presented by the Liverpool Royal Infirmary School of Medicine, published at page 73 of the JOURNAL for July 12th.

THE recently recorded low rate of mortality in English towns due to the low temperature and abundant rainfall still continues. The deaths referred to fever and to diarrhœa were last week considerably below the average; those caused by diarrhœa in the twenty largest towns being only 47, against 669, 243, and 602 in the corresponding weeks of the three years 1876-7-8.

IN London, last week, the deaths were only 1,190, being 490 below the average, whilst the death-rate was only 17.2. During the three weeks ending last Saturday, the rate of mortality has averaged 17.2 per 1,000; the nearest approach to so low a death-rate during the first three weeks of July was in 1860, when the temperature was also considerably below the average, and when the annual death-rate in the corresponding twenty-one days was equal to 18.3 per 1,000.

IN London, the fatal cases of fever, which had been 19, 11, and 12 in the three preceding weeks, declined to 5 (all certified as typhoid) last week, or 23 below the average. It is worthy of record that so few deaths from fever have not been registered in London in any week since 1840, when the Registrar-General's Weekly Returns were first published.

THE medical profession in Rome is represented at this time by 682 members. Of these, 183 are both physicians and surgeons, 142 physicians only, 66 surgeons, 23 veterinary surgeons, 145 midwives, 74 chemists, 20 dentists, and 26 bleed people, extract teeth, and perform similar duties in minor surgery.

DR. JOHN HARLEY has been appointed Physician to St. Thomas's Hospital in the room of the late Dr. Murchison.

THE COLLEGE OF SURGEONS ON MEDICAL REFORM.

THE final sentences of Mr. Simon's report as President of the College of Surgeons on leaving office are so significant, that we think it very desirable that they should receive wide circulation and permanent record. They run thus:

"That the wisdom of Parliament, assisted by the report of that Committee, may speedily terminate our long period of suspense and obstruction, is of greater importance for the rightly understood interests of the public than for any objects which may seem separately professional; and, with regard to both, I believe that the Council will respond to the hope which, in closing this report, I most earnestly express, that, within my next successor's term of office, the desired consummation may be attained. But if that is not to be, and if existing obstacles to proper general legislation for the profession cannot with the present great effort be surmounted, our College, it would seem, must accept this alternative; that, definitely abandoning, at least for many years, all expectation of the larger sort, and deprecating further demands in that direction, we proceed to concentrate our endeavours on the perfecting of our own corporate structure and working, and beg of Her Majesty's Government to give their aid to such amendments of our collegiate charters and by-laws as may be found needful for this separate public purpose."

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during June, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other companies and by the Tottenham Local Board was: Colne Valley, 1.2; Tottenham, 1.5; Kent, 1.6; Chelsea, 2.7; Lambeth, 3.5; East London, 3.6; New River, 3.7; Grand Junction, 5.8; West Middlesex, 7.8; and Southwark and Vauxhall, 8.6. The Thames water supplied by the Southwark and Vauxhall, Grand Junction, and West Middlesex Companies was quite unfit for dietetic purposes on account of excessive pollution with organic matter; the last mentioned company's water was also inefficiently filtered, and contained moving organisms. The Chelsea and Lambeth Companies' water derived from the same source was of superior quality; but the Chelsea water contained moving organisms and was inefficiently filtered. The water supplied by the New River and East London Companies, although efficiently filtered, was slightly inferior to the Chelsea and Lambeth Companies' Thames water. The deep-well waters supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were of their usual excellent quality. Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town, although clear, showed a considerably larger proportion of organic pollution than in recent months, owing probably to the recent heavy rains. Dr. Mills reports that the Loch Katrine water supplied to Glasgow was disturbed by recent storms; entomostraceous insects were visible to the eye, and the microscope showed decomposing vegetable matter.

MORAL DIETETICS.

DR. BOCK of Leipsic writes as follows on the moral effect of different articles of food and drink. "The nervousness and peevishness of our times are chiefly attributable to tea and coffee; the digestive organs of confirmed coffee-drinkers are in a state of chronic derangement, which reacts on the brain, producing fretful and lacrymose moods. Fine ladies addicted to strong coffee have a characteristic temper, which I might describe as a mania for acting the persecuted saint. Chocolate is neutral in its psychic effects, and is really the most harmless of our fashionable drinks. The snappish petulant humour of the Chinese can certainly be ascribed to their immoderate fondness for tea. Beer is brutalising, wine impassions, whiskey infuriates, but eventually unmans. Alcoholic drinks combined with a flesh and fat diet total subjugate the moral man, unless their influence be counteracted by violent exercise. But with sedentary habits they produce those unhappy flesh sponges which may be studied in metropolitan bachelor-halls, but better yet in wealthy convents. The soul that may still linger in a fat Austrian abbot is functional to his body only as salt is to pork—in preventing imminent putrefaction."

HOSPITAL AFFIDAVITS.

THE question of the abuse of medical charities has, it appears, begun to engage the attention of the profession in Chicago, as it has in the large cities of the Eastern States. Quite frequently, complaints are heard from physicians that the college clinics and dispensary services take away their patrons, who are well able to pay for both treatment and medicine. The plan so far pursued, in the largest of the general dispensaries, is to have patients, before being prescribed for, interrogated by a physician appointed for the purpose as to their ability to pay. If he think, after this examination, that anyone be not a proper subject for dispensary treatment, such person is at once dismissed. Notwithstanding this care, unworthy persons are often treated. Some people are fertile in resources of deception, and probably the most painstaking investigation of the circumstances of every person applying for free treatment would not succeed in rejecting all the undeserving ones. The Illinois Charitable Eye and Ear Infirmary, which has a very large attendance upon its dispensary service, has recently put into practice a new means for the prevention of this abuse. Each patient applying for treatment is now required to sign and swear to an affidavit that he is without means and utterly unable to pay. This scheme has been in operation hardly two months; but, says the *Boston Medical Journal*, it is a sad comment on the sacredness with which an oath is held by civilised people with sore eyes and ears, that so far the plan seems to have increased the number of well-dressed people applying for treatment, and who find no difficulty in subscribing to the affidavit.

THE MARCH FROM GUNDAMAC.

OUR special correspondent writes: Peace having been signed by Yakoob Khan and the Viceroy, it became a matter for serious consideration what was best to be done with our troops at Gundamac and those occupying the line of communication through the Kyber Pass thence to Peshawar. If no political objections had arisen on the part of Yakoob Khan, there were many suitable sites in the neighbourhood of Gundamac, where some of the troops might have been located during the summer; but to do so would have necessitated the maintaining of forces at Dakka, Barsowel, Batteko, Jellalabad, Roseabad, and Fort Battey, notably unhealthy positions at this time of the year, when even the natives leave for the neighbouring hills. Fearful destruction to life might therefore have been anticipated had it been decided to hold them. All circumstances having been well considered, the decision was given in favour of evacuation as far as Lundi Kotal (one point of the "scientific frontier"); and it will no doubt prove a wise decision, though at the time many were opposed to it on the grounds of the excessive heat to which our troops would be exposed, and the prevalence of cholera in the Pass. With due forethought on the part of the Surgeon-General of the British force, an experienced officer of the Quartermaster-General's Department and a medical officer were dispatched in advance of the troops, to select sites for camps, making the marches short, arranging for a good supply of water as far as possible, and establishing along the line rest-camps, depôt hospitals, and cholera-hospitals. It was decided that the force should move in small bodies. Though weak and dispirited from long exposure and inactivity, the troops were rejoiced at the prospect of the march, which they hoped would bring a speedy termination to the discomfort of camp life. On the 1st of June, the 10th Hussars and a troop of Royal Horse Artillery left Safed Sung. All apparently went well till Jellalabad was passed, when cholera attacked the men in a most virulent form, and by the time the 10th had reached Jumnod, twenty men had been carried off. The Rifle Brigade met with a still worse fate; cholera attacking the sick and weakly, who had been long sufferers from diarrhœa and dysentery. The batteries of Royal Artillery lost several men, as did the 51st and 17th Regiments.

It is remarkable that some of the native regiments escaped almost untouched, the 4th Goorkas having only one man attacked. Considering the debilitated state of the troops, the intense heat and dust, producing a thirst to which no description or imagination could do justice the unsavoury or unsanitary condition of the roads from the number of dead camels and other animals, which it was impossible to bury from want of labour, the march from Gundamac was not attended with the great loss of life anticipated. The officers and men, however, on arrival at Jumnod, looked all that was wretched; their faces were almost burnt black from the sun and dust, or of highly congested or livid appearance, the eyes were sunken, and they had a thirst which nothing appeared to satiate; some had a scared expression, were confused in mind, and physically helpless. This condition of our gallant troops happily did not last very long. A good night's rest in a comparatively healthy camp, good food, and the prospect of being soon under a roof, made a great alteration in the appearance of most; and they left, after a few days' rest, in excellent spirits for their respective destinations. The medical officers with the force suffered greatly, their duties night and day being unremitting and most harassing. Surgeon-Major Kelsall, R.H.A., who had been in delicate health when leaving the front, gradually became weaker, was unequal to the exposure, and succumbed between Barsowel and Dakka, at which latter place he was interred. Lundi Kotal, which has an elevation above sea-level of upwards of four thousand feet, is now occupied by the 12th and 17th Regiments; the pass from thence to Jumnod being held by Native troops.

THE PLAGUE IN RUSSIA.

DURING the last epidemic at Vetljanka, it was noticed that not a single case of plague occurred among the Kalmucks, who lived not very far from Vetljanka. This is even more remarkable, if we consider that they live in most decidedly antihygienic circumstances, as their religion does not allow them to eat any animal food except the flesh of animals or fishes that have been found dead. They do not bury their dead, but throw them into the fields. Neither can it be said that they are scrupulously clean in their bodies, etc. This seems to prove that antihygienic circumstances alone do not produce the plague, but that there must be some other agent to which this disease is really due.

SCHOOL-DIPHTHERIA.

ANOTHER abortive local inquiry into the causation of diphtheria has been made on behalf of the Local Government Board by Dr. William Ogle at a place called Swimbridge in Devonshire. On the southern outskirts of this parish exist about thirty or more cottages and farmhouses, often quite isolated, and scattered over a considerable area of elevated ground. In this small scattered community, no fewer than fourteen cases of diphtheria (six of which were fatal) occurred in a very little more than a month in the autumn of last year. When the outbreak occurred, the place appears to have been in a very filthy state; but it was subsequently cleared up, and at the date of inspection, about six months later, it had been brought to an average state of cleanliness. Under such circumstances, it was obviously impossible for Dr. Ogle to form any distinct opinion as to the amount of unhealthiness that might have been fairly attributable to nuisance; but he records the belief of the local medical officers of health that it was to the nuisances which had been abated that the origin of the diphtheria was due. Inquiry was made, without success, as to the likelihood of the importation of the disease from without; but the two children first attacked had not been away from home, so that either the infection must have been brought to the place in some untraced way, or have been developed in the place itself. It is worthy of note, that previously to these cases there had been no diphtheria in the place for many years. The outbreak commenced in the persons of two sisters, whose illness was so slight that they were not kept away from the school of the hamlet more than two days—October 7th and 8th—after which they regularly attended school to the end of the month. On October 15th, a boy in a distant cottage was attacked with genuine diphtheria; and all the other occupants of the cottage, five in number, were shortly afterwards attacked by the same disease, and one of them died. The boy first attacked in this family attended school up to and including October 14th; and a sister, who fell ill later on, attended school up to and including October 23rd. In the third week of October three more cottages were attacked, and of the five persons who fell ill four died. It is important to note that the first case of illness in each of these cottages was a child attending the school. The school was then closed, or rather it had closed itself, for on November 1st only one single child, out of an average of forty-three, presented itself to the schoolmistress. A few days after the closure of the school, another (fatal) case occurred in a girl who had attended school for the last time on October 28th, and who, in the interval, had been carefully kept from all intercourse with the cottages already infected. Here the epidemic apparently stopped. In proceeding to inquire as to the circumstances of these cases, Dr. Ogle could find no condition common to them all, except that the children in every cottage invaded attended the same school. The cottages were widely separate; they had each distinct water- and milk-services. Though six of the fourteen cases were not school-children, yet in each cottage attacked the first case, and in three of the cottages the only case, was a child from the school. As has already been shown, children were in constant attendance throughout October, who, though apparently in good health, were yet, there is reason to believe, capable of communicating the infection. The sudden stoppage of the epidemic when the school was closed, points, moreover, in the same direction. The fact that only six out of the twenty-three families represented at the school suffered from diphtheria does not detract from this explanation, as it is a matter of common observation that when a number of persons are equally, so far as can be seen, exposed to some cause of contagion, some of them yield at once, whilst others resist for varying periods of time. The closure of the school alone, in all probability, prevented a much larger proportion than six families out of twenty-three being attacked.

THE PRESENT LOW MORTALITY.

THE difference between the number of deaths from diarrhœa in London during last week and the corresponding week of 1878, is even more extraordinary than that for the preceding weeks of each year. It seems now to be generally admitted that the influence of a high temperature takes some time to make itself fully felt. According to Mr. Turner of Portsmouth, of the deaths due to the influence of the temperature of each week, one-seventh will die during the first week, two-sevenths during the second week, three-sevenths during the third week, one-ninth during the fourth week, one thirty-sixth during the fifth week, and so on, dividing by four. However this may be, it is certain that the very hot weather of June, 1878, was followed by a very remarkable and increasing mortality from diarrhœa during the next few weeks. This year there has been no such increase in the mortality, and the figures have remained at about the same level during the last four weeks. Thus while the proportion last year was 72, 145, 249, 339, the proportion for the last four weeks of this year has been 21, 13, 29, 27. The seventy-seven deaths from diarrhœa last week were no less than 263 below the average for the corresponding week of the last ten years; and the figures are only paralleled by those of the cold and wet summer of 1860. Continuing our comparison, the mean temperature last week was 58.4°, or 5.0° below the average, against 66.8° in 1878. The mean temperature of the Thames water was 60.2°, against 66.5° last year. Rain fell to the amount of 0.23 of an inch, last year no rain being measured. The mean humidity of the air was 86°, against 70°; and the duration of the registered sunshine was only 12.5 hours (or 11.5 per cent. of its possible duration), against 56.4 hours last year. It is not a little remarkable that, whereas twenty-six deaths occurred from diarrhœa at Leicester in the twenty-ninth week of last year, not a single death from that cause was registered there last week.

FOUNDATION CEREMONY AT THE BROMPTON HOSPITAL.

AT Brompton, on Thursday, July 17th, the Prince of Wales laid the foundation-stone of a building destined as an extension of the Hospital for Consumption. The new structure, which will resemble in appear-

ance the present hospital, is being erected on a site immediately opposite (a subway beneath the Fulham Road connecting the two), and will contain 137 beds, raising the total number to 347. The out-patients will find spacious accommodation in the new building, and a recreation-ground and music-room for entertainments, lectures, etc., will be provided. All the sanitary arrangements will be of the most modern kind; and among other noteworthy features is the position of the kitchen, which is to be placed at the top of the building. The royal visitors to the Hospital, consisting of the Prince and Princess of Wales, Prince and Princess Christian, the Duke of Cambridge, and Prince Louis of Battenberg, were received by the Earl of Derby, President, the Chairman of Committee (Mr. Beckwith), the Duke of Norfolk, Viscount Hinchinbrook, M.P.; Captain the Honourable F. Maude, Sir Philip Rose, Bart., Vice-Admiral Sir Leopold McClintock, the Reverend J. Hughes-Owen, Chaplain, Dr. R. Quain, F.R.S., Dr. J. E. Pollock, Professor Marshall, F.R.S., Dr. R. Thompson, Dr. W. T. Law, and Mr. Dobbin (Secretary). Among others present were the Duchess of Westminster, the Marchioness of Londonderry, the Earl and Countess Cadogan, Madame Otto Goldschmidt, and the remaining members of the Committee and the medical staff. The Bishop of London conducted the religious service; while the Grenadier Guards Band, assisted by a triple choir, rendered efficient musical aid. At the conclusion of the ceremony, the Royal party visited some of the wards of the present Hospital, inspected the church, examined the plans of the new building and the valuable pictures in the board-room, and, having taken afternoon tea, left the institution, appearing pleased with their visit.

SCOTLAND.

THE mortality in Edinburgh last week was 17 per 1000. There were ten deaths from zymotic diseases, and only one from diarrhœa.

THE Council of the Royal Society, Edinburgh, have awarded the Makdougall-Brisbane prize to Professor Geekie for his memoir *On the Old Red Sandstone of Western Europe*. This prize is given for the most scientific discovery and scientific work done during the year. The first prize-taker was the late Sir Roderick Murchison.

ARSENICAL POISONING BY SWEETMEATS.

IN the health-report just issued by Dr. Russell of Glasgow, he has called attention to two cases of arsenical poisoning which have occurred in the city from eating some green-coloured sweetmeats, which, on examination, were found to contain both arsenic and copper. Both the children affected recovered; but Dr. Russell has done well in drawing renewed attention to the danger involved in the combination of any green material with anything applied to the mouths of children.

CONFERENCE OF DISPENSARIES, EDINBURGH.

ON Monday, a conference of representatives of the various dispensaries at work in Edinburgh was held in the manager's room of the Royal Public Dispensary; Dr. W. Brown presided. The relation of the dispensaries to the outdoor practice of the Infirmary was discussed, as well as the method of supplying medicines to patients. Dr. Littlejohn submitted maps of the city and suburbs showing the districts allocated to the various dispensaries; and these, with some slight alterations, were approved and adopted. The four dispensaries at work at present are the Royal Public Dispensary, the New Town Dispensary, the Fountainbridge or Western Dispensary, and the Cowgate Dispensary.

NORTH OF SCOTLAND MEDICAL ASSOCIATION.

THE annual meeting of the North of Scotland Medical Association was held on Saturday at Aberdeen; Dr. Greig, senior, of Fyvie, occupied the chair. A Committee was appointed to meet a committee of the Aberdeen, Banff, and Kincardine Branch of the British Medical Association, to consider the necessary steps for obtaining an union of the two bodies. Dr. Will reported that the Committee appointed to consider the election of members to the General Medical Council recommended that the representatives of the Universities should be elected by the Councils of the Universities, instead of by the Professors in Senatus, as at present; and also that licentiates and members of other medical corporations should elect their representatives directly, instead of the election being, as at present, by the councils of these corporations.

THE ADDITIONS TO MONTROSE ASYLUM.

A SPECIAL meeting of the Board of the Montrose Asylum to receive the report of the House Committee as to the cost of the proposed additions to the Asylum was held last week. The estimates amounted to £9,373 13s. 3d., which did not include architects' fees, painting, or furnishing. The Committee were instructed to proceed with the addition without delay.

SCOTTISH METEOROLOGICAL SOCIETY.

THE practical bearing of meteorology on disease was again recognised by Dr. Arthur Mitchell at the meeting of the Society, held on Monday. Alluding to the remarkable manner in which high temperature influences the amount of diarrhœa, he said the question suggested itself to them, "Had the recent period of exceptionally cold weather expressed itself in the recent mortality returns in the way they would have expected if his and Mr. Buchan's conclusions were correct?" They found that, for the seven weeks ending on July 12th, the total number of deaths from diarrhœa in London was 131, while the average number of deaths in London from the same cause during the corresponding seven weeks of the last ten years was 472. At this meeting, Mr. Buchan submitted a communication "On the Cold Weather since November, compared with Cold Periods from 1764". In this paper, he clearly established that the weather had been colder during the past seven months than in the corresponding period of time during 116 years; the nearest approach to it was in 1782, when during seven months the temperature had been 5.2° under the average, while it had been 6° in the plain of the Severn and in some places in Scotland. It was noticeable that the cold was most intense in inland districts and on the eastern coasts and less so in parts exposed to the Atlantic.

GLASGOW VETERINARY COLLEGE.

THE summer session of this institution terminated on the 15th instant, and on the 18th and 19th instant the examinations for the diploma of the Royal College of Veterinary Surgeons were conducted within the museum. Among the examiners were Professor Crum Brown, Dr. Andrew Wilson, and Dr. Dunsmure of Edinburgh. Twenty-six students presented themselves for the first professional examination, and of this number twenty-three passed a highly creditable examination.

LOW DEATH-RATE IN GLASGOW.

THE statistics just published by Dr. Russell, Medical Officer of Health for Glasgow, show that the present season is one of the healthiest on record. For the week ending Saturday, the death-rate was the remarkably low one—for Glasgow, at least—of 16 per 1,000 annually of the population, compared with one of 29 per 1,000 in the corresponding period of 1878. Dr. Russell considers that the present unseasonably low temperature is preventing the development of the characteristics of summer mortality, and retaining in a slight degree those of winter.

IRELAND.

DURING the June quarter, there was not registered, in the town of Waterford, a single death from either small-pox, measles, scarlet fever, or whooping-cough.

THE HIGH DEATH-RATE OF DUBLIN.

WE are glad to see it stated that the Government have at length consented to appoint a Commission of Inquiry to investigate the causes of the high death-rate of the city. Dr. MacCabe, Local Government Board Inspector, and Colonel Rawlinson, R.E., are named as the Commission.

A SPECIAL meeting of the Queen's University Graduates' Association, Belfast, was held last week, when it was decided to appoint a deputation to represent the views of the Association before the Government, and urge their support upon members of the legislature.

THE MAIN DRAINAGE OF DUBLIN.

THE Local Government Board have sanctioned the proposed loan of £30,000 for completing the sewage of the city. This is a work of the most essential importance as regards the public health, which for sundry reasons, especially want of funds, has too long been deferred. We trust that now no difficulties may be allowed to stand in the way of its prompt execution.

ZYMOTIC DISEASES IN BELFAST.

THE annual rate represented by deaths from the seven principal zymotic diseases registered during the June quarter was 4.6 per 1000 of the population in 1871, or 3.7 per 1000 allowing for the increase since that year. Whooping-cough was very fatal, and caused 94 deaths; fever, 46; diarrhœa, 43; measles, 15; scarlet fever, 7; and diphtheria, 4. There was no death recorded from small-pox.

LUNATIC ASYLUMS, IRELAND: ANNUAL REPORT.

FROM the twenty-eighth report of the District, Criminal, and Private Lunatic Asylums in Ireland, which has been recently issued, we learn that, on December 31st last, there were 12,585 lunatics in these institutions, of whom 3,337 were located in poorhouses, 8,407 in district asylums, and 642 in private asylums. There was an increase in the accommodated insane during the past year of 205, as compared with 1877, of which increase, district asylums, in consequence of additional accommodation, have not largely participated, while there has been a decrease of 35 in poorhouses. At the end of 1877, there were 8,183 patients in district asylums, and last year 2,336 were admitted, or a total of 10,519 under treatment in 1878. Of these, 1,047 were discharged cured, and 221 improved, constituting a total of 1,268. Looking to the percentage of cures on the total resident, as well as to annual admissions, one year with another during the last ten years, there appears but little variation in Irish district asylums; and they may be considered as ranging from 44 to 47 on recent cases, and from 11 to 13 on the aggregate in them. The deaths during the year came to 817, all from natural causes with the exception of five, two being suicidal, and the other three resulting from accident or violence. Estimated on the total under treatment, the mortality was 7¾ per cent., being somewhat below that of the previous year; and it may here be remarked that the death-rate in Irish asylums is, generally speaking, lower than in similar institutions elsewhere by nearly 1 per cent. Of the deaths, the principal were due to thoracic affections 277, cerebral and cerebro-spinal diseases 223, while 172 were attributable to old age and debility. The admissions were 2,366 during the year, 1,934 being cases of a first attack, and 432 relapses, numbers slightly exceeding those of the previous year. A classification of the 8,407 persons in district asylums at the opening of the present year would, as regards their mental condition, distinguish them as follows: 1,840 lunatics, probably curable; 5,795 probably uncurable; 576 epileptics, and 196 idiots; so that the curable scarcely number 28 per cent. of the total under treatment. We learn that, although in the population females are in excess by nearly 2½ per cent., yet, of the 10,548 lunatics in district asylums during last year, 5,670 were males and 4,878 females; also that there was a marked disparity existing between the married and unmarried inmates of Irish asylums, public as well as private. For example, in the latter institutions, the single amounted to 502, the married to 90, and widowers or widows to 50; also of the 8,407 patients residing in district asylums at the commencement of the present year, 5,703 were single, 1,776 married, and 565 widowers or widows; while, in the Central Criminal Asylum, the unmarried stand fully as three to one in proportion to the married and widowed, a peculiarity which has received no satisfactory explanation. As regards the supposed cause of mental disease in the patients in district asylums, we find that 1,619 were due to moral, and 2,004 to physical causes, while 1,172 were hereditary, and 3,612 not known. Intemperance and irregularity of life were referable to 611 cases, grief, fear, and anxiety to 486, cerebral diseases to 471, bodily injuries and disorders to 455, poverty and reverse of fortune to 333, and religious excitement to 232. The inspectors speak highly of the satisfactory condition of the public institutions for the insane in Ireland, the various resident medical superintendents devoting every care to the well-being of the inmates, both in a domestic and professional point of view, in which latter they have been well supported by the visiting physicians. The general staff are also regarded by them as deserving of much credit; and indeed, during the twelve months ended, no serious causes of complaint, involving cruelty or criminal neglect of patients, have arisen.

BELFAST HOSPITAL FOR SKIN-DISEASES.

THE annual meeting in connection with this institution was held on the 11th instant, in Belfast. The Committee, in their fourteenth annual report, state that, during the year, nine hundred and seventy-two patients were treated by the hospital; but that, in consequence of the want of funds, only eight persons were admitted as intern patients, the Committee not being able to provide for a larger number. The total income was £222, of which only £73 was obtained by subscriptions and donations. The expenditure came to £173; and, remembering that fully one-third of the diseases treated were of a highly contagious nature, and that, by their stay and treatment in the hospital, not only have the patients themselves been relieved, but the spread of the diseases in Belfast and its neighbourhood curtailed, it is evident that the amount expended is small, when compared with the relief afforded. The Committee acknowledge a donation of £1,000 from Mr. George Benn, brother of the late Mr. Edward Benn, whose generosity provided the present hospital buildings. It is to be regretted that the institution is not properly supported; and it is to be feared, unless the annual income is considerably augmented, that it may be necessary not only to close the intern department against all except pay-patients, but materially to curtail the number of dispensary patients also. A vote of thanks to Dr. H. Purdon and the other honorary office-bearers of the hospital, and to Mr. Benn for his generous donation, terminated the proceedings.

MEDICAL OFFICERS OF PRISONS IN IRELAND.

ANOTHER circular, the fifth of the series, has been addressed to the surgeons of county infirmaries, acting as medical officers of jails, from the General Prisons Board (Ireland), informing them that the Board are advised that they may be regarded as prison officers within the terms of the 27th Section of the General Prisons Act, 1877. Also, that the following arrangements have been sanctioned as regards the remuneration of the medical officers of jails, appointed previous to the passing of the Act of 1877: viz., that they should have the option of undertaking the duties of compounding medicines, in addition to their duties of medical officer, and to be paid according to a general scale approved by the Treasury; or, in the event of the medical officer being unwilling to undertake the duty, that the salary of any such medical officer should be individually considered, according to the circumstances of the case. At a meeting of those interested in the matter at issue, held on the 15th instant, the following resolution was unanimously adopted: "That the members of the Association of Surgeons of County Infirmaries and Prisons in Ireland, while desiring to keep strictly within the respect due to the head of a department in which they serve, feel that the time has arrived for their giving very strong expression to the dissatisfaction they entertain—finding that, after the lapse of nearly two years, during which they have cheerfully performed increased and additional duties, though so long left uninformed as to the proposed rate of remuneration, they consider the terms of the circular letter of July 8th as not only not in accordance with the intentions of the legislature, but also as derogatory to those to whom it has been addressed. The members of the Association cease to have hope of just recognition of their claims by the General Prisons Board, and find themselves compelled to have recourse to every legitimate and constitutional means to draw Parliamentary and public attention to the great injustice under which they labour."

SELECT COMMITTEE ON THE MEDICAL ACT (1858) AMENDMENT BILL (No. 3).

House of Commons, Friday, July 18th, 1879.

THE RIGHT HON. W. E. FORSTER in the Chair. Present: The Right Hon. Lyon Playfair, Dr. Cameron, Dr. Lush, Mr. Dalrymple, Sir Trevor Lawrence, Mr. Plunket, Mr. Wheelhouse, Mr. Maitland, Mr. Errington, and Mr. Mitchell Henry.

PROFESSOR TURNER was called and examined.

By the CHAIRMAN: I am Professor of Anatomy and Dean of the Faculty of Medicine in the University of Edinburgh. I have been Professor of Anatomy since 1867, and Dean of the Faculty of Medicine for two years. I took a medicine degree at the London University. I have been a member of the Medical Council for six years, and represent the Edinburgh and Aberdeen Universities. I have here a paper, from which it appears that the number of students of medicine at Edinburgh in the year 1876 was 1070; in 1877 there were 1169; in 1878 there were 1290. There has been a steady increase during the last eight or ten years. The course is a four years' course, and the number of fresh entries each year is from 250 to about 320. I have analysed the 1,290 students of 1878, and I find that 565 were born in Scotland, being a percentage of 43.8; that 445 were born in England and Wales, being a percentage of 34.5; that 22 were born in Ireland, being a percentage of 1.7; that 75 were born in India, being a percentage of 5.8; that 149 were born in the different British colonies, giving a percentage of 11.6; that 34 were born in foreign countries, being a percentage of 2.6. The increase is probably a fairly proportionate increase, perhaps the colonies giving a somewhat larger proportion than the rest. The University of Edinburgh is, I believe, the largest existing school of medicine, and dates its rise from 1720, so that it has been established for a century and a half. I have before me an analysis of the anatomy class, which gives a very fair idea of the general attendance at the University, because all students must attend the anatomy class at an early period of their study. In 1780, the number of Scotch students was 235; of English, 53; of Irish, 48; of Americans, 3; and of foreigners, 3; making a total of 342 students in the anatomy class for that year. In 1790, the Scotch students numbered 262; the English, 73; Irish, 61; Americans, 26; foreigners, 12; making a total of 434. I believe that Edinburgh University was one of the first to give anything like a complete medical training in this kingdom, according to the ideas of the time. The number of Bachelors of Medicine in 1876 were 88; in 1877, they were 108; and in 1878, they were 117; making a total of 313 in the three years. An analysis of those showed that 141 were natives of Scotland, being a percentage of 45.1; that 106 were natives of England and Wales, being a percentage of 33.8; that 2 were natives of Ireland, or a percentage of 0.6; that 24 were natives of India, or a percentage of 7.7; that 31 were natives of the various colonies, or a percentage of 9.9; that 9 were foreigners, being a percentage of 2.9. My analysis of the Doctors of Medicine shows that there were 19 in 1876, 34 in 1877, and 30 in 1878. We give the degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. The degree of Master in Surgery is conferred along with the degree of Bachelor of Medicine, and almost all the Bachelors of Medicine take the degree of Master in Surgery at the same time—something like 95 per cent. I have had an analysis made of the Edinburgh graduates whose names are recorded in Churchill's *Medical Directory*, where the names, residences, and qualifications of all the practitioners in London, the provinces, Scotland, and Ireland are given. I preferred to take Churchill's *Directory* for the reason that, for the purpose I have before me, the *Medical Register* would not be so exact a guide, as Churchill's *Directory* more correctly shows the men who are in practice at the time than the *Medical Register*. According to my analysis, I find the names of 2,319 Edinburgh graduates appear in the former, and of these, 572 are in practice in Scotland; or 30 per cent. of the total practitioners in Scotland; 274 are in practice in London, or about 9 per cent. of the total practitioners in London; 857 are in practice in the English provinces and in Wales, that is, about 8 per cent.; 108 are in practice in Ireland, or about 4½ per cent. of the total practitioners. Churchill also gives a list of the practitioners in the public service and mercantile marine, and I find that 256 of these are Edinburgh graduates, or 11½ per cent.; and he gives a list of practitioners abroad, but of course it is a very imperfect list; the nature of the thing would not allow it to be a perfect list. I find in that list there are 252 Edinburgh graduates, or about 16 per cent. of the total number. It would be an extremely laborious task to analyse the whole of the graduates, so that I have contented myself with having an analysis made of the year 1877; and I find that, of 34 Doctors of Medicine made in 1877, 16 had other qualifications; and of 108 Bachelors of Medicine made in the same year, 24 had other qualifications. The greater number of those other qualifications would, I think, be taken after receiving our degree. One of the main reasons why they take the additional qualifications, I believe, is that there are many appointments, such as those of physicians and surgeons to public hospitals and dispensaries, which can only be held by those who have either the membership or fellowship of the College of Surgeons or of the College of Physicians; and, therefore, those who wish to hold such appointments, prefer to go to one of the Colleges to get the qualification. Some of the other bodies accept the earlier part of our examination, but I believe that it is the case with all the examining boards now, that persons seeking to obtain a licence for fellowship or a degree, must go through some portion of their examination. The reason why students resort to this University from various parts of the world is, I suppose, because the reputation of the University as a school of Medicine is so highly acknowledged, that her graduates are scattered all over the world. Students are thus induced to go there and obtain medical education in the first instance, and then, if they succeed in passing the examinations, they get the degree of qualification for practice. I could not admit for a moment that the explanation of students flocking to the Edinburgh University is to be sought in the laxity of the examinations. The medical professors in the University of Edinburgh hold out, as as essential part of their function, that the business of teaching should be the primary occupation. With us, teaching is a business, and I think when men pursue a particular occupation as a business, that they naturally, if they pursue it zealously, make it successful; and I believe that is one great reason of our success—that teaching is our primary occupation. Then we have laboratories and museums, organised on what we believe to be the very best methods of teaching. We have also a large and valuable library, enabling the students to obtain access to a wide range of medical and scientific literature. We have developed what I believe I may say is a very complete system of practical teaching, not merely in connection with the hospital, not merely in connection with our methods of teaching clinical medicine and clinical surgery, but with regard to the teaching of sciences on which knowledge of practical medicine is based. For instance, there is a large anatomical school, there is a large chemical laboratory, there is an important department for teaching, through the aid of a botanical garden, botany in its practical relations; there is also a school of practical natural history and practical zoology; physiology is also taught in a regularly organised laboratory; and pharmacy is taught. We have a regular institution for training students in a knowledge of practical pharmacy. Then, with regard to our hospital instruction, we have organised a system by which all students are drilled in the methods of physical diagnosis, in the methods of using the microscope, and in the matters of various secretions, and so on. Very precise instruction is given in the principles of operative surgery, bandaging, and so on; and we owe much to Mr. Lyon Playfair for what he has done in the matter. As to our mode of teaching, I consider it is more reliable than that of most other schools. There were instituted by the Scotch University Commissioners, under the Act of Parliament passed in the year 1858, certain regulations as regards the preliminary examination, which all candidates, not only for the degrees of Edinburgh University, but for the degrees of the other universities in Scotland, must pass before they can be admitted. On page three of the book I hand in, there are three sentences which show what the subjects of the University are. The preliminary branches of extra professional education are English, Latin, arithmetic, the elements of mathematics, and the elements of mechanics; and the proficiency of students is ascertained by an examination prior to their commencement of study. No candidate is admitted to professional examination who has not passed a satisfactory examination, in addition to those subjects, on two of the following: Greek, French, German, higher mathematics, natural philosophy, logic, and moral philosophy. In the first professional examination, candidates have some latitude allowed them. They appear for their examination after two summers and one winter of medical study, or two winters and one summer; and after those three terms, there is an examination in botany, chemistry, and zoology, with comparative anatomy. The second Bachelor's examination is in anatomy, physiology, pathology, and morbid anatomy, materia medica and pharmacy. That examination takes place at the end of the third winter of professional study. Then there is the final examination, which takes place in the last summer, and in which the subjects are medicine, surgery, midwifery and diseases of women, forensic medicine and public health, clinical medicine and clinical surgery. The title of Master in Surgery implies that the examination is a complete examination in medicine and in surgery, and that candidates who pass it can, if they choose, obtain a

complete qualification, that is to say, the degrees of Bachelor of Medicine and Master in Surgery. The former degree they must obtain, but the degree of Master in Surgery is optional. As I have said, about 95 per cent. of the candidates take the complete qualification, the other 5 per cent. being deterred, perhaps, by the fees, as they have to pay five guineas for the first professional, five guineas for the second professional, and five guineas for the final. During the years 1876-7-8, 756 candidates presented themselves for the first Bachelor of Medicine examination. Of these, 248 were rejected, the percentage of rejections being about 33 per cent. During the same period, 518 candidates presented themselves for the second Bachelor of Medicine examination, of whom 172 (the same percentage) were rejected. For the final examination, 364 candidates appeared, and 51 (14 per cent.) were rejected. The majority of those rejected in the first examination come up again. There is no restriction as to how often they can come up, but when a student is rejected twice in succession, he thinks a little before he comes up a third time. Greek is not necessary for the degree of Bachelor of Medicine. I believe the London University does not now require an examination in Greek; it used to do so. I have gone into the matter as regards the rejections for the degree of M.D., on the thesis, and I find that 11½ per cent. of the men who send in theses and otherwise carry out the regulations are rejected, so that will show that the thesis is not a mere matter of form. No right to call one's self a doctor is conferred by the Bachelor's degree. There was no such thing as the degree of Bachelor of Medicine in Scotland before the Scotch Universities Act of 1858 was passed, as, prior to that time, all graduates were Doctors. The Bachelor's degree has been conferred in England from time immemorial, and it has been long a matter of custom for a graduate of medicine of Oxford and Cambridge Universities to be addressed as Doctor as a matter of courtesy. Prior to the Universities Act of 1858 —an Act which reorganised our entire system—the professors in the universities were the sole examiners; but the Scotch universities thought then they should no longer continue to be so, and they appointed, to be associated with them, three gentlemen with the title of assessors; but it was found, as a matter of experience, that this arrangement did not give the kind of strength to the examining board which was required. The medical faculty and the senatus then applied to the Privy Council for leave to have our examining board extended. Such leave was given, and the examining board now consists of twelve professors and thirteen non-professors, which gives two examiners in each subject, one examiner being a professor and one a non-professor. Regulations for study, examination, and graduation for all the Scotch universities were established by ordinances of the Scotch University Commissioners, under the Act of 1858; all the ordinances were sanctioned by the Privy Council, and any alteration which has been made in them since has been with the sanction of the Privy Council. We have no power to alter any one of our regulations as regards study and examination without the approval of the Privy Council. I wish to direct attention to what I believe is a misconception of the universities in an important public document handed in by Mr. Simon. It is headed "No. 2. Extract from the 12th Report, 31st March, 1870, of the Medical Officer of the Privy Council". The Scotch universities are not corporations, each with liberty to restrict the conditions and apply the tests under which its own licences shall be granted. The regulations for the Scotch universities were made by a Royal Commission appointed by Act of Parliament, and no possible change can be made in those regulations without the sanction of the Privy Council. I should say if the four universities made any proposal for a change which was rather of a deteriorating character, the Privy Council ought not to agree to it. We have seven subjects for our preliminary examination, whereas the Medical Council and the English conjoint scheme have recommended but five. Five of our subjects are compulsory—English, Latin, arithmetic, mathematics, and mechanics; whilst the Medical Council have recommended that mechanics should not be compulsory; although yesterday the Council passed a resolution that, in future, mechanics should be compulsory. But their examination in mathematics is not so extensive as ours, and, under the resolution of yesterday, there are three optional subjects—Greek, French, and German; that is to say, a candidate may take any one of those. The medical faculty has nothing to do with the preliminary examination, which is conducted by the examiners in arts at the University. For the professional examination, we require that four years of study must be spent in a medical school, and that at least one must be spent in the University of Edinburgh. Under the English conjoint scheme, only three years need be spent in a medical school, and the remaining year may be spent as a pupil with a practitioner, a pupil in a hospital, or attending lectures. From an analysis I have made for the year 1877, I find there were 108 graduates, that 35 had taken four and a half years of study, 29 had taken five years, and 24 had taken more than five years of study; so that, although we allow admission after four years, the general conclusion is, that it is only a small minority who do graduate in four years, and those who do are clever fellows. I have no doubt at all that our pass examination for the degree of Bachelor is higher than is required generally for the qualification of practitioners. I have had twenty-five years' experience as a teacher, and was for five years examiner in anatomy at the University of London. I think that, unless you adopt a lower standard than ours, you will not get an adequate number of medical men to the requirements of the country. The examinations are higher than I think necessary for general adoption, because, firstly, they are based upon a more extended system of education—scientific, practical, and clinical; secondly, they embrace a wider range of subjects taught; thirdly, they require a more complete scientific training, familiarity with and power of applying modes of scientific thought and inquiry, than is needed for ordinary practice. For this reason, Edinburgh graduates have always taken a prominent place as teachers in medical schools and science. We require not only an examination in chemistry, which is required by the English conjoint scheme, but a specific examination in botany, in zoology, and in comparative anatomy; and I should state that the examinations for the degree of Bachelor of Medicine in chemistry, zoology, comparative anatomy, and botany are the same as those which we require from our science graduates. The excellence of our degree is based not merely on our scientific training, but on our training throughout, practical and clinical. There are one or two other matters on which our examination is more extensive than the examination proposed by the conjoint scheme; for example, we require specific education and examination in pathology and morbid anatomy; the conjoint scheme does not do so, but merely throws them in with medicine and surgery; so with forensic medicine and public health. I believe the reports of the visitors state that our examinations are satisfactory. Then our examining board is a conjoint board, inasmuch as it is made up of the professorial element and the non-professorial element, which latter consists of just those persons who would be introduced on to the board, supposing the conjoint board were established, viz., experts in the particular subjects who are not members of the teaching body, Fellows of the Colleges of Surgeons and Physicians. Hence I submit we already have in our university system all that is proposed under Clause 3 of the Government Bill. The conjoint scheme would subject our candidates to a superfluous examination, and entail payment of an additional fee, without any corresponding advantage. Clause 5 of the Government Bill gives a premium to candidates passing the conjoint board, to associate themselves with a corporation in preference to an university, and no university having a proper estimate of the value of its degree could accept the examination of the conjoint board as equivalent to its own examination; neither could it, with Clause 19, obtain proper funds from the conjoint board, in any proportion of the surplus. The University, I am sure, would be extremely loth to diminish the stringency of its examination or the completeness of its mode of teaching. I do not think there is anything in the Bill which would injuriously affect us. I have no complaint to make of it as it is. We hold that the examination by the College of Physicians and the College of Surgeons in Scotland is a lower examination than that by the University. I should propose an amendment to Clause 15 of the Government Bill, subsection 3, line 25, according to the last edition of the Bill, after the word "examinations" to add the words, "and shall further provide that every member of a university who shall have passed the professional examinations at such university for the degrees in medicine and surgery by it, shall be exempted from any further or separate examination for a qualifying certificate under this Act, provided that each department for professional examination, so far as regards all those subjects on which the Medical Board is required under the scheme to conduct examinations, shall be conducted before a board of examiners, of whom one half at least shall be examiners appointed by the Medical Board of that part of the United Kingdom in which such university is situate". Under this, our non-professorial examiners would be appointed by the Board. That amendment was proposed in the House of Lords when the Bill was going through Committee. I would further suggest that the conjoint examinations, so far as regards the University candidates, should be restricted to clinical examinations. I am of opinion that the University of Edinburgh should have a representative of its own on the Medical Council.

Mr. ERRINGTON then examined the witness as to the character and result of the German system of examinations, which the witness stated was a twenty-portal system. The examining board was appointed annually by the Government of those States which possessed universities, but practically the examining board consisted of the professors or teachers of the universities in which the examination took place; so that teachers examined their own people. Formerly, Germany adopted the

uniportal system, and all candidates had to go to Berlin for examination; but this was found to be so cumbersome and costly a scheme that it had to be given up, and there were now twenty legal modes of entrance to the profession. As far as he could understand the complexity of the German bureaucratic system, and the technical terms employed, it would seem that the German universities were under the control of the Minister of Education, and the Staats-Examen was under the control of another department of the Government. Before a candidate could get a licence to practise and his degree, he must undergo two examinations in the same place by the same examiners, and on almost the same subjects; so that he was subjected to what witness considered unnecessary labour. In Austria, Switzerland, and Russia, the examination for the licence to practise was conducted at universities, which showed that experience had decided that the examination for the licence to practise could be conducted by no one better than by the State, and in no more convenient and economical a manner than by university teachers. If the Medical Act were amended so that no one could get on the *Register* without being able to show that he had gone through a complete examination and got a double qualification, an important reform would be carried out which would practically do away with a great deal of the agitation. He thought he might say, the feeling in Scotland was universal against the conjoint scheme, as the remedy proposed was considered to be worse than the disease. With regard to the question of direct representation, he quite sympathised with those who felt that there should be a representation of the general practitioners on the Council; but whether the best means of attaining that end was by a vote of the profession, was a matter on which he could scarcely form a definite opinion.

By Dr. LUSH: It would lower the standard of the profession if men were induced to go into practice on a qualification less than that which the universities of Scotland required. If anything in the way of legislation were done which subtracted from the number of their students and candidates, the standard of medical education would be lowered throughout the country. He feared that under the conjoint scheme candidates would be satisfied with the examination of the conjoint board, and would not go to them for higher examinations. The cause of the failure of the uniportal system in Germany was to be sought in the fact that students were subjected to the expense and inconvenience of having to go to Berlin. He did not know that at that moment there was a single university in England which could give a complete medical education. It certainly seemed to him an anomaly that they should admit a foreign or colonial practitioner on the *Register*, if the Medical Council thought fit, without his going through an examination by the conjoint board, whilst a graduate of one of their own universities could not be so admitted. In any alteration of the constitution of the Council, he would not disfranchise any of the present corporations, except perhaps the University of Durham and the Apothecaries' Company. He was not prepared to say improvements might not be effected in the Medical Council, but he thought it was a very useful body as it was. It should be remembered that the powers of the Council were simply recommendatory, and that the Council had done a really good and efficient work, because it had, through the Medical Act, in a most material degree improved the examinations and the education of general practitioners. Before 1858, for instance, there was absolutely no test of a student having had any preliminary education at all.

By Mr. MAITLAND: He was not aware the public had ever pronounced in favour of the conjoint scheme; certainly the profession had not. He did not think any good would be effected by the conjoint scheme beyond what could be obtained with a full inspection of the examinations regularly carried on.

By Mr. WHEELHOUSE: The statement had often been made, that degrees were easily obtainable in Scotland; but he had no knowledge that such was the case. No corporations, so far as he knew, either in England, Scotland, or Ireland, required residence for their degrees. He submitted that the Scotch examinations were closer and more critical than the examinations of the English corporations; but he would not say the same as regards the English universities. Still he believed the university examinations in Scotland were perfectly on a level with the university examinations in England.

By Sir TREVOR LAWRENCE: Many students broke down in scientific examinations; many tried twice, and even three times, and failed to pass. There must be on the part of many most excellent men a difficulty in getting hold of scientific questions, and yet these men might turn out to be admirable practitioners. He thought it would be out of place for the Medical Council to occupy its time with any such matters as sanitation or the army and navy services.

By Mr. MITCHELL HENRY: It did not follow that, because many students registered in England and then went to Scotland to perfect their education, the preliminary examinations were easier in England, because those who went up for preliminary examination were, comparatively speaking, boys, and it was an advantage to them that they should pass their preliminary examinations in localities near their homes. The University of Edinburgh accepted a portion of the attendance at London schools—viz., two years—as equal to attendance with them. It was not a fact that the Edinburgh College of Physicians would sell to a member of the Apothecaries' Society its diploma without any examination and without any attendance.

By Dr. LYON PLAYFAIR: The corporations in Scotland had already a conjoint scheme (a voluntary one); but the universities had not, because they had no need of it. He thought the effect of the proposed conjoint scheme would be to increase the cost of admission to the profession, and so deter men from entering it, thus restricting the supply of medical men to the public. He believed the conclusion come to from an examination of census-returns was that the medical profession was not increasing *pari passu* with the population. Supposing examiners were appointed by the Medical Council, he thought the system would then be precisely on the same footing as that of the Staats-Examen in Germany.

The Committee then adjourned.

Tuesday, July 22nd.

Present: Messrs. Plunket (in the chair), Mitchell Henry, Arthur Mills, Wheelhouse, Maitland, Heygate, Dr. Lush, Sir Trevor Lawrence, and (later on) Right Hon. W. E. Forster.

Professor HAUGHTON was called.

Examined by the CHAIRMAN: Witness said he was an M.D. of Dublin University; D.C.L. of Oxford University; Fellow of Trinity College, Dublin; F.R.S.; and represented the University of Dublin on the Medical Council. He had acted for fifteen years, closing last Christmas, as Medical Registrar of the University of Dublin, and as such had the entire charge and responsibility of the conduct of its large medical school. There were two governing bodies in the University, the Provost and Senior Fellows, who were an executive body; and the Council, which was an elected body. The Medical School of the University of Dublin, which was technically called the School of Physic in Ireland, was a body created by Act of Parliament. It was placed under the joint government of the University of Dublin and of King and Queen's College of Physicians in Ireland. The University appointed the University professors, and the King and Queen's College appointed their professors. The two bodies worked very harmoniously. The Court of Examiners for medical education consisted partly of professors, and partly of non-professors, precisely the same as that of the University of Edinburgh, as stated by Professor Turner in his evidence. There was everything that was necessary to form a complete school of medicine and surgery. They could, of course, not boast of the large number of students that the University of Edinburgh had, but, nevertheless, it was a large and an efficient school. The school was very popular in Professor M'Carthy's time, from 1820 to 1835, when there were upwards of three hundred students, though, after he retired, the number fell off, until it came down to thirty. Within the past fifteen years, however, they had restored it again to its old strength, and there were now three hundred medical students. In M'Carthy's time, a large number of the students were English, owing to the defects in provincial medical education, particularly in the north of England. At the present time, nearly all the medical students were art students as well. The Dublin University aimed at educating the higher classes of the medical profession, and was the only university in the United Kingdom having a large medical school that required all graduates in medicine to be graduates in arts before they received a medical degree. They did not aim so much at educating the rank and file of the profession as educating the higher classes, and developing the higher branches. [Witness handed in a paper showing that, from the year 1864 to 1878 inclusive, there graduated 189 Doctors in Medicine, and 196 Masters in Surgery, whilst the total number of matriculations in the same period amounted to 1,049.] Their degrees in medicine and their licences were identical so far as professional qualification went, and the recipients were in every respect on a professional equality; but degrees in medicine were only conferred upon those who had graduated in arts. During the past fifteen years, there had been conferred forty-four licences in medicine, and there had been 539 bachelors in medicine. Many of those who obtained the licence went up afterwards for the degree of Master in Surgery or Doctor of Medicine. The higher degrees were often taken out years afterwards. The Dublin University had been very forward in improving medical education, and they were the first University in the kingdom that recognised the modern position of surgery by conferring degrees in that branch of medicine. They were still the only University that conferred degrees in obstetric science, and they were the first to institute clinical examina-

tions for degrees in medicine, surgery, and midwifery. According to his recollection, the College of Physicians of Ireland commenced their examinations in medicine about the same time as the Dublin University; but the latter preceded all the other bodies in surgery and midwifery. They were the first University in the kingdom to hold examinations and confer diplomas in State Medicine. Their total students numbered about thirteen hundred, of whom about three hundred were students in medicine also. The University of Dublin was in favour of any scheme that would secure uniformity of standard with a minimum qualification at which it would be safe for men to practise; and the University approved of the conjoint scheme proposed by the Lord President. The Board of Trinity College had passed a resolution in order that he might be able to state authoritatively their opinion. The resolution in favour of the conjoint scheme was passed by them on the Lord President's original scheme, which in that important matter allowed the Medical Council to delegate to the Branch Councils in England, Ireland, and Scotland the initiatory project of the conjoint scheme. The proposed project then was to come back to the General Medical Council, to be approved or not by them; and, if not approved, the matter was to be settled by the Privy Council. Lord Emly, however, introduced an amendment to the Government Bill in the House of Lords, which amendment was accepted by the Lord President. That imposed upon the Medical Council the duty of making a conjoint scheme of examination for each part of the United Kingdom, and did not allow the initiation to be taken by the local bodies. The Dublin University had not had before them both propositions, so that they had not expressed any preference. Speaking for himself, he believed that the Lord President's original scheme would lead to less practical difficulty. A variety of causes had combined to raise the standard of education of late years; the general progress of education in mathematics and other branches of knowledge as well as in medicine; and public attention having been directed to the irregularities of examinations and curricula, perhaps public opinion had something to do with improving the standard. He was instructed by the University to say that, although their chief aim was to educate the higher classes of the medical profession, they nevertheless felt it to be their duty in the interest of the public to join in any scheme such as the conjoint scheme proposed, and not to take any narrow view of reform. He thought too much importance was attached to examinations, crowding one after another upon students, and too little time was spent in practical teaching and hospital work. The conjoint scheme would effect an improvement in that respect. He entirely agreed with Professor Turner that university students should not be examined in scientific subjects by a conjoint board, as they were better taught and examined upon in universities; and also that the conjoint board, in dealing with a student who had passed through a proper curriculum, should confine itself to clinical examination in surgery, medicine, and midwifery. He saw no difficulty in the way of a conjoint scheme for Ireland if it were made compulsory. Witness thought much good would result from the clause providing that practitioners should affiliate themselves to corporations, as by that means a very wholesome influence could be exercised over offenders; but he strongly objected to the addition that, where corporations refused to incorporate, men could still go on the *Register*. There were two doors open to women: the College of Physicians in Ireland, and the Apothecaries' Hall in England; and he had no doubt that, as soon it was generally known that money could be made of them, some of the Scotch bodies would open their doors to women. The University of Dublin were in favour of the direct representation of the profession on the Council in addition to the interests already represented there, inasmuch as they believed that direct representation would strengthen the influence of the Council.

Sir TREVOR LAWRENCE: Would you confine the Medical Council to the duties at present discharged?

Witness: Does it discharge them?

Sir TREVOR LAWRENCE: But the duties supposed to be discharged?

Witness: I would.

The CHAIRMAN: Can you suggest any other beneficial change in the constitution of the Council?

Witness said he thought it ought to be very seriously considered whether medical schools not connected with universities or corporations might not have some representation; for instance, the medical schools in Dublin, of which there were four; then there was an extra medical school in Edinburgh, and one in Glasgow, and there were very important schools in Manchester, Liverpool, Leeds, Birmingham, which ought to be considered in any amendment of the constitution of the Medical Council. He thought the present members of the Council, from their high standing and position, were more likely to be affected by the traditions of the past than by the practice of the present. Sir Dominic Corrigan's statement that, "of the nineteen examining bodies, at least nine or ten of them have been added since the Council came into existence, with the sanction, if not at the instigation, of the Medical Council", was not accurate, and showed an almost inconceivable confusion of ideas; there were nineteen examining bodies in 1858, and there were nineteen now, all represented on the Council under the Act. And Sir Dominic's statement as to medical qualifications being easily obtainable from the University of Dublin was not fair, as would be seen from what witness had already stated of their requirements. The examinations were, in fact, much above those required by the Medical Council. There were six medical schools in Dublin, one only being under the control of the University directly. It was formerly the custom of the University to recognise no school but their own, but he had made representations to the governing body of the University that this was a great injury to their students, and he proposed to throw open the teaching of all the schools and all the hospitals to their College students. The result of this had been most beneficial, because the student went where he got the best instruction. He objected to the statement that the University assumed the power of granting licences. So far from that being the case, the power was conferred upon it by Act of Parliament. Sir Dominic Corrigan's statement that licences in medicine were granted after two years' study conveyed a false impression, as in matter of fact, the curriculum in medicine extended over four years. As regards the large percentage of failures to pass the examination at the University, he would say it was caused by improper teaching, or by want of judgment on the part of teachers in allowing unprepared students to present themselves for examination. A failure of as much as 10 per cent. of the candidates would, in his opinion, indicate a defective system of teaching.

By Mr. MITCHELL HENRY: At Trinity College, there are about 300 medical students, and at the other medical schools in Dublin, the average attendance is from 600 to 700; that would be about 1,000 altogether. As to whether there would be any insuperable difficulty in getting all the schools in Dublin to agree to a common minimum examination, I can only say that an attempt was made some time ago, that a conjoint scheme was proposed, and, on being discussed by the different bodies, there was no difficulty found in arriving at an agreement until we came to the question of money. Upon this point, difference arose, and one of the examining bodies backed out of the thing. An attempt was then made to combine the other four, but they fell out over the Apothecaries. An union was then tried between the Colleges of Surgeons and Physicians, but that failed also, chiefly on the ground that no definite good would be gained unless all the licensing bodies joined in the scheme. I have examined the conjoint scheme proposed for each of the three divisions of the United Kingdom, and if it were made compulsory, I think it would go far to settle the question of medical education for many years to come. If that were done, the duties of the Medical Council would be considerably diminished, and they would be able to apply themselves to the regular work of inspection of schools and examinations. Shorter sittings would suffice for the transaction of business, as the work of inspection could be delegated to small committees, who would report regularly to the Council. It is scarcely for me to say what should be the number of direct representatives on the Council. I should say four or six, as Parliament may think fit, would be quite sufficient. It is not the number that is so important as the fact that the profession is represented. I do not think that, by direct representation, you would get better men on the Council; but the grievance would disappear, and the agitation would be silenced, whilst the Medical Council would be greatly strengthened. Of course, indirectly the profession is represented at present as well as the general public. I do not regard myself as the representative of the three hundred medical students of Trinity College, but of the whole University. I am not elected by the students, but by the general body. No doubt my constituency is somewhat oligarchical, but some of the other constituencies are very democratic. As regards the expenses of the Medical Council, I feel very strongly that too much money is spent in the payment of members. I think the important duty of regular inspection of schools and examinations has been neglected because there has been no money for the purpose. In order to remedy that state of things, I would compel the Crown to pay its nominees, and I would enforce the same rule as regards the representatives of the various corporations. I think those who send representatives to the Council should pay them.

By Sir TREVOR LAWRENCE: The corporations have plenty of money to use for that purpose.

By Mr. MITCHELL HENRY: As regards the proposal that there should be a conjoint scheme without direct representation, I must confess that I do not like to give larger powers to the Medical Council as it is at present constituted. Whether rightly or wrongly I will not say, but the Council has not the confidence of the profession; and to give such a body greatly enlarged powers would not, I think, be

advisable. I say that, although personally I consider the conjoint scheme a very pressing question, I do not think that it can be carried out without direct representation.

By Sir TREVOR LAWRENCE: I think that, if a conjoint scheme were established, and a minimum examination fixed, a considerable number of graduates, men of ability and ambition, would go in for higher degrees in their own corporations, and that in that way the status of the profession would be improved. As for the extra time which would thus be required of students, I think they would be compensated for it by the additional hold they would have on the public, as men of supreme mark in the profession. I do not think a conjoint scheme would seriously injure the corporations. It might abolish those that ought to be abolished, but it would not interfere with those that are worth preserving. I agree with Professor Turner as to the great value of the medical degree conferred by the Edinburgh University. There is no higher qualification for the practice of medicine to be found in the United Kingdom. I am not prepared to state that the Medical Council has neglected the work entrusted to it by Act of Parliament; it has made a very excellent *Pharmacopœia*, and it has prepared a *Medical Register*, both necessarily works of time, so that the Council was, to a certain extent, compelled to postpone the question of medical education. At present, the *Register* is as complete as it possibly can be. Very little has been yet done in the way of promoting improved education. Visitors were appointed to go about inspecting examinations, and in some instances good may have been done, but the work has not been properly taken in hand. If the Council paid all its money in fees to members for attendance, it could not have any to apply for the inspection of education and examinations.

By Mr. WHEELHOUSE: I would enlarge the course of study in the schools of medicine, making room for new subjects by doing away with needless repetitions. As regards the Medical Council, I can hardly undertake to say that its work would have been done more efficiently if it had separated itself into committees. I think, considering the multifarious interests represented, there would have been very great jealousies aroused if the committee plan were adopted. I am of opinion, however, that it is the only plan that can be adopted in future. In referring to the degree of the Edinburgh University, I spoke of it only as regards the value of its medical qualification. So far as the five licensing bodies in Ireland are concerned, I do not think the phrase "battle of shops" could in any sense be applicable to them; they are not competing bodies as in other places. In Trinity College, our standard is so far in advance of the requirements of the Medical Council, that we would in no way be affected by a conjoint scheme. Under the system of examination which recognised certificates of attendance at lectures, it was quite possible for a man to get on the *Register* without any knowledge of some branches of the profession, but not the more important branches.

By Dr. LUSH: I do not think direct representation would bring a better class of men, but it would give the Council more influence with the profession; it would put them more *en rapport* with the general body of practitioners in the country. I am not prepared to say whether there ought to be a diminution in the number of the Council or not. In my country, hawks do not peck out hawks' eyes. That might be the reason why members of the Council generally are unwilling to give any opinion upon the question. It is a very natural feeling on their part.

Dr. LUSH: The Council having accomplished two of its main objects, the production of a *Pharmacopœia* and the completion of the *Register*, if it delegates the work of inspection of education and examination, what other duties will remain for it to perform?

Witness: The Council would have to consider from time to time the question of the removal of improper names from the *Register*. It has also other work to do—such, for instance, as the supervision of the registration of dentists; and it will, in all probability, have soon imposed upon it the superintendence of the registration and the supervision of the education of midwives all over the country.

Dr. LUSH: Would not the work be cheaper and more efficiently done if you abolished the Council altogether, and left it to be done by the Privy Council, as was the case in every other department of education?

Witness: I do not think so. We should certainly not allow the Privy Council to interfere with the education of men in the University of Dublin. We value our independence above all things. If representatives on the Council were paid by their constituencies, as I propose, there would be ample funds to carry out the work of inspection of examinations, and Council meetings would be a great deal shorter. I do not agree in the proposal that the Universities of Oxford and Cambridge should be united with Durham for the purpose of electing a representative to the Council. Smaller institutions might be combined; but all important Universities, such as Oxford, Cambridge, Dublin, and Edinburgh, ought to have each a representative of its own. I have not much sympathy with the trading bodies who send representatives to the Council.

By Sir ARTHUR MILLS: With perhaps one exception, none of the improvements which have been made in the educational system at Trinity College have been effected at the instance of the Medical Council, nor have they been reported to that body. It has not been thought necessary; we are so far in advance of the ideas of the Council. The change to which the action of the Medical Council gave a stimulus was in clinical examination. All the other improvements were carried out by the College authorities of their own motion. As regards direct representation, I think it is no more a sentimental grievance than the demand for an extension of the Parliamentary suffrage. It is only sentimental in this sense that, when the profession obtain it, they will be disappointed with the result. One of the principal reasons why I advocate direct representation is, that it will give the Council a higher position in the estimation of the profession. So far as legislation is concerned, the question of direct representation is so mixed up with the conjoint scheme that I do not think it would be possible to separate them. In Ireland, the opinion is very strong in favour of direct representation; resolutions demanding it have been passed by the Queen's University and by the Irish Medical Association. In answer to further questions, witness expressed his opinion that the Bill now before Parliament ought to become law, subject to such modifications as the Committee might think necessary.

By Dr. LYON PLAYFAIR: I did not mean, in referring to the Privy Council, that they should have no control over the curriculum of Trinity College. Under the Act, the College has the right of appeal to the Privy Council in case the Medical Council recommend too much. As regards the conjoint scheme, Trinity College accepted it as a means towards an end, and that end was that no licence to practise should be given to a man who was not capable of practising where life is involved. That would be secured in the cheapest way by the conjoint scheme. If the country were prepared to pay for the regular inspection of education and examinations, the end might be also secured in that way, but at much greater expense.

By Dr. CAMERON: I think that, if a conjoint scheme existed, the tendency of it would be to make the more ambitious student seek for a higher qualification than the minimum.

Mr. ERNEST HART was called and examined.

By Mr. FORSTER: I was for many years Ophthalmic Surgeon of St. Mary's Hospital, Paddington, and also Demonstrator of Anatomy at St. George's Hospital. I was Dean of St. Mary's Hospital Medical School for several years. I have been for several years engaged in medical journalism; for the past thirteen years, I have been editor of the BRITISH MEDICAL JOURNAL, and I still occupy that position. I am also Chairman of the Parliamentary Bills Committee of the British Medical Association. I do not consider that the Act of 1858 has afforded the public sufficient protection against false registration. In London, Liverpool, Manchester, and every large city, there are swarms of quacks and other extortionate persons who take the name of doctor without possessing any qualification, and prey upon the weakness and follies of the ignorant, publish pamphlets with the worst objects, and generally impose upon the public. The Act fails to be effective against such persons. No person should be allowed to practise medicine under the title of Doctor or any other title, whose name did not appear on the *Register*. Although there is a clause in the Act making it an offence for any unqualified person to practise as a surgeon or physician, there is nothing to prevent him from calling himself a surgeon, doctor, or a licentiate of some foreign college whose diploma may be quite worthless. I think it should be provided that no person should take those titles except they were on the *Register*. I do not object to persons consciously consulting quacks; but I do object to quacks being allowed to take designations leading people to suppose they are registered practitioners. In order to prevent that, I think the disciplinary powers which the General Medical Council possess ought to be exercised for the protection of the public. Up to the present, the Council have not exercised their powers in that respect. It is the duty of the Council to see that the *Register* is kept correct. They have fairly performed that duty; but I also think that they ought to undertake prosecutions against persons assuming without authority to be qualified practitioners. The question, which is a very important one, was considered by the Council in 1858 at their very first meeting, and they arrived at a resolution that it was no part of their duty to undertake such prosecutions, and further that their funds were inadequate. They have since adhered to that resolution. In the report of the Council on the subject, it is stated that in England it is the duty of the police authorities to carry out such prosecutions, as the offence is one against the common law; it also sets forth that in Scotland there is a Procurator-Fiscal, and in Ireland a public

prosecutor whose business it is to undertake such prosecutions. On the question being brought before the Scotch Branch of the Medical Council, they caused a letter to be written to the Procurator-Fiscal asking whether he would undertake the necessary prosecutions, and he wrote a letter in reply in which he declined to do so, on the ground that the penalties came to the Council, and that their officer was therefore the person who should prosecute. I think that any new Act should make it compulsory on the Medical Council to appoint an officer to undertake prosecutions of offenders against it. It is a rule that persons receiving the penalty under an offence specially created by Act of Parliament should be the parties to prosecute; but the Council have not done so. It has been left to individuals, or to any body who chose to take the matter up. The Council seem to think it is no part of their functions, and that they had no funds, and further, that the work would be troublesome and undignified. In my opinion, there is no foundation for these objections. In the first place, all prosecutions which were successful would pay for themselves, as the penalties inflicted would go to the prosecutors. At all events, the Council could have very easily tested the value of the clause, and, if they found it ineffective, they could have applied to the Government to get such an amendment carried as would enable them to do all that was necessary for the protection of the public. Of course, if the Council had to do the work individually, it might be troublesome; but that was not necessary. One law officer would have been quite sufficient, with agents in the various parts of the United Kingdom. All the information necessary for the enforcement would be supplied by the local practitioners coming into contact with the unqualified man, and often with sufferers from his proceedings. As for the expense, it would be very slight; but, of course, if the Council spend all their money on fees to their own members, they cannot have any left for any other purpose. Occasionally, prosecutions have been instituted by private individuals or private associations. The British Medical Association have never instituted any, considering themselves to be a scientific body; and they are not charged with any duties under the Act. As regards the constitution of the Council, I am of opinion that it requires revision. At present, its constitution is theoretically defective, in that the parties who supply the funds are the only parties not represented on the Council, and the persons who do not supply the funds are represented. The Council represents only the licensers and not the licensees. Practically, its constitution is defective because the Council avowedly does not possess the confidence of the profession. That is admitted by every serious member of the Council.

Mr. FORSTER: That is rather a strong statement. Dr. Acland and Mr. Simon have not avowed that the Council has not the confidence of the profession. Neither does Sir James Paget.

Witness: I did not hear Sir James Paget's evidence; but I think he would have acknowledged that it is so, if the question had been put to him. I think you will also find that such a statement as I make is in the report of the Executive Committee of the Council itself; and it is confirmed by the fact that the Council passed a resolution admitting the necessity for revising its constitution. Witness went on to say that another reason why he had arrived at the conclusion that the Council had not the confidence of the profession was, the fact that 10,000 medical men signed a memorial expressing a desire that the constitution of the Council should be revised so as to be in sympathy with the profession; and each time the question had been put to the profession, that desire had been reiterated. Witness referred, in confirmation of his statement, to the memorial signed by Dr. Bell Fletcher and 5,200 other practitioners, whose number was subsequently increased to 10,000, and which was recorded on the Minutes of the Council (volume vii, page 60, July 7th, 1869). It had been mentioned before the Committee that these memorialists, in asking for direct representation, had in view the pecuniary interests of the profession and the enlargement of the duties of the Council by the introduction of other matters outside its ordinary functions of registration and education; but reference to the text of that memorial would show that that was not the case. The Committee would find that, neither in that memorial nor in any other authorised document, had any such suggestion ever been made. The memorialists asked for a change in the constitution of the Council, on the ground that the Act itself was practically inoperative—that they were not able to distinguish between qualified and unqualified members of the profession by reason of the imperfections of the Act, and the way in which the Act had been administered; on the ground that the Council did not interfere to prevent proceedings which were regarded as a fraud on the public and the profession, such as legally qualified men lending their names to enable persons to practise who had no qualification. and such as the assumption of false titles; on the ground that the unsatisfactory state of the law in respect to the signature of death certificates by unregistered medical men had been passed over by the Medical Council; on the ground of the necessity for improving medical education; on the ground of the increased influence and power of the Council, which were necessary, and which would result from direct representation. Witness also quoted the memorial of the Garioch and Northern Medical Association, which complained that the result of the present constitution of the Council was that the interests of the licensing boards were represented, rather than those of the medical profession; and that the competition amongst so many licensing boards had naturally a downward tendency in the matter of education. (July 1st, 1869, vol. vii, p. 8.) Perhaps the non-fulfilment of some duties was attributable to the fact that the Government had not vested sufficient power in the Council; that was, no doubt, a large part of the case. He thought no one would doubt that, if, beyond the members who represented the corporations and the Crown, there had been on the Council a certain number of representatives of the general practitioners of the country, it would have been more advantageous, and more deference would have been shown to the wishes and requirements of the profession; because men, as a rule, attended to representations made to them in proportion to the direct relationship which they held with the persons urging matters upon them; and direct representatives, coming straight from localities where they saw evils in practice or operation, would be very desirable men to have on the Council. The medical press had urged it upon the Council repeatedly. Speaking for himself as editor of the BRITISH MEDICAL JOURNAL, he had rather hung back from discussing the affairs of the Council, because he had always entertained a feeling that the executive body of the Association were best left to speak for themselves. The feeling of the British Medical Association and of the profession was so emphatically and unequivocally in favour of direct representation, that he had preferred to leave the matter entirely in its hands, and not to express any particular views himself upon it. That, he thought, was the only matter on which he had not taken an active part. He would admit that the eminence and high character of the members of the Council would fit them admirably for discussing a considerable number of the questions that come before them; but eminence and high character were by no means all that was necessary in discussing many questions; and, however high their character, however eminent they might be, almost as much depended on the mandate by which a man sat on the Council as on the man himself. And "eminence" meant eminence in a certain sense, and came, as a rule, to mean eminent consulting men like Sir Benjamin Brodie, Sir James Paget, or Sir William Gull, who had never felt practically the wants of the profession at large. For instance, there was hardly a man on the Council who would deliver a woman; and there were, perhaps, not two men who could treat a case of disease of the eye. That made no difference to them, however, as they lived in great centres, and all they had to do, when particular cases came before them, was to send them to some one else. He thought it would be extremely desirable that representatives should in some way be introduced who had special knowledge of ophthalmic surgery and obstetric surgery. Those subjects had been greatly neglected. The question of the size of the Council he considered altogether subordinate to the way in which it discharged its functions. To introduce specialities need not necessarily increase the number; if it did, perhaps no harm would result. Knowledge, of course, might grow and increase; but at present he thought the specialties of the profession might properly be limited to ophthalmic surgery, obstetrics, and perhaps dentistry. The specialities recognised by the great hospitals were those which he had in view. The Council had been uniformly too tender to the interests of corporations. On every occasion and under all circumstances, the Council had been almost exclusively considerate of the interests of corporations, whatever other interests had been in question; and, whenever the interests of education had collided with the interests of corporations, the latter had always been regarded. Witness quoted an instance from pages 138-139 of the first volume of the Minutes (June 22nd, 1860), where the Council had made certain recommendations which were ignored; and the Council, instead of reporting to the Privy Council, allowed the matter to drop. Another instance was at page 127, vol. iii (May 7th, 1864), where the King and Queen's College of Physicians write to the Council that "their regulations do not at present accord with the recommendations of the General Medical Council, but has informed them in a report published in the Minutes of the Council dated May 17th, 1863 (vol. ii, page 179), that they have no confidence in the construction or permanence of any scheme of education or examination which is not rendered compulsory on all licensing boards; nor do they consider it practicable for any of the several bodies to sustain any improved code of examination or education while it is optional for other competing bodies to adopt or depart from it". Nothing, of course, was done on that. The Council might have made their recommendations effective by representing any body to the Privy Council. If they had made such representations, it would

then have been an argument for a conjoint board, and so reform would have been pressed forward.

Mr. FORSTER: But is it not a fact that the Council have over and over again pressed upon the Privy Council the desirability of a conjoint board?

Mr. HART: Pardon me; the two lines of argument are quite distinct, because this may or may not have reference to a conjoint examination. The fact is, that this was a question of the age at which preliminary education ought to commence, and the Council sent recommendations to various bodies—to the College of Surgeons, for instance; but the College of Surgeons distinctly refused to comply with them, and the General Medical Council has allowed the College of Surgeons to ignore its recommendations for twenty years, for it has never represented that College nor any other body to the Privy Council. The College of Surgeons (the witness continued) had refused to comply with the most important of all the recommendations of the Council, viz., that professional education should last for four years, and should commence at a medical school. In 1874, the Edinburgh College of Surgeons said that, on their part, they agreed with the Council, that medical education ought to last for four years and begin with attendance at a medical school; and that they were quite prepared then, and always had been, to conform their regulations to the recommendations of the Medical Council, "when the Council shall have shown a determination to use every legal means in their power to enforce their recommendations for a minimum curriculum alike on all the medical bodies over whom the Medical Act gives them control". Witness quoted a similar instance from page 118 of the same volume. Again, only last year the Council sent to the University of Dublin a copy of its recommendations, and said: "Would you oblige us by stating how far your regulations for education agree with ours?" to which the University reply in effect: "We have received your letter, together with a copy of the recommendations enclosed. We do not propose to consider your recommendations 'in detail', as it would take too much time; but we return you a copy of ours, with which you can compare yours." In his opinion, it was the duty of the Medical Council under the Act to prescribe curricula, and see that the examining boards carry out their examinations in an efficient manner. It was certainly the duty of the Council to use the powers which the legislature had given them, and see that their recommendations were carried out. The eighteenth section of the Act said the first duty of the Council was to see to the registration of only properly qualified practitioners; and, as a necessary preliminary to that, gave them the power of obtaining information as to the courses of study required for qualifications, and also of supervising examinations. The Council had appreciated their duty at the commencement, for they began by determining what should be the minimum preliminary education, and they had been twenty years over the curriculum business, and, as he had stated, their recommendations had not been complied with.

Mr. FORSTER: I have no doubt whatever, in reading the eighteenth and twentieth clauses of the Act, that it is their business to find out what the course of study is, and to make a recommendation if they think it necessary; but what I want you to tell me is, where you find that, in addition to that, it is their duty to prescribe what should be the course of study?

Mr. HART said his answer to that was that the Council at the outset felt, and wisely felt, that the quickest, and in fact the only certain way in which they could determine what was inadequate, was to settle a minimum of what was adequate; and that they did so settle it, and that they accordingly framed regulations which they sent out, and which, as he had proved, were systematically ignored and universally defied. All that the Council had done for the profession had been to make a *Register*, which cost nothing or next to nothing, as it was sold presumably at a price to cover its cost; and to publish a *Pharmacopœia*, which equally cost nothing, because it was avowedly sold at a price to cover its cost; and even these were not the work of the Council, but of paid officers. The income of the Council had been expended entirely upon house-rent and clerks' fees, and fees paid to themselves. Their present income was £4,000 a year. Out of that, they spent £2,000 on a place to sit in, and £2,000 on themselves for sitting there; in fact, they virtually sat there till they had talked all the money out of the bank into their own pockets, and then they dispersed. It was remarkable with what accuracy they performed that duty; and, as one of their own officers had reported, it was impossible to estimate how long they were going to sit, except by reference to the cash in the bank. The *Register* was made by a clerk, and the *Pharmacopœia* by a Committee, who were paid over £2,000 for making it. Putting aside those duties, which he did not admit were the duties of the Council, they had only two other duties: one of which was preventing the admission to the profession of unqualified men, and attending to prosecutions; and the other was the visitation of examinations. And whenever a difficulty arose in relation to either of the latter, the invariable answer had been that the funds of the Council were inadequate. In his opinion, the payment of members was in every way injurious; and the Council would be in every way more active, more efficient, and of a higher character if it sat without fees. He was quite sure there would be no difficulty in finding able and eminent men without payment. No difficulty was experienced by the College of Surgeons, to whose Council men regularly came up from Leeds, Manchester, and other long distances without payment, except the nominal sum of a guinea. Then, again, they had another example in the case of the British Medical Association, to whose Council and Committees men in the largest practice in all parts of the kingdom came up without any payment. Asked his opinion as to what revision of the constitution of the Medical Council he would propose, witness said, first, that it should sit as an unpaid board; secondly, doing so, and having a fund at its disposal, it should institute committees, which, when they had to perform some continuous work, should receive some small payment. They should take upon themselves, by a Parliamentary Committee, the duty—which they have neglected up to the present time—of watching all Acts of Parliament and other measures affecting medical education and registration. They should institute a Committee for superintending the prosecution of offenders, and a disciplinary committee. And instead of carrying out the visitation of examinations in a spasmodic and inefficient manner, they should appoint, on the plan first recommended by themselves, but dropped for want of funds, two paid inspectors, who should inspect examinations in an uniform and satisfactory manner; who should do what the Council did not now do, viz., analyse its reports, and present every year a picture of the actual state of things, showing how far existing bodies perform or neglect their functions, and how far recommendations are attended to. With regard to direct representation, he confessed his surprise that another plan had not been taken up which was in the first instance suggested by Mr. Simon, and which seemed to witness a most valuable suggestion—viz., that the relation of Branch Councils to the Central Council should be altered. He thought it worthy of consideration whether, instead of electing the Branch Councils as at present, the Branch Councils should not be elected, as those of the British Medical Association, direct, each division of the Kingdom electing its own Council, all the corporate bodies and the profession at large sending representatives to the Branch Council, so that it should have a thoroughly representative basis. Then from each divisional Council might be sent two representatives to form the General Medical Council, making six, to whom the Crown should also add perhaps four. There would then be a compact General Council of ten, in which, nevertheless, the whole profession and the corporations would be represented. The points of reform on which the British Medical Association laid stress were: first, reciprocity of practice (which had been granted under the Act of 1858); secondly, an uniform minimum qualification in medicine, surgery, and obstetrics, for an adequate protection of the public against the assumption of titles and false pretensions on the part of unqualified persons; and for a revision of the constitution of the Council and an increase of its mandatory powers. A satisfactory uniform minimum qualification might be secured by one of three ways: first, by a conjoint board—and to his mind that was the simplest, most effective, and most generally approved method; second, an alternative would be by empowering the Medical Council to refuse to register anyone until he had obtained a satisfactory double qualification, and at the same time by compelling the Medical Council to institute systematic and continuous visitation of examinations; third, by the institution of a State examination subsequent to the existing licence or degrees.

The Committee adjourned till Friday, the 25th instant.

COCKERMOUTH RURAL DISTRICT.—Dr. Ward seems to have been inoculated with the poetry which is indissolubly connected with the Lake district, as his reports are couched in language so glowing and picturesque that one can hardly bring oneself to believe that he is not describing a sanitary paradise instead of a common mortal place that indulges in diarrhœa, typhoid fever, and other products of unwholesomeness. There seems, indeed, to be much room for improvement in the sanitary state of the district, especially as regards defective drainage and the system of excrement-disposal. The water-supply has been suspicious; but a considerable area is now supplied with pure water from the hills. There is no hospital for infectious diseases, which, considering the circumstances of the district, shows lamentable want of foresight on the part of the local authority. The number of deaths from all causes was 446 last year, equal to a rate of 17.0 per 1,000. Of the total number, 235 were males, 211 females, showing a somewhat remarkable excess of males. Diarrhœa caused 31 deaths, scarlatina 5, and typhoid fever 8 deaths. In one division of the district, no less than 16 per cent. of the whole number of deaths were uncertified by a medical practitioner.

THE SELECT COMMITTEE ON THE CONTAGIOUS DISEASES ACTS.

MONDAY, JULY 21st.—The Right Hon. W. N. Massey in the chair. Colonel Alexander, Mr. Cavendish-Bentinck, Mr. Bulwer, Mr. Burt, Sir Harcourt Johnstone, Mr. Shaw Lefevre, Mr. O'Shaughnessy, General Shute, Mr. Stansfeld, Sir Henry Holland, Mr. Kavanagh. Mr. Ernest Noel and Mr. Tremayne were also present.

The examination of Mr. Barr, medical officer of the Aldershot Lock Hospital, was resumed, and occupied the whole of the sitting.

By Mr. KAVANAGH: The extension of the Acts to other than military districts would go far towards stamping out disease. The examination of soldiers was most desirable. To an experienced surgeon, there was very little difficulty in discovering disease in women. He believed a woman with a contagious discharge would very rarely escape. In syphilis, it was almost impossible for an experienced examiner to be deceived.

By Mr. STANSFELD: Witness attributed the great improvement in the state of the women at Aldershot mainly to the influence of the Acts. The class of women was not now better than before; it was in the same low class of women that the good effects had been manifested. The number of prostitutes now was only one-half of what it was formerly. Kind treatment in hospital had helped to improve their condition. All the prostitutes had submitted voluntarily to examination during the time Mr. Barr had been at Aldershot. The right hon. member next inquired why, if the women submitted to be examined voluntarily, there was any need of compulsory examination; to which question witness replied that, by voluntary submission, he did not mean that the women would submit of their own free will without the influence of the Acts, but that they, knowing that the alternative was a summons to attend before a magistrate, preferred the former course. If there were no Acts, prostitutes would not apply for treatment until they had spread disease to a considerable extent; and it was very doubtful whether good would arise from voluntary hospitals, even under the most favourable circumstances. In reply to a question as to whether the more decent and cleanly condition of the women would not make them more attractive to soldiers, and thus tend to increase the prostitution, witness replied that, on the contrary, under her improved condition, the woman felt her position more, and became disgusted with the soldiers and also with her own mode of life. He could not at all admit that the periodical examination of prostitutes was to be looked upon as an announcement of their being in a healthy condition, or that soldiers looked upon it in that light; probably half the number of soldiers did not even know of the existence of the Acts until told of them by the women. The proportion of prostitutes to the number of soldiers at Aldershot had largely diminished; and witness was decidedly of opinion that clandestine prostitution there had decreased since the Acts had been in operation. He thought there were more steady soldiers now than before the Acts. There were fewer young girls; the Acts had had a deterrent effect on them. Contagious diseases in Aldershot were increased by the number of men who came down for the summer drills and autumn manœuvres. The examination of men was desirable, but was not so important as that of women. There should be a law to reach those who spread disease; and men who were known to frequent brothels should be, if possible, examined in the same way as women. Nevertheless, great good could be, and had been, effected by the examination of women alone. The examination of prostitutes at Aldershot took place once a fortnight, as a rule. The number was now much reduced, and there were rarely more than thirty women to be examined in a day at the present time. On being asked as to whether the local contagious sore or gonorrhœa was the more serious disease, Mr. Barr pointed out that both might be disastrous in certain ways. Thus gonorrhœa in men was the commonest cause of stricture, which, especially if neglected, often shortened life; while the local contagious sore not unfrequently led to sloughing and consequent destruction of the tissues. In reply to a question as to the appearance of primary sores in women, it was stated that nearly all sores assumed the characters of the soft ulceration, whether followed by constitutional symptoms or not; so that the state of the glands, etc., had to be considered in making a diagnosis. The amount of secondary syphilis, as given in the reports relating to the Contagious Diseases Acts, did not at all represent the amount of primary syphilis: first, because the term "primary syphilis" was applied in the Acts to both varieties of the sore; and also because secondary syphilis, which extended over a considerable period, often necessitated repeated admissions of the patient into hospital, each admission being classed as a new case. Notwithstanding this, the amount of secondary disease had decidedly diminished in Aldershot.

The Committee adjourned until Thursday, the 24th instant, at 12 o'clock.

THE WORKING OF THE PUBLIC HEALTH ACTS.

AT the request of Mr. Ernest Hart, Dr. Lush, M.P., has moved for the following important return, which will, it may be noticed, afford most important information as to the present working of the Public Health Act, and will exhibit in a clear light the strange anomalies and varieties of district appointment, duties, and salary which have resulted, and the fitful and arbitrary character of the "combinations" from which so much was justly hoped. The form of the return has been carefully worked out, so as to afford data of information which have been hitherto much wanted by all who desire to study the existing status of health-administration; and great thanks will be due to the officers of the Local Government Board if, as we do not doubt will be the case, the return made be accurate, full, and promptly rendered. Sir John Lambert, the permanent secretary of the Board, has the highest capabilities of ordering facts and figures in a clear and masterly manner, and the return is safe in his hands. This return will be extremely important to the Committees of our Association, which take a natural interest in the working of the Public Health Acts, in whose legislative enactment they played an active causative part.

"*Sanitary Districts.*—Return of the number of sanitary districts in England and Wales in which medical officers of health have been appointed, distinguishing and enumerating (*a*) Districts which have entered into combinations, and stating such combinations, showing what combinations have fallen through, and what districts have seceded from or been added to combinations since their original formation; (*b*) Districts which have accepted part payment of salaries of medical officers of health; (*c*) Districts which pay the whole of such salary themselves. Of the names and registered medical qualifications of medical officers of health, and the salaries paid to them. At what dates the medical officer of each district reports on the health of the district to the local authority, and whether such reports are in manuscript or printed. And a map to accompany the tables, showing the area of the respective sanitary districts and their population." The return is to be in the form of a table, arranged under the following heads: Registration districts or unions; rural districts; urban districts; area of each district in acres; population; name of officer; registered qualifications; date of appointment; period of appointment; whether combined or not; whether a poor-law medical officer; whether debarred from practice; whether required to give up his whole time; salary; whether half paid by Government. As to port sanitary authorities: Port and limits of the same; name of officer; registered qualifications; date of appointment; period of appointment; salary and by whom paid; if debarred totally or in part from other duties. As to reports: When made to local authority; whether manuscript or printed. Regarding combined districts: Name of district; sanitary districts in combination; area in acres; population; officer; date of appointment; period of appointment; salary; whether required to devote whole time; how district was formed—voluntarily or otherwise; name of any sanitary districts included wholly or partly within area of combined district, but not in combination; area of such districts; population of such districts; names of any districts which have seceded from combination; area of such districts; population of such districts; consequent loss of salary of medical officer of health; names of any districts added to combination since its first formation; area of such districts; population of such districts; gain to salary of medical officer of health.

INFECTIOUS DISEASES AT PENISTONE.

AN epidemic of enteric fever of considerable dimensions at Penistone, in Yorkshire, and a concurrent epidemic of scarlet fever at the same place, have recently been made the subjects of an interesting report by Dr. Thorne Thorne to the Local Government Board. Penistone is a small urban district on the south bank of the River Don, about eight miles to the south-west of Barnsley. It has an area of 1,133 acres and a population (at the last census) of 1,549, now estimated at 2,000. Early in September last, an important case of enteric fever came under treatment in the district. The attack occurred in a man twelve days after his return from Oldham, where he had been on a visit. It was of a mild type, but convalescence was tardy; the patient, however, got about again within six or eight weeks of the commencement of his illness, although he continued to suffer from attacks of abdominal pain and occasional diarrhœa. Towards the end of December, these symptoms increased, and on January 3rd of this year he was found to be suffering from a relapse of well-marked enteric fever, which terminated fatally on January 16th. In the meantime, however, a second case had occurred in a child, who died on the 22nd of November last. No history of infection from the previous patient was ascertained. In this connection, however, it must be remembered that not only were the

man's movements unknown during a lengthened period of supposed convalescence, when he must have been, by means of his infectious evacuations, a source of constant danger to the community in which he lived; but the child's death was not reported to the Medical Officer of Health until January 15th last, so that no early inquiry by that officer into the circumstances of its illness was possible. A third case came under treatment in the second week of December; five more persons were attacked in the first week of January, three during the second week, six in the third week, and from that date occasional cases continued to occur until within about a week of the inspection, when as far as could be ascertained, forty-two cases had come under treatment. Five attacks had terminated fatally. Towards the beginning of December last, scarlet fever, which is stated to have been for some time prevalent in several districts in the neighbourhood, made its appearance in Penistone; the disease soon spread, and up to second week in April between fifty and sixty cases had come under treatment, ten of the patients having died. Dr. Thorne seems to have been unable to trace the course of the epidemics and the reasons of their spread; but considering the grossly neglected state of the district, this is only what might have been expected. The water-supply is described as admittedly bad both in quantity and quality. The majority of the supplies are more or less exposed to pollution, and are, with but few exceptions, scanty. Many of the inhabitants are obliged to resort to a brook receiving some of the sewage of the town, nominally for cleaning purposes, but doubtless at times for drinking and cooking. Nothing that can be called a system of sewerage and drainage exists: there are only some old square stone drains originally constructed to carry rain-water off the highways. The midden-privy in its worst form is the almost universal means for the disposal of excrement and refuse. By far the majority of the midden-privies are so constructed that they must necessarily cause grave nuisance and injury to health. Their capacity is also such as to favour the accumulation of large quantities of excrement and refuse in the immediate vicinity of the dwellings. Indeed, nearly throughout Penistone the midden-privies are a source of the greatest nuisance, and they are often so placed that the dwellings are surrounded by an atmosphere and by a soil which is thoroughly fouled. It is but fair to the Medical Officer of Health for the district (who has now resigned), to say that since his appointment in 1875 he has continuously drawn the attention of the authority to the sanitary defects referred to by Dr. Thorne. Indeed, four years ago he referred specially to the very imperfect means of drainage, the constant risk of contamination to which nearly all the sources of water are subjected, and he reminded the authority how, under the existing circumstances "a single case of typhoid fever" might by infection lead to a widely spread prevalence of the disease. His warnings were, however, unheeded, and at length came the Nemesis in the shape of the recent epidemic of typhoid fever. There can be no reasonable doubt that the disease was spread directly through the medium of the midden-privies, and indirectly by the agency of water derived from the soil in which the privies are sunk. The Local Board had it in their power to prevent such an epidemic as this; but, despite all warnings, they calmly awaited its onslaught. Cases like this make us despair of the success of the public health laws, and sadly shake our faith in local self-government.

HOSPITAL AND DISPENSARY MANAGEMENT.

UNIVERSITY COLLEGE HOSPITAL.

THE annual report of University College Hospital mentions that it is the intention of the Committee to fit up three houses in University Street for sleeping accommodation for the nursing staff; and, by adapting the top floor thus set free, and by a different division of the present beds, they will thus be enabled to obtain forty additional beds for patients, bringing the total number up to two hundred, and conferring a boon upon the public, while affording considerable additional facilities for clinical instruction.

PROVIDENT MEDICAL DISPENSARY FOR BIRKENHEAD.

A PUBLIC meeting was held a few days ago at Birkenhead, for the purpose of considering the desirability of establishing provident medical dispensaries in the borough. Mr. Peter M'Arthur, President of the Trades Council, was in the chair; and amongst those present were Mr. Vacher (Medical Officer), Drs. Main, Miller, Braidwood, and Baker, and others. The Chairman said that the Council of Organised Trades had examined the working of the Borough Hospital, and did not consider the out-patient system at all satisfactory; while, as regards the Workhouse Hospital, working men would rather not go there if they could help it. They had therefore taken up the provident dispensary system, and proposed to establish one of those institutions in Birkenhead. For a payment of 8d. a month, a man would be entitled to medical attendance and medicine; while the charge for children would be ½d. per month each for the three eldest; the remainder free; a widow 4d., and her children 1d. each per month. If five hundred members could be obtained, a dispensary would be opened at once in a central part of the town; and, if unable to go there, the members would be attended at their houses by any doctor they should select. He added that there would be a list of twelve or fourteen professional gentlemen to choose from. Dr. Main moved, "That this meeting agrees to further the establishment of a provident dispensary in Birkenhead, to be called the West Cheshire Provident Dispensary". This was seconded by Mr. James Samuelson, who said that the principle of the institution was to substitute self-help for charity. The motion was supported by Dr. Braidwood and others, and carried unanimously. A vote of thanks to the chairman concluded the proceedings.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION:
FORTY-SEVENTH ANNUAL MEETING.

THE Forty-Seventh Annual Meeting of the British Medical Association will be held at Cork, on Tuesday, Wednesday, Thursday, and Friday, August 5th, 6th, 7th, and 8th, 1879.

President: R. W. FALCONER, M.D., F.R.C.P., D.C.L., Consulting Physician to the Royal United Hospital, Bath.

President-Elect: DENIS C. O'CONNOR, A.B., M.B., Professor of the Practice of Medicine in Queen's College, Cork.

An Address in Medicine will be delivered by ALFRED HUDSON, M.D., M.R.I.A., Regius Professor of Physic in the University of Dublin.

An Address in Surgery will be delivered by WILLIAM S. SAVORY, M.B., F.R.C.S., F.R.S., Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.

An Address in Public Medicine will be given by ANDREW FERGUS, M.D., President of the Faculty of Physicians and Surgeons of Glasgow.

The business of the Association will be transacted in Six Sections.

SECTION A.: MEDICINE.—*President:* Andrew Clark, M.D., F.R.C.P. *Vice-Presidents:* James Little, M.D.; William Townsend, M.D. *Secretaries:* George F. Duffey, M.D., 30, Fitzwilliam Place, Dublin; Benjamin Spedding, L.R.C.P.Edin., 17, Cherry Mount, Belfast.

SECTION B.: SURGERY.—*President:* Professor W. K. Tanner, M.D. *Vice-Presidents:* W. Mac Cormac, F.R.C.S.Eng.; J. Cooper Forster, F.R.C.S.Eng. *Secretaries:* J. G. Curtis, F.R.C.S.I., 7, Camden Place, Cork; N. J. Hobart, M.D., 33, South Mall, Cork; Stephen O'Sullivan, M.D., 6, Camden Place, Cork.

SECTION C.: OBSTETRIC MEDICINE.—*President:* George H. Kidd, M.D. *Vice-Presidents:* W. J. Cummins, M.D.; Alfred Wiltshire, M.D. *Secretaries:* Professor R. J. Kinkead, M.D., Galway; Fancourt Barnes, M.D., 39, Weymouth Street, London.

SECTION D.: PUBLIC MEDICINE.—*President:* T. W. Grimshaw, M.D. *Vice-Presidents:* H. J. Littlejohn, M.D.; C. Meymott Tidy, M.B. *Secretaries:* J. L. Notter, M.D., Netley; James Martin, L.K.Q.C.P., Portlaw, County Waterford.

SECTION E.: PSYCHOLOGY.—*President:* J. A. Eames, M.D. *Vice-Presidents:* Henry Rayner, M.D.; Herbert C. Major, M.D. *Secretaries:* Oscar T. Woods, M.D., Killarney; Ringrose Atkins, M.D., Waterford.

SECTION F.: PHYSIOLOGY.—*President:* Henry Power, F.R.C.S. *Vice-Presidents:* Professor John J. Charles, M.D.; Reuben J. Harvey, M.D. *Secretary:* W. H. Allchin, M.B., 34, Wimpole Street, London.

Secretary to the Physiological Museum: C. Y. Pearson, M.D., Cork.

Secretaries to Museum Committee: T. Gelston Atkins, M.D.; C. Harvey, M.D.

Honorary Local Secretary: Professor H. MACNAUGHTON JONES, M.D., St. Patrick's Place, Cork.

Honorary Assistant Local Secretaries: RINGROSE ATKINS, M.D. Waterford; D. C. O'CONNOR, jun., L.R.C.P. & S.Ed., 2, Camden Place, Cork.

TUESDAY, AUGUST 5TH, 1879.

10 A.M.—Meeting of Committee of Council.
11 A.M.—Meeting of the Council of 1878-79.
3 P.M.—General Meeting. President's Address; Annual Report of Council, and other business.
8 P.M.—Reception by the President of the Association and the Local Reception Committee at Queen's College.

WEDNESDAY, AUGUST 6TH.
9.30 A.M.—Meeting of Council of 1879-80.
11 A.M.—Second General Meeting. Address in Medicine.
2 to 5 P.M.—Sectional Meetings.
8 P.M.—Reception by the Mayor, Corporation, and Citizens of Cork.

THURSDAY, AUGUST 7TH.
9 A.M.—Meeting of the Committee of Council.
10 A.M.—Third General Meeting. Reports of Committees.
11 A.M.—Address in Surgery.
2 to 5 P.M.—Sectional Meetings.
6.30 P.M.—Public Dinner.

FRIDAY, AUGUST 8TH.
10 A.M.—Address in Public Health.
11 A.M.—Sectional Meetings.
1.30 P.M.—Concluding General Meeting.
4 P.M.—Garden Party by Reception Committee at Queen's College.
8 P.M.—Concert by the Reception Committee.

Arrangements have been made for providing a Subsection of Ophthalmology and Otology in the Surgical Section. Mr. Jonathan Hutchinson, F.R.C.S., has consented to take the Chair. Dr. James Patterson Cassells, of Glasgow, will act as Honorary Secretary for Otology; and Mr. H. R. Swanzy, of 23, Merrion Square North, Dublin, and Mr. Edward Nettleship, of 4, Wimpole Street, London, will act as Secretaries for Ophthalmology.

There will also be a Subsection of Dermatology in the Section of Medicine. Professor McCall Anderson has consented to take the Chair, and Mr. Malcolm A. Morris, 63, Montagu Square, Hyde Park, W., London, and Dr. Walter Smith, 34, Lower Baggot Street, Dublin, will act as Honorary Secretaries.

SECTIONAL ARRANGEMENTS.

SECTION A.—MEDICINE.

The following subjects have been selected for discussion in the section.

1. "On the Value of Mountain Air in the Treatment of Phthisis." Drs. Henry Bennet, Clifford Allbutt, Berkart, Cuming, and Roberts have notified their intention of taking part in the discussion.

2. "Alcohol in Fever." Drs. James Little, Macnaughton Jones, Tibbits, Balthazar Foster, Norman Kerr, Wade, and Cuming will read papers and take part in the discussion on this subject.

3. "Tracheotomy in Croup." Drs. Wm. Squire and Corley, Mr. R. W. Parker, Drs. William Thomson, Cuming, John Moore, and Mr. William Stokes will read papers and take part in the discussion.

The following papers are also promised for this section.

ALLBUTT, T. Clifford, M.D., and JACOB, E. H., M.B. Simple Dilatation of the Stomach, and its Treatment.
BEARD, George, M.D. (New York). Inebriety and allied Nervous Diseases in America.
CHURTON, T., M.D. The Difficulties of Perignosis in Out-patient Hospital Practice; and the means of overcoming them.
COLLIE, Alexander, M.D. The Cold Bath in the Treatment of Enteric Fever.
CUMING, James, M.D. A Case of Diplegia.
DONKIN, Horatio, M.B. Some cases of Abnormally High Temperature.
DRYSDALE, Charles R., M.D. Syphilitic Albuminuria.
ELLIOT, Robert, M.D. Some rare and inexplicable Nervous Affections.
FOTHERGILL, J. Milner, M.D. Diagnostic Ceremonial.
HARKIN, Alex., M.D. Chlorate of Potass in the Hæmorrhagic Diathesis.
HAYDEN, Thomas, F.K.Q.C.P.I. Certain Varieties of Cardiac Neurosis.
HOWIE, James M., M.B. The Power of Alcohol to Prolong Life in Wasting Disease.
JAGIELSKI, Victor, M.D. The Effect of Koumiss upon the Urine in Health and in Disease.
LUSH, W. Vawdrey, M.D. A Case of Embolism into the Right Axillary, Left Brachial, and Right Middle Cerebral Arteries: Recovery.
MAC CORMAC, Henry, M.D. Tubercle and Tubercular Disease: their Genesis and Origin.
MACKENZIE, Morell, M.D. Laryngeal Phthisis.
RENFREW, R., M.D. Diphtheria; with special reference to Treatment.
SAUNDBY, Robert, M.D. Albuminuria.
SMITH, Walter, M.D. The Bismuth-test for Grape-Sugar.
SQUIRE, William, M.D. The Influence of Treatment in the Cure of Rheumatic Fever before and since the employment of Salicylic Acid.
STURGES, Octavius, M.D. Chorea, a Functional Disorder.
TIBBITS, Edward T., M.D. The Modern Theory of the Action of Digitalis.

Subsection of Dermatology.

A discussion on "Lupus, its Varieties and Treatment", will be opened by Mr. Jonathan Hutchinson. Mr. Cottle, Mr. Johnson, Mr. Malcolm Morris, Mr. Balmanno Squire, Mr. Startin, Dr. Stowers, Dr. E. H. Bennett, Dr. W. G. Smith, and Dr. Thin will take part in the debate. The following papers will be read in connection with this subject.

ANDERSON, T. McCall, M.D. The Use of Iodide of Starch in the Treatment of Lupus Erythematodes.
SQUIRE, Balmanno, M.B. The Treatment of Lupus by Linear Scarification.
STARTIN, James, Esq. Lupus, and its Treatment by Caustics.
STOWERS, J. HERBERT, M.D. On Lupus.

The following papers will also be read in this subsection.

FARQUHARSON, Robert, M.D. The Use of Arsenic in Skin-Diseases.
FINNY, J. Magee, M.D. 1. Purpura Hæmorrhagica. 2. Hydroa after Iodide of Potassium.
FOX, T. Colcott, M.B. On the Neurotic Origin of Lichen Planus.
MOORE, Charles F., M.D. Notes on Erythema Nodosum.
MORRIS, Malcolm A., Esq. 1. On Scarification as a New Remedy in Skin-Diseases. 2. Some Remarks on Molluscum Contagiosum.
SANGSTER, Alfred, M.B. On so-called Hydroa.
SMITH, Walter G., M.D. 1. On a peculiar Moniliform or Varicose Condition of the Hair. 2. On Favus: a Case of Infection traced to a Cat, with Specimen.
THIN, George, M.D. On Cancerous Ulcers of the Skin.

SECTION B.—SURGERY.

The special subjects for discussion in this section are:

1. "Subcutaneous Osteotomy." The discussion will be opened by Mr. William Adams. The following gentlemen will take part in the discussion: Dr. E. H. Bennett; John Fagan, Esq.; Rushton Parker, Esq.; Dr. A. Ogston; and William Mac Cormac, Esq.; and papers in connection with this subject are promised by the following members.

BRODHURST, Bernard E., Esq. On an Operation for Genu Valgum, with some Remarks on Osteotomy.
GANT, F. J., Esq. Subcutaneous Osteotomy below the Trochanter.
JONES, Thomas, M.B. Short notes of a dozen Cases of Subcutaneous Osteotomy.
MACEWEN, William, M.D. Antiseptic Osteotomy.
PARKER, Robert W., Esq. Subcutaneous Osteotomy in Young Children.

2. "The Diagnosis and Treatment of Joint-Diseases in their various stages." Dr. Lewis A. Sayre of New York will open the discussion. The following gentlemen have promised to take part in the discussion on the subject: Dr. E. H. Bennett; Dr. E. D. Mapother; and Rushton Parker, Esq.

Papers are also promised by:

FAGAN, John, Esq. Notes on the Treatment of Disease of the Wrist-Joint, with Report of a Successful Case of Excision in a Child Six Years Old.
GANT, F. J., Esq. On Excision of the Knee-Joint under special circumstances.
JOHNSON, Z., Esq. On the Free Opening of Joints.
JONES, H. Macnaughton, M.D. Exhibition of Cases illustrative of Operative Interference in Diseases of the Hip, Knee, and Ankle-Joints.
MAC CORMAC, William, Esq. A Case of Excision of the Shoulder- and Elbow-joints for Gunshot Wound in the same Arm, with final Result.
STOKES, William, M.D. On Resection in Joint-Disease.

3. "Treatment of Aneurism by Electrolysis." A paper on this subject will be read by Dr. Herbert Tibbits. The following gentlemen have promised to take part in the discussion: Joliffe Tufnell, Esq.; Dr. Clifford Allbutt; and Dr. Balthazar Foster.

The following communications on various subjects are also promised.

ANDREW, Edwyn, M.D. A New Method of Using Ice, especially in Operation.
BARTON, John K., M.D. Remarks on a Case of Phagedenic Ulceration.
BENNETT, E. H., M.D. 1. On Comminuted Fracture of the Upper Third of the Femur. 2. On Colles' Fracture. 3. An Analysis of the Varieties of Compound Fracture.
FAGAN, John, Esq. 1. Will exhibit some Splints, which he thinks are novel, and believes to be good. 2. Morbid Specimens.
HAYES, J. R., M.D. Case of Removal of entire Right Parietal and half of Frontal Bones, the result of Burn: Treated by Skin-Grafting: Recovery. (The patient will be exhibited.)
HILL, Berkeley, Esq. On the Effect of Stricture near the Meatus in causing Subpubic Contraction of the Urethra.
JOHNSON, Z., Esq. 1. On a Special and Peculiar Treatment of Varus (to be illustrated on a living example, if possible). 2. On a Special Treatment of Nævus. 3. On a Splint and Foot-piece (original), to be exhibited.
MCDONNELL, Robert, M.D. The Intravenous Injection of Blood and other Fluids.
MELDON, Austen S., Esq. The Intravenous Injection of Milk.
OWEN, Edmund, Esq. Remarks on the Cause of Eversion of the Limb after Fracture of the Neck of the Femur.
PARKER, Rushton, Esq. On Amputation through the Femoral Condyles by the Methods of Lister and Stokes.
SHINKWIN, Thos. C., M.D. Fracture of the Sternum, illustrated by Cases.
SPANTON, W. D., Esq. The Immediate Care of Inguinal Hernia by a new Instrument, illustrated by Cases. (The operation, on a living subject, will be performed, if possible, at one of the local hospitals.)
STEELE, Charles, Esq. On Chair-supports for Spinal Curvatures.
TEEVAN, W. F., Esq. One Hundred Cases of Operation for Stone in the Bladder.
THOMSON, William, M.D. On Dupuytren's Fracture.
WHEELER, W. J., M.D. Fracture of the Patella; and the Reports of several Cases treated by the Writer's Splint. (Exhibition of splint, and of a specimen of bony union of the patella.)

Subsection of Ophthalmology and Otology.

Ophthalmology.—The following are the subjects for discussion.

1. "The Treatment of Glaucoma." The discussion will be opened by Mr. Power of London; and the following papers will be read.

COWELL, G., Esq. On Glaucoma.
TAYLOR, C. Bell, M.D. Sclerotomy and Iridectomy in Glaucoma.
DE WECKER, Dr. Sclerotomy in different forms of Glaucoma.

At the conclusion of the discussion, Dr. W. A. Brailey will demonstrate some preparations illustrative of the Pathology of Glaucoma.

2. "Examination for Colour-Blindness." The discussion will be opened by Mr. Swanzy of Dublin. A paper on the subject is promised by Professor Cohn of Breslau.

3. "The Use of Eserine, Pilocarpine, Gelsemine, Duboisin, etc." The discussion will be opened by Professor Macnaughton Jones.

4. "Treatment of Detached Retina." The discussion will be opened by Mr. T. Shadford Walker of Liverpool.

5. "Tobacco and Alcoholic Amblyopia." The discussion will be opened by Dr. Hirschberg of Berlin.

6. "Diphtheritic Ophthalmia." The discussion will be opened by Mr. Nettleship.

Dr. Loring (New York) and others have expressed their willingness to take part in the discussions on the above subjects.

The following gentlemen have also promised communications.

BROWNE, Edgar A., Esq. Some Clinical Aspects of Optic Neuritis.
FITZGERALD, C. E., M.D. On Knapp's Peripheral Division of the Capsule in Cataract-Extraction.
GLASCOTT, C. E., M.D. Report on the Results of the last Two Hundred Cases of Cataract Extraction by the modified Linear Operation.
JONES, H. Macnaughton, M.D. Eye-Dressings after Operations.
TAYLOR, C. Bell, M.D. 1. Synopsis of several hundred Cases of Cataract Extraction. 2. Therapeutic Use of Electricity in certain cases of (so-called) Amaurosis.
WOLFE, J. R., M.D. 1. How to obviate the Complications which render Cataract-operations precarious. 2. The injurious effects of Tea-drinking Habits upon the Nutrition of the Eyeball.

Otology.—The following subjects will be discussed.

1. "The Therapeutic Value of Intratympanic Injections of Medicated Fluids in the Catarrhal Affections of the Middle Ear." Dr. Cassells will open the discussion on this question, and the following gentlemen have promised to take part in it: Dr. Weber-Liel of Berlin; Dr. Schuster of Aix-la-Chapelle; Dr. Bonnafont of Paris; Professor Macnaughton Jones of Cork; Mr. Lennox Browne of London; Dr. Kirk Duncanson of Edinburgh; Mr. W. Douglas Hemming; Dr. F. M. Pierce. Dr. Weber-Liel will also give a practical demonstration of the use of his "Koniontron" for intratympanic fluid injections.

2. "On Tinnitus Aurium." Dr. Laurence Turnbull of Philadelphia, U.S.A., has promised to open the discussion on this question, and the following gentlemen will take part in it: Professor Macnaughton Jones of Cork; Mr. Lennox Browne of London; Dr. Kirk Duncanson of Edinburgh; Dr. Alexander Ogston of Aberdeen; Mr. W. Douglas Hemming of Bournemouth; Dr. Weber-Liel of Berlin; Dr. Bonnafont of Paris; Dr. Schuster of Aix-la-Chapelle; Dr. Woakes; and Dr. F. M. Pierce. Dr. Weber-Liel will demonstrate practically his method of operating in tenotomy of the tensor tympani muscle. He will also demonstrate the use of his ear-microscope on the cases of patients. The following papers on the subject are promised.

HEMMING, W. D., Esq. On the Forms, Causes, and Treatment of Tinnitus Aurium.
SEXTON, Samuel, M.D. (New York). On Tinnitus Aurium.
TURNBULL, Lawrence, M.D. A Table of 164 cases of Tinnitus Aurium.

The following papers are also promised for this department.

BROWNE, Lennox, Esq. On the Treatment of Non-suppurative Hypertrophic Catarrh of the Middle Ear.
CASSELLS, James Patterson, M.D. 1. On the production of Artificial Deafness, and its bearing on a theory of the Etiology and Evolution of Ear-Diseases (illustrated). 2. Ear-Disease and Life Assurance. 3. On Aural Exostoses; and on a new Operation for their Removal (illustrated).
MCKEOWN, William A., M.D. 1. On the Treatment of Relaxed Membrana Tympani. 2. On Aural Gymnastics.
PIERCE, F. M., M.D. Auditory Exostoses.
TURNBULL, Charles S., M.D. (Philadelphia). 1. Inflation of the Middle Ear in cases of Cleft Palate, both before and after Staphyloraphy. 2. Chloroform-Vapour in Inflation of the Middle Ear.
WOAKES, Edward, M.D. Throat-Deafness associated with Paresis of the Palato-Tubal Muscles.

SECTION C.—OBSTETRIC MEDICINE.

The subjects for discussion in this section are:

1. "Intra-uterine Medication." The discussion will be opened by Dr. W. S. Playfair. Dr. Tilt, Dr. Cordes, Dr. Henry Bennet, Professor Dill, and Dr. Byford will join in the discussion. The following papers will be read in connection with this subject.

ATTHILL, Lombe, M.D. Intra-uterine Medication.
BATTEY, Robert F., M.D. Intra-uterine Medication by Iodised Phenol.
DILL, R. F., M.D. Intra-uterine Medication.
PLAYFAIR, W. S., M.D. Intra-uterine Medication.
TILT, Edward J., M.D. Remarks on Intra-uterine Surgery.

2. "Hæmorrhage from the Genital Organs during Pregnancy and Parturition." The discussion will be opened by Dr. Macan, and the following gentlemen have signified their intention of taking part therein: Professor Macnaughton Jones, Dr. Robert Barnes, Mr. Lawson Tait, Dr. Lombe Atthill, Dr. Henry Bennet, Dr. Malins, Dr. Edis, and Dr. J. Wallace. The following papers are promised.

MADDEN, T. More, M.D. The Prevention and Treatment of *Post Partum* Hæmorrhage.
WALTER, William, M.D. The Treatment of *Post Partum* Hæmorrhage by the Intra-uterine Injection of Warm Water.

The following papers are also promised for this Section.

ATTHILL, Lombe, M.D. Inversion of the Uterus.
AVELING, J. H., M.D. The Treatment of Chronic Complete Inversion of the Uterus, with cases illustrating the advantages of the direct method of applying gradual Elastic Pressure.
BARNES, Fancourt, M.D. A case in which Phlegmasia Dolens simultaneously attacked both legs and the left arm.
BARNES, Robert, M.D., F.R.C.P. A Case of Inversion of the Uterus.
BATTEY, Robert F., M.D. A *résumé* of the Results of a series of Operations for the artificial production of the Change of Life in Women.
BRADLEY, M. M., M.D. A Contribution to Midwifery Statistics.
BYFORD, W. H., M.D. The Treatment of Fibroid Tumours of the Uterus by Ergot.
CHAMBERS, Thomas, F.R.C.P.E. A Case of Fibroid Tumour of the Uterus.
COPEMAN, E., M.D. The Treatment of Severe Sickness during Pregnancy.
EDIS, Arthur W., M.D., F.R.C.P. Acquired Sterility: its Cause and Treatment.
HAYES, J. R., M.D. A Case of Extra-uterine Fœtation.
HOWIE, J. M., M.B. A Fatal Case of Autogenetic Puerperal Septicæmia, in which the Symptoms appeared previously to Delivery.
KERR, Norman, M.D. Warm Water Injections in *Post Partum* Hæmorrhage.
LYSTER, C. E. M.D. The Treatment of Subinvolution of the Uterus.
MALINS, Edward, M.D. Treatment of Conical Cervix of the Uterus.
MILLER, Hugh, M.D. Puerperal Mortality in Lying-in Hospitals.
WALLACE, John, M.D. 1. Sterility from Anteflexion, Cured in two cases by Section of the Posterior Lip of the Uterus (Sims's Operation). 2. Inversion of Uterus.
WILTSHIRE, Alfred, M.D., F.R.C.P. A Case of Tetanus during Pregnancy: Recovery.

SECTION D.—PUBLIC MEDICINE.

The special subjects selected for discussion are:

1. "The Influence of Drinking-Water in originating or propagating Enteric Fever, Diarrhœa, Diphtheria, and Scarlatina; to be illustrated, as far as possible, by instances which have come under the personal observation of the speaker." The discussion will be opened by Dr. Andrew Fergus, and the following members have promised to read papers and take part in the discussion: Dr. Edward Ballard; Dr. Alfred Carpenter; and Dr. C. Meymott Tidy.

Papers in connection with this subject will also be read by:

HUDSON, Robert S., M.D. Facts illustrative of the Spread of Enteric Fever and Diarrhœa by the Agency of Polluted Drinking-Water.
KERR, Norman S., M.D. Typical Cases of Enteric Fever, Diarrhœa, Scarlatina, and Diphtheria, from Drinking-Water.
NOTTER, J. Lane, B.A., M.D. On the Value of Chemical and Microscopic Analysis in its relation to this question.

2. "How are we to deal, by isolation or otherwise, with Convalescents from Acute Infective Diseases, so as to limit the spread of Disease?" The discussion will be opened by Dr. John W. Moore. The following members have promised to read papers and take part in the discussion: Francis Vacher, Esq., and Dr. Arthur Ransome.

Notice of papers to be read are given by the following gentlemen.

ALLBUTT, Henry A., Esq. The advisability of the Study of Geology as a part of Medical Education.
BERNARD, A., M.B. Reasons why the Contagious Diseases Acts ought to be extended to all Seaports.
BONNAFONT, Dr. (Paris). Hygiene.
CARPENTER, Alfred, M.D. The Dual Requirements necessary for the Production of Enteric Fever: A consideration of the Fallacies which are based upon a narrow view of the Germ theory.
CHAPMAN, John H., L.K. & Q.C.P.I. On the Sanitary Arrangements of Dwellings.
DRYSDALE, Charles R., M.D. The Mortality of the Rich and Poor.
HART, Ernest, Esq. Sanitary Districts and Sanitary Administration under the Public Health Acts, with Maps and Tabular Statements.
NOTTER, J. Lane, M.D. The Experimental Study of Disinfectants.
ROGERS, Joseph, M.D. The Anomalies and Deficiencies of the Poor-law Medical Relief in the United Kingdom, with Suggestions for its amendment.

SECTION E.—PSYCHOLOGY.

The special subject for discussion in this Section is:

"What can be done for the Prevention of Insanity?" The question will be arranged under the following heads: (*a*) Ascertaining and Classification of Causes; (*b*) The Legitimate Prevention of Hereditary Transmission; (*c*) The influence of bad Sanitary Conditions; (*d*) The Effect of the Teaching of Elementary Physiological Principles.

The following papers are also promised.

ASHE, Isaac, M.D. 1. Notes of Chemical Analysis as applied to Cases of Insanity. 2. A Case of Defective Renal Elimination of Potash-Salts.
ATKINS, Ringrose, M.D. 1. The Treatment of Hysterical Hemianæsthesia by Metals. 2. Softening of the Bones amongst the Insane.
BALL, Dr. (Paris). On Claustrophobia.
MAJOR, Herbert C., M.D. The Histology of the Brain in Apes.
SEGUIN, E., M.D. The Psycho-Physiological Training of an Idiot Hand.
TUKE, D. Hack, M.D. Intemperance in Study.

SECTION F.—PHYSIOLOGY.

The special subjects for discussion in this section are:

1. "The Physiology of Inhibition".
2. "The Influence of Light on Nutrition".

Two Demonstrations will be given by Dr. Richard Norris: 1. On the Existence of a Third Corpuscular Element in the Blood, which possesses the same Colour and Refractive Index as the Liquor Sanguinis. 2. On some of the more important bearings of this discovery on the Development, Coagulation, and Pathology of the Blood.

Professor Charles and Dr. C. Y. Pearson will give a Demonstration on some recent Physiological Apparatus.

The following communications are also promised.

CHARLES, J. J., M.A., M.D. 1. The propagation of Nervous Impulses. 2. The Circulation of Blood through the Lungs.
COATS, J., M.D. Report of the Glasgow Committee on Anæsthetics; with Illustrations.

GARSON, J. G., M.D. The Arrangement and Distribution of the Longitudinal Fibres of the Rectum.
HARVEY, Reuben J., M.D. 1. The Causation of the Dicrotic Pulse-wave. 2. A few points with regard to Cardiographic Tracings.
THIN, George, M.D. Remarks on Connective Tissue, with Demonstrations.

TRAVELLING AND TOURIST ARRANGEMENTS.

THE JOURNEY TO CORK.

Subjoined is a statement of the different ways in which Cork may be reached. All return tickets are available for two months.

1. *Viâ New Milford.* From New Milford, on Tuesday, Thursday, and Saturday, at 8.30 P.M. on arrival of 10.15 A.M. express train from Paddington; arriving at Passage at 8 A.M. Fares from Paddington to Cork, first class, single, £2 8s.; return, £4; second class, single, £1 18s.; return £3 3s.

2. *Viâ New Milford and Waterford.* From Paddington by express train at 5.15 P.M., arriving in Waterford about 11 the following morning, and at Cork at 4.35 P.M. The steamer does not leave New Milford on Monday morning.

3. *Viâ Bristol.* Steamer from Bristol to Cork, Saturday, August 2nd, at 6.30 P.M. Fares, cabin, single, £1 4s.; return, £1 16s.; from Paddington, first class and saloon, single, £2 2s. 6d.; return £3 8s.; second class and saloon, single, £1 16s.; return, £2 18s. 6d. Average length of sea-passage, 18 hours. Passengers leaving Paddington at 3 P.M. should be in time for the steamer.

4. *Viâ Holyhead and Dublin.* *a.* From Euston Station by Irish mail at 7.15 A.M.; from Holyhead at 2.15 P.M.; from Dublin at 7.45 P.M.; arrive in Cork at 2 A.M.—*b.* From Euston Station by Irish mail at 8.25 P.M.; from Holyhead at 3.15 A.M.; from Dublin at 9 A.M. and 10.15 A.M.; arriving in Cork at 2 P.M and 4.35 P.M. On Sunday mornings, the Irish mail trains, first class only, leave Dublin at 9 and 9.30 A.M., and arrive in Cork at 1.20 and 4.33 P.M.—*c.* From Euston Station by ordinary fast train at 5.15 P.M.; from Holyhead at 1.30 A.M.; from Dublin (North Wall) at 7 A.M. (except Mondays), and Kingsbridge daily at 9 A.M.; arriving in Cork at 2 P.M. (1.20 P.M. on Sundays).—Fares from London to Cork: Irish mail, first class, single, £3 9s. 6d.; return, £5 16s. 6d.; second class, single, £2 12s.; return, £4 7s. 6d.; ordinary train, first class, single, £2 17s.; return, £4 15s.; second class, single, £2 4s.; return, £3 13s. 6d.—Trains leave Dublin (Kingsbridge) for Cork at 6 A.M., 9 A.M., 10.15 A.M., 1 P.M., and 7.45 P.M. (mail).

5. *Liverpool to Cork, by Steamer.* Saturday, August 2nd, at 9.30 P.M.; returning from Cork on Saturday, August 9th, at 6 P.M. Average length of sea-passage, 20 hours. Fare, single, £1 1s.; return, £1 11s. 6d.

6. *Glasgow to Belfast, etc. (viâ* Greenock). Royal mail steamships: two services daily, except Sundays. First service: by train from Glasgow at 8 P.M., leaving Greenock at 8.45 and arriving in Belfast about 4.30 P.M. Second service: from Broomielaw, Glasgow, by steamer at 6 P.M.; or from St. Enoch Station at 9.5; leaving Greenock at 10.15 P.M., and arriving in Belfast at 6 A.M. The first train from Belfast to Dublin is at 7 A.M. Fares from Glasgow or Greenock: to Belfast, first class and cabin, 12s. 6d; return, £1; to Dublin, first class and cabin, £1 5s.; return, £2. Return tickets are available for two months.—*Viâ* Stranraer and Larne. Daily, Sundays excepted. Average sea-passage, two hours and a half.—*Viâ* Ardrossan. Daily (Sundays and Saturdays excepted) from St. Enoch Station at 9.20 P.M., and from Ardrossan by steamer at 10.30 P.M.; on Saturdays, from St. Enoch Station, at 4.20 P.M., and from Ardrossan at 5.30 P.M. Fare, Glasgow to Belfast, 12s. 6d; return ticket, available for a month, £1.

7. *Glasgow to Cork.* Steamer from Clyde Street Ferry every Monday and Wednesday *viâ* Waterford, and every Friday *viâ* Dublin, at 2 P.M. Fare, 17s. 6d. and 10s; return tickets, available for a month, £1 5s. Average length of sea-passage, thirty-five hours.

8. *Glasgow to Dublin* (by steamer from Greenock). Fare, 15s.; return ticket, £1 2s. 6d.

TOURIST ARRANGEMENTS.

The following arrangements are available in connection with the Great Southern and Western Railway during the tourist season.

Killarney viâ Mallow. Tickets, available for a calendar month, are issued to Killarney and back from Kingsbridge, Dublin. Fares: one passenger, *a*,* £2 10s.; *b*, £2; two passengers, *a*, £4 10s.; *b*, £3 12s.; three passengers, *a*, £6 7s. 6d.; *b*, £5 2s.; four passengers, *a*, £8; *b*, £6 8s.; and so on in proportion up to eight passengers. Tickets are also issued from other stations on the line at proportionate reductions. Passengers may break the journey at Limerick Junction or at Mallow.

Killarney and Connemara Circular Tour. Tickets, available for a calendar month, are issued at Kingsbridge for Killarney, Limerick (or Tralee), Athenry, Galway, Westport, Ballina, and thence, *viâ* Midland Great Western Railway, to Dublin (Broadstone), at the following fares: One passenger, *a*, £3 1s. 6d.; *b*, £2 2s.; two passengers, *a*, £5 10s. 6d.; *b*, £3 15*s.* 6d.; three passengers, *a*, £7 16s. 6d.; *b*, £5 7s. 6d.; four passengers, *a*, £9 16s.; *b*, £6 13s. 6d.; and so on in proportion up to six passengers. Cars run between Galway and Clifden, Cong and Clifden, and Clifden and Westport in connection, at moderate fixed fares.

Dublin to Cork viâ Killarney and Glengarriff. Tickets are issued at Kingsbridge for Cork, *viâ* Killarney by rail, thence by car to Glengarriff and Drimoleague, thence by rail to Cork, *viâ* Cork and Bandon Railway, at the following fares: first class rail and car, £2 17s. 9d.; second class rail and car, £2 7s. 10d. These tickets are not available for return from Cork, but are good for a month from the date of issue. Similar tickets for performing the journey the reverse way—viz., Cork to Drimoleague, Glengarriff, Killarney, and thence by rail to Dublin—can be procured at the Cork Terminus of the Cork and Bandon Railway.

Circular Tour, Cork to Killarney, Glengarriff, Drimoleague, and Cork. Tickets, available for a week, can be obtained for the above tour at the Great Southern and Western Railway Station, Cork; or for the same tour in reverse direction, at Cork Terminus of Cork and Bandon Railway. Fares: first class rail and car, £1 14s.; second class rail and car, £1 10s.

Cork and Blackwater Circular Tour. Tickets, available for six days, are issued at Cork (Glanmire Road) for the above, *viâ* Mallow, Lismore, Cappoquin; thence by Blackwater steamer to Youghal and by rail to Cork (Summerhill), or *vice versâ*, from Cork (Summerhill) to Youghal; thence by Blackwater steamer to Cappoquin, and by rail to Lismore, Mallow, and Cork (Glanmire). Fares: first class, 10s.; second class, 8s.

Through tourist tickets can be obtained from all the principal stations in England, the North of Ireland, and Scotland for Killarney, and the holders, if they prefer it, can travel to Cork in place of Killarney. The holders can break the journey at Dublin, Limerick Junction, and Mallow.

Through tourist tickets, available for two calendar months, are issued at Cork for Glasgow and Edinburgh (*viâ* Dublin and Glasgow Steam Packet Company's steamers). Fares: Glasgow, first-class, £3 12s. 6d.; second, £3 2s. 6d.; Edinburgh, first-class, £4; second, £3 10s.

Special tourist arrangements in connection with different parts of England, Scotland, North of Ireland, County Wicklow, etc., have been organised by Messrs. Cook. Particulars have been given in our advertisement columns.

* *a* denotes first class; *b* second class.

EXCURSIONS.

SPECIAL EXCURSIONS FROM CORK.

Killarney.—A special train will leave Cork on Saturday, August 9th, at 7.45 A.M., arriving at Killarney at 10.20 A.M. The party will be met at the train by carriages, to drive them to the Gap of Dunloe, through which they can walk or ride on ponies. Boats will meet them at the top of the Upper Lake, and they can row across to Durricunnihy Cottage, where the Reception Committee will have luncheon provided. Afterwards, they will row down through the three lakes. The return special train will leave Killarney at 7 o'clock. Excursionists can either remain, or return to Cork on the Saturday night. The return-tickets to Cork will cost 10s.; carriages, 2s. 6d. per head. Lord Kenmare has kindly lent his boats.

Blackwater Valley and Lismore Castle.—A special train will leave Cork at 7.50 A.M. on Saturday, August 9th, arriving in Youghal at about 9 A.M. The steamer will leave for Cappoquin at 9.10 A.M. The party can drive from Cappoquin to Lismore, or go by rail; also they can visit the celebrated monastery of Mount Melleray on their way. Lismore Castle and the grounds will be opened for the visitors, and the Duke of Devonshire will kindly provide luncheon at the Devonshire Arms. A train will leave Lismore at 5 P.M., arriving in Cork at 8.15 P.M. Price of circular tour tickets, 10s. The Dublin and Holyhead mail-train leaves Cork at 10.6 P.M.

River, Queenstown, Carrigaline River, Harbour, etc.—The Reception Committee will provide a steamer for a party of one hundred, to start at 10.30 A.M. on Saturday. The steamer will visit the different places of interest in the river, Haulbowline, the Forts, Camden and Carlisle; proceed up the Carrigaline River, and take the party to Ballinacurra. At 1 o'clock, luncheon will be provided for one hundred in the ballroom of the Queen's Hotel, Queenstown. They will return to Cork about 5 P.M. The train for Killarney starts from Cork at 6.30 P.M., arriving in Killarney at 9.32 P.M.

Blarney Castle.—A party of fifty will leave Cork by cars, driving along the Lee Road, passing Carrigrohane Castle, the Valley of Woodside, and arriving in Blarney about 12 o'clock noon. Sir George Colthurst will kindly provide luncheon. St. Anne's large hydropathic establishment, close to the castle, is well worth a visit. (Mr. Barter will

entertain any of the party who wish to remain to dinner.) After visiting the lake, grounds, and Rock Close, the party will return to Cork by train or car.

DONEGAL TOUR.

First Day. (Great Northern Railway, *viâ* Enniskillen and Bundoran Line.)—Leave Dublin at 9 A.M.; arrive at Ballyshannon at 3.20 P.M. Distance, 56½ miles.—(By cars, through Ballintra and Laghey.) Leave Ballyshannon at 3.30 P.M.; arrive at Donegal about 5.45 P.M. The ruins of the old Abbey of Donegal still possess interest for the antiquarian. A few miles to the left, on a jutting crag overlooking Donegal Bay, is Kilbarron, the ruined castle of the O'Clerys, where the celebrated *Annals of the Four Masters* were composed. The Arran Arms Hotel, at Donegal, is a comfortable one. There is an excellent spa in the town. Distance, 13½ miles.

Second Day. (By cars, through Mount Charles, Inver Dunkineely, and Bruckles.)—Leave Donegal about 8 A.M., and arrive at Killybegs about 11 A.M.; thence westwards to Carrick Hotel, where tourists will find guides to conduct them to the summit of Slieve League. Distance, 17½ miles.

Third Day. (By cars.)—From Carrick Hotel to Malinmore, Malinbeg, and Glen Columbkille, and back to Carrick. The bold headlands, the eagle crags, and the wild cliffs present unrivalled scenery. Distance, about 17 miles.

Fourth Day. (By cars. If this journey be considered too much for one day, fair accommodation can be obtained at Glenties.)—From Carrick Hotel, through Glen Pesh, Ardara, Glenties, Doocharry Bridge, and on to Gweedore Hotel, a most comfortable one, with angling privileges in the rivers in the immediate vicinity. Excursions can be made from here to Mount Errigal, a conical hill, and the highest in Donegal, 2,466 feet; also to Dunlewy and Bunbeg, which are at short distances from the hotel, and worth visiting. Distance, 30 miles. Travellers can reach Dunfanaghy the same evening from the Gweedore Hotel, passing through the cross road where may be seen an Ogham stone, the Myragh stone-cross, and Magherarvarty rocking-stone. At Dunfanaghy there is a comfortable hotel.

Fifth Day. (By cars, boat, and rail.)—From Gweedore Hotel, through Glenveagh, Kilmacrennan, Milford, and on to Rathmullen, crossing Lough Swilly, to Fahan, for 5.40 P.M., or 8.40 P.M., train to Derry, arriving there at 6.10 P.M., or 9.20 P.M. Distance, about 25 miles.—Or from Gweedore Hotel, *viâ* Falcaragh, Dunfanaghy, Creeslough, Kilmacrennan, and Letterkenny; and thence to Strabane, for 9.15 P.M. train to Derry. At Dunfanaghy, refreshments may be had at the Stewart Arms Hotel, whence an excursion should, if possible, be made to the cliffs of Horn Head, about 830 feet high.

Arrangements have been made for an excursion to Tory Island, distant eight miles from the shore. Its round towers and churches, with its pagan groves and Tower of Balar, and its fine red caves and arches, are well worth a visit. In ancient times, Torri was the abode of the Fomorian pirates, who made it their stronghold, and devastated the adjoining mainland. In Christian times, it was the residence of Culdees and of St. Columb-Kill. The steamer will leave Dunfanaghy for Tory Island at 8 A.M., and will land the party at Buncrana in Lough Swilly the same evening, in time for the late train to Londonderry.

Near Kilmacrennan is the Rock of Doune, on which the O'Donnells, chieftains of Tyrconnell, were crowned; also Lough Salt Mountain, 1200 feet in height, and St. Columb-Kill's Abbey.

The best route to Rathmullen from Dunfanaghy is through Aed's demesne, Doe Castle and ancient graveyard, Glen, and Cratlagh, the scene of the barbarous murder of Sidney, late Earl of Leitrim, and his two servants; thence through Milford, along the wooded shores of Lough Swilly, to Rathmullen, where the Carmelite Priory may be visited. Travellers can then take the steamers and railway at Fahan for Londonderry. Distance from Dunfanaghy to Rathmullen, by Glen, 23 miles.

SPECIAL NOTICES.

The Reception-Room in the Queen's College will be open on Monday, August 4th, for the issue of tickets to members, and for supplying all necessary information.

*** *It is particularly requested that gentlemen, on their arrival, will at once proceed to the Reception-Room at Queen's College, enter their names and addresses, obtain tickets and programme, inquire for letters, and consult the list of lodgings and hotels.*

All the steam-packet companies will convey goods to the Museum and for the Sanitary Exhibition free of charge.

Any persons requiring descriptions of tours in the South of Ireland can have the same on application to the Honorary Local Secretary.

Intending visitors are requested to communicate with Professor Macnaughton Jones without delay, stating whether they will bring ladies with them.

Reception and waiting rooms for ladies will be provided in Queen's College and in the City.

Dr. EASTWOOD gives notice that he will move:

"That, as the BRITISH MEDICAL JOURNAL is the organ of the British Medical Association, a greater amount of authority and surveillance be exercised by the Committee of Council over the JOURNAL, so that no articles appear which are not in accordance with the opinions and welfare of the medical profession, as well as of the public at large."

FRANCIS FOWKE,
General Secretary of the British Medical Association.
161a, Strand, London, July 24th, 1879.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Town Hall, Cardiff, on July 1st, 1879. The Chair was taken by the President, JOHN RUSSELL, Esq., who resigned the chair to the President-elect (WILLIAM TAYLOR, M.D.) About fifty members were present.

A Vote of Thanks was accorded by acclamation to the late President (J. Russell, Esq.) for his able services during the past year.

Report of Council.—The following report was read.

The Council of the South Wales and Monmouthshire Branch, in presenting their ninth annual report, are happy in being able to congratulate its members on the yearly increasing prosperity and usefulness of the Branch. The British Medical Association, one of the largest medical associations in the world, if not the largest, numbering as it does upwards of eight thousand members, and wielding a power for good in the interests of the profession and all matters connected therewith, showed great wisdom in its original organisation of its Branches, which help so much to support and consolidate the parent stem. We are one of the younger Branches, and number far more than any established since; indeed, we stand in this respect about eighth on a list of about thirty-five Branches. At our first annual meeting in 1871, at Swansea, our numbers were one hundred, and now we have about one hundred and sixty-five members.

The establishment of our Branch, as most of you are aware, was entirely due to the energy and perseverance of our friend Dr. Andrew Davies of Swansea, who, since its formation, has acted as senior honorary secretary, and whose valuable services in that capacity we are now regretfully losing. His resignation will to-day be placed in your hands, and it will rest with you to appoint his successor. Your Council, who have been intimately associated with him during the past nine years, cannot allow this opportunity to pass without expressing their very deep regret at this severance of his official connection with us—the first break we have had—and their most cordial sympathy with him in his recent severe accident. At the same time, they express the hope that his recovery may be rapid and complete, that he may be blest with many years of health and usefulness, and that we may still be able to avail ourselves of that assistance which he has always been ready so courteously and so ably to render us in the conduct of the business of our Branch.

Since our last annual meeting at Neath, under the genial presidency of Mr. John Russell, we have had the usual ordinary meetings—in the autumn of 1878 at Treherbert, and in the spring of the year at Llanelly, at both of which places we received a hearty welcome from the local members of the profession. The arrangements for our meetings during the year 1879-80 are as follows: Autumn, Tenby; spring, Aberdare; annual meeting at Swansea, the day to be fixed by the President and honorary secretaries. Hitherto, the election of president-elect has carried the place of our next annual meeting. This practice at times has many disadvantages, and, as your Council are of opinion that these annual gatherings should always be held at a large town, easily accessible to the members, they would suggest that the election of President-elect should be made without special reference to our next place of annual meeting.

A statement of accounts is appended to this report, by which you will see that we have a balance in hand of £25 15s. 9d., as compared with £19 2s. 5d. last year. One hundred and six subscriptions have been paid for the current year, leaving about sixty to be still collected; and as nearly all these subscriptions are due on January 1st each year, your Council would impress upon the members the necessity of punctually remitting their subscriptions when called upon, which would tend to save the honorary secretaries an enormous deal of trouble.

As regards medical legislation during the past year, I think we may fairly congratulate ourselves. The several Amendment Bills, and the

whole subject upon which they bear, have been referred to a Select Committee of the House of Commons, and the Habitual Drunkards' Bill, a most important measure, has been passed. The influence of the British Medical Association in bringing about these desirable results has been paramount and important. A Select Committee has also been appointed to receive evidence on the working of the Contagious Diseases Acts, and we have no hesitation in affirming our belief that the result will be not only the maintenance of these Acts, but their extension to other large towns.

We desire to take this opportunity of congratulating the members on the improved appearance of the JOURNAL with its pages ready cut, and better quality of paper and printing; and we think we are not far wrong in saying that it now stands second to none of the weekly medical publications in the world.

Finally, the Council, to quote from its first report, "desire to urge on the members of the Branch the duty of promoting the interests of the parent Association and its South Wales and Monmouthshire Branch, by endeavouring to enlist in the good cause all among their professional friends who are likely to strengthen an organisation which is advantageously influencing the intellectual, scientific, and social status of our common profession."

The Statement of Accounts was read. It showed receipts amounting to £42 16s. 5d., and expenses to £17 os. 8d., leaving a balance of £25 15s. 9d. The outlay included a donation of £3 3s. to the British Medical Benevolent Fund.

The report and statement of accounts were received and adopted.

President-elect.—On the motion of Dr. TALFOURD JONES, seconded by Mr. PROBERT of Merthyr, Dr. T. D. Griffiths of Swansea was appointed President-elect.

Secretaries.—Dr. BROWN of Tredegar proposed, and Mr. HALL seconded, that Dr. Sheen and Mr. J. Hancocke Wathen should be elected honorary secretaries. The motion was agreed to.

Vote of Thanks to Dr. Andrew Davies.—Dr. LEWIS proposed, and Dr. EDWARDS seconded, a vote of thanks to Dr. Andrew Davies for his services as joint honorary secretary, and of regret at his enforced retirement. This was heartily agreed to; as was also the suggestion by Mr. EVAN JONES, that the vote should be recorded on vellum.

Members of Council.—The following were elected: Messrs. Evan Jones, Jabez Thomas, Talfourd Jones, and Thomas Evans.

New Members.—The following were elected members of the Branch: H. R. Vachell, M.B., Cardiff; George Griffiths, Esq., Milford Haven; J. A. Jones, M.B., and D. I. Williams, Esq., Llanelly. These and the following had previously been elected members of the Association by the Council: M. Quirk, M.D., Blaenavon; M. Williams, Esq., Cardiff; John Evans, Esq., Churton, Cardiff; Philip James, Esq., Pandy, Pontypridd.

President's Address.—The President, after expressing his deep appreciation of the honour paid to him in electing him to the chair, made some remarks on university extension, advocating the establishment of an university for Wales on the principle of the University of London. He suggested especially the establishment of a school of medicine in connection with the university, and that the Cardiff Infirmary should be removed and enlarged, and made the clinical hospital. He then spoke at some length on lithotomy, lithotrity, and litholapaxy. He had applied to every member of the Branch, 160 in number, and had received replies from 140 gentlemen, 51 of whom had performed either lithotomy or lithotrity; a few others had sent particulars of cases in their own practice, not operated on by them, but handed over to Sir Henry Thompson or the Bristol Infirmary. A table was exhibited, showing the number of cases operated on. Of lithotomy, there were 179 operations by the lateral, and 15 by the median method. Of the 194 patients, 176 recovered and 18 died. As regarded age, 151 of the cases, and 12 of the deaths, were in subjects not exceeding twenty years; ten of the deaths being in boys under ten. Of lithotrity, there were 21 cases with two deaths. There were also seven cases of calculus in females removed by rapid dilatation of the urethra; five cases of urethrotomy; and fourteen cases of removal of calculus from the urethra—all successful. As regarded the causes of death, there were five deaths under five years of age: one from typhus, eight days after operation; one from scarlet fever, fourteen days after operation; in the remaining three cases no cause of death was returned. Five deaths occurred in females from five to ten years: one each from peritonitis, chloroform, diarrhœa, abscess of kidney; and in one no cause was returned. There were two cases from fifteen to twenty: in one, no cause of death was given, and one died from abscess of kidney. One death occurred in a man from thirty to forty, from pneumonia. At ages between fifty to sixty, there were two deaths: one from pyelitis, and in the second no cause was returned. Two deaths occurred at ages from seventy to eighty; in one, no cause was returned; the other case was one operated on at the urgent request of the patient, against the advice of the surgeon. And lastly, there was one death in the list where no age was mentioned, neither was the cause of death given. In the lithotrity cases, there were only two deaths: one at twenty-five, no cause of death being given; and the other, from forty to fifty, from cystitis. The cases of rapid dilatation in the females were all successful. (One hundred and seventy specimens of calculus were exhibited.)

Mr. HILL proposed, and Dr. LEIGH seconded, a vote of thanks to Dr. Taylor for his able address.

Papers.—The following papers were read.

Mr. E. RICE MORGAN: A fatal case of Inflammation of the Brain from a Blow on the Skull: Necropsy.

T. D. GRIFFITHS, M.D.: 1. A case of Acute Pleurisy, with Rapid Recovery after Paracentesis. 2. Is Croup Diphtheria?

Mr. J. HANCOCKE WATHEN: A case in which Excessive Doses of Nux Vomica were taken without producing poisonous effects.

Several papers were postponed for want of time.

Messrs. Ferris and Co. of Bristol exhibited a large and choice selection of instruments and drugs.

Dinner.—The members and visitors, to the number of fifty-nine, afterwards dined at the Philharmonic Restaurant; Dr. TAYLOR in the chair.

YORKSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at Sheffield on June 18th; A. JACKSON, Esq., President, in the Chair.

President's Address.—The PRESIDENT read an address, in which he discussed the various changes which had taken place in surgery during the present century. Proposing for the consideration of the members the question, "Has proper progress been made in surgery during the last thirty years, considering our advantages?" he answered it in the negative, urging in support of his view the small addition made to our knowledge of the the pathology and treatment of cases of strangulated hernia, hæmorrhage, gonorrhœa, carbuncle, boils, cancer, and other diseases; while we have allowed valuable remedies and modes of treatment to fall into disuse. Allusion was made to the unsatisfactory results of the treatment of fractures, and the frequent occurrence of stiff joints and œdema, which, though generally temporary, are very disagreeable and inconvenient while they last. The treatment of diseased joints, especially of the hip-joint, with its uncertain results, is another instance of our want of progress, leading us often to adopt treatment which ends in failure and is contrary to reason. Two reasons were suggested as tending to the want of progress in our knowledge and the failure of our treatment: one, the pace at which we live and the difficulty of finding time for thought; and the fact that our standard works are written by hospital men, who rarely follow their cases after they have left the wards. It was urged that the antiseptic method of treating wounds is unnecessary in a large number of cases; that many of the benefits attributed to it are really due to the better preparation of our patients for operation, to increased attention to cleanliness in its full meaning, and to rest, as well as to the more constant use of drainage-tubes and the more moderate administration of stimulants; while the belief in the antiseptic method has led to much rash and unjustifiable surgery. The paper concluded with an allusion to the differences of opinion existing among surgeons as to the treatment of injuries of the head, nævi, stricture, hæmorrhoids, and stone in the female bladder. To remedy this, it was suggested that the Branch should annually appoint a committee whose duty it should be to make a report upon the history and treatment of disease, so that this generation might leave behind it facts which should tend to the progress of surgical knowledge.

Report.—The report of the Council was read by the Secretary. The Branch was said to be in a satisfactory condition. The number of members was 263. Three meetings had been held during the year. In addition to the annual one at Leeds, meetings took place at Burnley and Huddersfield. On these occasions, eighteen papers were read, and the greater part of the time was devoted to the discussion of special subjects. The report then went on to consider the merits of the several Medical Reform Bills, and to show the advantages of that supported by the Association, and that it embodied those principles for which the Association had contended for the last fifty years; and members were requested to sign petitions to Parliament in its favour.

On the motion of Mr. ATKINSON, seconded by Dr. GOYDER, the report was adopted.

Medical Defence.—Mr. PACKMAN proposed, "That the Council of this Branch take into consideration the question of the formation of a Medical Defence Association". This proposition was seconded by Mr. BROWNING, and carried.

Officers and Council.—On the motion of Dr. DEVILLE, seconded by

Mr. G. S. TAYLOR, the following gentlemen were elected as Council and representatives to the General Council for 1879-80: *President:* A. Jackson, Esq. *President-elect:* P. Miall, Esq. *Branch Council:* (*York*) A. Ball, Esq.; W. D. Husband, Esq.; W. Matterson, M.D.; S. W. North, Esq.; G. Shann, M.D.; (*Halifax*) J. H. Wright, Esq.; (*Leeds*) T. C. Allbutt, M.D.; J. E. Eddison, M.D.; J. D. Heaton, M.D.; T. R. Jessop, Esq.; T. P. Teale, Esq.; T. Scattergood, Esq.; C. G. Wheelhouse, Esq.; (*Sheffield*) M. Martin De Bartolomé, M.D.; H. F. Banham, M.D.; W. F. Favell, Esq.; A. Jackson, Esq.; J. H. Keeling, M.D.; (*Rotherham*) H. J. Hardwicke, Esq.; (*Bradford*) W. Burnie, M.D.; D. Goyder, M.D.; R. H. Mead, Esq.; (*Scarborough*) T. W. Teale, Esq.; (*Wakefield*) S. Holdsworth, M.D.; (*Huddersfield*) S. Knaggs, Esq. *Representatives in the General Council:* T. C. Allbutt, M.D.; W. F. Favell, Esq.; J. D. Heaton, M.D.; S. Holdsworth, M.D.; W. Matterson, M.D.; A. Jackson, Esq.; J. H. Keeling, M.D.; W. Matterson, M.D.; R. H. Mead, Esq.; G. Shann, M.D.; T. P. Teale, Esq.; C. G. Wheelhouse, Esq.

Secretary.—On the motion of Dr. DE BARTOLOMÉ, seconded by Dr. BURNIE, Dr. Procter was re-elected Secretary.

Paper.—Mr. ATKINSON read a paper on the Antiseptic Treatment of Wounds, based upon the statistics drawn from the registers of the surgical practice at the Leeds General Infirmary, and showed the following results. 1. Since the adoption of the antiseptic method in the treatment of compound fractures, the mortality had been reduced from 19 per cent. to 10 per cent. (the latter including several desperate and complicated cases which were beyond the reach of any treatment; so that, if these were excluded, the contrast in favour of antiseptics would be far greater. 2. The results obtained in operative cases had not been so uniform; *e. g.*, amputations, both primary and secondary, but especially the latter, had as often done well without as with the antiseptic precautions. The same might be said of excision of mammary tumours. On the other hand, resection of joints, subcutaneous osteotomy, the ligature of large arteries, removal of simple tumours, and the opening of abscesses, acute or chronic, or the aspiration of joints under the spray, yielded better results than could have been expected without. 3. The diminution or entire absence of surgical fever after operations done antiseptically was very striking. But the temperature, as a rule, rose for the first twenty-four or forty-eight hours after operation, whether the case were treated antiseptically or not. This rise would vary according to the temperament of the patient, and could not be ascribed solely to surgical fever. 4. Lacerated and contused flesh-wounds, when dressed antiseptically from the first, almost invariably healed without putrefactive pus, and with slight, if any, rise of temperature. 5. The use of drainage-tubes was a very essential element in the success of antiseptic surgery, allowing a free exit to the serous discharges, which, if arrested, caused an immediate rise in temperature; so that the thermometer was a certain gauge of the need for disturbing the dressings. 6. The experience of antiseptics in ovariotomy had not hitherto confirmed that of Dr. Keith; whilst a large number of cases of colotomy and strangulated hernia, very few of the latter of which, and *none* of the former, were done antiseptically, had shown a high average of recoveries.

Dinner.—After the meeting, the members dined together at the Wharncliffe Restaurant.

MIDLAND BRANCH: ANNUAL MEETING.

THE annual meeting of the Midland Branch was held at the Infirmary, Derby, on Thursday, June 26th. About fifty members attended. Dr. A. MERCER ADAM, retiring President, took the Chair, and introduced the President-elect, J. WRIGHT BAKER, Esq., who delivered an address.

New Members.—The following gentlemen were declared to be elected members of the Association and Branch: George N. Adams, M.D. (Rippingale); L. P. Bateman, Esq. (Derby); Alfred Chawner, Esq. (Ashover); H. J. Foulds, Esq. (Derby); C. F. George, Esq. (Kirton-in-Lindsey); C. H. Hough, Esq. (Derby); H. Redmayne, Esq. (Derby); J. W. Measures, Esq. (Long Sutton); G. Rice, Esq. (Derby); C. J. Russell, M.D. (Messingham); W. E. Scott, Esq. (Lincoln); J. A. Storey, Esq. (Sutterton); C. V. Taylor, M.B. (Nottingham); R. S. Taylor, M.B. (Derby). J. M. Beckett, Esq. (Derby); W. E. Ditchett, Esq.; and J. S. Scriven, M.D. were elected members of the Branch.

Representatives on the General Council.—The following were elected: E. Seaton, M.D., and Joseph White, Esq., for Nottinghamshire; William Webb, M.D., and J. W. Baker, Esq., for Derbyshire; T. W. Benfield, Esq., and C. H. Marriott, M.D., for Leicestershire; E. Morris, M.D., and T. Sympson, Esq., for Lincolnshire.

Branch Council.—The following were elected: J. O. Brookhouse, M.D., and S. Job, Esq., for Nottinghamshire; William Ogle, M.D., and W. G. Curgenven, Esq., for Derbyshire; G. C. Franklin, Esq., and F. H. Hodges, Esq., for Leicestershire; W. Newman, M.D., and W. J. Pilcher, Esq., for Lincolnshire.

The Local Secretaries were re-elected.

President-elect.—T. Wright, M.D., Senior Surgeon to the Nottingham General Hospital, was unanimously appointed President-elect.

Widows and Orphans of Medical Men.—On the motion of Dr. NEWMAN, the following resolution was adopted:

"The members of the Midland Branch of the British Medical Association are deeply impressed with the desirability of making some arrangement by which the widows and orphans of medical men throughout the country may be effectually aided in their time of need and distress. They beg, therefore, respectfully to submit to the President and Directors of the 'Society for Relief of Widows and Orphans of Medical Men in London and its Vicinity' this unanimous expression of their opinion; and to ask if they will kindly consider how far it may be possible for them to extend to residents in the country the advantages of their Society, and, by admitting them on such equitable terms of payment as may seem good, to make provision for the destitute widows and orphans of the medical profession on a much wider scale than has hitherto been done."

A Donation of five guineas was granted from the funds of the Branch to the Nottingham Medical Defence Association.

Papers.—The following papers were read and discussed:

On Some Recent Methods in the Treatment of Wounds. By Jos. White, Esq.

Ovariotomy; and Ligature of Femoral Artery under Antiseptic Plans. By C. H. Marriott, M.D.

Case of Compound Dislocation of Astragalus. By T. Sympson, Esq.

Nævi; their Treatment, especially by Electrolysis. By W. Newman, M.D.

Relief of Mechanical Tension by the Knife in some Acute Affections of the Eye. By F. H. Hodges, Esq.

An Electro-Magnet was exhibited which had proved useful as a means of displacing particles of steel lodged in the interior of the eyeball.

Dinner.—The members afterwards dined at the Midland Hotel.

SOUTHERN BRANCH: ANNUAL MEETING.

THE sixth annual meeting of the Southern Branch was held at Southlands, Ryde, the residence of the President-elect, BENJAMIN BARROW, Esq., on Wednesday, June 25th. There were present forty-seven members and eleven visitors. The chair was taken by the retiring President, B. GOWING, Esq.

Communications.—Dr. Sinclair Coghill of Ventnor read a paper on Idiopathic Irritable Spine. The principal speakers in the discussion which followed were Dr. J. Ward Cousins and Dr. Lewis.

Sir W. Smart read a paper on Epidemic Erysipelas, in which he gave a number of instances which tended to show the epidemic character of certain forms of this disease. An animated discussion followed, in which Dr. Axford, Dr. Kealy, Dr. Turner, Dr. Lewis, Dr. Blackman, etc., took part.

Other professional matters were introduced by Dr. Blackman, Dr. J. Ward Cousins, and Dr. Cæsar.

Address of the Retiring President.—The PRESIDENT thanked the members for the great kindness they had shown him. The year had been very uneventful, though one of increased prosperity. The grim visitor who would never be denied admittance had, however, been amongst them, and borne away at least one member who was present when they last met. This constantly happened, but still others always came forward to fill the ranks. The most important and absorbing subject before them at their last meeting was that of medical reform. Unfortunately for his reputation as a prophet, he said that the matter, having been taken up by the present Government, would be settled before long. He was sorry to say that there was every probability of the prediction being falsified, now that the matter had been relegated to a select committee of the House of Commons. The positions of a retiring official, and of the coming official, reminded him of the pictures which appeared in some of the comic papers at the beginning of the year. The old year was represented casting a "longing, lingering look behind", while the new one came up looking hopefully and joyously to the future. That was something like the relative positions of himself and the new President. Their President-elect needed no introduction. In resigning the chair, he thanked them all for the honour they had done him, and asked them to give a cordial and hearty welcome to his successor, Mr. Barrow.

Mr. Gowing then vacated the chair, which was taken, amidst great cheering, by B. BARROW, Esq., the President-elect.

Financial Statement. — The SECRETARY read the statement of accounts, from which it appeared that the balance from last year was £12 8s. 3d., and the present balance in hand £13 4s. 6d.

Next Annual Meeting: President-elect.—Dr. KEALY (Gosport) proposed: "That the annual meeting of 1880 be held at Bournemouth, and that Dr. Stewart Falls be the President-elect." Dr. ELLIOTT seconded; and the motion was carried unanimously.

Representatives in the General Council.—Inspector-General Sir W. SMART proposed: "That Surgeon-Major Boileau and Dr. Knott of Portsmouth be the representatives on the General Council of the Association, in place of Surgeon-Major Porter and the late Dr. Case." Dr. AXFORD seconded; and this motion was also carried unanimously.

Honorary Secretary.—Mr. LANGDON of Winchester proposed: "That Dr. J. Ward Cousins be elected Honorary Treasurer and Secretary of the Branch for the ensuing year." Dr. TURNER of Ryde seconded; and it was carried unanimously.

Dr. J. WARD COUSINS thanked them for electing him again to the position of secretary and treasurer. He acknowledged the assistance he and received from the secretaries of the various districts, and he was pleased to announce that they were making great progress. They now numbered one hundred and seventy-five members. Each district was independent, and had its own members and its own officers, considered its own topics, and held its own meetings.

President's Address.—The PRESIDENT delivered an address. After briefly alluding to the locality in which the meeting was held, he took, as the text of his address, "The Past, Present, and Future of the Medical Profession". In the course of his address, he commented on the public estimate of the profession; quackery—both without and within the profession; the practice of medicine fifty years ago; the modern popular prejudice against blood-letting; lady-nurses and lady-doctors; the Contagious Diseases Acts; the antivaccination movement; the administration of alcohol in medicine; and the appointment of medical officers of health. He concluded by expressing his deep interest in the profession, and the desire to do all he could to aid his professional brethren, though no longer practising.

Inspector-General Sir WILLIAM SMART moved, and Dr. TREND seconded, a vote of thanks to Mr. Barrow for his excellent address. The vote was carried by acclamation.

Excursion.—After the meeting, the members accompanied the President to the beautiful mansions and grounds of West Field and Apley Towers, where a very pleasurable afternoon was spent.

Dinner.—The members returned at 5.30 to Southlands, where a splendid dinner was provided in a large room, which gave every accommodation. The President presided.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ANNUAL MEETING.

THE twenty-fifth annual meeting of the above Branch was held on Tuesday, June 24th, at the Grand Hotel, Birmingham. There were about sixty-five members present. The Chair was taken by the President, Dr. TIBBITS of Warwick, who introduced his successor, Dr. JAMES JOHNSTON.

New Members.—The following were elected members of the Branch: Mr. John Clay; Mr. Thomas Duke, Rugby; Mr. Alfred Harvey.

Vote of Thanks to Retiring President.—Mr. SAMPSON GAMGEE proposed a vote of thanks to the retiring President for the able and courteous manner in which he had discharged the duties of the presidency. He said they were quite prepared that Dr. Tibbits, as thrice Mayor of Warwick, should be familiar with the conduct of public business; and he had conducted it systematically and successfully, and had besides exercised a wide and splendid hospitality, and extended many kindnesses to them during the past year.

Dr. THOMPSON of Leamington seconded the motion, which was cordially agreed to and acknowledged by the ex-President.

Report of Council.—Dr. MALINS read the report of the Council. The number of members was now 372, against 356 at the close of the previous year, representing a greater total strength than had ever before been attained. Thirty-eight new members had been elected during the year, while twenty-two had been lost by death and withdrawal. The Council noted with deep regret that five senior and respected members of the Branch had died since the last annual meeting; viz., Dr. Birt Davies, who for nearly forty years held the office of Birmingham borough coroner: Mr. J. Hyde Houghton of Dudley, at one time Chairman of the Pathological and Clinical Section of the Branch; Mr. G. E. Horton of Dudley; Mr. G. P. Dunn of Hales Owen; and Mr. J. J. Hadley of Birmingham. Six ordinary general meetings and one special general meeting of the Branch had been held during the year. At the ordinary meetings, various papers on medical topics had been read; and patients, pathological specimens, surgical instruments and appliances, were shown. At the special general meeting, held on July 26th, 1878, the report of the Joint Medical Committee on Provident Dispensaries was received and adopted. At the next succeeding ordinary meeting of the Branch, the President (Dr. Tibbits) drew attention to the long and arduous labours of the ex-President (Mr. Sampson Gamgee) as President of the Joint Medical Committee on Provident Dispensaries; and he moved the following resolution, which was seconded by Mr. Watkin Williams and carried unanimously: "That the best thanks of the meeting be hereby tendered to Mr. Sampson Gamgee for the valuable services he has rendered to Birmingham and the district during his recent year of office as President of the Branch in furtherance of the reform of medical charities." At the March meeting of the Branch, Mr. J. F. West brought forward the case of Mr. T. Millerchip, surgeon, of Coventry, who had been sentenced at the recent Warwick Assizes to four months' imprisonment with hard labour—he being a chronic epileptic—for the manslaughter of George Bastock. A memorial to the Home Secretary in favour of the mitigation of the sentence was signed by two hundred and seventy-seven members of the Branch, and forwarded. The reply of the Home Secretary was to the effect that, having carefully considered the memorial, he regretted that there was no sufficient ground to justify him in advising Her Majesty to comply with its prayer. At the last meeting of the Branch, a letter was read from Dr. Sawyer, the senior Honorary Secretary, resigning his office, to which he was elected in October 1874, because he no longer found leisure for the performance of his duties to his satisfaction. The Council deeply regretted Dr. Sawyer's retirement, and were confident that the annual meeting would formally acknowledge its obligations to Dr. Sawyer for his untiring and very able services in promoting the best interests of the Branch. The Council had also to regret the resignation as a member of the Council of Mr. Alfred Baker, whose presence was required in London as a member of the Council of the Royal College of Surgeons. At a special meeting of the Council on March 31st, 1879, it was resolved to support the Medical Act (1858) Amendment No. 2 Bill, introduced at the request of the British Medical Association. A petition in support of the Bill was approved by a committee appointed by the Council, and issued to upwards of eight hundred medical practitioners in Birmingham and the neighbourhood. Four hundred and seventy-four signatures were received; and the petition, with the signatures, was presented to the House of Commons by Mr. Joseph Chamberlain, M.P., to whom the thanks of the Branch were due for his influential assistance in giving expression to the views of the members of the profession residing in the district.

Mr. WATKIN WILLIAMS (the Treasurer) read the financial statement, which showed a balance in hand of £83 5s.

On the motion of Mr. NEWNHAM, seconded by Dr. DEWES, the reports were adopted, after a little discussion raised by Mr. Palmer on that portion relating to the Millerchip memorial.

Resignation of Dr. Sawyer.—The PRESIDENT moved and Dr. TIBBITS seconded the following resolution: "That this meeting, while sincerely congratulating Dr. Sawyer on the fact that his professional engagements prevent his continuing in the office of Honorary Secretary, deeply regret the loss of his services. During a period of unexampled prosperity in the history of this Branch of the British Medical Association, Dr. Sawyer's official career has been distinguished for ability, judgment, and unfailing courtesy, which entitle him to the warmest thanks of his professional brethren in general meeting assembled."

The resolution was carried unanimously.

Votes of Thanks were passed to the Treasurer and Secretaries, to the Chairman and officers of the Pathological and Clinical Section, to the retiring Council, and to the representatives of the Branch in the General Council of the Association.

The Report of the Pathological and Clinical Section was read.

Officers and Council. — The following were elected:— *President-elect:* R. Prosser, Esq. *Honorary Secretaries:* E. Malins, M.D.; E. Rickards, M.D. *Treasurer:* T. Watkin Williams, Esq. *Council:* (*Country Members*) G. F. Bodington, M.D.; E. Dewes, M.D.; W. C. Garman, Esq.; F. E. Manby, Esq.; J. Manley, Esq.; D. H. Monckton, M.D.; C. A. Newnham, Esq.; T. Underhill, M.D.; (*Town Members*) T. H. Bartleet, Esq.; B. Foster, M.D.; J. S. Gamgee, Esq.; Lloyd Owen, Esq.; T. Savage, M.D.; J. Sawyer, M.D.; Priestley Smith, Esq.; W. F. Wade, M.B. *Representatives in the Council of the Association:* T. H. Bartleet, Esq.; G. F. Bodington, M.D.; B. Foster, M.D.; J. S. Gamgee, Esq.; J. Greene, Esq.; J. Johnston, M.B.; J. H. Joy, M.D.; H. R. Ker, Esq.; F. E. Manby, Esq.; John Manley, Esq.; H. M. Morgan, Esq.; C. A. Newnham, Esq.; Lloyd Owen, Esq.; O. Pemberton, Esq.; J. V. Solomon, Esq.; J. Thompson, M.D.; T. Underhill, M.D.; W. F. Wade, M.B.

President's Address.—The PRESIDENT commenced his address by observing that the place of honour was very often the post of duty; and, therefore, in electing him to the honourable post of President, they had given him the golden opportunity, not only of testing, but of, he trusted, proving, the truth of that proverb. In accepting office, he could but thank the Branch, and hope that at the end of the year, on resigning office, his work would have proved the honesty of his feeling. He then proceeded to speak of the British Medical Association, which, he said, had been in existence for forty-seven years. The ranks of those earnest men who could boast that they assisted at its organisation were annually and rapidly thinning. Practically, the society was now composed of members who, thanks to its successful principles, had never felt the urgency of the want and the intensity of the desires which impelled their fathers to combine for its formation. He observed that the chief object of an annual address should be to obviate a fatal tendency to apathy, and proceeded to speak of a variety of matters of interest to the medical world, dwelling particularly on trade-diseases arising from lead and other causes, and on the intimate relationship between mental irritation and bodily disease.

At the conclusion of the address, the President was warmly applauded.

Dr. WADE moved, and Dr. RICKARDS seconded, a hearty vote of thanks to the President for his very able address. The motion was passed by acclamation, and the meeting terminated.

Dinner.—The members and their friends afterwards dined together, under the presidency of Dr. Johnston. Fifty-three sat down, and a highly successful and pleasant evening was spent.

SOUTH MIDLAND BRANCH: ANNUAL MEETING.

THE twenty-third annual meeting of the South Midland Branch of the British Medical Association was held at the Swan Hotel, Bedford, on Thursday, June 26th, at two o'clock; the President, G. P. GOLDSMITH, M.D., occupying the Chair. Previously to the meeting, about twenty gentlemen were entertained at luncheon at the house of the President. Twenty-five gentlemen were present.

New Members.—The following gentlemen were proposed as new members of the Branch: Dr. Bower, Bedford; Mr. Kennedy, Northampton; Mr. W. J. Mackie, Turvey; and Mr. Mahon, Aspley Guise.

President's Address.—The President read an able address, referring to the more important medical topics of the day. A hearty vote of thanks to the President was proposed and seconded.

Papers.—The following papers were read:

1. Clinical Remarks in Ophthalmic Surgery. By H. Veasey, Esq.
2. Diphtheria in Bedford in 1877-79. By C. E. Prior, M.D.
3. Notes on Recent Pneumonias. By Frank Buszard, M.D.
4. The Distribution of Diphtheria. By Alfred Haviland, Esq.
5. Case of Foreign Body in the Trachea. By G. H. Percival, M.B.
6. Case of Hydatid of the Uterus. By A. N. Watts, Esq.
7. Case of Abscess of the Liver. By C. J. Evans, Esq.
8. A Few Remarks on Two Cases of Litholapaxy. By G. F. Kirby Smith, Esq.

The usual votes of thanks were proposed and carried unanimously.

Dinner.—About twenty of the members adjourned to an excellent dinner. A most pleasant evening was spent, the customary loyal and other toasts being duly honoured.

NORTHERN COUNTIES OF SCOTLAND BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in Gray's Hospital, Elgin, on Thursday, July 10th; Dr. NORRIS MACKAY, President, in the Chair. There was a good attendance.

Fees in Medico-legal Cases.—The President and Secretary were appointed to confer with the North of Scotland Medical Association as to fees in Medico-legal cases.

Office-bearers for next year.—The following were elected: *President*, T. Aitken, M.D., Inverness; *President-elect*, W. Bruce, M.D., Dingwall; *Vice-President*, A. R. Mackenzie, M.D., Fortrose; *Secretary and Treasurer*, J. W. N. Mackay, M.D., Elgin; *Members of Council*, C. Adam, M.B., A. Butler, M.B., D. McFadyen, Esq., James Ross, M.D., R. Turner, M.D., and G. Whyte, M.D.

New Members.—The following gentlemen were nominated and duly elected members of the Branch: Brodie Cruickshank, M.D., Nairn; John Simpson, M.D., Inverness; and William Simpson, M.B., Buckie.

The next place of Meeting was fixed to be at Forres on a Wednesday early in July.

President's Address.—The PRESIDENT delivered an address on Puerperal Hæmorrhage and its Prevention. This was followed by a discussion, when the members generally agreed with the views advanced by him. A hearty vote of thanks was, on the motion of Dr. Forbes of Fochabers, passed to the President for his address.

There was no time left to bring up the subject fixed for the day, viz.: Croup and Diphtheria.

Luncheon.—On the conclusion of business, the members to the number of twenty, adjourned to luncheon, at the house of the President, and were very handsomely entertained by Dr. and Mrs. Mackay, which concluded an exceedingly pleasant meeting.

CORRESPONDENCE.

RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

SIR,—Allow me space to make a proposition, in addition to those made in the BRITISH MEDICAL JOURNAL of June 14th, in behalf of the widows and orphans of medical men. Why not start a "General Pension Fund" for all holding diplomas registered in Great Britain, to be admitted by the annual payment of a stipulated sum—say, £10, £15, or £20, according as to whether we join at the time we have obtained our diploma or a number of years afterwards; the recipients of the pensions to be *medical men* who are incapacitated from the discharge of their duties by illness or old age, their widows and orphans? If all, or even two-thirds or one-half, on the *Medical Register* were to subscribe the above-mentioned sum or sums, the annual receipts, I should imagine, would form a very handsome figure, and enable us, when we are past our work, to exist comfortably, and to feel that our dear ones will not be left entirely destitute and dependent on the pittances that we too often see paraded in the columns of a newspaper, that are to go towards the support of the living partner and the poor children of a deceased brother. The working of such an undertaking, no doubt, would entail great expense and labour at the onset; but the benefits to accrue by-and-bye will compensate for all. The receipts would, in all probability, enable us in time to form a pension fund equal to any. Such pensions need not interfere with those derived from other sources of a similar nature that now exist amongst our professional brethren, nor with the pensions derived from Government sources. A restriction would necessarily be placed on subscribers who are in the enjoyment of private means, much in the manner that the late East India Company exercised in such cases. Let our influential brother physicians and surgeons hold a meeting with the above object, and we would soon muster thousands who would be but too glad to subscribe their names and moneys for such a good and useful cause—ourselves and those so near and dear to us.

If some, or most of us, have enjoyed a fair income, and lived up to it (very easily accomplished now-a-days), let us feel, when our course is ended, that we have made a provision for our widows and orphans, and not denied them the many benefits they enjoyed during our lifetime.

June 16th, 1879. Yours faithfully, IRELAND.

ANNUITIES FOR WIDOWS OF MEDICAL MEN.

SIR,—Will you permit me here to acknowledge the receipt of letters from a very large number of your readers, and to thank them, not only for cordial encouragement and many practical suggestions, but for the copies of rules and other useful enclosures which they have sent in answer to my last letter in your columns?

On carefully considering the whole subject, I frankly confess that it seems to me inadvisable to guarantee a fixed annuity, and so trench on the business of life-assurance; but I propose the following scheme, which has the advantages of being extremely easy to conduct, of incurring no liability or risk to any one, of requiring no periodical valuations to see that the funds are sufficient, and of placing every succeeding generation of beneficiaries in a better position than the former.

The general outlines are these:

1. Members (registered practitioners in the United Kingdom) to pay an entrance-fee varying from £25 to £50, and an annual subscription varying from £5 to £10, according to age on admission.
2. All entrance-fees to be invested in the names of the trustees, and to form the capital fund.
3. The interest of the capital fund, together with the annual subscriptions, to form the annual revenue.
4. The annual revenue to be divided half-yearly among the annuitants.
5. The annuitants to be the widow, and, where there is no widow, the family, until the youngest child is aged fourteen, of every member who was a subscriber at the time of his death.
6. Should the dividend exceed £25 in any half-year during the first

ten years, the surplus to be carried forward to the revenue-account of the next half-year.

7. The committee of management to fix the dividend before the close of each half-year.

Supposing, for the sake of example, two hundred members join to begin with, and pay an average entrance of £40 each; this will give a capital account of £8,000, which, invested at 4 per cent., yields £320 a year. Add to this an average annual subscription of £7 10s., and the revenue will be £1,820, to be divided among the annuitants of the first year. But, as there cannot well be thirty-six annuitants in the first year, the balance over and above the £50 each will go to help the time when the number is greater. Each fresh member, however, increases the capital account; and by the time that the second two hundred members have been admitted, the capital will amount to £16,000, instead of £8,000, and, as time goes on, the annuitants must steadily increase.

I am aware that this scheme is not strictly scientific, from an actuary's point of view; but that is a small matter, if it be simple and useful, and if it can be carried out without trouble by men who have, as a profession, little time for intricate calculations and elaborate accounts.

Many of those gentlemen who have written to me express a very strong opinion that, to be complete, a sick-fund ought to be combined, which would pay for a *locum tenens* and help to make up for the inevitable loss which illness entails upon all. This can easily be done, and the fund enrolled under the Friendly Societies' Act. The rate of subscription, taking the most successful societies' tables as a guide, would be: every half-year, £2 5s., entering at the age of twenty-five; £3 at the age of thirty-five; and £4 at the age of forty-five—securing £3 a week for the first year, thirty shillings a week during the next year, and fifteen shillings during any sickness continuing longer than two years. If the above half-yearly subscriptions be increased to £3 at twenty-five, £4 at thirty-five, and £5 10s. at forty-five respectively, they would then, in addition, secure a payment for funeral expenses of £60 on the death of a member, or £30 on the death of his wife.

It is highly improbable that medical men would claim sick-pay, as ordinary club-members do, for every trivial ailment; and, therefore, experience may prove that larger benefits than those indicated may safely be conferred.

I shall still be glad to receive the names of those interested, and any practical suggestions or remarks.—I am, etc.,

West Lodge, Wilton, Salisbury. CHARLES R. STRATON.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

SIR,—With all that has been advanced against the proposal in the Leicester Bill, to make it penal for medical men to omit informing the local authority of the existence of any case of infectious disease they may be called in to attend, by Dr. Alfred Carpenter, in his wise and thoughtful letter, I thoroughly agree. At the same time, I feel that the object aimed at, in this and similar Bills, is a most desirable one in the interests of public health; and that this object would be as effectually attained if the Leicester Bill were amended, by providing that it should be the duty of the attending practitioner to report to the householder only, leaving the latter responsible for the compulsory notification to the local authority. By this procedure, the medical attendant would be freed from the possibility of the imputation of acting as a spy or an informer on any one.

The question whether there should be a penalty imposed on any practitioner neglecting formally to apprise the householder of the presence of infectious disease is to me a very difficult one to solve. Through various committees, it appears to me that the members of the British Medical Association are morally pledged to the principles of compulsory notification to the householder; but I confess it never struck me till the other day that compulsion may be held to involve a penalty for non-compliance. I find that many members have laboured under the same misapprehension; and would it not be the wisest course for the various Branches (the Metropolitan Counties Branch, I hope, leading the campaign) to thoroughly discuss the whole question, with a view to bringing it up, for a deliberate decision, at the annual meeting of the Association in 1880?

I offer this suggestion in the belief that, though the matter has been pronounced upon by several committees, there has not yet been a judicial deliverance by the Association.

Meanwhile, it may not perhaps be too much to anticipate that the subject will be well ventilated at the Cork meeting; and I trust that the distinguished reader in Public Medicine, Dr. Andrew Fergus, will pardon me if I venture to express a hope that this vital question will not be "conspicuous by its absence" in his address. No one in the United Kingdom can speak with more accurate knowledge or a higher authority than he can.—I am, sir, your obedient servant,

London, June 21st, 1879. NORMAN KERR, M.D.

THE DISCOVERY OF THE ANÆSTHETIC POWER OF CHLOROFORM.

SIR,—The subject of anæsthesia is one ever of interest, and many have not taken the trouble to read the literature of thirty or forty years ago bearing upon the question. I have for some time doubted the priority of Sir J. Y. Simpson's discovery; but he must be credited with great patience and enormous working power; and he never threw away a palpable suggestion, even if emanating from a babe in science, literature, or medicine.

In regard to the composition of the chloric ether (or shall I say chloroform?) introduced into the practice of the Liverpool medical men, in 1838, by Mr. Waldie, I can find no reliable data. I am now referring to exact chemical composition. Whether the chloroform, as suggested by Mr. Waldie to Sir James Simpson, was the chloric ether of Thomson, Robiquet, and Colin, I am not able to say: I leave Liebig out of the discussion altogether. His analysis was defective and inaccurate, inasmuch as hydrogen is completely omitted in his calculation.

In 1834, Dumas determined the true composition of chloroform, and gave it the name by which it is universally known. Mr. Guthrie of America, and Soubeiran of France, in 1831, prepared chloroform; but does Guthrie's description at all correspond to our modern article? He writes, in 1832, that "he had used the product very freely during the previous six months to the point of intoxication; that he had found it singularly grateful, producing promptly a lively flow of animal spirits and consequent loquacity, and leaving little of the depression consequent on the use of ardent spirits; that it promises much as a remedy in cases requiring a safe, quick, energetic, and palatable stimulus; and that, for drinking, it requires an equal weight of water".

Dr. Black, of Bolton, speaks of it, in 1833, as a new remedy, and considers it useful in asthma and adynamic conditions of the system.

In 1847, the *United States' Dispensatory*, published in July, describes it thus: "It acts as a diffusible soothing stimulus *in the same manner as sulphuric ether*, but with this decided advantage, that, when sufficiently diluted, it possesses a bland sweet taste, which renders its administration easy even to children. The dose for an adult is a teaspoonful, diluted with water. In affections characterised by difficult respiration, it may be used by inhalation."

We have thus Guthrie and the *United States' Dispensatory* speaking of a something called "chloroform", but which is miscible with water. Now we know chloroform is only soluble in water to the extent of one in two hundred, and barely soluble in an equal weight of rectified spirit; how, then, could pure chloroform be described by Guthrie and the *United States Pharmacopœia* as possessing the properties above mentioned? I believe it was a spirituous solution of chloroform that Waldie introduced into Liverpool, and it was called chloric ether; but it was not the chloride of olefiant gas of Thomson and others. The question may be asked, Was it chloroform as we now know it that was used by Sir James Simpson in his first experiments, or was it the spirituous solution? I have searched all available records, and confess that upon this point we are in ignorance. I know it is stated a liquid, by some means or other put aside, was used, and most unexpectedly answered the purpose—*i. e.*, of anæsthesia. The party grew exhilarated, we are told, and some became insensible. I need not refer to the fact that, for more than ten years, ether and ether-anæsthesia were the rage, and every medical and pharmaceutical journal literally teemed with accounts of ether-inhalation and descriptions of apparatus up to 1847. Mr. Jacob Bell, editor of the *Pharmaceutical Journal*, in a note on p. 357, No. viii, for February 1847, thus writes: "Chloric ether has been tried in some cases with success; it is more pleasant to the taste, but appears to be rather less powerful in its effects than sulphuric ether."

Of the dead we must say nothing but in praise; but I am bound to add, Sir James Simpson got his first hint in regard to the anæsthetic power of chloroform from Mr. Waldie; but the name of Jacob Bell must not be overlooked. Bell's note was written in February 1847, and Waldie's suggestion was offered in November of the same year. I thus leave the subject; but with ample material behind to prove that, although Sir James Simpson was the first to put thoroughly to the test the anæsthetic power of chloroform or chloric ether of 1847, he was indebted to others for the suggestion, and Mr. Waldie followed in the wake of Mr. Jacob Bell. Mr. Bell does not inform us as to his authority; but anæsthesia with ether, and no doubt with chloric ether, was practised for reality's sake, or for the purpose of scientific curiosity, years before the discovery of Sir James Simpson took the medical and civil world by storm.—I am, etc., HENRY BROWN.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL RELIEF IN THE DOCKING AND FREEBRIDGE LYNN UNIONS.

In our issue of May 3rd, page 686, we inserted a letter from Mr. Manby of East Rudham, Norfolk, in which that gentleman complained of the unfair way in which the Boards of Guardians of the Docking and Freebridge Lynn Unions had acted in refusing to pay, under their discretionary power, a fee of £2 2s. for the attendance of himself and partner on a case of cut-throat, which necessarily gave them great trouble; and also in refusing to pay for a truss which, under arrangement, he supplied at a stipulated price, without his first sending an invoice for the auditor's inspection. At the time, we advised that Mr. Manby should lay a statement of his complaint before the Local Government Board. This he has since done; and from the copy of the correspondence now before us we learn that the board of guardians refused to entertain the application for payment of an extra fee for the attendance of himself and partner on the case of cut-throat—first, because Mr. Manby did not obtain an order prior to giving his attendance, etc.; and, secondly, because the guardians consider "he is so fully remunerated for his exceptionally light duties in his small district, that compensation for his attendance was met by the salary assigned to the office".

As regards the first point, it appears to us that Mr. Manby would have been open to the charge of inhumanity, if not worse, if, under the circumstances, he had declined to attend until an order had been given; and, as regards the second ground of refusal—the alleged full remuneration—we are at a loss to see the force of it, when we find that for the Eastern District of the Freebridge Lynn Union, with a population of 1,454 persons on an area of 8,524 acres, with all medicines to find save cod-liver oil, this gentleman receives the very modest sum of £26; whilst for the East Rudham District of the Docking Union he gets only £36 for ministering to the medical necessities of 2,142 persons distributed over an area of 12,825 acres, and where, similarly to the Freebridge Union, the guardians find only cod-liver oil.

We regret to observe that, for the two reasons assigned, the Local Government Board refused to interfere by urging on the guardians the fairness of giving a fee in such a case; and we warn the department that the rule they are setting up, of requiring a medical officer to get an order before going to a case of urgency, will be, sooner or later, fraught with disastrous consequences.

In reference to the question of the truss, we are sorry to be compelled to differ from our correspondent. The auditor is clearly within his powers in requiring to see the voucher for the truss, etc., before sanctioning the payment. It matters little that no such request has been made before. Medical officers cannot be too particular in reference to forwarding invoices for instruments which they may provide under arrangements with boards; and, although no possible suspicion attaches to Mr. Manby in objecting to do so in this instance, yet we would remind him and all other medical officers that anything like collusion in the way of commission or charge for trouble in getting instruments or water-beds, if discovered, would lead inevitably to loss of office. Instances of this kind have come under our notice. Cæsar's wife must be above suspicion.

PROPOSED REDUCTION OF MEDICAL OFFICERS' SALARIES.

The Local Government Board having refused to sanction a resolution of the guardians to reduce by a considerable amount the salaries of the medical officers of the Ardee Union, a meeting of the Board was held lately, when the report of the committee appointed to inquire into the matter was received. The modified report suggested that reductions should be made in the salaries under the Sanitary Acts, and the committee recommended that Drs. Moore, Jones, and Keelan, sanitary officers, and Dr. Callan, consulting sanitary officer, should have their salaries lowered by £15 to £10 each. The reason given for the proposed reduction is, that the salaries of these officers were originally fixed in comparative ignorance of the duties to be performed, and out of proportion to the work they entail, which, it is stated, is in almost every case extremely light. The consideration of the matter has been adjourned until the next meeting of the guardians.

POOR-LAW MEDICAL APPOINTMENTS.

Carroll, Thomas E., L.K.Q.C.P.I., appointed Medical Officer to Carlingford Dispensary District, *vice* T. Barbor, M.D., resigned.
Coates, William H., M.R.C.S., appointed Medical Officer to No. 1 District of the Tunbridge Union, *vice* M. Monckton, L.F.P.S.G., resigned.
Dudgeon, J. M., M.B., C.M., appointed Parochial Medical Officer and Public Vaccinator for the Parish of Comrie, Perthshire, *vice* G. Leith, M.D., deceased.
Jefferson, W. D., M.R.C.S.Eng., appointed Medical Officer and Public Vaccinator for the No. 1 District of the Ripon Union, *vice* T. T. Frankland, M.R.C.S.E., resigned.
Keir, W. Ingram, L.R.C.P.E., appointed Medical Officer to the Fourth and Fifth District of the Melksham Union, Wilts, *vice* G. J. Perry, M.R.C.S., deceased.
Magner, Edward, M.D., appointed Medical Officer to the Courceys Dispensary District of the Kinsale Union, *vice* W. Hegarty, M.D., resigned.
Murray, Charles Frederick, M.D., appointed Medical Officer, Public Vaccinator, and Sanitary Officer to the Gweedore portion of the Crossroads Dispensary District, co. Donegal, *vice* A. S. Bleakley, M.B., resigned.
Pearson, T. R., M.D., appointed Medical Officer and Public Vaccinator of the Thornaby District of the Middlesbro' Union, *vice* Joseph Laidler, M.R.C.S.Eng., deceased.

PUBLIC HEALTH MEDICAL APPOINTMENTS.

Keir, W. Ingram, L.R.C.P.E., appointed Medical Officer of Health to the Melksham Rural Sanitary Authority, *vice* G. J. Perry, M.R.C.S., deceased.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 10th, 1879.

Cotman, John Sell Edmund, Twickenham
Greensill, James Heynes, Great Whitby
Lewis, John George Stephen, Windsor Road, Ealing
Parr, John Frederick Fitzgerald, Sheffield
Teevan, Alfred, Hammersmith
Uhthoff, John Caldwell, Anerley

The following gentlemen also on the same day passed their primary professional examination.

Gould, William Robert, University College
Haigh-Brown, Clarence William, St. Thomas's Hospital
Sequeria, Henry James, London Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 17th, 1879.

Hart, Henry, Morgan Street, Newport, Monmouthshire
Spencer, Dhanjebhai Barjorji, 47, Murford Gardens, Kensington, W.

The following gentlemen also on the same day passed their primary professional examination.

Crosse, William Henry, Guy's Hospital
Osborne, Harold Rochester, Guy's Hospital
Stansbury, Charles James, St. Bartholomew's Hospital

Queen's University in Ireland.—At a public meeting of the University, held in Dublin Castle, on Monday, June 23rd, 1879, Sir Dominic J. Corrigan, Bart., M.D., Vice-Chancellor of the University, conferred the following Degrees and Diplomas.

Doctor in Medicine and Master in Surgery and Diploma in Midwifery.—Joseph Crowley, Cork.

Doctor in Medicine and Master in Surgery.—Thomas Dorman, B.A., Cork; Thomas P. Maddon, Galway; Charles Magill, Belfast; Robert Mitchell, Galway; Alexander Sharpe, Belfast; and Jacob T. Shipsey, Cork.

Doctor of Medicine and Diploma in Midwifery.—John Simpson, Belfast; William Smyth, Belfast; and Horace R. Townsend, B.A., Cork.

Doctor of Medicine.—William J. Cowden, Belfast; James Wilson, Belfast and Galway; and William M. Young, Belfast.

Master in Surgery and Diploma in Midwifery.—Gilbert Kirker, M.D., Belfast.

Master in Surgery.—A. Osmond Geoghegan, M.D., Galway; John M'Kinlay, M.D., Galway; and John F. Tuohy, M.D., Cork.

Diploma in Midwifery.—Daniel Riordan, M.D., Galway; and John Wilson, M.D., Belfast and Cork.

King and Queen's College of Physicians in Ireland.—At the monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, July 7th, 8th, 9th, and 10th, the following candidates were successful.

For the First Professional Examination.—Baylor, Robert Jonathan; De la Cherois, Annie; Douglas, Janet Monteath; Grant, Jane Russell; Marston, Alice Kyme; Nicholas, James Hamilton; and Vickery, Alice.

For the Licence to Practise Medicine.—Banks, Henry; Croly, Arthur England Johnson; D'Alton, Peter Reynolds; Dugdale, William; Fitzpatrick, Thomas; Mackenzie, Murray; Meagher, Edward Patrick; Morrissy, Edward; O'Connor, Charles Joseph; Ogden, William Henry; Reddy, Bernard; Shackleton, Edmund; White, Henry Lawrence Esmonde; White, Vincent; Wolseley, William Owen; and Younge, George Harrison.

For the Licence to Practise Midwifery.—Byers, John William; D'Alton, Peter Reynolds; Darling, John Singleton; Egan, Constantine John; Fitzpatrick, Thomas; Magill, Charles; O'Connor, Charles Joseph; Reddy, Bernard; Shackleton, Edmund; White, Henry Lawrence Esmonde; White, Vincent; Wolseley, William Owen; and Younge, George Harrison.

ERRATUM.—In the list of Degrees in Medicine and Surgery conferred at the Summer Commencements in the University of Dublin (see BRITISH MEDICAL JOURNAL, July 12th, 1879, page 74), the name of "Jacobus Henricus Reynolds" is erroneously included among the "Doctores in Medicinâ". The degree which was really conferred, *honoris causâ, in absentiâ*, on Surgeon-Major Reynolds, V.C., was "Doctor in utroque Jure" (LL.D.). The conferring of an honorary degree upon him was not so much intended as a professional compliment, as a recognition of his devoted bravery and gallantry in the ever memorable action at Rorke's Drift, Zululand.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BILLERICAY UNION—Two Medical Officers of Health. Salary, £60 per annum for Western District, and £50 per annum for Eastern District. Applications not later than July 29th.

*BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon at the Western Branch. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Diplomas and testimonials to be sent to the Chairman on or before Monday, August 4th.

*CHILDREN'S HOSPITAL, Birmingham—Assistant Resident Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications to the Honorary Secretary.

*COTON HILL INSTITUTION FOR THE INSANE—Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications immediately.

*CROYDON GENERAL HOSPITAL—House-Surgeon. Salary, £80 for first year, with an annual increase of £10 up to £100, with board and furnished apartments. Applications on or before August 1st.

*GREAT NORTHERN HOSPITAL, Caledonian Road, N.—Junior Resident Medical Officer. Applications on or before August 1st.

*HOSPITAL FOR WOMEN, Soho Square—Surgeon-Dentist. Applications to the Secretary, on or before August 6th.

*HULL GENERAL INFIRMARY—House-Surgeon. Salary, £105 per annum, with board and furnished apartments. Applications on or before August 6th.

*LEEDS AMALGAMATED FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION—Assistant Medical Officer. Salary, £120 per annum. Applications on or before August 2nd.

*LINCOLN COUNTY HOSPITAL—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to be made on or before August 11th.

*LONDON LOCK HOSPITAL (Male and Out-patient Department)—House-Surgeon. Applications on or before July 29th.

*MIDDLESEX HOSPITAL—Physician and Surgeon; Assistant-Physician and Assistant-Surgeon.

*SHEFFIELD GENERAL INFIRMARY—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on or before August 16th.

*SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY—Two Assistant House-Surgeons. Salaries, £65 and £50 per annum, with board, lodging, and washing. Applications on or before August 1st.

*SHEFFIELD SCHOOL OF MEDICINE—Medical Tutor. Salary, £120 per annum. Applications to the Honorary Secretary.

*SUSSEX COUNTY HOSPITAL—House-Surgeon. Salary, £80 and £10 a year from each Resident Pupil. Applications on or before August 13th.

*TOWNSHIP OF MANCHESTER—Resident Assistant Medical Officer for the Workhouse. Salary, £140, with furnished apartments, fire, washing, etc. Applications not later than August 2nd.

*VICTORIA HOSPITAL FOR CHILDREN—House-Surgeon. Salary, £50 per annum, with board and lodging. Applications on or before July 26th.

WESTERN OPHTHALMIC HOSPITAL—Clinical Assistant. Applications to the Secretary on or before August 2nd.

WINDSOR ROYAL INFIRMARY—House-Surgeon. Salary, £100 per annum. Applications on or before July 30th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

DOWSE, Richard S., M.B., appointed Resident Medical Officer to the Newport (Monmouthshire) Infirmary and Dispensary, *vice* O. E. B. Marsh, L.R.C.P.Ed., resigned.

JACOB, Ernest H., M.A., M.B., appointed Honorary Physician to the Leeds Public Dispensary, *vice* *T. Clifford Allbutt, M.D., resigned.

MUMBY, Bonner H., M.B., appointed House-Surgeon and Secretary to the Royal Isle of Wight Infirmary, *vice* H. S. Little, M.R.C.S.Eng., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

EATON.—At Orchard House, Cleator Moor, Cumberland, on July 20th, 1879, the wife of John Eaton, M.D., of a son.

MARRIAGES.

OWELL—FALKENBERG.—On July 19th, at Wallasey Parish Church, Cheshire, by the Rev. T. H. Sheriff, William Powell, M.R.C.S., of Bromyard, to Amalie W., younger daughter of the late Carl Ernst Falkenberg of Trier, Rhenish Prussia.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 18 in every 1,000 persons living; it was 16 in Glasgow, 17 in London, 18 in Edinburgh, and (including 51 deaths that occurred prior to the 1st of July) 29 in Dublin. In the twenty English towns, the highest death-rates were the following: Liverpool 20, Manchester 20, and the highest rate (22) in Newcastle-upon-Tyne. The highest zymotic death-rates were as follow: Sheffield 3.3, and Salford 4.4. Small-pox caused 6 deaths in London and 8 in Dublin, but not one in any of the 19 large English provincial towns. In London, there were only 1,190 deaths, or 490 below the average. There were 6 deaths from small-pox, 73 from measles, 40 from scarlet fever, 10 from diphtheria, 36 from whooping-cough, 5 from different forms of fever, and 27 from diarrhœa; or 197 deaths altogether from these diseases, being 284 below the average, and giving an annual zymotic death-rate of 2.8 per 1,000. The deaths referred to diseases of the respiratory organs were 169, or 7 above the average. At Greenwich, the mean temperature of the air was 58.4°, being 5.0° below the average. The direction of the wind was variable. Rain fell on two days of the week, to the aggregate amount of 0.23 of an inch. The recorded duration of bright sunshine in the week was equal to but 11 per cent. of its possible duration.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—At the recent meeting, Dr. Norman Kerr read a critical and exhaustive *précis* and review of recent researches on the Alcohols, by Drs. Dujardin-Beaumetz and Audigé, illustrated by specimens of the different alcohols.

BEQUESTS, ETC.—The Reverend John Griffith, D.D., formerly vicar of Bexley, Kent, and canon residentiary of Rochester Cathedral, has left £200 each to the Asylum for Idiots at Earlswood and to the Hospital for Consumption and Diseases of the Chest at Brompton.—Mr. Patrick Lagan has bequeathed £200 to St. Michael's Hospital, Kingstown.—The Misses Brooke have given £50 to the Ulster Hospital for Children, Belfast.

TREATMENT OF PSORIASIS.—Dr. Preissmann, in the *Wien. Med. Presse*, 1879, No. 16, strongly recommends the use of salicylic acid in the treatment of psoriasis. A little cotton-wool or lint is soaked in a mixture of one part of salicylic acid and sixteen parts of rectified spirit, and the affected parts of the skin are then rubbed with it. The crust soon falls off, and leaves the surface of the skin red, shiny, and smooth.

THE following gentlemen have been appointed to seats on the Board of Governors of the Institute of Jamaica: The Hon. Robert Hamilton, M.D., Member of the Legislative Council; Deputy Surgeon-General C. B. Mosse, C.B., Superintending Medical Officer; and James Cecil Philippo, M.D.

MARINE SANITATION: THE ILFRACOMBE HOTEL.—This well known and highly attractive marine resort for summer and autumn pleasure-seekers has been recently completely overhauled in all its sanitary arrangements; and, under the superintendence of Mr. Eassie, C.E., works have been carried out which will render it a model of sanitary completeness and safety, and as such it deserves to be noted. During the past six months, the directors have been busy in removing all obsolete contrivances and replacing them with the best services known. New soil-pipes have been erected, ventilating themselves at the roof; new baths have been added, the wastes of which deliver in the open air, as do the housemaids' sinks and lavatories; and closets have been fixed, constructed of one piece of cleanly earthenware. The hotel has been disconnected from the town sewer in the manner most approved by sanitary engineers, and upon a principle by which a current of fresh air is made to flow continuously through the drains and to find its exit harmlessly at the roof in the open air, thus preventing stagnation of air in the drains. Another most valuable feature has been introduced into the system of drainage in this hotel; and that is a means of automatic flushing from a special cistern situated at the roof, which twice daily discharges down a separate pipe five hundred gallons of water, thus scouring the drains from end to end, and preventing any lodgment in them. The water-supply has also been reconstructed, and a slate cistern of the largest size has been erected in the open air to supply the potable water only, which is laid on therefrom by a service of tin-encased lead pipes. It will thus be seen that nothing has been neglected to render this hotel as perfect in point of hygienic construction as it can possibly be, and to provide for every factor of healthiness which science can fairly add to those which its isolated site and proximity to the open sea have already provided.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

CORRESPONDENTS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

IRON STILLS FOR DISTILLING WATER.

WILL Mr. Charles W. De Lacy Evans kindly state where the iron stills, which he recommends in his recent work for distilling water for drinking, can be obtained, and whether he deems it necessary or desirable that they should be lined with Dr. Angus Smith's patent for iron pipes used in conveying water generally? Does Mr. Evans, however, consider stills made of pewter in the least degree objectionable?

IDIŌTES MEN EIMI.

IT was thought that the Society of Apothecaries dispensed only the preparations of the *British Pharmacopœia*. Whence, then, do they obtain a formula of a syrup of free phosphorus?

IDIŌTES.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE CASE OF THOMAS MILLERCHIP.

SIR,—The undermentioned sums have been forwarded to me: the subscribers have asked for acknowledgment.

J. H. Crisp, Esq., Lacock, Wilts	£1 1 0
Dr. Green, Alderston, Woodbridge	0 10 0
James Milward, Esq., Cardiff	1 1 0
Dr. C. J. Renshaw, Beech Hurst, Ashton	2 0 0
Dr. Glover, Highbury	1 1 0

The total amount which has reached me is £60 10s.—Yours obediently,

33, Dean Street, Soho, W., July 23rd, 1879. JOSEPH ROGERS.

ERRATA.—In the BRITISH MEDICAL JOURNAL of July 19th, page 85, column 2, line 3, for "circus on the face', read "circumscribed base"; and at line 27, for "Savile Row", read "Sackville Street". At page 115, column 1, line 21, for "Van Busen", read "Van Buren". At page 118, column 1, in line 11 of Mr. Cripps' letter, for "extracti belladonnæ gr. 1¼, read "extracti belladonnæ gr. 1-14 (one-fourteenth).

NITRO-GLYCERINE.

THE *Daily News*, referring to the recent notices which have appeared in our own columns and elsewhere, to the effect that, a difficulty having been experienced in obtaining a convenient and portable preparation of nitro-glycerine for angina pectoris patients, a London chemist has turned his attention to the subject, and has succeeded in making the compound into pills. The *Daily News* observes, "They are reported upon very favourably from a medical point of view; but we may perhaps be excused if we point out that there are other very serious considerations involved. Has the ingenious chemist, whose discovery is here recorded, so completely confined his reading to professional journals that he never heard of the Explosives Act, which provides, *inter alia*, that before an apothecary's shop may be converted into a nitro-glycerine factory, the consent of the local authorities and the approval of the Secretary of State must be obtained? Have the plans of the proposed factory and of the adjacent buildings where the explosive pills are to be made been deposited at the Home Office in triplicate, as the Act enjoins? Will the pill-boxes be waterproof, and will they, in accordance with the orders of the Secretary of State, be marked "Explosive:—Blasting cartridges, containing Dynamite ammunition. Class 6, Division 2"? Moreover, it is not quite clear that, in his devotion to science, the chemist in question has not overlooked patent rights. The House of Lords have just decided on an appeal case that, to absorb nitro-glycerine in porous non-explosive substances, constitutes an infringement of Nobel's patent. It might be a nice question for a court of law, how far an angina pectoris patient, taking one of these pills, might not be held to be disobeying an injunction of the highest court of appeal. These considerations are urged on purely legal grounds. But the prospect of a growing passion for nitro-glycerine pills opens up apprehensions of personal surprises of a very unpleasant kind. We have already sufficient 'mysterious disappearances' without introducing a fresh element of possibility in the shape of nitro-glycerine to be taken internally. The apothecary who made pills to prevent earthquakes is an old figure in literature. An apothecary who makes pills calculated to bring about an earthquake is a new factor in social life, which appears to require especial attention."

We have laid this communication before a member of the medical profession, who has paid much attention to the subject. He writes as follows.

"I have read with some amusement, not unmixed with astonishment, the extract from the *Daily News*. Surely the writer must be joking—it cannot be meant seriously. The dose we employ in medicine could not, by any possibility, cause an explosion. Long ago, when first I commenced working with the drug, I took steps to assure myself that I was not subjecting my neighbours to any danger, and I am thoroughly satisfied as to the safety of Mr. Martindale's preparations. However, to make assurance doubly sure, I have to-day made some observations which I trust will satisfy even the most sceptical. I obtained about an ounce of the mass from which the pills and lozenges are made, and carried it with me in my coat-pocket, first to Westminster in an omnibus, and then to the city by underground railway. It received a very considerable amount of jolting and knocking about, and had it been an explosive, could hardly have failed to have gone off and annihilated me. This evening, I stirred it up, first with a lighted match, and then with a red-hot wire. I have also thrown some of the pills and lozenges from a second-floor window to the pavement beneath without the slightest effect. That the mass cannot be exploded by percussion is, I venture to think, amply shown by an observation also made this morning. A portion of the mass was placed on an iron plate, and a heavy weight allowed to fall on it from a considerable height. Another portion was wrapped in paper, and hammered for some minutes on an anvil. If that will not satisfy them, what will? We have not been unmindful of the requirements of the Explosives Act, and, to the best of my belief, no patent rights have been infringed.

"Nitro-glycerine is a valuable remedy for a most painful and distressing complaint, and it would be a thousand pities if any attempts were made to limit its utility. It can be used for medicinal purposes with the most perfect and absolute safety."

J. W. B.—Marked for insertion; but it is impossible at present to fix a date.

DEATH OF A CENTENARIAN.

SIR,—It has been suggested to me by an eminent member of the profession, that I should add a few lines to your short notice of the death of Mrs. Susanna Hartshorne. It may be no breach of professional confidence if I state that I have attended her during the last twenty years, and that her age was undoubtedly one hundred years and eleven months, and it was generally understood that it was a year more than this. She was of an active disposition up to within a very short time of her death; was of very abstemious habits, but took two or three glasses of good port wine every day. She paid her annual visit to London last year, drove out in her carriage a week before she died, and to the last took an interest in passing matters, having the news of the day read to her the night before her death, which took place somewhat suddenly. She was subject to attacks of bronchitis, when she would take but little care of herself, being with difficulty persuaded to keep to her bed. Her sight and hearing were impaired, but she would have nothing to do with such "new-fangled things" as spectacles and ear-trumpets. Her memory was wonderfully good, but she complained latterly that it *began* to fail her.—I am, sir, your obedient servant,

W. WOODWARD, M.D.

Worcester, July 14th, 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

PREMATURE GREY HAIR.

SIR,—In reference to the subject of premature grey hair, in a letter in the BRITISH MEDICAL JOURNAL of June 28th, I may draw your correspondent's attention to the great prevalence of grey-haired people in Edinburgh. This observation has been often made by visitors and strangers when they go to the churches or public meetings, or parade for a stroll in Princes Street. The people who have grey hair do not appear to be at all out of health, as they are often robust and of fresh rubicund countenance, and in good mettle. Some theorists attribute it to the windy climate of the city, where this exerts its full effect in the open streets; others to the geological strata of the carboniferous formations of sandstones and shells on which the city is built. I am, however, more inclined to attribute it to the nature of the food and drink than to external causes; but I should be desirous of propounding the statement, and asking for suggestions from your readers as to the means to be adopted to mitigate the tendency to premature grey hair. The usual ones recommended from time immemorial are probably the best and the safest. 1 Samuel, ch. 10, v. 1, and 2 Kings, ch. 9, v. 3, supply early references of the means then used in those dry climates and upland countries by their inhabitants for keeping their hair in proper condition.

Pliny, in his *Natural History*, lib. 30, cap. 15, recommends the application of the ashes of earthworms mixed with oil for the prevention of canities; and for blackening the hair, there are various curious medicaments recommended (lib. 33, cap. 7; lib. 29, cap. 6), and other numerous references on the management of the hair amongst the Romans.—I am, etc.,

HIRSUTUS.

Caledonian United Service Club, Edinburgh, June 1879.

DEPILATORIES.

SIR,—In reply to Mr. Startin's letter on the above in last week's JOURNAL, I would refer him to a small work on *Diseases of the Hair*, by Benjamin Godfrey, M.D., from which I quote the following treatment of hirsuties: "The cause of this condition must be first found out, and, if possible, removed. Should it be the general hirsuties we have to do with, then a course of regular medical treatment will be necessary. Steel stands pre-eminent as a remedy given for six months at least; the constipation produced thereby to be obviated by a compound rhubarb pill once or twice a-week.

"Tepid baths to be used frequently, and the hairy surface to be rubbed gently twice a-week with solution of potash (liq. potass.) diluted with spirits of wine, equal parts. The following morning, a tepid bath and profusion of soap, well lathered, but not rubbed hard enough to give pain. The potash solution should be laid on with a piece of lint tied to a tooth-brush handle or a piece of stick, and lightly laid upon the conrate material. If nicely used, no damage will be done to the skin, the solution dissolving the cuticle and hair, and a leaving a fair, white, smooth surface behind. Hairs should never be plucked out, and the usual depilatories are worse than useless. Hair is quite soluble in solution of potash; sulphuric acid also dissolves it, but requires some time to do so.

"Local maternal marks or moles can be easily removed by applying the acid nitrate of mercury, and letting it remain upon the diseased patch till it dries. My plan is to take a fine pointed glass tube, and, having dipped it in the caustic solution, to dot all round the hirsute mass upon the healthy skin where they both join; then to dot points through the mass, like the white squares upon a chessboard, leaving the blank ones to be treated in a similar manner in a fortnight hence. By such a method, you prevent too great an inflammatory action setting in, and make a less scar in the future."—I am, sir, your obedient servant,

Newcastle-on-Tyne, June 23rd, 1879. WM. CAIRNS WICKS, M.B., etc.

PARASITE UPON PARASITE.

SIR,—The Hudibrastic couplet in the JOURNAL of June 21st contains truths never imagined by the witty author. Additional light of two centuries has not made them apparent to all. Diatoms parasitic on larger species are not uncommon. Particular reference to such, in connection with pinnularia, must have borne on characteristics rather than on existence. Pinnularia, as compared with some genera, would be a triton amongst minnows: one-half might stretch athwart the field under one-tenth and A eyepiece. Crassinervis, now before me, with that amplification, shows only the size of a small barley-corn. Organisms suspected of connection with disease are inconceivably smaller; whilst their reproductive germs, again, are infinitely less, and also tolerant of intense cold or great heat.

Study of the foregoing has interest in relation to physiology, pathology, even to therapeutics, although a few days since Dr. Tidy publicly repudiated the "germ-theory". The writer recently took water from a wayside country ditch, favoured by such sunshine, light, and air as this season has supplied. The desmids closterium and cosmarium were plentiful, with numerous filamental diatoms and others—zygnemaceæ, and many animalcules. Several of the latter died after corking the bottle for transit home. A single drop of the sample, examined next day or the day following, presented one very large creature, apparently dead, but with ova escaping. Around were countless other individuals, varying in size and appearance from that of a speck of light to a shred of thin wire, bent at an obtuse angle, motionless, commencing to move away from a film, or careering rapidly. One portion was in the first state—a small heap, like a mass of eels: the numbers were simply astounding.

The existence of certain allied growths in the blood of even healthy animals has been detected also in low states of the system; more frequently previous to dissolution. Much remains to be learned or to be cleared up. New high powers in the hands of cotemporary observers in England or elsewhere promise much. Things harmless, or comparatively so, under certain conditions may, perhaps, become lesser in different circumstances, or acquire new properties. Insects coming direct from putrid matter inflict injuries far more irritating than are produced at other times.—I am, etc.,

VIBRIO.

MR. CAMPBELL'S letter has been forwarded to Professor Rutherford.

OVARIAN MENORRHAGIA.

SIR,—My colleague Dr. Meadows, in a communication on this subject, published in the JOURNAL of July 12th, says that, so far as he knows, the term "ovarian menorrhagia" is not one in common use, and in that I concur. Agreeing also in the main with his views of the pathology and treatment of the affection, I should like to mention that during several years I have been accustomed to use the term in question, both in my lectures and in clinical teaching, at St. Mary's Hospital, as many of our students can testify. These views were also embodied in the Lettsomian Lectures, which I had the honour of delivering before the Medical Society of London in 1877, and which I hope shortly to publish.—I am, etc.,

July 1879. ALFRED WILTSHIRE, M.D., F.R.C.P.Lond.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

CORONER'S INQUESTS: FEES TO WITNESSES: MEDICAL PRACTITIONER.

THE information conveyed in reference to the subjoined queries, for which we are indebted to Mr. Amyot of Diss, will, we believe, be interesting to many of our readers.

The following request, written in pencil, was lately left at the house of a medical gentleman: "Will Dr. A. B. kindly attend the inquest at the King of Prussia Inn, Shipton, to-morrow (Wednesday) at 10 A.M., by request of coroner, R. D. Pierpoint, relative to the death of William Evans of that parish.—THOMAS PINCHES, Inspector of Police, Shipton."

I find the following information in a medical pocket-book:—(C)—*In the Coroner's Court.*—If summoned under the Medical Witnesses Act, Sch. A, 6 and 7 Will. IV, c. 89, and in the form and manner following, the witness is entitled to a fee of one guinea for his attendance to give evidence, and a further sum of one guinea for performing a *post mortem* examination, provided such examination be ordered by the coroner.

Form of Summons.—"Coroner's inquest at the ——, in the parish of ——, in the county of ——, upon the body of ——. By virtue of this my order, as coroner of ——, you are required to appear before me and the jury at the place aforesaid, on the — day of ——, one thousand eight hundred and ——, at —— of the clock in the ——noon, to give evidence touching the cause of the death of the aforesaid person; and make, or assist in making, a *post mortem* examination of the body (with an analysis of the contents of the stomach, if such be necessary), and report thereon at the said inquest.—A. B., Coroner.—To Mr. ——."

Note.—Unless the summons be worded as above, it is not considered a *medical* summons. Differently framed, it is an *ordinary* summons, and carries no fee with it; but the witness is nevertheless bound, under penalty of £5, to obey both forms of summons. The chemical analysis, and subsequent attendance at the inquest to report thereon, is considered a part of the necropsy, and included in the fee; nor is a chemist, applied to by the medical witness for assistance, allowed to appear in evidence at the inquest, the latter being held responsible for the joint conclusions of the two.

I would ask, first: Is a medical practitioner, fully qualified, bound under a penalty of £5, to obey an ordinary summons in a case of which he has personally no knowledge of facts, where his evidence is only required on scientific points? Secondly: If he is bound to obey an ordinary summons, would he not be entitled, at least, to such fee as the justices of the county in quarter sessions have fixed in their scale of fees, allowances, and disbursements under 1 Vict., c. 68? Thirdly: Not having at hand the statutes at large, I cannot ascertain whether a form of ordinary summons is given in the schedule to 1 Vict., c. 68: I find a form given in *Burn's Justices*, 29th ed., vol. 2, p. 48, where the summons is set out as under the hand and seal of the coroner. I would ask whether the request, of which I have sent a copy under the hand of the inspector of police, professedly at "request of coroner, R. D. Pierpoint", is of any force whatever?—X. M. N.

Answer.—First: The first section of the 6 and 7 Will. IV, c. 89, has reference in the first instance to cases where it appears that the deceased person was attended by a legally qualified medical practitioner; and secondly, if the deceased were not so attended, it provides that the coroner may issue his order "for the attendance of any legally qualified medical practitioner in actual practice in or near the place where the death has happened". The order in the form marked A. in the schedule to the Act, is the same as the form of summons for the attendance of an ordinary witness, with certain words which, when an examination or analysis is required, are to be introduced (see Form A). Secondly: Schedule B of the last Act provides a table of fees to every medical practitioner for attending to give evidence at an inquest where he has made a *post mortem* examination: the fee is one guinea. For making a *post mortem* examination and for giving evidence, two guineas. It was found that the provisions of that statute were insufficient; and the 7 Will. IV and 1 Vict., c. 68, provided for the making a table of fees by the justices, which, on the holding of an inquest, might be paid by the coroner other than the fees payable to medical witnesses under the former Act. This latter statute appears to have reference to necessary expenses, for the payment of which no certain provision was previously made. Thirdly: We do not consider that the request under the hand of the inspector of police was of any legal force.

A CASE OF SKIN-DISEASE.

SIR,—I shall be glad if some of your readers will enlighten me as to the diagnosis and treatment of a case of skin-disease in a child, aged seven months, now under my care. The eruption comes out in crops, perhaps a dozen spots at a time, appearing like strings, in the centre of which a little vesicle forms (the fluid of which rarely becomes purulent), generally oozing forth a tiny drop of serum, and forming a scab. Severe itching attends the eruption. The mother tells me that from the first appearance of the redness to the oozing of the serum seldom takes more than two or three hours, and that then the itching immediately ceases and the redness disappears. The crops come out every second or third day. The spots are quite separate, but generally affect one part of the body at a time. The arms are the chief seat of the disease; but the whole body, head included, is also affected. I may say that the male children—and this is a male—in two or three branches of the family are afflicted with eczema, some of the cases being exceptionally severe.—Yours, etc.,

J. G.

THE VALUE OF AN ARMY COMMISSION.

SIR,—In 1874, soon after obtaining my commission, I applied to the Dean of the Medical Department of King's College, London, for the Associateship of the College; my claims, according to the King's College Calendar, appearing sufficiently strong to warrant my doing so. The reply was, that when I had obtained some good appointment I might apply again. This very unflattering comment on my newly acquired position was anything but palatable to me; but men will hold their own opinions, and so I remain, sir,

Bath, July 1879. WITHOUT THE A.K.C.

TELEPHONIC STETHOSCOPE.

SIR,—I observe in the last JOURNAL a letter from Dr. Wedgwood, headed "Mr. Edison and the Stethoscope". About twelve months ago, I purchased, from the well-known instrument-maker, Mr. Pratt, a stethoscope constructed on the principle of a telephone, and have since used it constantly with much satisfaction, and I think it requires only to be better known to be more appreciated. I would also say that it is not every ear which can hear with a telephonic stethoscope better than by the common instrument. The sense of hearing requires an education for the use of the telephone, and gains much as you advance.—Yours faithfully,

Leamington, July 9th, 1879. JAMES THOMPSON, M.D.

Monastic Value of Medical Services.

The subjoined is a copy of a document in the Rawlinson MS., B 326, f 14, in the Bodleian Library at Oxford. It is an agreement between the Abbot of Cirencester and Thomas Newton, a doctor at Withington in Gloucestershire. The date is 1424.

Hec indentura facta inter religiosos viros Willielmum abbatem ecclesie beate Marie in Cirencestria et ejusdem loci conventum ex una parte, et Thomam Newton de parochia de Wydendon in comitatu Gloucestrie fisicum ex parte altera, testatur quod predicti abbas et conventus concesserunt dicto Thome unam annualem pensionem viginti sex solidorum et octo denariorum, pannum pro toga de suta armigerorum suorum familiarium, cum liberatura data familiaribus armigeris suis, unam camaram competentem pro se et serviente suo, unum stabulum pro duobus equis, competentes duas carettatas grossi focalis, duas carettatas feni, victum ut in cibis et potibus cum armigeris suis, et victum pro serviente suo, et unam panem albam et unam quartam servicie conventualis diatim pro collacione sua quamdiu moram trahit intra monasterium nostrum; percipiendo annuatim dictum annualem redditum viginti et sex solidorum et octo denariorum, pannum pro toga, duas carettatas grossi focalis, duas carettatas feni ad terminum vite sue tantum, et victum ut in cibis et potibus pro se et serviente suo, et diatim unam panem albam et unum quartam servicie ad totam vitam suam dum moram trahit intra monasterium nostrum; habendo eciam et tenendo dictam camaram et stabulum ad terminum vite sue tantum; et pro omnibus hiis predictis annuatim percipiendis prefatus Thomas deserviet dicto Abbati et conventui et eorum successoribus in arte fisica et curam suam eis et eorum cuilibet diligenter faciet quociens et quocunque necesse fuerit, pre omnibus dominis et dominabus et aliis personis quibuscunque, rege domino de lovel et domina de lovel nunc viventibus tantummodo exceptis, dum tamen dictus Abbas ea que ad curam suam conveniant invenerint et eorum successorum quilibet inveniat; deserviet eciam dictus Thomas prefato Abbati et conventui et successoribus suis intra domicilium suum et extra tam in negociis suis faciendis quam in aliis serviciis que ad armigerum et domicellum pertinent pre omnibus aliis, exceptis superius preexceptis, ad custum ipsius Abbatis et conventus et successorum suorum; superius specificata cum requisitus fuerit et ea negaverit et ea in singulari et generali facere noluerit, tunc omnia predicta et singula superius specificata, vel per predictum Abbatem et conventum dicto Thome concessa omnino cessent, retrahentur, et pro nullo habeantur, hoc presente scripto non obstante in aliquo. In cujus rei testimonium sigillum nostrum commune apposuimus; datum in domo nostra capitulari Cirencestrie vicesimo secundo die mensis februarii anno regni regis Henrici sexti post conquestum tertio.

Notes.—Duas carettatas grossi focalis=two cartloads of large firewood. Unam quartam servicie (*i.e.*, cerevisiæ) conventualis=a quart of convent ale. The diphthong *æ* is replaced by *e*, as commonly occurs in medieval Latin.

Medical Etiquette.

Sir,—The ruling of the editor of a medical journal, like that of the Speaker of the House of Commons, is to be held sacred, and not lightly impugned. But, in giving your decision in the case of "F. W.", whose letter you publish to-day, I take it that you do not speak authoritatively, or even with absolute certainty, but merely give your individual opinion: "We should be disposed to give an affirmative answer", "we think", etc. I trust, therefore, I shall not be considered disrespectful or out of order in giving one or two reasons why the profession is likely to suffer if the view to which you give your countenance be maintained.

From "F. W.'s" letter, I gather that for some time he had been attending a patient, and that, having arrived at a certain diagnosis of the case, he had been following (also for some time) a certain line of treatment, when he held a consultation with a physician at the patient's house. The physician made no new suggestion, but simply endorsed "F. W.'s" view of the case: "Go on as you have done, you cannot do better." He gave no written prescription because he had none to give, and because, being a true gentleman, he would not pretend to interfere where interference was unneeded. But the patient, a few days afterwards, for some reason or other, probably because he thinks he has gained but little from the expensive consultation, dismisses the original practitioner and calls in another. This, of course, he has a perfect right to do, since it is a mere exercise of the liberty of the subject. But he does not stop here. He goes on to ask "F. W." to disclose, for the benefit of his successor, the line of treatment that has been followed, on the mere ground that, as the physician approved it and was paid for such approval, it must be held as his prescription, and no longer a possession of "F. W." Now this seems to me to be the very reverse of equitable, and I very much doubt if a jury of Englishmen would consider any man bound to give up the result of his own knowledge and experience simply because another man has approved of it. Why should "F. W." be at the trouble, unremunerated, of filling up an omission on the physician's part? or how is he to know that the whole transaction is not a ruse on the patient's part to get the secret of successful treatment out of him at a cheap rate? We all know that such things are done. But I have yet to learn that general practitioners are under any obligation to disclose their treatment. There must be a change in the ordinary tariff before this becomes law.—I am, sir, your obedient servant, D. B.

July 12th, 1879.

*** The argument is able, and the case, as we intimated, is not an absolutely clear one; but in such a case, we consider that the patient is entitled to the presumption that his intention is *bonâ fide*, and that it would be suitable to the dignity and liberal basis of a code of professional etiquette, that the attending practitioner should not withhold the therapeutic formula of which the physician in consultation approved and endorsed, although it was not at the time reduced to writing.

The Medical Defence Association.

Sir,—Your columns have, from time to time, contained reports of the good work done by the Medical Defence Association in filling the gap left by the inaction of our corporate bodies.

The legal profession owes a considerable debt to its Incorporated Law Society, who have not contented themselves with licensing candidates, but have corrected abuses also. To show, however, what the Medical Defence Society can do (and it would do more if properly supported), let me give the following illustration. A year or two since, a registered practitioner in this country took a gentleman into partnership, and the connection thus formed was pleasantly ripened by the junior marrying the senior's daughter, the name of the firm appearing on a marble slab in front of the house. However, the junior's name not being visible either in the *Medical Register* or the *Directory*, the secretary to the society above mentioned, on being applied to, wrote at once to the senior partner, asking if his junior was qualified. No answer was vouchsafed to this inquiry; but the slab at once came down.

The junior, however, goes on giving evidence at inquests and signing death certificates, the Registrar accepting them, giving as his reason for so accepting, that the senior partner told him his junior was qualified. It will occur to your readers that such a partnership arrangement as sketched above is very different from a man temporarily engaging an unqualified assistant, as many do; it is that of a man accepting a partner, letting him marry his daughter, and so presumably intending him to succeed him. Should not such a man have a registered qualification? Granting that chemists' practice is bad enough, is not that of an unqualified medical man worse? The former only attends trivial cases, whilst the latter gives out that he will attend all cases, serious and trivial. Again, does not the existence of such a body as the Medical Defence Association come home to every medical man in the kingdom, and for the matter of that, every layman too? The number of qualified men, I believe, is twenty thousand. A shilling annual subscription from each would realise £1,000 a-year, which, if placed at the Society's command, would enable them to clean out an Augean stableful, which they cannot do without funds. A large subscription would bear hardly on the giver, and is, in fact, unfair; a small one from each would be right.—I am, sir, yours truly,

Rutland Villas, Leighton Buzzard, July 2nd, 1879. J. A. Hedges.

Dr. Mackenzie's communication shall be published.

The Sydenham Society's Lexicon.

A "Subscriber from the Commencement" should make known his views at the annual general meeting of the Society, when the subject can be fairly discussed, or communicate them in a letter which he may request to be laid before the Council, who would, no doubt, fairly consider them.

Mr. J. T. C. Williams (Frohenlog).—Pupilage to a surgeon is recognised, under certain conditions, as part of four years' curriculum of professional study, but not as any part of hospital attendance.

Struck by Lightning.

Sir,—The following curious occurrence, which was related to me to-day by a patient of mine, may perhaps prove of interest to your readers.

During a thunderstorm yesterday morning, my patient's nursemaid was standing by the window, having two needles inserted in the front of her dress. Directly after one of the flashes of lightning, having occasion to use the needles, she took them out, but found them so hot, that she was obliged to drop them; and, on looking down, discovered the small portion of her dress where the needles had been was smouldering. There is a small hole about the size of a shilling burnt in the material of the dress, and the lining underneath is scorched. The needles are slightly bent and blackened. I enclose them for your inspection.

The girl did not experience any shock, and she was quite unconscious at the moment of anything unusual having occurred. In the evening, she complained of a good deal of pain in the side, but that was after the circumstance had been talked about in the family; and as she seems quite well to-day, I do not feel inclined to pay much attention to that.—I am, etc., John Brock.

129, Clapham Road, July 4th, 1879.

X. L.—The University of Erlangen examines candidates for the M.D. degree in English; at least they did so in my case in 1864.—M.D.Erlang.

The New University.

Sir,—May I be permitted to ask through the medium of your columns whether it be true, as is currently reported, that an influential, albeit non-official deputation from the Liverpool Medical School, exerted themselves so far as to travel to Manchester and interview certain of the Owens College authorities, in order to ascertain the possibility of attaching themselves in some undefined manner to the "Twentieth Licensing Body in Medicine".

It would, moreover, be of interest to know whether the results of that interview had any determining influence in respect of the presentation of a memorial to the Privy Council, protesting "against a further addition to the nineteen Licensing Corporations already existing"; copies of which, accompanied by envelopes stamped and addressed to the Registrar of the Liverpool School of Medicine, have been forwarded to teachers in other schools.—Yours, etc., Argus.

Warrington, July 16th, 1879.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. W. S. Savory, London; Dr. Denis C. O'Connor, Cork; Dr. E. B. Baxter, London; Dr. R. L. Bowles, Folkestone; Dr. H. Macnaughton Jones, Cork; Dr. Flint, Scarborough; Mr. Teevan, Londnn; Dr. T. C. Fox, London; Dr. Coombs, Bedford; Mr. James Green, Landport; Dr. Foss, Stockton-on-Tees; Dr. Hess, London; An Indian Correspondent; Mr. J. B. James, London; Our Own Correspondent, Gundamak; Mr. Arthur Jackson, Sheffield; Mr. J. G. Campbell, London; Dr. Gillespie, London; Mr. Erskine Stuart, Dunse; Mr. J. C. Comely, King's Clere; Mr. Berkeley Hill, London; Without the A. K. C.; Dr. Seguin, Paris; The Secretary of Apothecaries' Hall; Argus; Mr. W. T. Black, London; The Registrar-General of England; Dr. Fancourt Barnes, London; Dr. Copeman, Norwich; Mr. G. Eastes, London; The Registrar-General of Ireland; Mr. J. J. Murphy, Dublin; Dr. Macvie, Chirnside; Dr. Macewen, Glasgow; Dr. Fagan, Belfast; Our Glasgow Correspondent; Mr. J. H. Wathen, Fishguard; Sir Wm. Smart, K.C.B., Portsmouth; Dr. Dougall, Glasgow; Mr. Malcolm Morris, London; Mr. Warner, London: Our Edinburgh Correspondent; Dr. Hardwicke, Sheffield; Dr. Marion Sims, Paris; Mr. Startin, London; Mr. Van Buren, London; Dr. Murrell, London; Dr. J. W. Moore, Dublin; Mr. Wheelhouse, Leeds; Baron von Langenbeck, Berlin; Dr. Sieveking, London; Our Dublin Correspondent; Mr. T. R. H. Clun, Denbigh; Mr. W. Walter, Manchester; Mr. Reginald Harrison, Liverpool; Dr. Underhill, Liverpool; Sir Henry Thompson, London; Mr. F. R. Tooze, Brecon; Dr. A. Fergus, Glasgow; Dr. Robinson, Dublin; Dr. Churton, Leeds; Mr. C. F. Wright, Leeds; Dr. E. H. Bennett, Dublin; Dr. T. Chambers, London; Mr. Hickman, Newbury; etc.

REPORT
OF
LITHOTRITY AT A SINGLE SITTING:
A SERIES OF CASES.

By SIR HENRY THOMPSON, F.R.C.S.Eng.,
Surgeon-Extraordinary to H.M. the King of the Belgians; Consulting-Surgeon to University College Hospital; and Emeritus Professor of Clinical Surgery.

I DESIRE to place a brief record of my recent experience of the method of removing calculus from the bladder at a single sitting before the profession. I would gladly have done so at the forthcoming meeting of our Association; but, as it is not possible for me to visit Cork this year, I send this paper to the JOURNAL beforehand.

I shall narrate the chief particulars of thirteen cases, all but the first, which was in December 1878, occurring in the current year. I have purposely omitted three or four cases of operation on small stones—I mean those which weigh less than eighty or ninety grains, or thereabout—since I have for years past always removed such at one sitting, and also because they do not in any way illustrate that extension of the crushing process which is at present under consideration. I have not yet applied the plan to cases of large calculus; that is, to those weighing between one or two ounces—leaving these, as heretofore, to lithotomy.* I have in all cases used my own lithotrites with the cylindrical handle; but I have also employed for the latter three cases a more powerful instrument, although but very little exceeding in size those I have hitherto employed. This has been applied chiefly during the first part of the procedure; viz., that of breaking the stone into large fragments. The difference in this new lithotrite consists in making the lower part of the male blade keel-shaped, or like the prow of a ship, while the upper part is still flattened; so that the instrument may execute powerful cutting and crushing actions simultaneously. The male blade is also placed at right angles with the shaft, and thus acts at great advantage in comparison with a blade diagonally placed. At the same time, the female blade retains its curve, enabling the instrument to be introduced with as much facility as heretofore. Lastly, I have thickened the sides of the latter, and enlarged the opening to admit the prow of the male blade to enter it and drive out any *débris* which—with the increased amount of work now required—might otherwise lodge and impact the blades. (See figs. 1 and 2.)

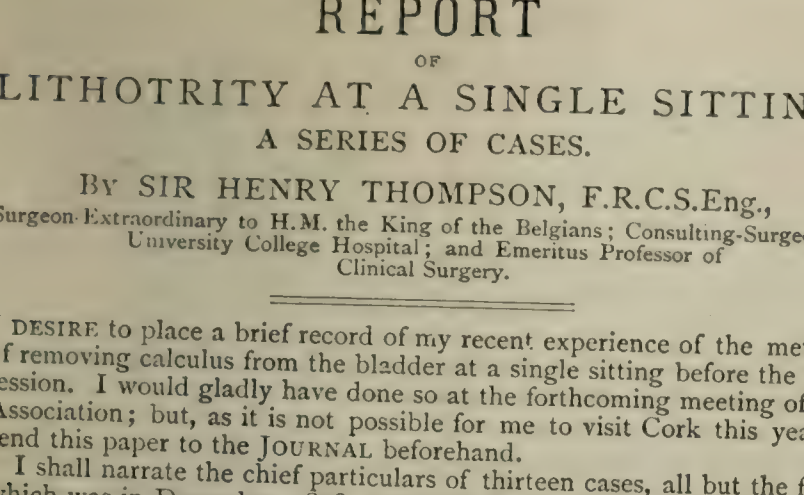


Fig. 1.—The male blade, showing that it is almost vertical in profile, and the prow-shaped form of the lower part gradually becoming flattened above; transverse sections of the blade, A at the upper part, B at the middle, and C near the base, show this form.

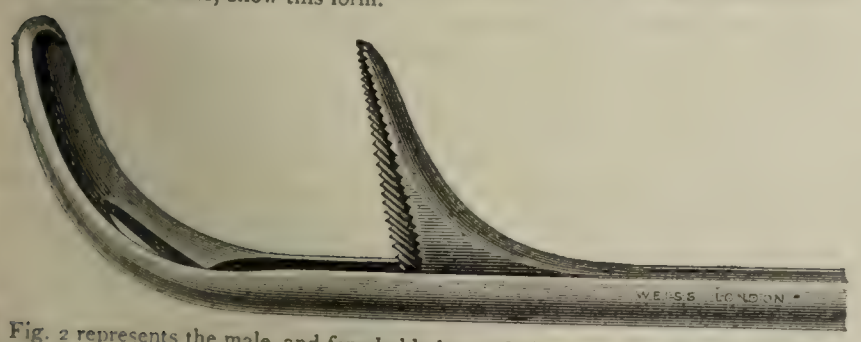


Fig. 2 represents the male and female blades and the opening which is filled by the projection of the lower part of the former when the lithotrite is closed.

* Since writing the above, I have applied it to one of nearly nine drachms: it is the last case, No. 13.

In all the cases appended, I have used my improved aspirator, which I have described in the *Lancet*, February 1st, 1879; and have removed large quantities of *débris* by it, and a smaller quantity by means of the flat-bladed lithotrites.

CASE I.—A gentleman aged 54. December 16th, 1878. A sitting of nine minutes' duration. Calculus chiefly phosphatic, with some oxalate of lime. Weight of *débris* after drying, 97 grains. Sent to me by Mr. Spencer Wells, who, as well as Mr. F. Jordan of Birmingham, was present at the operation. One small fragment only was removed afterwards in my room. He still forms phosphates, and washes his bladder out twice a week to prevent fresh accretion.

CASE II.—A gentleman aged 69. January 22nd, 1879. A sitting of eleven minutes' duration. Calculus uric acid; weight of *débris*, 172 grains. Sent to me by Mr. Lathbury of Finsbury. Result successful; but the patient proved to be also diabetic.

CASE III.—A gentleman aged 68. January 31st, 1879. A sitting of nine minutes' duration. Calculus uric acid; weight of *débris*, 114 grains. He was sent to me by Mr. J. H. Walters of Faringdon. His recovery was rapid and complete.

CASE IV.—A gentleman aged 79. February 12th, 1879. A sitting of twelve minutes' duration. Calculus phosphatic; weight of *débris*, 194 grains. A year before, I removed four uric acid calculi of considerable size by lateral lithotomy, from which he rapidly recovered; but he had enlarged prostate, passed all his urine by catheter, and had now formed this phosphatic stone. Mr. Clover gave ether on both occasions.

CASE V.—A gentleman aged 65. February 13th, 1879. A sitting of six minutes' duration. Calculus phosphatic; weight of *débris*, 116 grains. Sent to me by Mr. Holberton of Hampton. He passes most of his urine by catheter, and has done so for some years past. He still forms a little phosphatic material, and requires washing out to prevent re-formation of the calculus.

CASE VI.—A gentleman aged 69. March 15th, 1879. A sitting of ten minutes' duration. Calculus uric acid; weight of *débris*, 200 grains. Seen in consultation with Dr. Bantock, who was present at the operation. A few small pieces were left, and removed at two subsequent explorations. The recovery is perfect.

CASE VII.—A gentleman aged 47. March 28th, 1879. A sitting of seven minutes' duration. Calculus pure triple phosphate—a rare form, and harder than the common or fusible phosphate; weight of *débris*, 94 grains. Sent to me by Dr. Mitchell of New Cross, who, with others, was present at the operation.

CASE VIII.—A gentleman aged 66. June 2nd, 1879. A sitting of ten minutes' duration. Calculus uric acid; weight of *débris*, 175 grains. Seen in consultation with Dr. Owen Rees, who was present at the operation. The recovery is complete.

CASE IX.—A gentleman aged 70. June 12th, 1879. A sitting of ten minutes' duration. Calculus uric acid; weight of *débris*, 198 grains. Sent to me by Dr. Ryott of Newbury, who was present at the operation. The recovery is complete.

CASE X.—A gentleman aged 60. June 20th, 1879. A sitting of nine minutes' duration. Calculus oxalate of lime; weight of *débris*, 165 grains. Seen in consultation with Mr. John Morgan of Sussex Place, who was present at the operation. Mr. John Morgan of Chapel Street administered ether. The result thus far leaves nothing to be desired.

CASE XI. A gentleman aged 70. June 25th, 1879. A sitting of twelve minutes' duration. Calculus mixed oxalates and urates; weight of *débris*, 214 grains. Seen in consultation with Dr. George Johnson, who was present at the operation. The recovery, thus far, is all that could be wished.

CASE XII.—A medical man aged 41. July 16th, 1879. A sitting of fifteen minutes' duration. Calculus phosphatic; weight of *débris*, 208 grains. A small portion, which evaded two or three trials, was left. The patient had an attack of orchitis and fever, which postponed the remaining search for a few days. I have just removed ten grains more, and he is now recovering steadily.

CASE XIII.—A gentleman aged 78. July 19th, 1879. A sitting of twenty-five minutes' duration. Calculus large hard uric acid; weight of *débris*, 329 grains. Sent to me by Mr. Quain of Cavendish Square. The patient's medical attendant at Cannes, whence he came—Dr. Stephen—was present. Large as this quantity was, the whole of the stone was by no means removed; but Mr. Clover thought the patient had been sufficiently long under the influence of ether. I therefore postponed the proceeding until the 22nd, when I took away 192 grains more in thirteen minutes, making a total of 521 grains, or nearly one ounce and one drachm. He has had no fever and is doing well.

The result appears to me to be encouraging. I felt, as I stated last year in a lecture at University College Hospital, that "the proposal to

remove a large and hard calculus at one sitting was an attractive one, ...and that I was predisposed to regard favourably any plan by which we may hope to take away once and for all the hard and angular fragments which must remain after an uncompleted sitting". My experience has confirmed, perhaps even beyond my expectations, the prepossessions thus expressed for this endeavour to complete an operation by lithotrity in a single effort, but more prolonged than heretofore; and I have no hesitation in stating that we owe to Professor Bigelow the assurance that so much manipulation is tolerated by the bladder in the process of removing the stone, provided we take it away entirely, or nearly so. It is quite true that the presence of sharp broken fragments in that viscus does more damage to it than the prolonged, but of course careful, use of instruments for their removal. My former partial but not complete recognition of this fact for years past led me to observe the value of a prompt and free use of the lithotrite and of Clover's aspirator when inflammation of the bladder has been produced by fragments: a fact to which I have called especial attention on repeated occasions. Under such circumstances, I have with those instruments removed from one hundred to one hundred and fifty grains at once, and thus instantly checked a violent cystitis.* It is unquestionably better, however, to prevent than to cure; and this lesson, I think, is one which may be deduced from the foregoing cases.

There is one observation I may make, and it is this. When the great bulk of a calculus of considerable size has been removed, say in fifteen or twenty-five minutes, or thereabout, and it is quite obvious that a small piece or two only remain, I would advise that, if another effort or two to remove these last be unsuccessful, it is better not to repeat fruitless manipulations, but to give over the search to a future attempt. As far as my brief experience above given enables me to judge, it is wise, I think, to leave, as I did in three or four cases, a fragment or two, which seemed unwilling to be caught, until a day or two later, when they may be found in a tranquil bladder without difficulty, and meantime had clearly done no harm.

Lastly, there is a fact about which I have now no manner of doubt; viz., that large and clumsy lithotrites are unnecessary for our purpose; and that the instruments which I have described above are more efficient, safe, and speedy in their action than the large and unwieldy lithotrites which have been proposed.

THE TELEPHONE AND DISEASES OF THE EAR.

THE introduction of new inventions amongst the practical requirements of civilised life brings with it its disadvantages. The telephone, when further improved, is no doubt destined to become a most useful agent in daily intercourse; and I do not wish to create unnecessary alarm by pointing out a possible source of inconvenience in its use. The following case which has come under my notice will exhibit a way in which the ear may be more or less injured during the use of the telephone.

A woman, about thirty-five years of age, manageress at a smallware manufactory in Manchester, which was connected with its office (two miles off) by a telephone, was listening to a message, when a violent clap of thunder took place, and which appeared to be conveyed through the wire. The effect on the listening ear was that of complete numbness and deafness, accompanied by a sensation of giddiness, slight nausea, and tinnitus aurium. These symptoms, with the exception of the deafness, passed away in a few minutes. I did not see the patient for three or four days after this occurrence, and cannot, of course, speak to the amount of deafness at first produced; but, on the fourth day, I examined the left ear (the listening ear), and found the hearing distance twenty-forty-eighths of an inch. As my patient had always had perfect hearing with both ears, and had never experienced any difficulty in hearing before, I think it very unlikely that this degree of deafness was due to any previous affection of the ear. She stated that she had never had anything the matter with her hearing until using the telephone during the storm. I have examined her lately, and found both ears and hearing distance quite normal; nearly a fortnight elapsed, however, before perfect hearing returned. This case was no doubt due to a concussion of the auditory nerve. In its present form, the telephone is almost useless to those who have even a comparatively slight degree of deafness.

F. M. PIERCE, M.D.,
Institution for Ear Disease, Manchester.

† Among other instances, the following is from a clinical lecture given at University College Hospital, December 1875, reported in the *Lancet*, January 8th, 1876. "Treat any cystitis that may occur during the course of the sittings, especially if it is severe, by freely crushing the stone without delay. I have for some years insisted on the importance of this practice in my teaching. . . . The more I see of the operation, the stronger is my conviction of the great importance of this practice, and the more ready I am to adopt it. . . . Under these circumstances, I place the patient under the influence of ether, crush freely all the large and sharp pieces, and wash out the *débris* with Mr. Clover's aspirator." The same principle was laid down, although less absolutely, in the second edition of my *Lithotomy and Lithotrity*, 1871.

OBSERVATIONS ON MEDICAL EDUCATION.

BEING THE

President's Address delivered at the Annual Meeting of the Metropolitan Counties Branch.

BY JOHN WOOD, F.R.C.S., F.R.S.,
Senior Surgeon and Professor of Clinical Surgery in King's College Hospital.

GENTLEMEN,—In taking the Chair just vacated by our esteemed and eminent retiring president, I cannot but feel that I come short of that perfect adaptation of the man to the place which has so satisfactorily characterised his term of office during the past year. I cannot lay claim to the comprehensive business capacity and impelling energy which has aided so powerfully in forwarding the progress of the Metropolitan Counties Branch of the Association, and in guiding its councils during a period of extensive development of its usefulness by the establishment of district branches in various parts of this great city. Nor can I hope to equal him in the experience of his decided views upon the various important and moot points of medical politics which are now under discussion by the medical profession, and under review by the general public.

But I may justly satisfy my desire to prove myself in some degree worthy of the great honour you have done me in electing me your president, to the extent of saying that, in the high estimation in which your suffrages are held, and in gratitude for such a mark of your favour and consideration as my present position carries with it, I yield to no one who has heretofore been so honoured as to occupy this chair. To the utmost of my humble capacity, I will endeavour to aim at a standard of usefulness which will justify at least your choice, and will also, I trust, advance your business satisfactorily.

It is customary, I believe, on the occasion which I find before me to declare (as more important ministers are wont to do) what may be called a policy, or to offer, at all events, an opinion for your consideration upon some topics of professional interest. It would not be becoming in me to trouble you with many things, and we have scarcely the time (before our more festive development) to say much. It is best, therefore, that what I have to say should concern what has been one of the most important functions of my professional career—viz., medical education. I feel sure that a man can tell most effectively and most to the advantage of his hearers about matters that he has practically dealt with most of the days of his life. Thus one may be able to "point a moral" which may hit a mark.

History is said to be continually repeating itself. Reflection upon the history of medicine and its professors has convinced me that social developments of this kind certainly do so to a considerable extent—but with a difference—a difference which reflects the altered conditions of the social circumstances. Before I can point the moral that this form of analogy offers, I must lead you through a short tale which it adorns. Let me hasten to assure the more apprehensive of my hearers that I am not going to begin at Tubal Cain or the immediate posterity of Noah, nor yet at Machaon and Podalirius, the "wise physicians skilled all wounds to heal", who were "worth more than armies to the public weal"; but I will begin at a period succeeding to the great revival of learning, when our now time-honoured medical corporations had their somewhat humble origins under the palladium of the Lord Mayor as worshipful companies of the city. At this time, there were three bodies in charge of the health of the lieges of the sovereign, viz., the College of Physicians, the Worshipful Company of Barber-Surgeons, and the Company of Apothecaries. To the first belonged the privilege of prescribing the treatment then deemed proper for all injuries and diseases to which the human frame is liable. The two others were respectively the right hand and the left of the prescribing body; the one to perform all the operations then deemed safe and necessary, from bleeding to shaving of the head; and the other to compound the nauseous and strange pharmaceutical or alchemical remedies which were in vogue. The Fellows of the College of Physicians were graduates of the Universities of Oxford or Cambridge, or of Leyden, Paris, or Padua, and were deeply imbued with, and often no mean proficients in, the classical, philosophical, and mathematical learning of the day. The study of Hippocrates, Dioscorides, and Paulus Ægineta, and of Galen and Celsus, made them accomplished classical scholars, and attached

them strongly to the elder traditions of the Universities, then closely connected with, and overshadowed by, those pervading influences which formerly had united two professions in the persons of the monastic practitioners. These influences still were strong enough powerfully to incline physicians to the classical and literary side of their art, and gave an elevation of mind and gracefulness of diction which frequently led inferior pretenders into pomposity of expression and that affectation of learning to which the immortal comedies of Molière gave an ineffably absurd and ridiculous aspect. Such aspirations impelled the physician of that day to disdain the manual details of the healing art, and to leave surgery and pharmacy to persons inferior to themselves in learning and polite literature, but very often their superiors in the practical and empirical knowledge of the treatment of injuries and disease, which formed, and still form, a very large part of the practice of medicine and surgery. They were apt to bow down slavishly to classical authorities, true worshippers of the *Idola Theatri* of whom Bacon spoke, as afraid to differ from those who had played great parts on the world's stage. We may be permitted to hope that they were not just illustrations of Pope's satire:

> "The boastful blockhead, ignorantly read,
> With loads of learned lumber in his head."

In Garrick's time, a famous and fashionable physician, yclept Dr. John Hill (perhaps having read in Galen that Æsculapius wrote comic songs to promote by laughter the circulation in his patients), wrote farces while he practised physic. Garrick said of him:

> "For physic and farces his equal there scarce is,
> For his farces are physic, his physic a farce is."

Some eminent physicians were much more popular for their literary ability than for their skill in healing. Such was Richard Blackmore, and such was Akenside, the author of *The Pleasures of the Imagination*, who was called by Smollett (himself a medical man) "Smellfungus". Among the pleasures of that nature likely to be indulged in by a candidate for practice, he omitted to enumerate that of contemplating in a solitary room an imagined crowd of patients with guinea fees in hand.

The many brilliant exceptions who gradually developed out of the common rule, such as Caius, Harvey, Linacre, Sydenham, Arbuthnot, Mead, and others, handed onwards the lamp of medical knowledge with increased illuminating power. One incident of the time may be taken as emblematical of the antagonism then arising between the scientific and the literary aspects of the profession. Dr. Mead is said to have quarrelled on some point of precedence, and fought a duel, with Woodward, the scientific geologist, in the archway of Gresham College, Bishopsgate, where two sculptured figures still commemorate the feat. As Mead stood over his fallen antagonist with drawn sword, and said, "Will you beg your life?"—"Never!" was the unvanquished and ready answer; "Never, till I am your patient, Doctor!"

While the heads of the profession and its chief representatives to the upper classes in the metropolis discussed high philosophy and literature with Johnson and Swift, wrote verse and satires with Dryden and Pope, collated the Galenic and other ancient manuscripts, met in learned discussion at the rooms of the Royal Society in the city, and prescribed for the fashionables of the period, the barber-surgeons and apothecaries were labouring steadily and empirically among the country people and humbler classes. The former had split up into two parts; the barbers, who still remain the original civic representatives, and retain the spiral bandage on a bleeding pole; and the surgeons, the more educated portion, who, emulous of the rank and position of the physicians, obtained a separate charter, studied to some extent the classics, and more especially became the patrons and cultivators of the working and experimental method of scientific investigation. To them the genius and industry of John Hunter gave the final stamp of scientific eminence, and the legacy of the famous museum to the Surgeons' College formed a centre of scientific culture and education, which has gone on increasing in importance and brilliance every year up to the present time. Both the surgeons and apothecaries kept up the old system of apprenticeship to the business of healing as to any other city trade. All the petty details of bone-mending and pill-making were carefully and painfully taught and learned. Practically and empirically, the lower ranks of the healing art were made real handicrafts, and seven years were served for this Leah of manual aptitude before the Rachel of mental culture could be indulged in. And this culture, when it came, was obtained usually from the side of the natural sciences; chemistry and botany for materia medica, anatomy and physiology for surgery. Some of the greater discoverers in the latter subjects "had but little Latin and less Greek". Even the great Hunter himself could not spell rightly the Latin and Greek names of some of the animals he mentions. For this we have the authority of Sir James Paget (*Hunterian Oration*, 1877).

But these two corporate bodies at last succeeded, through the indifference and supineness of the College of Physicians, in obtaining by far the greatest part of the medical practice of both town and country, and in supplanting to a great extent the physicians as the family medical attendants. One of the most powerful agents in this achievement was the assumption of the humble office of midwives to the community. Despised by the physician, and left by the medical ecclesiastics to the old women in the middle ages, the superintendence of man's entrance into the world was deemed by the surgeon-apothecaries of almost as much importance as the regulation of his way of leaving it. At any rate, it gave them the charge of the children; and the educationists, religious and otherwise, are now finding out and acting upon the same maxim of progress: "If you get the children and the mothers, you are finally sure of the fathers and the brothers." In the hands of Dr. William Hunter and his successors, the processes of generation and parturition became a true scientific study; a powerful agent in physiological education; and, finally, it has produced almost a separate class of scientific experts, with the distinct and very classical denomination of "gynæcologists".

When the social question of organised gratuitous assistance to the poor arose in the beginning of the eighteenth century, the apothecaries were strong enough to enter upon this subject into a struggle with the College of Physicians (who had then become alive to its importance). In 1718, Dr. Samuel Garth, the physician and poet, brought the influence of his poetical genius to bear on the side of the College by the publication of his poem *The Dispensary*. The literary qualifications of the physicians, and the higher social position derived from these, turned the scale in the metropolis in their favour against their more illiterate competitors.

But still the medical attendance upon the lower middle and artisan classes was in ever increasing extent monopolised by the surgeon-apothecaries. This was, no doubt, chiefly secured to them by the lower scale of charges which prevailed among them. The robustness of the faith of all classes, at that time, in the efficacy of medicine supplied in a bottle or pill-box, led them to ascribe all the symptoms which ensued upon the swallowing of a potion to the subtle power of the inworking medicine as the *causa causans*. The natural history of disease was but little known, even by the profession, much less by the public; and *post hoc, propter hoc*, was, with but few exceptions, received as a logical sequence. As the apothecaries kept a written record of the prescriptions, or "bills', as they were formerly called, emanating from the pens of the most famous and learned doctors of the day, it was naturally argued by the public that they (the apothecaries), knowing the name of the disease, once authoritatively and oracularly pronounced by the physician, and having the bill and the drugs all ready to hand in their shops, would be able to supply the antidote, during the whole lifetime of the patient, whenever the bane required it. When it ceased to be efficacious, the same or some other famous doctor was applied to to modify or alter it. Thus the family doctor, equal to so much in combatting the greater ailments, would be able, *componere magna parvis*, to engage single-handed with the minor ailments of families, and would naturally know more about their *constitutions* than even the famous doctor himself.

The surgeon who devoted his attention to injuries and diseases requiring instrumental interference was able, even at a very early period, to withdraw himself from the physician's leading-strings, and to set up shop for himself. This independence was greatly facilitated by the decided advance in practical scientific knowledge made by Hunter and others in relation to the repair of tissues and the treatment of aneurisms, and of amputations, by Ambroise Paré's famous method of ligature of arteries.

Natural Science now began to prove her usefulness in mental training, and her power as a rival in education to classicism and polite literature. The knowledge of things themselves as they are in nature's workshop asserted its supremacy over the knowledge of the mere words which stand for them, and of the opinions and speculations of the famous men of old, whose interpretations of natural phenomena were proved to be very commonly false, and to be founded upon imperfect observations; and their disputes about words and philosophies presented very distorted images of the substances or things for which they were supposed to stand. The idealism of Plato had obscured the realism of Aristotle and Hippocrates; and the disputes of the schoolmen about forms of reasoning went to prove that "naught was everything and everything was naught", and "thinking", therefore, "an useless waste of thought". Whenever and wherever the study of anatomy and the natural sciences flourished, as in Alexandria and the famous schools of Italy, the art of medicine and surgery had cast off these trammels of learning and become more simple, reasonable, and practical.

The influence of the study of natural science has been ever since on the increase; and the discovery of the powers of the compound microscope has given a great impulse to the progress of knowledge of the

minute forms of anatomy, both human and comparative, as well as to physiology. Powerful aid has also been derived from the applied sciences of optics, dynamics, etc.

And now, subjects such as these have assumed towards medical studies the same relative position that classics and philosophy formerly held. They are in an unquestioned attitude of supremacy in regard to medicine and its relative pursuits; and are even combating the claims of classicism and Greek, as educational agents, in the sacred precincts and very stronghold of the latter at the University of Oxford. In the late newspaper controversy between Canon Liddon and Professor Odling, I do not think that the champion of modern illuminism and natural science has by any means had the worst of it. The defence of the old positions has assumed a half-hearted and apologetic character about it, as if the battle were already half lost. And in medicine, so complete has been the decadence of classicism, that physicians have even ceased generally to write their prescriptions in Latin. *Ecce signum.* The ancient badges have been entirely thrown off in the route of defeat. The watchword is no longer "Galen and the ancients", but "Science and modern illuminism". And now I approach the point of my moral.

Human nature and its progress has been compared to a drunken man trying to mount a horse. He springs too vigorously into his saddle, fails to keep a *juste milieu*, a *media via*, overshoots his mark, and beyond it comes again and again to grief; "and at a bound high overleaps all bounds", like "mad ambition overleaps itself, and falls on t'other side.'" Science is now supreme—*facile princeps*—in medicine, surgery, and, I suppose I must add, gynæcology. She has vaulted into the vacant place of honour, and is trying to improve and keep her seat. But is she not in danger of being overweighted, of becoming top-heavy? She has been levelling upwards (to use a political phrase) too fast, and may have to level downwards to a scale more adapted to the limited capacity of ordinary human nature. She is certainly beginning at the beginning in education. She is paramount almost in our board-schools; she is chief in our preliminary examinations of all kinds.

"Naturam licet expellas furcâ, tamen usque recurret."

Students will now sometimes come up well primed in scientific physics, who cannot even spell their mother tongue, and murder atrociously the classical nomenclature used in natural science. What has been crammed in through the scientific funnel has forced out the groundwork through the bottom.

The area of the sciences, preliminary to the arts of medicine, has been extended with a rapidity commensurate with the rapid progress of scientific discovery. To the simples of the old pharmacy has been added materia medica; to materia medica, botany; to botany, vegetable physiology and the cell-theory; and to this, the geographical distribution of plants. From the first employment of minerals in medicine — the *currus triumphalis* of Paracelsus—has proceeded pharmaceutical chemistry; and thence physics, with electricity, optics, and acoustics. To human anatomy has been added comparative anatomy, histology, and physiology; and from the last, the most widely embracing and absorbing of all, have been developed all the subjects now included under biology; comparative physiology; vital dynamics; physiological chemistry and experimental physiology—bringing with it the somewhat unexpected, but powerful, public opposing force, the humanitarian outcry against vivisection. In the art of medicine have been developed auscultation, medical electricity, metallotherapy, and forensic medicine—bringing in its train psychological medicine and its associated philosophical speculations; and sanitary science, with its wide-embracing problems and many points of contact with jurisprudence.

In surgery have been evolved abstruse problems of mechanics and dynamics, modified progressively by discoveries in anatomy and physiology. Its latest outcome—the antiseptic system of treating wounds and sores—opens up another wide field of knowledge and investigation into the very lowest forms of life and mouldiness, and their agency in the production of disease. And this, again, is now entrenching upon the domain of medicine proper. And the art of midwifery has developed into the treatment of the special diseases of women and children; and the knowledge of those hidden and mysterious processes of nature, whereby one springs from the other, and the inheritance of the whole earth is secured. These recondite mysteries of Isis have been wont to be decently veiled from the eye of the *profanum vulgus* by their ministering priests. The saddest and most rotten of the "fruits of philosophy" has been the rending of this veil by the hand of one of the sex for whose shame's sake it had been drawn.

It must be conceded that this long list of subjects, about which much must be known by a candidate for medical diplomas, is likely to be somewhat overwhelming, if not absolutely deterrent, to an unhappy and doubting student on its first being presented to his astounded gaze. His perplexity cannot be lessened by the multiplicity of teaching institutions which now offer at various scales of fees to be his Mentor and faithful guide through these labyrinthine mazes. No fewer than nineteen establishments in the United Kingdom solicit, nay compete for, the privilege of implanting into his mind these separate roots, whereby he may grow into all medical knowledge. Each of them is cultivated, watered, and trained by special professors and lecturers, and then carefully pruned and digged about and dunged by assistants, demonstrators, and tutors. Formerly, the resulting grain was sifted and hoppered and winnowed into flour fitted for the baking-oven of the examination-room by special and independent millers or grinders; but now, such is the paternal care of the educational system, that all the grinding is done at home, under careful supervision, and the candidates are polished *usque ad unguem* as an acknowledged part of the educational system. Some of these schools offer the obvious advantage of examining their own pupils, and conferring on them degrees which carry the qualification to practise. This gives them a decided advantage in the public competition, as exhibited in the advertising pages of the medical journals. A lad may be taken as a recruit from the plough-tail almost, may be put in at one end of the educational machine and dropped out at the other a complete and capped Doctor of Medicine, ready to go anywhere and do anything medical, surgical, and obstetrical.

These abundant facilities for acquiring medical knowledge and obtaining medical degrees have in one respect been productive of public good, in supplying a very fair average of medical skill to that numerous class who are unable to pay a high price for it, and who, if they cannot get easily the genuine article, fall into the hands of quacks and persons unqualified to prescribe for and treat disease.

And here we touch another point where the history of medicine repeats itself. As the Apothecaries' Hall, gradually rising superior to all merely shop interests except the till, by instituting, after the example of the physicians and surgeons, examinations not only in the subjects proper to pharmacy, but also in medicine and midwifery, and, by so elevating the educational standard of its licentiates, trod on the heels of the colleges in prescribing: so followed upon them, and in their turn encroached, the class of chemists and druggists who succeeded to the ancient inheritance of the apothecary in the compounding and sale of medicines to the public. They have instituted a Society (the Pharmaceutical Society) with a regular educational course, and they examine for a diploma to dispense medicines. By virtue of their examination, they think themselves as competent to prescribe as the apothecary himself. And the lower class of the public, still retaining the ancient faith in the bottle of medicine and the pill-box, endow the dispenser thereof with the attributes of wisdom possessed by the prescriber, and invest the shilling at the temple of Æsculapius in the druggist's at the corner with the same touching confidence as did their fathers display in the apothecary of the eighteenth century. Hence has arisen counter-practice, prescribing, and the sale of patent quack medicines. The most powerful agency by which this encroachment has hitherto been kept in check has certainly been the plentiful and cheap supply of properly educated men from the medical schools. We see it operating in the fact that Doctors in Medicine of all the more popular universities may be found practising among the poor, doing on the whole useful work, and gaining a good livelihood too, at the inadequate remuneration of a shilling a visit, medicines included. Some, under the flimsy guise of a provident dispensary, strive to gain an unfair advantage over their fellow-practitioners by an assumption of the outward clothing of a charitable and economic establishment. This is an abuse to which the attention of your Council has been lately directed, and it is hoped that the reprobation of professional opinion will be effectual in removing this hypocritical stain from the medical character.

Now, as a liberal and classical education was in its place a good thing in professional men, so an elevated scientific training is even a better thing. But as a too exclusive ambition led our forefathers to excess in the former direction, and to the pretentious pomposity of vulgar pretenders in the same line, so there is a danger now of overburdening the professional student with a parade of all the sciences with the effect of repressing or excluding the more useful and practical knowledge and manual aptitude for the cure of injuries and diseases, which, after all, is the medical man's *raison d'être.* Already, in Germany, the prolific land of -ologies and -pathys, of water-cures, and milk-cures, and grape-cures, the most odious of all forms of quackery—viz., *scientific quackery*—is wellnigh rampant.

As the literary physician of the last century was fully prepared to point out and to imitate the classical beauties of a prescription by Celsus, or (as satirised by Coleridge) to personify and apostrophise the then newly introduced cure for smallpox, thus—"Hail, Inoculation! heavenly maid!"—(after having very vigorously opposed its introduction), so now the fully developed scientist is ready to demonstrate the chemical conditions of the protoplasm which produced an Achilles or a Hamlet.

Nihilism in politics and Materialism in religious matters are accompanied by a tendency to belief in the wonders of science, which may be both slavish and superstitious. Nature again revenges herself for being expelled with the fork of infidelity. New theories in the art of healing are broached, which might be tolerated as hypotheses adapted for classifying facts, but which, pushed to hasty practical conclusions in the morbid anxiety to gather results, serve now, as they have often done before, only to disorder, confuse, and delay the onward march of true science. There is little reason why the views of the most advanced workers in physiological science which have not yet stood the test of time and the fire of criticism should be shovelled into the brain of a junior medical student, and occupy his time to the exclusion of more useful and practical knowledge, merely for the object of having it again brought up without either rumination or digestion, for the admiration or disgust of examiners in science. If the man be not clever, the mass simply overwhelms him, and renders him more hopeless and more useless than before. If he be clever, he is in danger of being transformed into a priggish scientific pedant, "crushed", as Renan said of Germany politically, by the weight of his own armour. Some few, and but few, have the sublime confidence which prompted the answer of David when arrayed in Saul's armour, "I cannot go in these, because I have not proved them." How many facts in physiology, for example, cannot safely be applied in the treatment of disease because they have not been proved? And of what use to the young recruit in medicine if he cannot go in them?

It will probably occur to many of my hearers that it is much easier to find a fault than to find a remedy. And the situation in which we find the question of medical education is by no means an easy one.

We are in the *crux* which commonly occurs in periods of transition. We have nearly entirely demolished the old substructure of the apprenticeship system, whereby the elementary rules and practical details of medical practice were learnt, and which occupied a period of five to seven years. And we now expect that a lad, fresh from the Latin, Greek, and mathematics of the schools, shall get up all the array of learning I have before reviewed, and, in addition to that, acquire the practised manipulation of disease, injury, and parturition in a period of four years.

The consequence is, that the elementary and preliminary work encroaches on and displaces the work in the hospital wards. The College of Surgeons has led the way in requiring a preliminary examination in classics and mathematics, and a primary one in anatomy and physiology. In the latter, about one-third of the candidates fail in the first attempt, and are referred to their studies, thereby postponing their hospital work. Now much of this want of success is caused, in my opinion, by a want of preliminary education and preparation. Such is the universal upheaval of the standard of general education, that it is impossible to go back and lower the medical standard. *Nulla vestigia retrorsum* has ever been the watchword of knowledge. We cannot, indeed, diminish the amount of knowledge required, but we can shift its incidence; we can make the acquisition of the preliminary sciences come in at an earlier age, and put the knowledge of things into the minds of our pupils during part of the time now occupied in gaining a knowledge of words and ideas. This will be rendered more possible in future by the action of the board-schools pushing upward the standard of the middle class school, and the action of the older universities in general academic training.

The medical schools will find it necessary to relinquish the preliminary training of students and the teaching of the elements of science, which they undertook in order to supply a pressing deficiency. Medical education must, for the future, be more strictly a technical education. Botany, mechanics, physics, chemistry, and the elements of anatomy and physiology, both human and comparative, should be taught in a scientific college or institution, as part of the applied sciences. The same may, perhaps, be said of psychology and the laws of scientific evidence and jurisprudence. Certificates of proficiency in these subjects should be obtained before a student is entered at the hospital at all. The effect will be to specialise medical education at an earlier period of life than at present prevails, and also to raise the average age at which men enter upon a hospital career to a period in their mental development when they will be better able to know their own minds, and to set to work seriously at the real business of life. And a more real and serious business than the struggle with disease and death it is impossible to conceive!

I feel quite sure that no fear need be entertained that the pursuits of natural science will suffer in such a change. The genius for science is strong enough and developed enough to take good care of itself. Our future Owens, Huxleys, Parkers, and Flowers, will find ample scope for development in the schools of science proper to furnish forth the demonstrators, teachers, and professors for carrying on the work of investigation and teaching. Nay, it will be done far better than it is now, and it will be far better paid.

A powerful means for effecting the above change will be the establishment of one portal of examination for the State licence to practise. This, it is to be hoped, will not be long delayed by the action of the Scotch schools, who have hitherto shown no remarkable anxiety to smell at our nosegay. In due course of time, it is to be hoped that its attractions will begin to prevail among them, and finally overcome the national tenacity to cling to ancient privileges, so as to induce them to embrace some conjoint scheme.

It may not be essential for the foregoing purposes that the Government should be called upon to set its seal upon both the preliminary and the pass examinations; upon the portal of entrance to as well as upon that of exit from the hall of medical education—the gate of humility as well as the gate of honour. The present examining bodies can well guard the former as well as the intermediate steps of medical instruction. But a proficiency in the art of spelling and writing the English language with propriety should certainly be required at the pass examination, in setting forth the knowledge of the practice of medicine and surgery acquired in the schools.

In all this, the question of the expense of medical education has a preponderating influence. The number of medical practitioners must be kept up to the public demand, or an increase in the counter-practice of chemists and the competition of quacks and unlicensed practitioners will inevitably ensue. The lower classes must be supplied with cheap doctoring, even in places where hospitals, infirmaries, and provident dispensaries are not established. The expenses of a medical education are already as high as can well be borne by the classes supplying the greatest number of students. But the rearrangement of education does not necessarily imply an increased cost. The co-operation of the medical bodies in scientific teaching will, in the end, prove as saving and economical as in trading. A less adulterated article will likewise be supplied, and a less cost of distribution will be the direct result of concentration.

As time goes on, and the influence of the elementary and intermediate education begins to tell upon the middle classes, we shall, in the first place, have a better prepared material for technical training. Up to the present time, the medical schools and examining bodies have supplied the want of preliminary knowledge, and, considering the appliances at their command, have done it well. The burden is now, however, getting too heavy for them. They must lighten the load of preparation that they may the better do their own business. The educating energy of our younger physicians, surgeons, and obstetricians will thus become concentrated upon the more practical details of their profession, rather in the hospital wards than in the class-rooms. By their help it will be possible, even in large schools, for the students to be taught practically and thoroughly the diagnosis and treatment of disease under the superintendence of the experienced and skilled physician or surgeon who may have, by his reputation and success in teaching, attracted a large clinical class. The way is, simply to apply the demonstrator system, which has worked so well in practical anatomy and physiology, to the practical teaching of medicine, surgery, and obstetrics in the wards of the hospital. The total effect will be a lightening of the cost of medical education to the student and his friends. This question of increased expense of the medical curriculum has an important bearing upon the proposed prolongation of the period of education, by fixing the age of going up for the pass examination at twenty-two years instead of twenty-one. This would increase the expense of education to the student by the cost of the additional year. The answer which to my mind is the most satisfactory to this objection is, that this year might be spent in learning pharmacy, compounding, and the details of practice with a general practitioner, as an unqualified assistant or articled pupil. By such a plan, the student would certainly be placed in a better position for doing practical medical work directly on passing his final examination. He would be worth more and would earn more as a qualified assistant; would be fitter to take charge of a passenger-ship, and fitter for beginning practice for himself. He would have his money's worth in being better prepared for the real business of life—for earning his own living.

There seems to be (judging from the answers given to the queries recently propounded by your Committee on Medical Education, originating with our late president) a great preponderance of opinion among general practitioners in favour of the revival of this old-fashioned plan, sanctioned by the experience of our forefathers. Not less than 70 per cent. have declared for it, while only 14 per cent. have expressed an adverse opinion, in which a very small majority of the present and past teachers of surgery have coincided. The College of Surgeons have always looked with approval upon the custom of articled pupilage, and have admitted it as equivalent to a year's study at a medical school to

be taken before entering at such school. The Scottish schools admit it only after the first two years of education at a medical school. The latter system has certainly the advantage of giving to the practitioner a more instructed, and therefore a more efficient, pupil. Whether such increased efficiency would be deemed by the master an equivalent for the expense of maintenance of the pupil, so as to lighten the expense of his prolonged education, is a question, I think, to be referred entirely to, and decided by, the general practitioners only. It is nearly certain that it would be a greater benefit to the pupil himself, than the system of requiring it before entering a medical school, as stated in the list of queries before alluded to. If, however, a preliminary examination in botany, chemistry, physics, and the elements of general anatomy and physiology were required *before the articled pupilage* as well as before admission to a medical school, most of the advantages of the latter system would be gained without the interruption of the student's regular course of technical medical education, an interruption of a year's absence, which would intensify the frequent forgetfulness of anatomy and physiology even now complained of by the examiners in surgery at the pass examination.

I am very glad to observe a most marked and decided "consensus" of opinion of both teachers and practitioners to question 5 in the same series, viz., that a full two years should be spent in the wards of the hospital after passing the primary examination in anatomy and physiology. It is, in my opinion, one of the most important of all the detailed matters connected with medical education, and it should be accompanied by a much stricter method of enforcing attendance of actual clinical examinations, and of signing certificates of fitness of each individual student, than is now usually enforced.

Medicine as an art, gentlemen, has always and must always continue to precede medicine as a science, if a science it can even now be called. This is true, even to a greater extent, of surgery. We cannot wait in the emergencies of human suffering, and hold our hands, for a rational explanation of our methods of relief. Hence the necessity for empiricism; hence the various and absurd theories which have been given for practices which have proved successful. Men drew water from wells ages before Torricelli explained the pressure of the atmosphere in the action of the pump. And you will even now find twenty men who know what to do sooner than one who can render a valid reason for what he does. So medicine and surgery must be taught in the doctor's private dispensary and in the wards of our hospitals, as an art to be practised before it is explained as a science. "*Oportet discentem credere*" comes before "*Oportet edoctum judicare*" in the maxim of the old world philosophers.

Gentlemen, we are living in changeable if not stirring times, and it is at least very open to question whether we can decide, off-hand and straightway, all these nice adjustments of medical education in the way most advantageous for our posterity.

While we are, on the one hand, most sensible of the evils of multiplied and competing licensing bodies, and endeavouring to remove them by the establishment of a common State portal, we are, on the other, on the point of adding one more licensing authority to the nineteen already existing. The new Victoria University arises to compete with the Universities of Oxford, Cambridge, and London, in the face of the effete and collapsing warning of the University of Durham.

Concentration and redistribution in learning, as in politics, go hand in hand in our reforming land. In all the learned professions, everything seems to be somehow very wrong, and must needs be set right at once and without delay. We have all our hands full; and the strongest and toughest have perhaps rather a better chance of survival than the best and fittest. We have, like the one in the parable, often "bought a yoke of oxen, and must needs go and prove them", when we should have been wiser to prove them before buying them.

In the Church, we have priests and laymen, and bishops and priests, and bishops and laymen, wrangling in courts of law, and pugnacious in newspapers. In the Law are alterations, amalgamations, and radical changes, conducted, albeit, in close chambers, and usually with all the shrewd reticence of the gentlemen of the long robe. But from the arcana of even these quiet councils issue forth occasional explosions of a somewhat volcanic nature. The ecclesiastical judge bites his thumb at the Queen's Bench justice, and somewhat indecorous and personal attribution of motives emerge in the public papers.

Similar outbreaks occur in architectural and in engineering circles. The House of Commons itself, the "collective wisdom of the nation" is passing through the uneasy stages of an eruptive fever, and, uncontrollable by the ordinary usages and traditions, gets mobbed into a confusion somewhat chaotic upon Home Rule and foreign affairs. Trivial causes bring on, in this tetanic condition, very violent convulsions; and the presence of a cat-of-nine-tails in the august custody of the Sergeant at Arms is sufficient to make everybody from the honourable the Speaker downwards "out of order".

"It is a reeling world, my lord", as Catesby says in *Richard the Second*. There is surely something in the air, or in the weather, or in the sun-spots! That the result of the medley will tend somehow to the advancement of learning and science in promoting the greatest happiness of the greatest number is not open to doubt. Movement of this kind is usually evolution; and we may rest confidently in the hope that in some future happy time the competitions of the nineteen medical degree-granting bodies will develop into a professional "happy family", with no encroaching licentiates assuming titles which do not fairly belong to them, when "the envy of Ephraim and the vexations of Judah" will cease from troubling the dignified repose of the General Medical Council; and when both practitioners and students, unfettered by regulations, can be trusted to be *a law unto themselves* (as advocated by some of our enthusiastic, though somewhat *doctrinaire* advisers). Then will medical science and experience be among those good things which that wonderful compendium of all sorts of knowledge which was wrapped up in the brain of Shakespeare designates as "Begot in the ventricles of memory, nourished in the womb of the pia mater, and delivered upon the mellowing of occasion" (*Love's Labour's Lost*, Act IV, scene 2).

THE GENERAL PRACTITIONER OF MEDICINE: HIS POSITION AND EDUCATION.

Being an Extract from the Introductory Address delivered at the Annual Meeting of the South-Eastern Branch.

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IT has been suggested to me that "the General Practitioner" should be the burden of my song to-day; and, as for nearly twenty years I had the honour of being very actively engaged in that capacity, I trust I am not incompetent to approach the subject without prejudice or reserve.

The general cry for higher education, for medical reform, the discussion on medical titles, our relations with the State and with the public, all betray an unsettled state of the *mens medica*, a disturbed condition of our professional relations with each other and with the public. We are in the throes of change, and the efforts of our admirable British Medical Association will still be needed, as they have hitherto always been employed, to conduct these changes along the right paths and make all things work together for good. On the subject of higher education, although I admit that in one sense no education can be too high for such a profession as ours, I am entirely a nonconformist to the view that of all who enter its portals the same high standard should be demanded.

Let us consider for a moment our relations with each other, consulting physicians and consulting surgeons acting as general practitioners, and general practitioners sporting their degrees and thinking themselves, as no doubt they very often are, as good as the physicians and surgeons. Then, again, think of the specialists and what they arrogate to themselves, and how on their particular subjects they ride over everybody. Is it wonderful that with such glaring incongruities the public are puzzled, and often take what appear to us very irregular means of satisfying their own particular medical requirements?

A Frenchman who had committed a murder for gain, when asked by the judge why he had been guilty of such a crime, replied: "Il faut vivre", to which the judge replied, "Je ne vois pas la nécessité", and immediately ordered him to be hanged. Now, "Il faut vivre" is probably the only, but still very potent, reason why many physicians and surgeons enter into competition with the general practitioners, and the same may be said of those consulting surgeons who prescribe for medical cases. I fear this axiom will continue primarily to live at the root of our actions, however we may try to alter, disguise, or avoid the imputation. The same applies also to the prescribing chemists, to the unqualified practitioners, and last, but not least, to the lowest and most mercenary of all, the common quack.

We are apt to forget in our wailings for medical reform, that it is by no means the duty of the legislature to take up the cause of the doctors, and to give them various forms of protection; on the contrary, a statesman should, and would doubtless as a rule, see it to be his duty to do the greatest good for the greatest numbers; and it is on this ground that I take leave to differ from the general almost universal cry of raising the standard of medical education to an uniform height. I do not see what is to happen to the impecunious, the lower class of tradespeople, to the artisans, and to all those labouring but independent

classes above the region of the charity seekers and indigent paupers. It is quite clear that our highly educated and aspiring young practitioners who have had the means of spending five or six years at the hospitals and schools in acquiring their medical knowledge will not descend to accept such fees as these classes are able to afford; and consequently they will be driven to consult quacks, and prescribing chemists, or to sacrifice their independence by availing themselves of medical charity. Now, to drive such a large section of the community to spend their money outside the pale of the profession is simply to deprive the profession of a very large amount of income which would, if we gave the opportunity, flow naturally into its coffers.

Even in my own experience, there has existed the (what would now be called) old-fashioned apothecary, the very man who, in my opinion, administered in the best possible way to the medical and surgical requirements of that section of society just now referred to. Some of these we have most of us known personally; men who had open surgeries where man and maid might have a tooth pulled out for a shilling, or a splinter removed, or an abscess opened for a proportionate fee, or where a mother might have some teething powders for her baby, and ask for some liver powders for her little Johnny; where, in short, all people might have their petty ailments dealt with in a satisfactory manner, and in the cheapest and readiest method. These surgeries were similar to the out-patient room of the hospital or dispensary, only the patients retained their independence on retiring, and left something behind them for the doctor to live upon. In some of our manufacturing towns of the north, a few still exist. I have in my mind one gentleman who has prescribed literally for hundreds daily, and has his dispensers at hand to make up quickly what is ordered: the shilling, more or even less, is paid for the medicines, and the doctor becomes rich and enjoys a fine country house, with carriages, horses, and their attendant luxuries. Another case, too, I know of in a coal and mining district where a firm of three partners prescribe in a similar way, and have a clerk to see fair play; a basin stands on the office-table, and the pitmen and their families put in what they can afford. These gentlemen are all of high character, and two of them I know to be exceptionally talented both in medical and surgical cases.

It is open to question whether provident dispensaries can ever take the place of the open surgeries: the public does not like to be bound by societies in such a personal matter as health, nor does it feel so independent in its choice of a doctor.

I regret that these valuable men are fast dying out. From their enormous field of observation they became quick sighted in detecting diseases, and had a ready way of dealing with them; and, although they could not, perhaps, so profoundly investigate an obscure case, they would often in the lesser things in physic (which after all form the chief part of our practice) be wiser and more trustworthy than the theoretically and highly educated man of more recent date.

At one of the meetings of our Association, it was told that a graduate of the University of London of high standing, being called to attend a case of measles, treated it as a skin-disease, and gave iodide of potassium. This seems very absurd, but can we, on reflection, wonder at it? I should be glad to know how many cases of measles any of us saw during our time of so-called "walking the hospital", and further, how much confidence any of us would place in a doctor who had only learned his profession theoretically. Now, it appears to me that all this insistance upon such a complete mastery of theoretical detail, before any other practical work of the profession is undertaken, is an error on the part of our medical reformers, as I also think is the large number of subjects in which complete theoretical knowledge is demanded.

I think the examination of the conjoint board, should it ever exist, ought not to be of too high a standard, or range over too many subjects, but that it should demand a very satisfactory practical knowledge of all the common "ills that flesh is heir to", so as to resuscitate, if possible, the surgeon and apothecary of twenty years ago. This should be the minimum and State examination for the protection of the general public; and men from these ranks would supply the medical and surgical necessities of those with limited means for a suitable remuneration, as well as attend to those small ailments about which the more wealthy preferred not to trouble their physician. Men who had not passed this State examination should not, under any circumstances, be allowed to practise, whether chemist, druggist, or quack. Here the responsibility of the State might cease, and the respective corporations and Universities would offer their higher honours to all who aspired to and were thoroughly able to achieve them.

We are, however, met by a serious difficulty on the very threshold of the question; the public, from custom and from want of knowledge of the subject, will recognise the degree of M.D. as the *alone* higher qualification. F.R.C.P. and F.R.C.S. have to them no practical meaning, as even a Fellow of the Royal College of Physicians cannot properly call himself a doctor, and *a doctor the public will have*. Since this is so, the degree of M.D. becomes an absolute necessity to him who aspires to higher medical position. How is this to be obtained by those who had not originally thought of any position beyond that of general practitioners? Like many others, I have had good reason to know that the doors of the British Universities are practically closed to those who would improve their medical position, certainly to those in active practice beyond the bounds of the metropolis; for the former Medical Reform Bill caused the Universities to insist upon certain courses of lectures being attended in a certain order, as well as many other requirements incompatible with residence in the provinces, entirely ignoring the fact that these lectures *have* been attended, and these requirements complied with previously to passing the examination for a general practitioner.

A friend of mine, who was six years in London, and had obtained by examination the Fellowship of the Royal College of Surgeons, and had fulfilled all the essential requirements of the London University, entered into practice. After some years, he found he had very little surgical and much medical work; and he was made to feel that, if he could but be called doctor, it would increase his influence with his patients and in the future probably be of considerable service to himself. He appealed to Cambridge and other Universities, but at first none would listen to him; at length, however, one did consent to receive him at the examinations if he attended a quarter of the lectures; and, as he had to travel a long distance to the University, those lectures were concentrated and lumped together in a short space of time, in order that my friend as well as the University might at least fulfil the letter of the law.

Gentlemen, why should this continue? I once put the question to a distinguished member of our profession and one occupying the highest offices in it, and his answer was that a degree implied a leisurely education, and generally a higher cultivation, and that it was very desirable that this should continue. In this I heartily agree with him; but I think there are other ways of obtaining this higher cultivation than attending for a second time courses of lectures, the utility of many of which is open to question, even when only attended for once in a lifetime. I maintain that a gentleman who has followed out the usual curriculum for making a general practitioner at the present day, and who has obtained some position at the end, say, of ten years of private practice, and has so kept up his anatomical, physiological, pathological, and medical knowledge as to pass a good searching examination at that period without any favour, is in all respects more fitted to uphold the dignity of the M.D. degree than the younger man who has simply followed the course as at present prescribed by the University authorities without having borne the responsibility of private practice, and his character as a man and a gentleman been tested and tempered by the hard experience of life.

Responsibility is, indeed, a master in the art of teaching, no master so thorough as he; books and theory sink into insignificance beside him; ten years under such a master, and the knowledge of men and manners, of what is called life, with the general reading which every thoughtful man would undertake during that period is, to my mind, an education and cultivation not equal with, but far, very far, superior, to that of the University graduate, who is deficient in such training, but who, perhaps, had even distinguished himself in the acquisition of theoretical knowledge.

Is it to be tolerated that a man, having started in life at a certain standard in his profession, should by law and usage *not have the liberty to raise himself to a higher standard?* A young man, I may say a boy, enters the London hospitals with the intention of being a general practitioner. He is entirely inexperienced as to what it exactly means, and ignorant as to his own powers and inclinations; he finds, perhaps, after he has done his work, that he has much distinguished himself, and that he would like to become a physician, and to take a degree at the London University. He is told that, unless he matriculates and goes through the whole curriculum *de novo*, this cannot be; the doors are closed to him, however excellent and distinguished he may be. Surely, gentlemen, this is antiquated conservatism, worthy only of the days of George III; and this in an University (I refer especially to that of London), affecting to be governed by the most liberal and advanced of principles.

It is obstructive policy such as this which drives men, and very good men too, to seek a foreign diploma to enable even those who are already members of the Royal College of Physicians to say to the public that they possess an University degree.

Men who take this road for becoming physicians will naturally be of the practical class rather than the teachers, scholars, writers, and philosophers of our ranks; these last will still take their rise from the ordinary University curriculum, in which theory and original investigation will hold its place and tend to develop those qualities which lead and

guide others, and enable their possessors to leave behind them a reputation and a name. The high-class general practitioner will still continue, as well he may do, the strength of the profession, the friend and adviser of families, the guide and support of many a weak mind and body—essentially the family doctor.

Probably few of us stop to reflect on the great responsibility of our position, how much we have in our hands of the happiness and welfare of society, and how enormous is the personal influence of the doctor when once he obtains the confidence and sympathy of his patients. Solomon says: "A merry heart doeth good like a medicine", and how constantly is a doctor able to give this merry heart to his patient by correcting sad and mistaken views of case or condition, by turning the current of thought into other channels, by exciting fresh interests, by calling upon the sympathies on behalf of others, and, most of all, by calling out the philosophical or religious attributes of the individual, and urging a proper and judicious cultivation of them.

Think how bodily function must be affected by a "merry heart", and how, conversely, a "broken spirit drieth the bones".

MEDICAL EDUCATION:

BEING

An Extract from the Oration delivered before the Hunterian Society of London, February 1879.

By WALTER RIVINGTON, B.A., M.S., F.R.C.S.Eng.,
Surgeon to the London Hospital, etc.

The estimation of the medical profession by the public will be directly proportionate to the general standard of culture attained by its members, and to its freedom from trade propensities and trade practices; whilst its position in the body politic will largely depend upon the efficiency and cohesion of its internal organisation. The general standard of culture rests upon a tripod: preliminary knowledge, scientific knowledge, and professional knowledge and skill. Each and all of these branches must be cultivated in due measure and proportion; for by general culture we take our position in society as gentlemen; by scientific culture we raise our art above the level of a mere handicraft and mystery; and by professional culture we separate ourselves from the quacks and empirics who thrive by obtaining the repute of superior wisdom in things whereof they are grossly ignorant, and by professing to cure diseases which are either beyond human means of relief, or have been conjured up in the morbid imaginations of their dupes and victims by vile publications and nefarious schemes. A few months ago, we found the *Times* remarking: "A very large proportion of the general practitioners who now throng every town could well be spared; but they are in possession, and cannot be got rid of." Whether this be exaggerated or not, a candid review of the present state of medical education and examination can scarcely fail to convince you that, great as have been the advances and the gains of the last twenty-one years, since the passing of the Medical Act in 1858, which has been justly styled the Magna Charta of the medical profession, and since the commencement of the labours of the General Medical Council, which I for one have no wish to depreciate—since the time when it was the boast of a transpontine grinder that he could take a respectable cabman out of the ranks and pass him through the College of Surgeons in six months—the proper standard has not yet been reached in any of the three branches of knowledge upon which our repute is based. Can it be said that our preliminary examinations are satisfactory, so long as they are carried on by so many different boards and vary so greatly in value? It is true that the percentage of rejections, even at the mildest of the boards, is enormous; but it is equally true that the percentage of rejections, compared with the quality of the candidates, ought to be very much greater even than it is. Possibly the candidate who did not know whether physician was spelt with a great or a little F was referred to his studies; but the testimony of the visitors to the professional examinations has been, that a large proportion of men who have successfully surmounted the dire ordeal of the preliminary, display, at the first and second professional examinations, a sad incapacity for writing grammatically and spelling correctly the words of their mother tongue. The experience of every medical teacher and examiner will strongly support this observation.

As you might expect from three Colleges of Physicians, four Colleges of Surgeons, two Apothecaries' Halls, and ten Universities, there is an absolute want of uniformity in the regulations of the nineteen corporations, both as regards attendance on educational courses and examination in the scientific subjects. A second detrimental feature is a want of correspondence between the requirements of corporations for education and their requirements for examination—some of the medical authorities compelling the student to attend courses of instruction in subjects in which they decline to examine. In the third place, the study of the scientific subjects is insufficiently encouraged. No desirable branch of knowledge for a medical man could occupy a more deplorable position than physics or natural philosophy. It has been divorced from chemistry, and cast adrift without legal provision for its maintenance. It is no longer taught as part of the chemical course at our medical schools, and in many it is not taught at all. The wisdom of the General Medical Council has enjoined it as a purely *optional* subject of examination at the preliminary, but merely to the extent of "elementary mechanics of solids and fluids, meaning hereby mechanics, hydrostatics, pneumatics, and hydraulics"; and, therefore, the colleges and halls neglect it altogether, except so far as it is kindly permitted to be an optional subject for the preliminary.* The result of this is that the general practitioner may enter on his career without even a rudimentary acquaintance with the phenomena of heat, light, sound, and electricity; or the principles exemplified in the structure of any common instrument—such as the thermometer, barometer, or an ordinary syringe, let alone a pump. And yet you expect the general practitioner to be a scientific light, shining in a dark place, and to assist in laying a scientific foundation for medical practice.

If you turn to the strictly professional subjects and to the regulations of the nineteen corporations for the professional education of medical students, you will discover striking evidence of the immense advantage which the public and the profession derive from the enjoyment of the boon of being provided with nineteen independent medical authorities issuing separate codes of compulsory observances. The first evil which shows the cloven hoofs is the remarkable fact, that there is scarcely a subject of medical study in regard to which the regulations of the corporations coincide. Categorical details would weary you. Suffice it here to say that the regulations differ in respect to anatomy, physiology, materia medica, medicine, surgery, midwifery and diseases of women, the practice of medicine and surgery, clinical medicine, clinical surgery, pathology and morbid anatomy, the performance of the duties of clinical clerk and dresser, and the number of midwifery cases to be attended; and that the difference extends to the number and kind of courses in the specified subjects, to the number of lectures in a course, and to the number of patients or of beds which a hospital must contain to be recognised by the authorities. To some minds, possibly, the diversity of requirement may present a pleasing parallelism to that resemblance, in general outline with diversity of detail, which has been described by Professor Humphry in his work on the human skeleton as a law of created being, exemplified abundantly in the animal and vegetable kingdoms, and observable in our own bodies in the structure of the vertebræ and the ribs, none of which are mere repetitions of each other. Unfortunately, however, the parallelism stops here; for, whilst the diversity in nature, whatever may have been its cause—whether it bears a teleological or a Darwinian significance—is strictly correlated to the performance of useful and necessary functions, the diversity of regulations of the corporations is a serious inconvenience to the student, prevents the establishment of the great desideratum of medical education—a satisfactory uniform code for the minimum qualifications to practise medicine and surgery—and interferes with the utility of the medical profession to the public, and with the elevation of the profession in the social scale. On what grounds of common sense or public convenience can any one defend the diversity of the requirements of the corporations in regard to midwifery cases? Is "Caledonia stern and wild" so "meet a nurse for the" obstetric "child" that he can become an expert after attending six cases of labour; whilst his southern brother must painfully present himself ten or twenty times at the "imminent and deadly breach"?

A second evil, not less striking, and directly flowing from the number of regulating medical authorities, is the burden of an over-legislation. Ten years ago, I pointed out to the Medical Teachers' Association that the pious care of the licensing corporations, in compelling the body of the medical student in the hope of benefiting his mind, had resulted in providing for attendance on courses of instruction, not only during eight hours out of three hundred and seventy-nine available working days during the first eighteen months of the student's career, but also during eight hours out of eighty-nine additional days, which did not, and of course could not, exist; so that, if the student were to endeavour to carry out in his first two years all the prescribed regulations, and conscientiously to earn all the necessary certificates, he would find that the hours of the working day were more than occupied, and that no time would be left for bodily sustenance. Moreover, he would run at his examinations serious risk of reference to his studies, to use the polite

* Since this was written, Physics to the extent named has been made a compulsory subject by the Medical Council.

phraseology which soothes the wounded spirit of rejected candidates. This overcrowding of the medical curriculum with compulsory observances, which remain almost *in statu quo*, is partly due to the absence of classification of the subjects of study, and partly to the regulation which permits students to spend a year and a half of the prescribed four years of study away from the hospitals and medical schools, and to compress their attendance on lectures and hospital practice within the brief space of three winter and two summer sessions. The ill effects are felt alike by students, teachers, and the governing authorities of the medical schools. The hapless student finds himself compelled to be learning in one and the same period the most incongruous subjects, to be listening to harangues on natural science which have little or no bearing on the great object of his studies at a hospital and medical school, to be attending courses of instruction on diseases and injuries affecting parts of the body of which he scarcely knows the names, much less the composition and structure; and to prove practically the error of one of Euclid's cardinal axioms by being in several places at the same time. Ambitious, perhaps, of distinction at the University of London, he meets with a stumbling-block, well-nigh insurmountable, in the want of coincidence between the curricula of the corporations and the curricula of the universities. The unhappy teacher is asked to adapt his instruction simultaneously to those who know nothing of the subject, and to those already well-grounded in its elements; to those who require to be fed with milk, and those who require to be fed with strong meat; and is expected to make the same discourse instructive and interesting both to those who are resolved to profit by the instruction offered and to the Gallios who care for none of these things, and who have flocked into the theatre solely for the purpose of obtaining an autograph.

Bound down by the rigid rules of central authority, the governing councils of schools are fettered in their action and unable to adopt the measures which they deem best calculated to promote a sound and satisfactory professional education. The curriculum is already so overweighted, that the authorities are unable to insure sufficient attention to special subjects of study, daily acquiring increased importance: diseases of the mind, eye, ear, throat and skin; therapeutics, and hygiene. Sporadic questions may be asked at examinations, and a case or two of eye and skin-affections may be shown to the candidates; schools may provide special courses of instruction; but the *vis à tergo* of regulation and the *vis à fronte* of examination are insufficient as yet to compel every student to cultivate special subjects in due measure and proportion.

Now, though I have merely touched the fringes of the evidence, I believe that I have adduced enough to show that not one of the three legs of the tripod of culture is trustworthy. The preliminary leg is rickety, the scientific leg is rudimentary, containing a mere splint-bone, and the professional leg has not attained its normal growth and development. Then comes the question to which you will naturally look for an answer, What do you propose as remedies for the multifarious evils on which you have dilated?

At the root of all educational reform lies, by testimony quite overwhelming and well-nigh universal, an amalgamation of the licensing corporations, for the purpose of examining candidates for the minimum qualifications to practise medicine and surgery. The formation of a conjoint board for England, through the voluntary combination of the seven English licensing corporations, stimulated most faithfully and perseveringly by a majority in the General Medical Council, after passing, like the course of true love, through strange and romantic vicissitudes, has more than once appeared a *fait accompli*, and on two occasions—once in 1870 and once in 1878—Medical Bills, rendering combination of corporations in each division of the kingdom compulsory, have been withdrawn at the eleventh hour, after they had been discussed, amended, and approved by the General Medical Council. The profession is now anxiously, but confidently, awaiting the completion by the Conservative Government of 1879 of the work commenced under Liberal auspices and carried to a successful issue by the Conservative Government of 1858. As the Government are thoroughly impressed with the necessity for amalgamation of the licensing corporations, particularly alive to the evils which have resulted from admitting to the *Register* persons qualified only in one faculty, and apparently anxious and determined to pass a Medical Act Amendment Bill during the current session, it would be thrice to slay the slain to combat the objections, substantial and sentimental, urged by the Caledonian and Hibernian members of the Council against conjoint examinations. The rivalry between the medical corporations and the universities in Scotland and Ireland in licensing the general practitioner, and the difficulty of adjusting the pecuniary and other claims of each corporation, have blurred the outlines of the object, and produced in the eyes of the interested parties a certain degree of chromatic aberration. Hence the protests uttered against the reduction to one dead level of uniformity of the examinations for the admission of candidates to the medical profession. Mark the ingenuity of the epithet, "one *dead* level of uniformity"; but mark also how completely the epithet—as epithets often do—begs the whole question at issue. To the more accurately accommodated eye of the disinterested bystander, conjoint examinations imply, not a *dead* or *low* level of uniformity, but a *high* level of uniformity of good and trustworthy examinations through which no incompetent men could filter. Equality of fees, which savours of injustice to the economical instinct of the Scotchman, appears to the average Englishman a just and necessary provision, effectually guarding against the possibility of the perpetuation of the old abuse of competition of examining bodies downwards. Moreover, conjoint boards signify admission to the *Medical Register* only for candidates who have obtained a complete qualification in medicine, surgery, and midwifery, diminution of the expenditure of the Council on visitation of examinations, and the prevention of the danger of examinations relapsing into inefficiency when visitations are no longer in progress. The accomplishment of these objects alone would render a Medical Act Amendment Bill worthy of the support of the profession; but the Government Bill will contain a satisfactory amendment of the much-vexed fortieth clause, and, but for the apathy of the General Medical Council and the hostility of the Executive Committee, might have contained provisions for admission to the Council of representatives chosen by the profession at large. At the present time, about five hundred—certainly not more than one thousand—of the twenty-four thousand members of the profession take any part in the election of the Council—in other words, about two to four per cent. The argument commonly relied upon to prove the justice of the claim of the profession to direct representation, viz., that taxation and representation should go together, has never appeared to my mind a strong argument or the best ground for urging the claim. Strictly speaking, the profession is not taxed. It is not taxed as the unrepresented legal profession is taxed, each solicitor having to pay from £6 to £9 a-year for his licence to practise. The single preliminary payment for registration receives—or is supposed to receive—its *quid pro quo* in the advantages derived from admission to the *Register*, and, therefore, if you continue to use this argument, you may find that it is capable of this inconvenient application, namely, that, if the profession be represented in the Council, the profession must be taxed to maintain its representatives. The true ground for asking that the profession shall be represented is that the measure is desirable in the interests of the public. How can the public be sure that they will enjoy a constant supply of properly educated general practitioners through the agency of a Council composed wholly, or almost wholly, of professors and teachers, and consulting physicians and surgeons? Surely, it is desirable to hear the voice of those who have to meet daily the emergencies of general practice, and who are intimately acquainted with the needs of the family doctor, the voices of those who have recently sat on the benches of the lecture theatre, and are practically conversant with defects in our educational system to which the occupant of the easy and well endowed professorial chair may be excused for being a little blind. Surely, also, the public interest demands that harmony of feeling and sympathy should exist between the Council and the profession, and it is matter of experience that the best assorted union is incomplete without a ceremony and an outward and visible sign, which shall ratify, cement, and perpetuate the blissful state, and impose such legal duties on either side as shall be safeguards against vicissitudes of feeling, and outride the passing storms which sometimes arise even in the serenest skies. Surely, also, when the Council has become the mouthpiece of the profession in regard to medical questions introduced into Parliament, as the Duke of Richmond has confessed, it is not only bare justice to the profession, but a measure of undoubted expediency in the interests of the public, that the views of the rank and file of the profession should be adequately and completely expressed. The chief faults of the Council have been timidity, vacillation, recapitulation, and inability to control recalcitrant corporations. Representation of the profession in the Council would tend to cure these defects, if it be not obtained at the expense of the diminution of the public spirited Crown nominees, and if it be supplemented by abolishing the weak expedient of recommendations and conferring a binding force on the decisions of the Council. Garrulity and combativeness of corporate representatives would be checked by bestowing on the corporations the privilege of paying the members who so faithfully conserve their vested interests and show that they love the corporations, not indeed wisely, but, alas! too well.

Let us look beyond the great reforms which loom imminently in the immediate future to the educational changes which would be their appropriate supplement. The first and foremost of these changes in importance and extent will be the promulgation of a single uniform code of educational regulations for all medical students in the United Kingdom. In regard to the preliminary education, I would say, trust it in

each division of the kingdom to one authority—in England, for example, to the University of London. Remodel the examination, abolish the present list of optional subjects, for it is founded on the erroneous notion that for the purposes of the medical student and practitioner dead and living languages can be the equivalents of each other, and that a subject from the natural sciences can be the equivalent of either, and no matter which. Either a subject is necessary, or it is not necessary; if necessary, include it; if not necessary, exclude it altogether, without vain compunctions or regret. The only inconvenience entailed by the necessity for a summary decision on the necessary subjects will be an inconvenience to the General Medical Council, who will once more have to make up its oscillating mind on the question of the inclusion or exclusion of Greek. The justification of the advocacy of Greek lies in the cardinal circumstance that it is *par excellence* the language of science. A very large proportion of technical terms, compound scientific words, and the descriptive names used in anatomy and physiology, medicine and surgery, are taken from the Greek. A knowledge of Greek is of immense assistance to the student in understanding and mastering these terms, and I cannot but believe that even on the score of economy of time in learning, and not afterwards forgetting, it would be for the advantage of the student if the Medical Council made Greek compulsory. Another reason for including Greek is that more than half the bad spelling which appears so prominently in the papers of candidates at the professional examinations is due to want of acquaintance with the Greek language. How would it be possible for any candidate well grounded in Greek to leave out the *g* in diaphragm or the *e* in pleura—to call symphysis "simpathis", and "epiphysis", epithesis?

The preliminary examination should be of a character sufficiently high to be accepted by the University of London as equivalent to the matriculation, and to open out to medical students the medical degrees of the University.

To the University of London, I should be glad to see entrusted the task of examining in physics, chemistry, botany, and zoology. A preliminary scientific examination—of course, less difficult than the preliminary scientific of the University of London (for it would be a serious mistake to make it too severe)—could be passed by students as soon after the preliminary in general education as they were ready for it. The advantages which would flow from the improvement of the preliminary by the inclusion of Greek, and from the institution of a preliminary scientific examination, would comprise an elevation of the typical forms of medical students, abolition of bad spelling, raising the standard of culture of medical men generally above that required from members of the legal profession and pharmaceutical chemists, lightening the medical curriculum and giving room for the introduction of neglected matters of great practical importance, concentration of the attention of the student at a medical school on the human body in health and in disease, and encouragement to those who desired to obtain the higher degrees and qualifications. For the purpose of securing to students facilities for studying the natural sciences, steps should be taken for the establishment, maintenance, and extension of provincial museums of a strictly educational character. Every important provincial town should possess a well-built, well-situated, well-furnished, well-arranged, well-lighted, well-dusted, well-catalogued, and well-ticked museum, and be provided with an educated curator, who could give demonstrations of specimens to classes or individuals paying for instruction. The Government of the country should be urged to undertake the work in connection with the Science and Art Department of the Committee of Council on Education. In London lectures on the scientific subjects should be delivered annually at a central institution by Professors appointed by the College of Surgeons, or the University of London. In the provinces, the need for professional instruction could be met by the extension of University teaching. During the time intervening between the preliminary and the preliminary scientific examination, students might advantageously reside with practitioners, especially such as were attached to provincial hospitals, and occupy leisure time in acquiring a knowledge of dispensing and book-keeping, and an interest in medicine and surgery, or else in demonstrating their own unsuitability for the profession, and withdrawing before their parents or guardians had paid the fees at a medical school.

Would not the most beneficial arrangement of the four years of professional study be into four periods, each of a year's duration, and each terminated with an examination after the manner of the arrangement but recently in force in the University of France? It is gratifying to know that the importance of examining students at the end of their first year has received substantive recognition in the General Medical Council. How many waste their first year from sheer idleness or dissipation, or from the force of evil example, or from the consciousness of abilities sufficient to enable them to master the necessary subjects in their second year, or from want of guidance, direction, and aim. An examination at the end of the first year would be like the guiding star, and gently lead the student on. It would supply a needed stimulus which would save many from diverging from the track. Scarcely inferior in importance, as I endeavoured to prove some years ago at the Medical Teachers' Association, would be a practical examination in medicine, surgery, and midwifery at the end of the third year, the passage of which might entitle the successful candidate to a certificate of competency to act as an assistant to a registered practitioner. Would it not be well if medical students were obliged, as in the University of France, to show that they had attained the age of eighteen years before they were allowed to commence professional studies, or shall we still encourage the entrance into our medical schools of irresponsible babes and sucklings? Has it not sometimes occurred to you that the professional curriculum might advantageously commence in the summer, and that the first summer session might be occupied, *inter alia*, with a course of osteology, and a course of elementary human histology? If not, consider, I pray you, what a great point gained for the student would be a thorough knowledge of the bones, and a fair knowledge of the tissues before the beginning of the first winter session. No more shivering on the brink of dissection in October and November, for anatomy would already have been robbed of the passing strangeness and distastefulness which bewilder and impede the uninitiated freshman.

By the amalgamation of corporations for the purpose of examination, the expenditure of the Medical Council on visitations of examinations would be greatly lightened. Let the money thus saved be devoted to visitations of medical schools. A measure of this kind would probably induce that conjunction of metropolitan schools, that improvement in the quality and quantity of teaching, in the remuneration of teachers, and in the educational material provided in the schools, and that formation of a great medical faculty in connection with the University of London towards which advanced reformers are now straining their weary eyes in vain.

CASE OF EPISTAXIS COMPLICATED WITH AN EPILEPTIFORM SEIZURE.

By JOHN COCHRANE, L.R.C.P. & L.R.C.S.Ed., Edinburgh.

THE following case occurred in my practice lately; and as it presents some features worthy of attention, I wish to record it.

About nine o'clock on the evening of June 25th, I was requested to visit an elderly man who was bleeding from the nose, which could not be stopped by the usual household remedies—cold to the nape of the neck, etc. When I entered his bedroom, I found him sitting partially undressed, bending over a chamber-pot which was quite filled with bright blood, mixed with large clots. The blood was running profusely from the left nostril alone, and under the bed was another chamber-pot completely filled with clotted blood.

The man was in a composed state, and did not appear to be at all alarmed, but his face was beginning to become blanched. Being desirous of trying the effects of an injection through the nasal cavity of a solution of the perchloride of iron, I used it with a quantity of the tincture of the perchloride of iron, diluted sufficiently with water. As the blood still continued to flow in spite of repeated injections, I resolved at once not to further delay; but, cutting some lint in sufficiently long strips, I dipped one of them in a strong solution of the perchloride of iron, and insinuated it up the left nostril, and in a few minutes all traces of bleeding ceased. The patient expressed himself as feeling much better, and to me he appeared to be more comfortable; when, all of a sudden, he gave a short cry, and drooped his head. I noticed that his teeth were firmly fixed, and that his hands were clenched. He fell on the floor, and struggled like one in a convulsive fit. I laid him on his back, and managed to get his jaws open; and, after a few minutes had elapsed, consciousness gradually returned. He now rapidly recovered, and was able to sit up and converse with me. During the convulsive attack, he was perfectly insensible. His pulse before the attack was normal, and, during it, there was no material difference, with the exception that it became much quicker. The bleeding was completely stopped, and, to verify this, I removed the nasal plug. Previously to the introduction of the lint, I examined the throat, and saw the blood flowing into the mouth. On examining, again, after the fit, not a single drop could be seen.

Now, in regard to this case, it strikes me that the cause of the production of the epileptic symptoms was most probably the injection of the iron solution, which had in some manner been partially absorbed, as it is well known that fatal cases have occurred where nævi have been hypodermically injected with the perchloride of iron. That injection in this case did not check the bleeding, although I tried it

repeatedly, does not augur well for this procedure; and I am certain it caused considerable annoyance to the patient.

After getting the patient to bed, I carefully examined his heart; but, with the exception of a soft blowing murmur at the mitral area, due apparently to the loss of blood, there was nothing abnormal. This murmur disappeared after a few days' rest; and now my patient is up, and to all appearance has made a good recovery. For a long period before this attack of epistaxis, he had been much troubled with a heaviness in the head; but, beyond this symptom, he enjoyed pretty good health.

I must not omit to mention that I at once, on seeing the man, administered a dose of thirty minims of the liquid extract of ergot, and left some doses to be given during the night if there were any appearance of bleeding; but as there was no recurrence, although the plug was not left in the nostril, the drug was not again administered.

CLINICAL MEMORANDA.

IS PSORIASIS PALMARIS ALWAYS A SYPHILIDE?

I HAVE read with interest the views that have been expressed on this subject; and, though I cannot go the length of agreeing entirely with Dr. Spender that "there is no such thing as psoriasis palmaris except as a syphilide", yet I would say from my own experience that a non-specific dry scaly disease limited solely to the palms and soles is remarkably rare. In support of my view, I would quote Hebra, who says: "The palms of the hands and the soles of the feet are, however, peculiar in being very rarely the seat of a non-syphilitic psoriasis; whereas they are well known to be very subject to a syphilitic affection which (from the special anatomical structure of these parts) presents characters supposed to resemble those of psoriasis, and which is, therefore, called the psoriasis palmaris syphilitica." The difficulty, often impossibility, of tracing a true syphilitic history in these cases is well known, and therefore the absence of such history does not of itself prove the disease to be non-syphilitic. Further, I would point out that the majority of cases get well under antisyphilitic treatment.

I remember seeing a case in which a middle-aged man had a deeply fissured dry condition of one thumb and a part of the palm. There was no disease elsewhere. He denied having had syphilis, and there was no evidence that his statement was untrue. Various remedies, both internal and local, were tried with little or no benefit; but under mercury a marked improvement took place. This case seemed at first sight to be common eczema; it was unsymmetrical, and looked as if it had been produced by local causes. Nevertheless, it improved under specific treatment.

My own view is, that a very large proportion of the cases of palmar psoriasis are syphilitic in origin; but I grant, as I have already said, that there may be some that are not syphilitic; and the question arises, Are they eczema or psoriasis? If there be no sign of either disease on other parts of the body, I hold it is impossible to make a differential diagnosis; but suppose, for the sake of argument, that, from some peculiarity in the shape of the eruption, or from the colour of the scales, or from some other symptom, we were able to decide between psoriasis and eczema, what advantage would be gained? The object of an accurate diagnosis is to aid us in our treatment; and if, in this instance, the treatment be the same in both diseases, why should there be any dispute about the name?

The first point, therefore, in all cases, is to form a correct opinion as to whether the disease be syphilitic or non-syphilitic; and for the latter variety I would urge the retention of the present name of psoriasis palmaris.

MALCOLM MORRIS,
Joint Lecturer on Skin-Diseases in St. Mary's Hospital Medical School.

FATAL HÆMOPTYSIS IN A CHILD.

THE discussion at present going on in the JOURNAL with regard to the expectoration of blood by infants recalls to my mind a case, of which I made short notes at the time, of distinct phthisis pulmonalis at a very early period of life, terminating by sudden and copious hæmoptysis. The child, a boy aged one year and two months, was the son of extremely scrofulous parents and had been ailing from birth. I saw him ten days before his death in 1877, and he was then completely emaciated, with constant cough and expectoration, which was occasionally ejected from his mouth—an unusual occurrence in infants. On auscultating the chest, cavernous respiration with gurgling was heard at the apices of both lungs. With the usual antistrumous remedies, he appeared to improve; but suddenly one morning, during a fit of coughing, he expectorated about a pint of blood, and died immediately. I did not make a *post mortem* examination; nor, indeed, do I think it would have proved much more than was clearly evident. The case itself is interesting as one of phthisis pulmonalis at a very early age, and from the peculiarly uncommon manner of death.

R. W. Foss, M.D., Stockton-on-Tees.

THERAPEUTIC MEMORANDA.

CHLORIDE OF BARIUM IN ANEURISM.

I HAVE treated a case of abdominal aneurism, at the unpromising age of sixty-three, with one-fifth to two-fifth grain doses of chloride of barium, with great success; after failure of five months' rigid adherence to absolute rest and Tufnell's diet. The case was seen by several professionals besides myself, who all coincided in the diagnosis, and the reliability of the improvement has been verified by two of them. The chloride of barium, having affinity to the heart and blood-vessels, promises to be a great remedy in these diseases, and especially in aneurisms.

I hope that those who have frequent opportunities of treating aneurisms will give this important drug a careful trial.

JOHN FLINT, M.D., Scarborough.

SODIUM-SALICYLATE IN CHRONIC RHEUMATISM.

THERE are few better established facts in the history of therapeutics than the success in acute rheumatism of treatment by the salicylates. Very little evidence, however, has been given of its effect in the chronic forms. A few observers, after a short trial, declared it useless; and few voices have been heard in its defence.

In a paper read before the British Medical Association in 1877, I gave short notes of about thirty cases so treated. I have now accounts of 57 more, all well-marked cases of chronic articular rheumatism treated during the two past years as out-patients at the Leeds Infirmary. Making the usual allowance for the imperfection of out-patient notes, I find that, out of the whole number of cases in which the drug was given, viz., 103, 16 did not return after the first visit. Next, out of the 87 of whom notes have been taken, 61 (70 per cent.) derived some benefit from the drug, which was in most cases sodium-salicylate in doses of fifteen to thirty grains three times a day. The remaining 26 felt no improvement, and in four cases some sickness was noted. In comparatively few of the cases was the relief given as speedy as that afforded in the acute disease; but, considering the generally unsatisfactory nature of the treatment of chronic rheumatism by drugs, I think we may say that sodium-salicylate deserves a further trial.

ERNEST H. JACOB, M.B. (late Resident Physician to Leeds Infirmary), Leeds.

THE TREATMENT OF ECZEMA OF THE HAND.

WITHIN the limited compass of a therapeutic memorandum, it is impossible to discuss a subject more than in a very superficial way; but I am much obliged to several correspondents for noticing my paper, and for their interesting remarks. I am glad that Dr. Liveing distinctly reaffirms what would seem a natural postulate in skin-pathology; but the high authority of Dr. McCall Anderson deserves all respect. Let us turn, however, to Plate XVII of the New Sydenham Society's *Atlas of Skin-diseases*, and we shall find a very bad disease of the palm of the hand, labelled *psoriasis diffusa;* the figure is rather a fearful one, but represents pretty closely the condition of the hands in the patient whose case I related in my former paper. Does it need much argument to prove that *psoriasis diffusa* is a misnomer, and that the therapeutic use of arsenic and tar for such a hand (at least in the early stage of treatment) would be a bad and exasperating practice? Eczema is much more likely to attack the extensor side of a limb than psoriasis is to come on the flexor side; thus it is almost part of the "common learning" of skin-diseases that prurigo on the outside of the leg may be complicated with eczema, but honest non-syphilitic psoriasis of the centre of the palm is one of the rarest events, if it exist at all.

The present point is, however, therapeutic, not pathological. A few days ago, I received a letter from a surgeon-major in the Army Medical Department, stationed about a thousand miles from England, telling me that he had had "so-called psoriasis of the palms and soles for nearly ten years, scaly and fissured. No remedy suggested by distinguished specialists has been of any use". My correspondent then enumerates the "remedies already tried": viz., (1) mercury internally and externally; (2) *liquor carbonis detergens;* (3) *oleum Rusci;* (4) vulcanised India-rubber gloves; (5) carbolic acid; (6) iodine; (7) camphor; (8) gas-tar; (9) palm-oil and glycerine; (10) sulphurous acid; (11) solution of potash; (12) hypophosphite of soda; (13) Turkish baths;

(14) Barége water; (15) chrysophanic acid; (16) various alteratives and tonics; (17) arsenic for a long period; (18) phosphorus the same. Here is a goodly list; and the utter rout of such a legion of medicines proves to my own mind that, in obedience to traditional dogma, the disease has been called by a wrong name from the beginning, and therefore useless, or even injurious, means have been prescribed.

Two other points occur to me. Any chronic disease of the palm or sole, call it by what name we will, may have at least a partially neurotic origin, or may be kept up by neurotic irritation. Our internal treatment may be modified by this consideration. And, secondly, the patient may help the local treatment by preserving the hand in a slightly flexed posture, so as to prevent constant rebreaking of the new and tender skin by alternate flexion and extension. Similarly, for the sake of the feet, locomotion must be at first little and seldom, and as much as possible in slippers.

Both in this and in my last Therapeutic Memorandum, I have been speaking only of the chronic or subacute form of eczema of the palm and sole. And I may add that I have found Mr. Balmanno Squire's glycerole of subacetate of lead a very useful auxiliary.

JOHN KENT SPENDER, M.D.Lond., Bath.

SURGICAL MEMORANDA.

THE OPERATIONS FOR GENU VALGUM CONTRASTED.

DR. MACEWEN has kindly called my attention to an error in dates in my clinical lecture on Operations for Genu Valgum, appearing in the JOURNAL of July 5th, which I take the opportunity of correcting. What I there call his second method ought to be dated as first performed on February 2nd, 1878. This would give it the precedence of the other method (May 10th, 1878). But he performed an operation on May 17th, 1877, removing a wedge-shaped piece in the same line as in that of February 2nd, 1878, which really ought to be placed first of all. I was misled into the belief, that he regarded the two operations of May 1877 and May 1878 as identical, by some remarks of his in a recent lecture.

I notice also a typographical error on page 3, column 2, line 4, viz., "external third" instead of "external two-thirds", which any reader will see is what it should be from the context.

In reference to Mr. Barwell's paper, in the JOURNAL of the 12th instant, alluding to my lecture, I would apologise if I have appeared to dismiss his operation more shortly than seems to him justifiable. In such a clinical lecture, I hold that broad outlines for contrast were called for in addressing students, and that elaborate analysis would have here been out of place. The opinion I ventured to express as to the advantages and disadvantages of the operation was given in good faith, believing that it was my duty to place before my class what appeared to me to be the general feeling in regard to it commonly held amongst surgeons. I felt justified in concluding that I did, in some measure, express the general opinion in regard to the relative value of the operation, from having observed, in a rather extensive reading on the subject (and Mr. Barwell will, I trust, correct me if I am in error) that, though his method has been brought prominently forward, and its claims advocated, not only in his first interesting paper, but in a subsequent correspondence, nevertheless, for every case recorded of operation by his method, I believe I have met with a score treated by Ogston's, Macewen's, or Reeves's—perhaps I should say scores. Of course, this is no strictly logical proof that Mr. Barwell's operation is not as good as the latter, but it does indicate to a certain degree the estimate commonly formed of it by operators at home and abroad.

As to the pathology question, I expressed a desire to avoid it in my lecture, as leading too far just then, and feel similarly just now in its relation to this postscript. A discussion, however, of the question would be particularly pleasing to me, as I believe it would show that there is less difference of opinion in regard to it between Mr. Barwell and myself in point of theory than he supposes, though in practical deductions we may diverge in some slight measure.

I would only add, in reference to Mr. Barwell's remark, "Surely a subcutaneous, antiseptic, and simple section of a bone must be, even though repeated, safer and less complex than the removal of a wedge", that this is not the question at all. If there is to be any comparison, it should be between "subcutaneous, antiseptic, linear section" of two-thirds of the lower end of the femur on its inner side, and a similar section of two-thirds on its outer side at the same spot, with the addition of section of the tibia in Mr. Barwell's case. Having no partisan feeling in the matter, I feel that it is only right to say this, as the above remark might be misinterpreted by the casual reader to the disadvantage of Dr. Macewen.

ARTHUR E. BARKER.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

CASE OF PERFORATING ULCERS OF THE STOMACH.

(Under the care of Dr. BRADBURY).

FOR the following report, we are indebted to Mr. J. K. FOWLER, B.A., M.B., House-Physician.

Edmund P., aged 40, a tinman, living at St. Ives, was admitted into Griffith Ward on April 8th, 1879, complaining of pain in the abdomen. The patient stated that his father died, aged 48, from dropsy; mother, aged 70, cause unknown; and two brothers, from "abscesses in the groin". He had a brother and sister alive and well. Sixteen years ago, he had an attack of typhoid fever; but, with this exception, he had always enjoyed good health.

His present illness began in October 1878, with pain about the umbilicus, of a cutting character, occurring generally between breakfast and dinner. At the same time, he suffered much from flatulent distension of the stomach. In the November following, he noticed that he was losing flesh; and, towards the end of the month, he was attacked with diarrhœa, passing from four to fifteen motions *per diem*. He had never passed any blood in his motions. The diarrhœa and abdominal pain continued up to the present time of admission, the pain being always worse immediately after taking food, and also during the act of defæcation. Three weeks ago, he noticed a swelling in the abdomen, over the site of the pain. Last week, he vomited twice; he had not previously been sick. He had never had hæmatemesis. He had suffered from a cough, which had been more troublesome for the last fortnight.

On admission, the patient was an emaciated, cachectic-looking man, with a brown beard, intermixed with which were patches of lighter coloured hair. His skin was dry and inelastic; tongue furred, white in the centre, clean and moist at the edges; his appetite was fair; he complained of thirst. The abdomen was prominent, especially in the left iliac and umbilical regions, where a hard irregularly rounded mass, painful on pressure, could be easily distinguished. About the centre of this swelling, there was a round soft patch, and, on auscultation over this spot, the contents of the intestine were found to be in motion, just beneath the integument, which was thinner than elsewhere. The respiratory and cardiac sounds were normal. The liver-dulness extended from the sixth rib in the mammary line to an inch and a half below the costal margin. The urine was acid, of specific gravity 1026, free from albumen. Temperature 100.4° Fahr.; pulse 120, small and compressible.

Two days after admission, he vomited his food twice, and seemed much weaker. On April 11th, the pulse was 132, and there was considerable peristaltic action of the intestines. For the first three days, the bowels were confined, but subsequently diarrhœa set in. He gradually became weaker, and died after being a week in hospital, no change having occurred in the tumour in the abdomen.

Post Mortem Examination.—On cutting through the abdominal wall, a cloaca containing fœcal matter was found, just under the site of the swelling; into this, there were four openings from the alimentary canal. In the centre of the greater curvature of the stomach, two perforating ulcers, with indurated borders, were seen; through these a probe could be passed along fistulous canals into the sac before mentioned. Adhesions had formed between the contiguous coils of intestine and omentum, thickened by inflammation. At the points of contact, the walls of the bowel had been destroyed by suppuration, and thus a communication had been established between the stomach, transverse colon, and jejunum. The parietal peritoneum overlying this spot was destroyed, along with part of the rectus muscle. The mucous membrane of the intestine, from the commencement of the jejunum to the sigmoid flexure of the colon, presented a worm-eaten appearance, from the presence of a vast number of small irregular-shaped depressions, with clean cut margins, varying in size from a pin's-head to a pea. These were too numerous to be the remains of the solitary glands. There was no appearance of any recent change in the mucous membrane. Peyer's glands were normal. In the upper lobes of both lungs cicatrices of old cavities were found, and, in the pleura covering them, from twenty to thirty well-marked miliary tubercles. The lungs were free from tubercle. There was no change of importance in the other organs.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 2ND, 1879.

THE MEDICAL COUNCIL BEFORE THE SELECT COMMITTEE.

THE Select Committee of the House of Commons on the Medical Act Amendment Bill have closed their labours for the session. On Friday last, the evidence of Mr. Ernest Hart was concluded on the side of reform, and Dr. Andrew Wood made his contribution to the statement of the case of the Scotch corporations, in so far as they are opposed to an uniform minimum examination, and his defence of the General Medical Council: and this closed the labour of the session. The Committee met on Tuesday, and agreed that there was no expectation of their being able to complete the inquiry this session, as there remained several corporations still claiming to be heard by their representatives; and as the evidence has still to be taken of some of the independent societies, such as the Medical Alliance or Defence Associations, who have to support their particular views, especially on the subject of the amendments necessary in the penal clause. The course taken, therefore, has been that which is usual under such circumstances; viz., it has been resolved to report the evidence already taken to the House, so that it may be printed in a Blue-Book, and to recommend to the House to reappoint the Committee next year in order that the evidence may be completed and the report made thereon. There is one technical difficulty in that course in this case; viz., that the reference to the Committee is to report upon a Bill now before the House, and at the close of this session that Bill will cease to have any existence, and will require to be renewed by being formally presented to the House before the Committee can be reappointed to report upon it. It will probably, except as a matter of form, hardly be possible that that Bill should again be presented in precisely the same form as that in which it now is, since the evidence given has been such as to point irresistably to various modifications of it. On the other hand, it might be found to be inconvenient to seriously modify the Bill before the report of the Committee; and it will be a subject on which the curious may interest themselves, in speculating whether the Government Bill when reintroduced will reappear in the same form or will have undergone any change.

Reviewing the evidence which has been given to the Committee, and of which we have presented to our readers tolerably full abstracts, it will, we think, be apparent that some considerable change is inevitable in the Bill which must be ultimately presented to the House of Commons by the Government, if it is to have any relation to the real wants of the public and of the profession, and to the gist of the testimony which the Committee has before them. We may assume that our readers are somewhat familiar with the various aspects of this question, and have acquainted themselves with the nature of the evidence given; and we believe that whoever has done so can hardly fail to have arrived at the conclusion that the opposition which has been manifested to the revision of the constitution of the Council by the members of the Council has been unexpectedly weak, and that the grounds shown for such revision have been overwhelmingly strong. The evidence which should have been most important—that of Dr. Acland, as President of the Council—has been received throughout the medical press, and we imagine, therefore, throughout the profession, with something very like discourteous and wicked amusement. We endeavoured to do full justice to our sense of the difficulty of the position of the gentleman who represented a Council more or less divided in itself and presenting obvious defects in constitution, in action, in historical records of its past, but who felt it to be his duty to maintain that all was for the best in the best of all possible councils, whilst he, as President, had actually nothing to suggest to the Committee which should in any way affect the constitution of the Council, the proceedings of the Council, the finances of the Council, the construction of the Government Bill, or the wording of any of its clauses. This thesis Dr. Acland developed during two days, with a tortuous vagueness and diplomatic diffuseness which ended by completely wearying at least some of those who followed the proceedings. "*Tout est pour le mieux dans le meilleur des mondes*", is a cry which is a little ironical in its meaning, and was not likely to produce much serious effect before a Committee which included a number of persons well acquainted with the facts, and some of them pledged to reforms. Urged with great vigour by Dr. Quain, and presented by him with the uncompromising and terse impetuosity characteristic of the energy of his character and convictions, it succeeded perhaps in his hands in effacing some of the cloudy and confused impressions which the evidence of the President had left; but, except as an expression of Dr. Quain's conviction that he and others with him had worked hard and had accomplished, under *régime* of the Council, much good work, and that, characteristically enough, he doubted whether any set of men under any other possible *régime* could do better, his evidence went for little, as it added nothing to the known facts. It was Dr. Acland over again, only this time in an abridged edition, positive, fiery, and earnest, but ill supported by facts.

Sir James Paget, who appeared on the same side, is one of the newest members of the Council. He manifested an almost complete unacquaintance with the previous history of the Council, and was unable to afford any information on most of the points in dispute. He had apparently no personal acquaintance with the curricula, periods of education, or methods of education of other countries, or of other bodies than the College of Surgeons. He spoke manfully and justly in support of the Council of the College of Surgeons of England; and he urged, with the eloquence and sagacity for which he is remarkable when discussing any subject which he has thoroughly studied, the importance of settling an adequate standard of examination, which should be so far uniform that no one should be permitted to go below it. He seemed to be unaware that the College of Surgeons has largely and repeatedly set at nought the recommendations of the General Medical Council; and that it has, in fact, pursued its own course almost contemptuous of the existence of the Council, declining to make any changes which the Council recommended when it disapproved of them; and making for itself many other important changes, which it never has even taken the trouble to communicate to the Council. The facilities for cross-examining witnesses before the Committee are very limited, and there appears to be no one on the Committee who has made it his business to master the rather complicated history of the relations of the Medical Council to the educational bodies, and their relations to it; otherwise, a considerable part of Sir James Paget's evidence would have been destroyed in its bearing upon the question at issue by a few well-directed questions. That part of his evidence, however, and of that of Dr. Quain, which will have the most permanent value, was the demonstration which each in his turn made of the necessity which he felt to exist for settling a conjoint scheme.

Professor Turner, it will have been seen, devoted himself in his admirable evidence, with unquestionable success, to a clear, powerful, and adequate statement of the educational system of the University of Edinburgh, and of its claims to be allowed to pursue the course in which it has been so successful, without any interference which could retard its progress or lessen its *prestige*. His evidence was well prepared, replete with facts, and thoroughly convincing on this head; but, to us at least, it appears to have failed in the essential point towards

which the Committee might reasonably claim that it should have been directed. It was extremely interesting to have so thoroughly able an essay upon the educational system of this great university, which stands without a rival in this country as an institution for medical instruction, and of which Scotchmen may be justly proud. But when the question arose whether the establishment of a conjoint scheme, settling a minimum preliminary to its degrees, and below which no other body should descend, and in which it, together with other bodies, should take part, Professor Turner could show only one ground on which he believed that the university would suffer; and that was that the proposed scheme as settled would increase the cost of graduation, and so possibly diminish the number of graduates of the university. A large part of his argument, however, was destructive of his conclusion. He showed that the greatest periods of prosperity of the university had been coincident with periods when its medical diploma gave no legal title to practise in England. He showed that the great attractions to the university are the admirable organisation of its classes; the high character of its teachers, who devote themselves to teaching as a profession and as a career; the extent and perfection of its laboratories and its museums; and the high estimation in which its degree of M.D. is held, and the value of the title of "Dr." which it confers. All these remain untouched by any conjoint scheme of preliminary minimum; and it will be hard indeed if the hypothetical inference, that some increase in the fee will affect the number of persons who graduate in the university, cannot be satisfactorily met, either by a suitable arrangement for the purpose or by the answer such as Professor Haughton gave, that his university (the University of Dublin), like the universities in England, did not propose to set up a possible hypothetical injury of this kind as a ground for opposing a safeguard which the Medical Council, the profession, and the Government have repeatedly declared, by large majorities, to be necessary as a protection for the public, and for the general elevation of the standard of education of the profession.

Dr. Andrew Wood may be claimed happily by both sides. His evidence was in many respects a model of excellence—clear, candid, firm, and patriotic. He openly avowed himself a defender of his College and of the Council. What he had to say in favour of the Council is well known to everyone. He has said it often; he has said it well. He claims for the Council a considerable share in the impulse which has been given to the improvement of medical education during the last twenty years. Other witnesses had said that this impulse was part of the general progress and improvement in educational methods in the science of teaching, and especially in the organisation of medical schools in this country—that it was due rather to medical opinion than to any influence which the Council had exercised, and that on the whole there was reason to doubt whether medical education was not rather behind the mark in respect to its rate of progress than in advance of it; that, in point of fact, less progress had been made with the Medical Council in existence than might fairly have been expected if no Medical Council had existed. When this was put to Dr. Andrew Wood, he avowed himself, of course, of the opposite opinion, and it was undoubtedly a matter open to difference of opinion; but he fully admitted that it was difficult to discern how much of the progress made, if any, was due to the body of which he is so efficient a member.

We may come now briefly to review the main points which were put forward at the Select Committee by those who urged that the Council has shown itself a costly, cumbrous, and inefficient body; that it has talked much and done little; that it has shrunk from its responsibilities; that it has not carried out its duties; that it has shown itself more tender to corporations than solicitous for general public and professional interests; that its constitution is defective; that it does not possess the confidence of the profession; that it requires reconstitution and revision; that its funds need to be better employed and its energies better directed. The weight of this part of the case fell in succession upon Dr. Waters, Dr. Glover, Professor Haughton, and Mr. Ernest Hart. Dr. Waters laid before the Committee the history of this question, which is by no means a matter of merely historical interest, but has this practical bearing—that the Council itself owes its actual existence mainly to the founders of the British Medical Association; that the Medical Act is an Act which sprang directly out of their continuous exertions, and that the particular form in which it is cast—omitting direct representation of the profession and giving a representation only to the Crown and to corporations—was at the time understood to be a temporary arrangement made almost *ex necessitate;* because the profession, not possessing at the time any legal roll, did not constitute them a possible constituency. This disposed of that argument immortalised by Sidney Smith in the famous oration in which he epitomised the unfailing objections to all reforms, and which is generally classed under the heading "the wisdom of our ancestors". To the now familiar argument, that the election of direct representatives would cause a turmoil was opposed, by more than one witness, the obvious reply that that is an objection to all elections; and if it were accepted it would be a conclusive reason, for example, why the House of Commons should be elected, say, by municipal corporations rather than the present constituencies. It belongs to the old paternal theory of government long exploded, which is revived only as a rusty weapon from the armoury of the past, when a desperate conservatism feels that some weapon must at least be brandished to make the semblance of a fight. The observation that the Council, as at present constituted, represents only those who do not supply the funds, and not at all those who do supply the funds, was not met or questioned; the argument that the Council, as at present constituted, represents only the licensors and not the licensees was left in all its force untouched. The suggestion that a similar end might be attained by enlarging the franchise within the corporations, was destroyed by the evidence adduced that to bring about such a change would involve the remodelling of the electoral system and the charters of nineteen corporations and universities, and would probably be far more seriously inconvenient than any other expedient which could be suggested, and that if it were adopted its effect would be to create nineteen constituencies, some of which would be individually as extensive and as difficult to appeal to as the whole profession irrespective of corporations. The College of Surgeons itself would include upwards of nine thousand members; the University of Edinburgh would have a roll almost as large as the whole existing electoral medical constituency of Scotland; and so on. In fact, this suggestion, which is known as the theory of enlarged indirect representation, crumbled at the touch of the finger, and showed itself to be, as it has always been understood to be, a mere hollow bubble tossed into the air to amuse those who perhaps might be induced to go in search of it, and thus to draw them away from the object to which they had steadily set their faces: that of obtaining an adequate representation of the profession in the Council.

There remains the objection that persons so elected might probably be not very far different from those who now sit in the Council—perhaps even the same individuals; and what then would be the advantage? The answer to this was that the power, course of action, and even the opinions of an individual sitting at a Council, are largely affected by the interests which he represents, and by the mandate in virtue of which he sits. It was curious to see how frankly one after another of the witnesses before the Committee admitted that on the Council they ardently defended the interests of the corporations which sent them. On this head, Professor Haughton, Sir Dominic Corrigan, and even Dr. Andrew Wood himself, although each in a characteristic manner and in characteristic words, were alike significantly eloquent. Their motto in respect to their own corporations was *Nemo me impune lacessit.* It would be idle to suggest that that would also be a moving principle of representatives of the profession who were sent there, regardless of the interests of corporations whenever these should prove to be antagonistic to those of the profession. Each of these gentlemen felt that for him at least it was essential that his corporation should live; but it is obvious that at any time, in respect to one or the other or to some other sister corporation, the representa-

tive of the profession might feel it his duty to say with Talleyrand, *Je n'en vois pas la nécessité*. The argument that the men might possibly be unaltered was supplemented by another which might almost be considered destructive of it, but which nevertheless was advanced in support of the same views—viz., that a very inferior class of men might possibly be returned. This was shown, however, to be so entirely contrary to the instincts, the culture, and the conservative tendencies of a learned profession such as that of medicine, that such an argument was almost self-condemned even in the mouths of those who used it. Moreover, it was entirely contrary to all experience under similar circumstances in the profession. Very few warm opponents of direct representation were to be found before the Committee, and it must be said that if there were any who came to oppose it they did their spiriting gently, and can hardly be said to have produced either a fact or an argument calculated to leave any impression. On the head which has been always considered by us as one of great importance—viz., that such a representation would secure within the Council the presence of a certain number of general practitioners and of persons habitually practising under circumstances and in localities which made them cognisant of all the wants, difficulties, and aspirations of the great body of medical practitioners—most of the witnesses agreed that there was need in the Council of a larger representation of general practitioners. Among the members of the Council itself, Professor Turner and Dr. Andrew Wood freely accepted this view; and neither of them can be said to have given evidence opposed to the introduction of that element into the Council in a larger proportion, although naturally, looking to the recent proceedings of the Council in the matter, they could hardly be brought to say they considered direct representation the best way of doing it. They could not, however, suggest any other way which would meet all the sides of the question, and the weight, therefore, of their evidence in this respect may fairly be claimed as adding greatly to the probability that the Committee will accept direct representation as an inevitable element in any future Medical Act.

As to the shortcomings of the Council, evidence was given of a kind for which many people were unprepared. The analysis of the minutes of the Council for the last twenty years, which was laid before the Committee, displayed an amount of weakness, vacillation, diffuseness, self-contradiction, and subservience to corporate interests, which formed perhaps an unparalleled record in the history of any public body. We have been unable to give the full details, from want of space to record the whole of the evidence; but when the Committee report their evidence in full, those who care to read it will be seriously enlightened as to the valid grounds on which the Council is charged with cumbrous, inefficient, and feeble action in the matter of medical education, the supervision of examinations, and the enforcement of its recommendations by representation to the Privy Council. It is written in those records how often one body after another has flouted the Council, pointed out to it its own weakness, and made its very tenderness to other corporations the grounds for refusing to obey any recommendations which it made to themselves. It will be seen how the Council has in turn vainly argued and threatened, and how it has invariably drawn back when the moment for action arrived. It is not possible that any House of Commons should desire to perpetuate the constitution of a body, which, notwithstanding the number of eminent men whom it has included on its roll, has evidently, by virtue of the palpable defects of its constitution, rather than in virtue of any want of individual capacity, ability, and earnestness on the part of its members, so signally failed to carry out the work for which it was created.

One point which cannot fail, we think, to commend itself very seriously to the consideration of the Committee in its future amendment of the Medical Act, was the historical summary which was given of the failure of the Council to put into force those clauses which arm it with the power of protecting the public and the profession against unqualified persons assuming medical titles. From the first, the Council chose to declare that this function was not incumbent on it, and that it would not carry it out because "its funds were inadequate". It assumed that it had a legal justification for this, which was especially strong in Scotland, because there there was a public prosecutor. Very early in its history it became aware that this was a mistaken view of the facts; and the Procurator-Fiscal informed the Council that in administering an Act of Parliament which created special pains and penalties, and which gave to the body charged with carrying out the Act the fines inflicted for infringement of it, the duty of conducting prosecutions was incumbent upon them, and not on the Procurator-Fiscal. This does not appear ever to have been seriously debated in the Council. It does not appear ever to have caused it to reconsider the abandonment of duty which it based on such slender grounds. It continued to desert its duty, apparently in virtue of its other declaration that its funds were inadequate, a declaration not very creditable, seeing the way in which the funds are expended, and in great measure inaccurate.

The question of the disposal of its funds became, therefore, one of no small interest in the course of the evidence; and the more so, because it was shown to the Committee that, early in its history, the Council had decided that, in order that the supervision of examinations should be adequate and complete, it was desirable that one or more officers should be appointed as inspectors of examiners, whose duties should be to make continuous reports and keep the Council acquainted with the existing methods and standards of examination, and the extent to which they were observed from year to year and from month to month in the various examining bodies. This also was put aside, "because the funds were inadequate"; and in its place, after long delays, was substituted at considerable intervals some trial visitations of a less extensive character, which were made the subject of slow report and lagging comment by the Council from year to year. The visitation of examinations was shown to have been occasional, unsystematic, ill-organised, and rare, and that of late years it had ceased. Hence the question of finance came prominently under notice. And now it became evident that, inasmuch as the sittings of the Council cost, in virtue of the system of daily fees paid to the members, over 120*l*. a day, besides the expenses of the sittings of the Branch Councils, the question needed to be considered how far the disposal of funds in the past has been a wise one. Mr Hart, who brought this matter very strongly under the notice of the Committee, showed that the annual income is virtually expended in two halves—one-half being devoted to buildings, salaries, printing, and other expenses of machinery; and the other half to the payment of fees to the individual members of the Council; and he formally proved, what has long been vaguely seen, that the limit of the efficiency of the Council is to a great extent the limit laid down by its available funds. He quoted a considerable number of instances, derived from similar bodies in our own and other professions, from which it appears that the weight of precedent is contrary to the payment of heavy fees to persons fulfilling functions such as those of the members of the General Medical Council. Some allowances for travelling and other expenses have, of course, much to be said in favour of them; but it is clear that there is much less to be said in favour of a system by which the Council virtually vote into their own pockets pretty nearly all the funds available after payment of salaries, rent, and printing. He suggested, as a purely personal suggestion, that these payments should cease; and that, at any rate, some means should be found for setting free the available balances left, after payment of expenses, to the work which the Council is in duty bound to perform, of adequate supervision of the examinations and the payment of a prosecuting officer. Two members of the General Medical Council, called at this stage (Dr. Haughton and Dr. Wood), expressed views so favourable to the carrying out of this suggestion, in whole or in part, that we have the most sanguine hopes that in any case very little time will pass before the General Medical Council will voluntarily take steps to set free, for public purposes, some part of the large funds now expended in the payment of fees to its members. Professor Haughton was of opinion that the Crown should pay the necessary fees to its nominees, and the corporations to theirs. This

is a suggestion to which we can have no objection at all. It has in it the elements of equity, so far as these gentlemen are supposed to represent the interests of the bodies who nominate them; and it is a matter on which we need offer no opinion, except to say that that would be in itself an arrangement obviously satisfactory to the profession, since it would achieve the result of leaving at the disposal of the Council a fund of 2,000*l.* a year for the more efficient carrying out of the public duties for which the funds are now inadequate. Dr. Andrew Wood, the Chairman of the Business Committee of the Council, and one of its oldest members, and therefore in every way well fitted to give a weighty and deliberate opinion on this subject, expressed his assent to the view that some means should be taken to leave available a larger fund for purposes such as the visitation of examinations; and he believed that this purpose could be fulfilled if the fees of members of the General Medical Council and the branch councils should be reduced from five guineas to three. That is, of course, a step in the right direction.

We can but feel heartily rejoiced that the evidence on this subject given by the previous witness before the Select Committee elicited so valuable an expression of opinion from the Chairman of the Business Committee of the Council; and we may even entertain the hope that the opinion which was so frankly expressed before the Select Committee of the House will find a pretty general, if not universal, echo in the minds of all the members of the Council; for it is needless to say that, whatever be the shortcomings of the Council as a whole, no one has ever for a moment entertained the doubt that its members individually go to its meetings with a desire to carry out their duties, in the manner in which they understand them, to the utmost of their ability and with the utmost possible integrity of purpose. There is always a tendency from time to time, on the part of persons of a certain temperament, to displace the discussion of such matters from general on to personal grounds. This is much to be deprecated. Any one who should attempt to make imputations upon individuals would be in such a case ill-founded in his views, ill-advised in his expressions, and unworthy of serious attention. On the other hand, it is equally to be deprecated that any attempt should be made to distort an expression of opinion upon a matter applying to the general course of action of a public body into a personal question.

Much as the profession has had to complain of the General Medical Council, little disposed as it is to bestow its confidence on that body at large, it has always recognised the fact that among its members are a number of men whom it esteems, and in whom it has great confidence. The questions, however, are entirely distinct; and no tenderness, no esteem for individuals as members of a public body, can be allowed to interfere with the duty of expressing an opinion upon the action of that body as a whole, upon the principles on which it is constituted, and upon the necessity which exists for the reform of those principles, the improvement of its organisation, and the quickening of its action.

THE PRELIMINARY SCIENTIFIC EXAMINATION.

THIS examination at the University of London, which was held last week, has been the subject of just complaint among the candidates. While some of the questions and papers submitted to the candidates were all that could be desired, others were very unsatisfactory. Nothing can be more unfair to the student, or a more unsatisfactory test of his knowledge, than setting catch questions or requiring him to answer a number of questions on any particular department of a subject. A candidate may, for example, have learned, and learned well, a subject like botany, and yet be unable to answer questions on some obscure plant with some slight peculiarity. Such knowledge is entirely a matter of memory and cramming, which it should be the object of the examiner to discourage.

The papers on Chemistry contain, as a whole, very fair questions, and can only be found fault with for being confined to a few of the prescribed branches of the subject. In the morning paper, we find no fewer than four questions out of seven upon the chlorine, bromine, iodine, and fluorine group. This is decidedly far too many, and quite out of proportion to the space or importance this group occupies. It should be borne in mind that the candidates for this examination have not only chemistry but a number of other subjects to prepare, and it is impossible to expect them to possess a profound knowledge of a particular subject.

The two papers on Experimental Physics when compared present a marked contrast. While the morning paper is very fair, and, we think, cannot be complained of by any one, the same cannot be said of the afternoon one. It is very unfair; indeed, the worst that has been set on this occasion, being very much a display of his own knowledge on the part of the examiner who set it. It consists of eight questions, each of which, with the exception of the last, is divided into two parts; in the first part of each question we do not find much amiss, but it is to the latter part that our criticism applies. The paper shows signs of being set by one who has not had great experience as an examiner, and who forgets the class of men that he is examining.

The paper on Botany, although strictly within the limits of the prescribed subjects, contains too great a proportion of vegetable physiology; and the questions are, with a few exceptions, not such as to give much scope for answering or a test of the candidate's acquaintance with the subject; some of them being what are termed "catch" questions. Although there are about twenty natural orders mentioned in the syllabus, upon which the student is to be examined, there is not a single question asked in the paper.

As a model examination paper in every respect, we would mention that on Zoology by Professor Ray Lankester and Dr. Marshall. It contains six questions, three of which are upon the invertebrata and three on the vertebrata. Three of the six questions are for the purpose of testing the candidate's knowledge of comparative anatomy, and three are what may be termed zoology questions. The paper is one that will readily show the examiner what amount of knowledge the candidate possesses of the subject.

The only papers which can be said to be thoroughly satisfactory at this examination are the morning paper on Physics and the Zoology paper. We hope that in future the authorities will undertake some more supervision of the examination papers than heretofore, as it is not creditable to the University of London that out of six papers only two should be satisfactory, according to its own standard.

THE Council of University College has appointed Dr. Radcliffe Crocker Physician to the Skin Department of the hospital, in succession to the late Dr. Tilbury Fox.

THE St. Katherine's Cross was presented last week to two of the nurses of St. George's Hospital, at a public ceremony, at which the Duke of Westminster presided—Dr. Barclay and Mr. Prescott Hewett testifying on behalf of the hospital staff to the merits of the nurses so decorated.

DR. SIEVEKING is about to vacate his chair as an examiner in medicine at the Royal College of Surgeons, in consequence of his becoming Senior Censor at the Royal College of Physicians. The nomination for the vacant chair will take place at a meeting of the Council of the College of Surgeons on Thursday next.

ON Wednesday evening, a number of volunteer surgeons assembled at a general meeting of the volunteer ambulance classes of the metropolis, at which Surgeon-General Munro presided, for the distribution of prizes to the men. It was stated that there were now about six hundred volunteers trained in ambulance duties.

A NEW ANTISEPTIC AGENT is reported to have been recently discovered accidentally, during experiments on separating the crystalline sugar from molasses. It is, according to the *Pharmaceutical Journal*, now sold at twenty-five cents the pound, and is made in large quantities

by dissolving in water equal parts of chloride of potassium, nitrate of sodium, and boracic acid, filtering and evaporating to dryness. It is easily soluble in water, and is deliquescent. It passes under the unscientific name of double borate of potassium and sodium, and its action as an antiseptic is said to be prompt, and to continue undiminished for a long time.

We understand that upwards of two hundred answers have been received from professors and teachers to the queries on medical education issued by the Committee of the Metropolitan Counties Branch. On the other hand, the number of answers from general practitioners is somewhat limited; and a further expression of their views is much desired by the Committee, who will be glad to receive communications from any members of the profession engaged in general practice as to their opinions and experience on the subjects stated in the queries issued. Dr. Grigg, 6, Curzon Street, Mayfair, one of the honorary secretaries of the Branch, will be happy to furnish further copies of the queries to any gentlemen who may desire them.

The low death-rate of the largest towns in the United Kingdom, due to the long continuance of cold and wet weather, still continues. The fatal cases of diarrhœa in the twenty English towns were but 61 last week, against 904, 275, and 991 in the corresponding weeks of the three years 1876-7-8.

In London, during the past five weeks of the current quarter, the death-rate has averaged but 17.3 per 1,000, against 23.1, the average rate in the four corresponding weeks of the five years 1874-78. The fatal cases of diarrhœa, which had been 29 and 27 in the two previous weeks, further declined to 25 last week, and were so many as 328 below the average for the week. So small a fatality of diarrhœa in July is without precedent in London during the past thirty years.

Small-pox last week caused one death in Dublin and six in London. The number of small-pox patients in the Metropolitan Asylum Hospitals had further declined on Saturday last to 113, from 190, 172, and 137 at the end of the three preceding weeks.

MURDER OF A SURGEON OF HER MAJESTY'S INDIAN ARMY IN AFGHANISTAN.

The *Times of India* gives the following details of an outrage committed in Afghanistan: "Surgeon W. B. Smyth, attached to the Kuram force, was stabbed at Chapri, near Thal, by tribal thieves. He was on his way to Kuram, and on the night of the 25th of June pitched his tent inside the camel enclosure immediately attached to Chapri, a military post seven miles from Thal. He appears for some reason to have left his tent and to have wandered about inside the enclosure. At about two o'clock on the morning of the 26th, a cry from him is said to have been heard. The inmates of the enclosure raised shouts, and a party from the military post came down. They found Surgeon Smyth dead fifty yards from his tent inside the enclosure, with three severe sword or knife cuts on the chest and both arms. The cause of death was a cut across the chest. The thieves escaped by breaking down the wall. Surgeon Smyth had only been in the Indian service about two years." The following extract from a private letter written a few weeks before this sad event occurred, by a military surgeon with the same division of the army as that in which Surgeon Smyth was serving, has a special interest in connection with that officer's tragic end. "The tribes about the Kuram valley have still to be brought to a sense of law and order. There is as great danger from assassination as ever. Only a few days ago, within a mile and in sight of our camp, a party of my dhooley-bearers were out in the morning collecting wood. They were attacked by some villagers, who cut one man to pieces and wounded another. The enemy escaped, though we gave chase with a few companies of the regiment. The dead body, when brought to camp, presented a dreadful spectacle. The man had been stabbed through the brain above the left ear. The right shoulder-joint was laid open by a downward cut of the knife, as was also the elbow-joint, and the arm was only held to the body by a little skin of the axilla. The left hip-joint was opened by two longitudinal cuts, and the trunk was nearly severed into three pieces by three cuts through the chest, everything being divided down to the spine. Opening the joints is the favourite method of mutilation adopted by the tribes in these parts, and they effect their purpose with remarkable skill. The other man was severely wounded in the right side of the chest, the weapon passing between the lung and the liver, but he is now out of danger. The weapons used by these savages have blades about three feet long; they are three inches broad at the base, and gradually taper to a point. The weight is about six pounds. Their sharpness is equal to that of any surgical instrument."

LITHOTRITY AT A SINGLE SITTING.

On another page, we publish a report of thirteen cases of "lithotrity at a single sitting", recently performed by Sir Henry Thompson. The last case, that of a man aged 78, the stone weighing upwards of an ounce, was removed at two sittings. The whole series of cases were successful, and the mortality *nil*. The record is a brilliant one, and full of *promise* for the future of this department of surgery.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

From the annual report of the financial condition of the funds of the Royal College of Surgeons of England from Midsummer-day 1878 to Midsummer-day 1879, and which has just been published, it appears that the receipts amounted to £15,133 7s. 9d., derived principally from fees paid for the Fellowship and Membership of the College, viz., £11,367 10s. Elections to the Fellowship, formerly a very productive element, realised only twenty guineas. Dividends on stock and rent, £2,484 19s. 10d. The expenditure amounted to the sum of £14,878 11s., the largest item being fees to Council, Courts, and Boards of Examiners, viz., £5,886 2s. Salaries and wages for the three departments, College, Museum, and Library, £3,915 19s.; taxes, rates, and stamps, exclusive of postage, £1,235 2s. 8d.; Hunterian dinner, oration, and refreshments, £459 15s. 3d.; alterations, repairs, and painting, £1,069 3s. 5d. Amount of income over expenditure, £254 16s. 9d.

THE HABITUAL DRUNKARDS' ACT.

A general meeting of the Society for Promoting Legislation for the Control and Cure of Habitual Drunkards was held on Tuesday, at 1, Adam Street, Adelphi; Lord Shaftesbury, the President, in the chair. The report, read by Mr. Stephen S. Alford, Honorary Secretary, stated that, as the Act would be in force for only ten years, and as its application was limited to voluntary effort, the Committee felt the urgent need for the Society to redouble its efforts to prove the measure a success, and thereby to secure an indefinite prolongation of its operation, and the addition of strong enabling powers to municipalities and other local authorities. It would also be the duty of the Committee to stimulate extensive efforts, both public and private, to establish "retreats" under the Act for the control and curative treatment of habitual drunkards, and especially to aid in originating some such institutions on a large scale for the reception of police-court and other confirmed drunkards. Dr. Norman Kerr read the balance-sheet, which showed a balance from 1877 of £16, and subscriptions of £138, a small sum remaining in hand from the total of £154 received. In moving the adoption of the report, Mr. W. T. Charley, M.P., referred with satisfaction to the very small cost at which the important objects this Society had in view had been achieved. The President, Vice-Presidents, Executive Committee, and other officers were re-elected. Dr. Alfred Carpenter moved a resolution, to the effect that the meeting was of opinion that a vigorou effort should be made to promote the establishment of typical institutions suitable for the treatment of all classes of habitual drunkards. As this Act was to continue only for a term of ten years, it was not likely that any institution for the treatment of these cases would be established as a commercial enterprise; yet it was necessary that some means should be taken by which the Act might be proved to be a step in the right

direction. In many of these social matters, permissive legislation, if found beneficial in its effects, was followed by compulsory legislation. One of the great difficulties was a fear in the minds of legislators that private persons might get people under their control for purposes of gain. This Society would, therefore, do well to seek to encourage the formation of institutions which should be above suspicion on this ground. He had in his mind the idea of institutions like the asylum at Northampton, which was under the management of a Committee, formed of men of good position, who derived no pecuniary benefit from it, and superintended by medical men of high standing, whose only object was to make as many cures as possible. In time, such institutions might be made self-supporting. The evidence of the possibility of curing habitual drunkards which might thus be gained would be most valuable. Dr. Grindrod of Malvern, agreeing with Dr. Carpenter that the formation of such model institutions was desirable, and speaking from an experience of forty years in the treatment of such cases, pointed out certain arrangements which would be essential to success. He was convinced that it would not do to mix persons of different classes of society, and provision must be made to occupy and amuse the minds of those who placed themselves in the institutions. Possibly some handicrafts might be profitably followed. Canon Ellison, pointing out that the disease to be cured was both physical and moral, said it would be essential that religious influences should be brought to bear from the first on those who were to be cured in these institutions. He believed that by appealing to the religious portions of the community funds might be obtained for the formation of such institutions. The Chairman said that, although this had been regarded by both Houses of Parliament as an experimental measure, if they could make the Act operative and show that this was no ideal matter, but something real and substantial, they would be allowed to go a great deal further than they were at present.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

ON Tuesday, a meeting of the Council of the Hospital Sunday Fund was held at the Mansion House, under the presidency of the Lord Mayor. The Committee of Distribution submitted a list of the proposed awards to one hundred and twenty-seven institutions. The number of hospitals had this year increased from seventy-nine to eighty-one, and to these the Committee recommended a sum of £22,342 15s. 3d., and to forty-six dispensaries £2,113 16s. 6d. In addition, £260, being 1 per cent. of the gross receipts of this year's fund, so far as it was at present known, had been set aside for the purchase of surgical appliances, making in all £24,716. It was proposed that any further payments to the fund after this date should be allowed to accumulate in aid of next year's fund. The Committee concluded by stating that they had invited the committees of nine hospitals to confer with them, and that five institutions, owing to a sufficiency of means or other causes, had not renewed their application for a grant. On the motion of Sir Sydney Waterlow, M.P., seconded by Dr. Sedgwick Saunders, the distribution was approved and sanctioned.

INDIAN MEDICAL AFFAIRS.

THE summary of Indian news by the last mail includes the following items. The total loss of life in European regiments above Umballa by cholera in the course of the recent epidemic has been estimated at 200, out of about 300 seizures. The rate of mortality in Bombay last week was 31.22 per thousand of the population *per annum*. The total number of deaths was 406, including 133 from remittent fever.

THE CASE OF DR. PHILLIPS.

IN the Court of Appeal, on July 28th, before Lords Justices James, Brett, and Cotton, the case of Phillips *v.* the London and South-Western Railway Company was argued. This was an appeal by the defendants from an order of the Lord Chief Justice and Mr. Justice Lopes directing a new trial, moved for on the ground that the damages awarded in the action were inadequate. Dr. Phillips, the plaintiff, a London physician, had brought the action to recover damages for injuries he had sustained in a railway accident at Nine Elms Station in December 1877. He showed on the trial that he had been making an income of £7,000 a year before he was incapacitated by the accident. The jury found a verdict in the plaintiff's favour for £7,000. A rule obtained by the plaintiff for a new trial, on the ground of misdirection and consequent inadequacy of that sum as damages, was made absolute; and the appellants now contended that a new trial ought not to have been granted, on the ground that the jury had properly awarded an amount which they considered sufficient, and that the Court should not interfere to set aside their verdict. Details were given to show that the plaintiff had not, in fact, been in receipt of an income of £7,000 a year from his profession. On the other hand, it was contended that the judge had, on the trial, improperly directed the jury that they must take into consideration the patient's private income of £3,500 a year. Mr. Serjeant Ballantine and Mr. Dugdale appeared for the appellants; the Attorney-General, Mr. Pope, Q.C., and Mr. A. L. Smith, for the respondent. Their lordships held that there was no reason why the Court should differ from the conclusion at which the Queen's Bench had arrived, and the appeal must therefore be dismissed.

THE ANNUAL MEETING IN CORK.

AMONG the eminent continental and American members of the profession, who have signified their intention of being present at the annual meeting of the Association, are the following: Professor Charcot, Professor Ball, Dr. Gallard, Dr. Bonnafont, Dr. Löwenberg, and Dr. Gueneau de Mussy, of Paris; Dr. Herschberg, Dr. Weber-Liel, and Dr. Martin, of Berlin; Dr. Giacinto of Turin; Dr. Cordes of Geneva; Dr. Lewis A. Sayre, President of the American Medical Association; Dr. Beard, Dr. Loring, Dr. Seguin, Dr. Gray, and Dr. Hodges, of New York; Dr. Yandell of Louisville; Dr. Lawrence Turnbull, Dr. Da Costa, and Dr. Wood, of Philadelphia; Dr. A. B. Palmer, of the University of Michigan, etc.

SEASIDE TREATMENT.

PROFESSOR MOSLER of Greifswald says in the *Berlin. Klinische Wochenschrift*, June 2nd, 1879, that he has for some years most successfully treated patients with chronic catarrh of the throat by gargling with sea-water. Special rooms for gargling have been erected on the sea-shore in some watering-places, according to his directions. It is, however, essential that the patients should be given special directions how to gargle. As the affection is generally located in the naso-pharyngeal space, it is necessary that part of the water should come into contact with the nasal cavity. In order to attain this, the gargling movements must be combined with movements of deglutition. A marked improvement in the state of the patient follows as soon as the latter has acquired this particular art of gargling. Patients who suffer from chronic pharyngitis, and who are exposed to much fatigue through singing, preaching, etc., have been completely cured by gargling twice a day for many months with a tumbler of cold water, to which are added from one to three tablespoonfuls of a twenty or twenty-five per cent. solution of sea-salt. To protect the teeth from the influence of the salt-water, they must be cleaned immediately after the gargling with a tincture prepared by the author. Another of the advantages of this method is that the disposition to relapse gradually decreases, especially if the patients be directed to wash their face, neck, and forearms with cold water, and rub them dry before gargling in the morning and at night. After this has been kept up for some time, the mucous membrane of the nasal cavity and the pharynx changes entirely, and the disposition to diphtheria which predominates in certain families is greatly diminished.

THE ARREST OF VOMITING IN PREGNANCY.

DR. L. ROSENTHAL publishes, in the *Berliner Klinische Wochenschrift* of June 30th, a paper on the treatment of vomiting during pregnancy by Dr. Copeman's method. He distinguishes three forms of the affection: 1. Vomiting in the morning during fasting; this generally sets in early in the period of conception, and may cease when the movements

of the fœtus are first perceived; 2. Vomiting at various periods of the day, especially after meals; 3. Obstinate vomiting, resisting all medicinal treatment and dietetic regimen. After a review of this subject, with reference to several British and Continental authorities thereon, Dr. Rosenthal says that the perusal of Dr. Copeman's communications in the BRITISH MEDICAL JOURNAL led him to try the method of dilatation of the os uteri in two cases which have occurred in his practice. The first case was that of a woman aged 34, who had been much troubled with vomiting during her first pregnancy. In her second pregnancy, which followed a few months after the first, she was again attacked with vomiting after nearly every meal. Although not remarkably prostrated, she was much troubled with the frequent vomiting, and sought Dr. Rosenthal's aid. He found the os uteri capable of admitting the tip of the finger. By means of rotatory movements, he introduced his finger as far as the middle of the last phalanx into the cervical canal. After this, there was no more vomiting; and when he wrote, the woman was expecting to be soon confined, and was altogether in a very satisfactory condition. The second patient was a primipara aged 30, suffering from obstinate vomiting; she had been pregnant two months. In this case, a second introduction of the finger into the cervical canal was necessary; this arrested the vomiting, which did not return. Dr. Rosenthal says that, in our present ignorance of the causes of obstinate vomiting during pregnancy, he cannot explain the *modus operandi* of Dr. Copeman's method; but he hopes that it will become more generally known.

SCOTLAND.

GLASGOW DISTRICT BOARD OF LUNACY.

AT its last meeting, the Glasgow District Board of Lunacy considered the propriety of proceeding to acquire the Woodilee Asylum from the Barony Parochial Board. Two motions were submitted: one proposing to go on with the negotiation; the other deprecated such a course, and proposed the purchase of two hundred or three hundred acres of land in the upper ward of the county, and that a plan for a suitable asylum (susceptible of enlargement, if subsequently required) should be prepared. Ultimately, it was agreed to defer consideration of the matter until the opinion of the Lord Advocate had been obtained. The necessary alterations on Kirklands Asylum, Bothwell, were approved of, and a committee appointed to carry them out.

SCHOOL OF PHARMACY AND CHEMISTRY, EDINBURGH.

THE summer session of this School was formally terminated last week, when the Rev. Dr. Teape distributed the prizes. From his remarks, it appears that the above title scarcely describes the School properly, seeing that its provident dispensary has during the session had three hundred medical and surgical cases and one hundred and ninety-eight cases of midwifery.

HEALTH OF EDINBURGH, GLASGOW, AND LEITH.

THE death-rate in Edinburgh last week was 17 per 1,000; of the 70 deaths, only two were due to zymotic diseases. No death was registered as due to whooping-cough. In Glasgow, the mortality was 18 per 1,000; less than for the same period the last two years. In Leith, the mortality was 16 per 1,000.

THE NEW UNIVERSITY BUILDINGS, EDINBURGH.

THE estimates for the north block of the new buildings, in which are to be located the medical jurisprudence, materia medica, and a great portion of the chemistry departments, have been accepted, and the work will proceed forthwith. Including the Government grant of £80,000, the sum at the disposal of the University for the new building is £180,000; this, it is considered, will be sufficient for the erection of the working portions of it, but will leave to be completed the hall and tower, estimated to cost about £60,000; and for this the University must rely on the munificence of some of her wealthier graduates, or perchance another nobleman may become actuated by the benevolent impulse that caused the Marquis of Bute to do a like kindness to the University of Glasgow last year. Mr. R. Bruce Johnstone has received an intimation of a legacy of £500 to the building scheme, left by the late H. G. Watson, C.A.

EDINBURGH DENTAL HOSPITAL AND SCHOOL.

THE half-yearly meeting of the Directors of the Edinburgh Dental Hospital was held last week. Satisfactory reports were submitted, showing that the progress made has been considerable. Fifteen hundred cases have been treated since the opening of the hospital. The school in connection with the hospital will be opened in November. The lecturers were appointed—subject, however, to the approval of the College of Surgeons. The treasurer announced that the donations and subscriptions had hitherto sufficed to clear the expenses, and appealed for a continuation from the public of its support for so useful an institution.

IRELAND.

NORTH DUBLIN UNION.

WE understand that Dr. Kirkpatrick intends shortly resigning the surgeoncy to the North Dublin Union Workhouse, which he has held for many years.

DEATH FROM HYDROPHOBIA.

A LADY, aged 25, died of hydrophobia, in one of the private wards of the Meath Hospital, last Wednesday. She had been bitten on the lip by her pet dog on June 11th. The characteristic symptoms made their appearance five days before death.

SCHOOL OF PHYSIC IN IRELAND.

IN consequence of the resignation of Dr. Finny and of Dr. Walter G. Smith, two Demonstratorships in Anatomy in this School are now vacant.

DECREASE OF IDIOCY IN IRELAND.

IT is gratifying to find, on examining the returns for some years past, that if the idiotic element in workhouses under fifteen years of age be reckoned in Ireland, it amounts to 88; if between fifteen and thirty years, to 395; and over thirty, to 911; from which it may fairly be deduced that idiocy is on the decline in Ireland.

QUEEN'S UNIVERSITY IN IRELAND: MEDICAL GRADUATES' PETITION.

A PETITION has been forwarded to both Houses of Parliament, signed by upwards of two hundred medical gentlemen holding the M.D. degree of the Queen's University in Ireland. The petitioners state that, owing to the efficiency of medical teaching in the Queen's Colleges and the high standard of the degree examinations, the degree of Doctor of Medicine is one of the highest qualifications in Medicine of the United Kingdom; that the University has advanced greatly the cause of medical education in Ireland; and that they consider that the dissolution of the Queen's University and the abolition of the name of the University contemplated by the Bill dealing with University education at present before Parliament would inflict upon every medical graduate a personal wrong. Also that there is no grievance connected with the medical department of the University requiring legislative interference; that, the Senate having rendered such valuable service to the cause of medical education, the medical graduates regard with grave apprehension its supercession by new senators. Finally, the petitioners pray that the name "Queen's University" be retained; that the present senators be continued in office, and that, in case of any addition to the governing body of the University, the number of representatives of convocation be increased in proportion.

LUNACY LAW REFORM.

IX.—"I DID STEER TOWARD THIS REMEDY."

THE time of the year and the crowded state of these columns compel brevity in the consideration of the manner in which these things may best be bettered. By a most remarkable concurrence of opinion, which is evidently the result of independent conviction, all persons who have right to speak with authority on the best remedy for the evils of private trade in lunacy have advocated the extension of the system of public asylums for that purpose. The Lord Chancellor's Visitors, the Commissioners in Lunacy, the Royal Commissioners on Irish Asylums, and many other official and experienced persons have with one accord fixed upon this remedy; and the Select Committee of 1877, in its compromising report, endorsed this opinion by recommending to Parliament "that legislative facilities should be afforded by the enlargement of the powers of magistrates or otherwise for the extension of the system" "of public institutions for all classes, such as exist in Scotland, in Cornwall, and at Cheadle in Cheshire", so that eventually "there would be no demand for licensed houses for the upper and middle classes". The arguments which may be advanced against making either the Scotch chartered asylums, the English hospitals for the insane, or the solitary instance of a county asylum for paying patients which exists in Cornwall, the model for imitation of the new public asylums for paying patients which are now needed in this country, must be given at a more convenient opportunity. Excellent as all these institutions are in their own sphere of work, they none of them meet the requirements of the existing emergency; and there is no reason to believe that permissive "enlargement of the powers of magistrates", which is the project of Mr. Dillwyn's Bill, would not be that which the Select Committee of 1859 declared it would be, namely, "inoperative". If so, therefore, a wise provision of public institutions for all classes must be "otherwise"; and it is curious that the Committee should have omitted existing models which are far more to their purpose than those they have cited, although such models are plainly enough shown to be the right examples in an important paper printed by the Committee in the appendix to their report. This class of asylums are the State asylums, of which Broadmoor and the India Asylum at Ealing and the Naval Asylums at Haslar and Yarmouth are examples in this country, and of which the State asylums of the United States of America, accommodating patients of all classes so that fewer than three hundred patients are confined in adventure asylums in all that vast community, are an example abroad.

The paper above referred to is a "Memorandum on the Establishment of Three State Asylums for the Chancery Lunatics", presented to the Lord Chancellor, and signed by Dr. Bucknill, Dr. Lockhart Robertson, and Dr. Crichton Browne; and it recommends that "three State asylums should be provided for the care and treatment of the Chancery lunatics", and each with an accommodation for two hundred patients, within fifty miles of London, each with an estate of one hundred acres, at a total estimated cost of £300 per patient." If the establishment of such State asylums for Chancery lunatics would be right, it is difficult to see on what principle such institutions should be confined to Chancery lunatics. Rather, it would seem that, as Chancery lunatics are already provided with costly and elaborate means of protection which are not enjoyed by ordinary lunatics, their further protection by means of separate State asylums for their use is less needful for them than for paying patients who are not under the care of the Court. All lunatics who either possess property or who have relatives possessing property who are bound to support them, ought to be under the protection of those to whom the Sovereign has deputed her prerogative in this matter; while all lunatics maintained at the public cost may well be left under the protection of the magistracy. This is a social classification founded upon a real difference; but the accident of a lunatic's property being accessible or not, protected or not, being an artificial distinction upon which it is absurd to establish differences of jurisdiction, and still more so to arrange varieties of treatment, the logical division will no doubt at some time be recognised; and, meanwhile, it is desirable that State asylums should be founded upon the wide and reasonable basis of receiving all lunatics who pay for their maintenance. Probably the three physicians who signed the memorandum saw this clearly enough, but did not feel themselves justified in extending the scope of their recommendations beyond the borders of that which might seem to be their peculiar province; but it is most earnestly to be hoped that the Commissioners in Lunacy, with their more extended interests and influence, will adopt and endorse the recommendation with regard to all paying patients, and thus bring to a practical issue the general views they have so emphatically expressed as to the necessity of the establishment of public asylums for all classes.

The task is not tremendous. No one has proposed to establish State asylums for all paying patients, but only for so many as would enable the authorities to discontinue their licence to all owners of asylums who do not fulfil their implied contract between their patients, the public, and themselves, which is to give their patients the possession and enjoyment of all possible sources of comfort, security, and recovery. The total number of private patients in licensed houses on the 1st of January last year was 3,472; but from these ought to be deducted the soldiers at Bow Asylum and the imbecile children in the schools (which are only asylums in an official sense) of Normansfield, Kenton, Colchester, and Knowle, amounting to an aggregate of 661 patients, and leaving the total number of private patients, including Chancery patients in licensed houses, at only 2,811. And this existing total is already on the wane from various causes, of which the steadily increasing preference of the public for the insane hospitals is the most observable. To what extent these admirable institutions, which are not likely to be increased in numbers, are likely to be increased in their capacity of accommodation, and to what extent the tranquil and slightly insane inmates of adventure asylums may, under a change of public and professional opinion, which may occur any day, pass into domestic care, it is impossible to estimate. But not forgetting the probable operation of these influences, it would seem fair and reasonable to leave half of the aggregate to be dealt with in the first instance by existing methods and the survival of the best adventure asylums, and to make State provision for only 1,450 of the insane of the upper and middle classes at present confined in those adventure asylums which ought to be speedily closed. Should the future management of the best asylums not justify the plea for their preservation which good authorities have urged, they also ought to be dealt with subsequently, and all insane persons be thus placed either under public or domestic care.

It would not be needful or right to estimate the cost for building and establishing new State asylums for paying patients of all classes so high as the Lord Chancellor's medical advisers have properly fixed their estimate for Chancery lunatics. The average payments of this latter class for maintenance in adventure asylums is £253 annually for each lunatic. But the large number of insane persons of small means who are confined in the worst adventure asylums suffer more from the want of suitable accommodation than those who are comparatively opulent, and their claims for State interference and relief are more urgent; and if £300 per patient would be an adequate sum for building State asylums for Chancery lunatics, who are paying an average of £253 a year for maintenance, the sum of £200 per patient would be a fair estimate for building State asylums for the paying insane of all classes, a large proportion of whom are comparatively poor. This estimate, therefore, would contemplate an expenditure of £290,000 for building State asylums for 1,450 paying patients, far less than the sum which Colney Hatch asylum for paupers has cost, far less than one modern man-of-war has cost. And this money, if advanced by the State, could most certainly be repaid to the State, interest and capital, within the customary thirty years, out of the payments of the patients, and after they had received the most liberal treatment. If the owners of licensed houses calculate upon repayment of their purchase-money out of the profits of four years, the State, being owner, might very fairly arrange to repay itself within thirty years, unless, indeed, the State preferred to employ some of its receipts from the insane in the extension of its benevolent protection over this class of sufferers.

The most ready and efficient instrument by which these proposed State asylums could be established would seem to be a Parliamentary Commission, containing an independent medical and legal element and an efficient contingent from the existing boards of lunacy; and the main duties of such a Commission would be—

1. To enter into contracts for the purchase of sites and the erection and furnishing of buildings for State asylums, and to pay for the same with money advanced from the consolidated fund.

2. To repay interest and sinking fund for the debt so contracted from a percentage taken from the payments of patients receied into such State asylums.

3. To make rules for the governance of such State asylums, and the payments of the patients.

4. To appoint the persons to form a governing body for each State asylum.

5. To determine what licensed houses for the reception of lunatics shall be closed, and upon what conditions.

6. To summon and examine upon oath witnesses, and to require the production of documents relating to matters within the reference of the Commission.

7. To prepare statutory amendments and reports to Parliament.

Each State asylum should have a separate governing body, composed of gentlemen and professional men, ready and willing to discharge the unpaid duties of control, similar to those now discharged by the Com-

mittees of Management appointed by the Governors of Hospitals for the Insane, save and excepting one duty which some of these committees permit themselves to discharge in contravention of the original purpose of their institutions—namely, that of making a large profit. It is to be hoped that the contagion of the spirit of trade would find no entrance into the State asylums, and that there would be no rivalry between them except the generous rivalry of earnest endeavour to relieve the greatest amount of suffering. The Lord Chancellor's advisers recommend that each of the State asylums for Chancery lunatics should contain two hundred patients. This may be a good medium size; but State asylums on the wider basis should some of them be larger, and some perhaps smaller; some should be plain and economical, some more luxurious and costly. The present system of adventure asylums, whereby under the same roof some wealthy patients are pampered and many poor patients are stinted, causes envious heart-burnings, which may most advantageously be avoided by the apportionment of payment to the variety of accommodation provided in different institutions.

The general idea of this scheme of reform having now been given, further details respecting it may well be postponed to a future opportunity. Carried out with wise forethought, and with the single purpose of benefiting a most suffering and pitiable class of the community, who are "so much at the mercy of others", as Mr. Wilkes says, this scheme offers a thoroughly practical solution of a great social difficulty. Moreover, it promises to remove a great professional scandal; for there can be no room for doubt that the great and beneficent profession of medicine does suffer in its honour before the public, and in its self-respect before the tribunal of its own conscience, for the state of affairs into which it has unwittingly drifted in its relations to persons afflicted with mental disease. This position is most unjust to the profession at large, and even to that portion of the profession which has devoted itself to the study and relief of mental disease; for, while there are fewer than one hundred medical men engaged in what may, without injustice, be called the business of lunacy, there are "more than five hundred medical appointments held in the three kingdoms in connection with the treatment of mental diseases", and no doubt a much greater number of medical men engaged more or less in the private treatment of mental disease, not one of whom have ever touched one farthing of profit from the business of keeping lunatics. That the keeping of lunatics in licensed houses for profit is a business and not a profession, is at once obvious from an inspection of the names of the persons licensed to carry it on. It appears from the last report of the Commissioners in Lunacy that, out of the ninety-eight adventure asylums in England and Wales, forty-nine are licensed to medical men alone, and twenty-one are licensed to medical men in partnership with laymen or women; and of the remainder, ten are licensed to laymen, and eighteen to women alone. But these figures, remarkable as they are, give a most inadequate idea of the inconsiderable interest which the medical profession possesses in the business of keeping lunatics. Few of the larger adventure asylums which are licensed to medical men are in reality the property of the licensees. Large shares in them, and oftentimes the whole of the property, belong to laymen or to women, the medical licensee being a salaried person, with undefined powers and duties. Lord Shaftesbury said, in his evidence of 1859, Question 82, "Medical men would be the fittest persons to be the proprietors of these houses, and to have the entire charge of them; but it often happens that the fittest medical men have no capital at all, and they have not the means of undertaking this charge, whereas other persons, who are not fit to have the charge themselves, have the capital."

It cannot be doubted, therefore, that this business of keeping diseased persons for profit in places of confinement is heterogeneous to the medical profession, except in so far as the medical profession is responsible to the community for abuses in the treatment of all diseased persons, that is to say, responsible to the extent of its power in amending such abuses; and therefore it is that the medical profession has a duty to itself and a mission to society in the reform of a law which encourages a "vicious principle" of treatment of a most suffering and pitiable class of diseased persons. To "minister to a mind diseased" is now as strictly within the scope of medical art as any ministrations to the diseased body; and the responsibility lies upon the whole medical profession, untainted with any indirect gains or advantages, to bring within its fold those most unhappy persons who, in the helplessness of their incompetence, lie "so much at the mercy of others", and have been too much sequestrated from the beneficent action of a profession which exists for the purpose of alleviating human suffering, and not for the purpose of keeping any people in safe custody; of a profession which subsists upon remuneration for services freely sought and accepted, and not upon payments by third parties for the board, lodging, and detention of unwilling captives.

SELECT COMMITTEE ON THE MEDICAL ACT (1858) AMENDMENT BILL (No. 3).

House of Commons, Friday, July 25th, 1879.

THE RIGHT HON. W. E. FORSTER in the Chair. Present: Mr. Mills, Mr. Errington, Mr. Heygate, Mr. Maitland, Mr. Mitchell Henry, Mr. Plunket, Mr. Wheelhouse, and Sir Trevor Lawrence.

Mr. ERNEST HART's examination was resumed and concluded.

By Mr. FORSTER: My view is, that an uniform minimum examination will not alter the educational advantages of any body which now combines educational with degree-giving functions, such as the Scotch universities. The argument so constantly used, that persons who pass an uniform examination under the conjoint board will not go to universities for their degrees, because the degrees will not then have a legal value, is contradictory to the history of all those bodies, as the greatest periods of prosperity of all the degree-giving bodies have been periods coincident with the time when their degrees had no legal value whatever. The conjoint board will not give a degree or a licence at all. All it will do will be to open the door to every one of the bodies concerned, and leave the students free to choose which they prefer; and the University of Edinburgh will not cease to attract large numbers by good teaching. I do not think that a student having to pay a fee to a Scotch university after having paid a fee to the conjoint board would be a disadvantage, because he would get a higher qualification. He would not have to pay any extra fee to the College of Surgeons of England. I do not think it is a necessary part of the conjoint scheme that the examinations should be held only in London, Edinburgh, and Dublin; and the inconvenience would be extremely small, except perhaps in Scotland. I believe you will find that, in England, one-half of the whole body of medical practitioners on the *Register* come to London to be examined; and that more than one-half of the practitioners of Scotland go to Edinburgh to be examined. The German system has been described as multiportal; and that is because the students no longer pass—what used to be the case—a single examination; but they have their university diplomas, and after then they pass a State examination in each place. But it seems to me that it is only a question whether you put the small door behind or in front of the big door. There is an uniform examination after the degree. I have very carefully studied the whole subject, and have gone through the curricula of and personally visited all the principal universities in Europe at different times; and I do not think any one can possibly do that without arriving at the conviction, first of all, that, with the exception of the University of Edinburgh, and possibly the University of Glasgow, the students of England are not so well examined, nor are they so well taught. The teaching in England is extremely inferior to the teaching on the continent. The curriculum is shorter, for one thing. They have a curriculum abroad of from five to six years in France, Germany, and Brussels; and that larger curriculum is not found to interfere with the supply of practitioners. And in no country in the world but England is there anything but a complete examination in medicine, surgery, and obstetrics, for every person who is allowed to practise.

By Mr. MILLS: There is another authoritative document to which I wish to refer besides the memorials I have previously mentioned, as showing that the Medical Council has not the confidence of the profession, and that is the memorial presented by the British Medical Association, in 1870, which will be found in the volume of the minutes of that year. That memorial was then signed by a Committee appointed by the Association, and was last year signed by five thousand members of the profession, and also expressed the same want of confidence in the Council by reason of its defective constitution. With regard to the influence of the press on the Council, reference to the minutes of the proceedings of the Council on July 9th, 1874 (vol. xi, page 12), will show that Dr. Paget of Cambridge, the late President of the Council, in his farewell address, spoke as follows: "The statutable coercive powers of the Medical Council are slender; but the chief power was gained when the Council determined that its debates should be published. The agency of the press, giving publicity to our debates and proceedings, has, I believe, more than doubled the power of the Council—doubled its power for everything that is right and reasonable; and doubled, and more than doubled, its influence with the licensing bodies in any question on which this Council would be in the right and they in the wrong." The only cases which it will perhaps be necessary to point out, as examples of anomalies in the mode of electing representatives to the Council, are those of the College of Surgeons of London, which is the greatest licensing body in the kingdom; the Apothecaries' Company of London, which

has fallen away much as a licensing body; and the Apothecaries' Hall of Dublin, which is little more than a trading company — each of which has one representative. Then the medically active University of Cambridge and the medically passive University of Oxford have each one representative; whilst the University of Edinburgh, the most important school in the kingdom, has only half a representative, and an unimportant school like Durham has a whole representative. Again, while some of the bodies concerned in medical education are represented, medical schools, such as Bartholomew's and Guy's, Queen's College (Birmingham) and Owens College (Manchester), having no less claims, are entirely unrepresented. Some medical schools being connected with licensing bodies are thereby *de facto* represented in the Council, and have thus an unfair advantage over others that are not represented. Then the electing bodies are so extraordinarily diverse in character that, as a matter of fact, the representatives have no common basis of representation. For example: the representative of the University of Oxford represents the whole body of the University; the representative of the College of Surgeons of England represents the Fellows of the College; and the representative of the College of Physicians represents only the council of that body, which is arbitrarily elected, and into which a person can rarely win his way unless he has attained a position as a consulting practitioner; so that the ordinary licentiates of the College are not properly represented. There is, therefore, no recognised principle whatever in the election of the representatives of the various bodies. I do not agree with Mr. Simon's statement, that the privilege of electing representatives to the Medical Council is an inducement to members of the Royal College of Surgeons to become Fellows. It seems to me to present the matter in a sense which would hardly accord with the political state of facts. No doubt, theoretically, a person can become a Fellow of the Royal College of Surgeons by passing an examination; but, as a matter of fact, it is only after a further curriculum, which means that he shall still spend two years and more in hospital work, at a cost of £200; and I believe the Fellows are really decreasing in number, and that, although there are nearly ten thousand members, there are not more than one thousand Fellows. I think that, in order to obtain admission to the Council of the Apothecaries' Society, a person must have a share in the drug business of the company; it is a trading company, and I believe the government of the company is carried on in connection with the shareholders. I do not think any extension of the franchise within the corporations would meet the requirements of the profession, as the representation would still be that of the corporations rather than that of the profession, and it would involve new charters to nearly all of those bodies, or else the revision of existing charters; and the effect would be that the College of Surgeons would have ten thousand electors and the University of Edinburgh several thousand electors; and, in fact, the total number of electors so created would be much larger than the constituency which the Bill you yourself have introduced proposes to create for direct representation. I have often seen the statement made that the men who would be returned by a system of direct representation would be less fitted to sit on the Council than those who sit there at present, and that unknown persons who were active in canvassing would be returned; but I have always observed that it has never been supported by any reference to any facts, but has simply been an expression of opinion. I have looked into parallel facts, and, as far as I can find, the argument is all the other way. For instance: I find that persons elected on the Committee of Council of the British Medical Association, which is a popular election, have not been unknown men. The senior members of the Council of the Association and its past presidents include with others the same class of persons as those who constitute the General Medical Council. Dr. Stokes, Sir G. Burrows, Sir R. Christison, Dr. Paget, and Dr. Acland are among the past presidents of the Association; and, in fact, persons who are the most eminent members of the Medical Council are also persons who have been nominated as presidents of the Association by the popular vote. And I have noticed particularly, from time to time, that persons who might be called agitators or persons of demagogic tendencies, who had aspired to posts of honour, had always failed; and my experience of the medical profession is that it is essentially conservative; and further, that it is very jealous of the qualifications of those persons whom it elects to office. I am convinced that, unless candidates were universally known and trusted, they would not have the faintest chance of being elected; and I think all experience justifies the expectation that the men who would be sent to the Council by direct representation, although they could not be more eminent than many of the present members of the Council, would nevertheless be more eminent than others who now sit there, and whose chief claims are that they have been the faithful servants and the faithful commissioners of the corporations who sent them. [Asked a question as to the constitution of the Medical Reform Committee of the British Medical Association, witness said:] I have prepared a list for this Committee, and I will ask permission to hand it in. It will show that persons who have been nominated, and who are still members of the Medical Reform Committee, are persons of the highest standing in the profession, local heads of the profession, senior physicians of great hospitals, and senior lecturers of great schools. It is undoubtedly the opinion of those who signed the memorials to which I have referred—memorials which should have more weight with the Committee and with Parliament than the opinion of single individuals—that the representation of general practitioners would increase the efficiency, and therefore the public usefulness, of the Medical Council. That is my opinion also; and it seems to me that, since the great mass of the profession are engaged in general practice, and are brought into direct contact with the public at large, their opinion, based upon practical experience, should not go for nought. I think the past history of the Council shows that they have distinctly failed in exercising judicial functions. I cannot find from the minutes of the Council that it is the case, as Sir James Paget stated, that the Royal College of Surgeons of England have obeyed the recommendations of the General Medical Council. I, however, merely base my opinion on official data; I have looked through the fifteen volumes of the minutes, and have not been able to find that the College of Surgeons has habitually obeyed the recommendations of the Council; quite the contrary. For instance, the fundamental recommendation which the Medical Council gave, that medical education should begin at a medical school, and last for at least four years, the College of Surgeons refused to comply with. Again, the Medical Council recommended that forensic medicine and hygiene should be subjects of examination; but the College replied that they saw no necessity for adding those subjects to the examinations. It was stated by Professor Haughton that perhaps the one thing which the Medical Council had done had been to improve the clinical examinations of the licensing bodies. The College of Surgeons had two modes of conducting their clinical examinations, one being that, in the examination for membership, patients were brought to the College for examination; and the other, that in the examination for fellowship, the students were taken to the hospital. The Medical Council ventured to remark that that was not altogether satisfactory, and recommended that in all cases the students should be taken to the hospital; but the College of Surgeons, with as much deference as was conceivable under the circumstances, did exactly the opposite. That was within the past few years. I am aware that the Council take great credit for the *Pharmacopœia*, which is rather surprising when you come to consider that it is not their work as a Council, but the work of a paid committee. As to the *Register*, the same carelessness has been shown in the expenditure over that as in many other things. The Council went on printing it at a very high price for a long time; and it was ultimately found, when it was taken to the Stationery Office, that it could be done for just half the money—£300, instead of £600, a year. So far as the argument of taxation with representation goes, it is altogether in favour of the medical man. I do not at all think that, in being put on the *Register*, the practitioner gets a *quid pro quo* for the payment he makes; he is put on the *Register* not for his own benefit, but for the protection of the public, to enable them to distinguish between those who are qualified and who are not qualified (as the Act and the whole course of legislation declares). The *Register* is not made for his benefit, and does not exist for his benefit.

By Dr. LUSH: What I mean by Oxford being passive with regard to medical education is, as the Committee have already been told, that it has neither a medical faculty nor a medical school, notwithstanding the fact that it has large medical funds and large medical endowments. There have been efforts on the part of the profession to stimulate the University of Oxford to do its duty in the matter of medical education, but certainly not on the part of the Medical Council; the latter have shown the most complete indifference in the matter. I do not consider it undesirable that the University should have a representative on the Council: it might prove useful that he should be able to state his views on this question. The fact of a representative of the University of Oxford sitting on the Council is a reason why the Council should deal with the matter, seeing that there are very large funds expressly left for medical education, and seeing that Oxford is one of the dark spots which point more strongly than anything else perhaps to the defective position of the Council and the tenderness with which corporations are treated. In connection with the proposed charter to the Northern University, there is another singular example of the way in which the Medical Council has limited itself to small questions. Everyone has known for some considerable time that a charter is contemplated for the Northern University, and that degree-giving powers may be given to it, which would imply the creation of a twentieth body; nevertheless, the Medical Council met last week, and I find no reference whatever in their debates to that most burning question. Then, again, the great scarcity of medical men in the army, and the employ-

ment of uneducated civilians, has altogether escaped the attention of the Council. It is well known at the present time that there is an army warrant which proposes to abolish entrance examinations, notwithstanding the fact that there is much to be found on the minutes showing that entrance examinations have demonstrated the existence of great incompetency on the part of gentlemen seeking to enter the Army Medical Service. There are no fewer than forty persons serving now with the army in Zululand who have had no Netley training, and who have undergone no entrance examination. Not only do I attribute blame to the Medical Council for not having represented this defect to the Privy Council, but it points clearly to the fact that the Council is not adequately representative. The state of things at the present moment with regard to army entrance examinations is unsatisfactory; an army warrant is about to do for the British Army Medical Service that which Parliament expressly refused for the Indian Army Medical Service. In the Poor-law Medical Service and Public Health Service, there has grown up within the past few years a great public service, as to which it is of the utmost importance that local sanitary authorities should have the legal means of ascertaining that candidates for public appointments have a knowledge of their special duties for those appointments. There is, as you are aware, a science called public health or preventive medicine, which embraces a variety of subjects besides those in which medical candidates are ordinarily examined. The result has been that corporations recognising that there exists a want in that respect, have separately created a number of qualifications, and bodies like the Apothecaries' Society of London and the Universities of Oxford and Cambridge each grant special diplomas. I think the Medical Council should have insisted on this in all the medical schools, that it is distinctly a moral duty on their part to see that the educational standard of the profession is brought up to the requirements of the public; and if there had been general practitioners on the Council, that would long since have been supplied.

Questioned as to the alleged migration of weak candidates in search of easily obtainable diplomas, Mr. Hart said: There is an item I have come across in looking through the minutes, which seems to me instructive as to the migration of candidates. It is at page 104 of vol. xii—a Report as to visitation of the conjoint examination of the Royal Colleges of Physicians and Surgeons of Edinburgh, May 1873. The visitors were unfortunate enough to meet only very inferior candidates, who were all rejected. They have given their answers, and stated their sense of the great deficiencies of those candidates both in general and professional knowledge. This was not intended or taken as a reflection on the Scotch schools. The College of Surgeons say that a large number of the candidates who come to be examined in Edinburgh have received their education in other parts of the country, and that it would be most unjust to infer any inferiority in the Edinburgh school of medicine. Here is an example of five candidates who were all so deplorably inferior that it was thought necessary to apologise for them, and who had been simultaneously possessed by the hope of passing the examinations of this body. That seems significant. I think that, to whatever extent this *migration* now goes on, it is probably diminishing very much. In a report of a Subcommittee of the Council on the visitation of examinations, page 126, vol. i, June 21st, 1860, it is recommended that, *in the event* of a candidate at any examination being *rejected*, his name shall be communicated confidentially to the registrar of every other examining body without delay. Then, on July 1st, 1861, a resolution was passed that it be recommended to all the examining boards that they should require from every candidate before examination a statement, signed by himself, whether he has or has not been rejected within three months of either of the examining boards. And then there has been a third suggestion made, that the papers of any person presenting himself for examination should be simply stamped when he goes up to an examining board, so that he may be known. Nevertheless, only one or two of the examining boards have acted on any such recommendation in the course of nearly twenty years. Very respectable practitioners often go abroad for *foreign degrees;* and it is a very remarkable fact that at the present time the graduating facilities for candidates in England are fewer than anywhere else in the world. I have in my mind at the present moment two instances of most distinguished young men who, within the last few months, having passed the complete curriculum, and having got the qualification of the London College, still find themselves under the necessity of going abroad, to Brussels, which is the place to which people go most now, and passing through a very stiff examination, in order to get the degree of M.D. The anomaly that at present exists is this: that while the profession is pressing upon the Government that reputable degrees should be admitted to France, for instance, and that English practitioners should be allowed to practise there, yet in this country no such registration is allowed, and we are asking privileges for our graduates which are not accorded to the graduates of any other country. In fact, the only persons who get facilities to practise in this country are those possessing disreputable foreign degrees. With regard to the work done by the Council, among the most valuable works done by the Committee were those extremely interesting reports by Dr. Parkes, for which I believe he received no payment whatever. As a rule, the work of the Council is done by paid committees; but, on the other hand, what I believe is universally looked upon as the most valuable work of the Council, the report on education and examination, was done by a special committee, which reported on the results of visitations of examinations, and which receives no payment whatever. The paid committees are the Pharmacopœia Committee, which received £2,000, the Executive Committee, and the Branch Councils. With regard to the supervision of examinations, the duty of the Council is, in the first place, to say what is adequate and what is inadequate for the public as a qualification, and they themselves divide that into two departments. They say adequacy shall be determined, first of all, by the curriculum; secondly, by the examination; then they at once proceed to define what is the minimum which they can accept; they communicate that minimum to all the bodies, and having done so, on several occasions they threaten to represent some of the noncomplying bodies to the Privy Council, in virtue of the further power which said it should be lawful for them to do so; but they have never done so. The moral influence of the Council has undoubtedly been great, and I should be far from saying that in no case have they influenced the bodies in virtue of it.

By Mr. WHEELHOUSE: I should say the action of the Medical Council is extremely cumbersome and extremely slow. It is a body consisting of twenty-four persons, who sit for a few days every year, and their number of sittings must be limited by the amount of money available for remuneration. The average number of their sittings has been nine days in each year. Practically, they do very little work, and then they adjourn. I consider the corporation element overwhelmingly large. The proposal contained in Mr. Mills's Bill for a reconstitution of the Council, appears to me very well calculated to meet the case. I would not say that is the best possible scheme, but it would effect a very good compromise. Taking away or amalgamating part of the corporate representation, as it now exists, would be nothing but justice, and would be a great element of strength to the Council. A great proportion of the members are past teachers, who taught many years ago, and it would be an act of justice because, if it happen that a school is connected with an examining board, it would be represented, and then it is a mere matter of chance whether a school is or is not represented. I do not, however, think that the representation of schools as such would satisfy the demand for direct representation; it is a distinct branch of the question altogether. Probably Mr. Mills's proposal in Bill No. 2 would for a long time satisfy the feeling of the profession in regard to direct representation. I have never known, in twenty years, any subject whatever on which there has been so strong and unanimous a feeling as that for direct representation. I am brought into communication with ten thousand practitioners, who more or less express their opinions to me on various matters, and every week I get a shoal of letters on different subjects, so that I have an excellent opportunity for becoming acquainted with the views of the profession. I do not think I would destroy the representation of corporations, but would rather have it counterbalanced by the addition of direct representatives of the profession, and by modifying the character of the Crown representatives—by providing that the Crown representatives should not, in the future, be as they have been in the past, men almost wholly representative of the consulting practice of the profession, but that half of them should be general practitioners. The efficiency of the Army Medical examination test has, in consequence of the death of Dr. Parkes, been largely lost sight of. I am strongly in favour of there being some representative of the Army Medical Service on the Council, as also of the Poor-law Medical Service. So far as I know, there is no representative of the Army or of the Poor-law Medical Service on the Council, and I do not think there ever has been one of the latter. My great complaint against the Council is the denial of its being any part of their duty to see the preamble of the Act carried out. It would be easy to mention the names of members of the Council who hardly ever rise in the course of years, except to say a word or two in defence of their corporations. The deliberations of the Council are devoted much more largely than they ought to be to the affairs of corporations and to the consequent neglect of more important duties. Everyone can form his own opinion on this subject by reading the debates.

By Mr. MITCHELL HENRY: I should say there are three pressing points of medical reference at this moment, as to which it would be difficult to say which was the most important. I think it would be possible to effect one reform without the others, but I can give many

reasons why you should not. I have not always been of opinion that you must reform all three together. I have always been of opinion that Parliamentary action must be fitted to existing conditions and requirements, and, at times when there was no prospect of getting such committees as this to investigate the whole question, I thought the most attainable thing would be immediately to protect the public by passing a clause to keep the *Register* pure. That could have been done without any trouble in 1876, before the appointment of this Committee. A slight difference of opinion had manifested itself on that subject in the British Medical Association. The Association Bill had been brought forward year after year, and had not reached the second reading in 1876, when the report came up, and I moved as a rider to the resolution that the report be adopted at the annual meeting, "that it be an instruction to this Committee to prepare a short Bill at once to amend the penal clause"; and one or two members of the Committee then said—though they did not act upon it—that they were so desirous to press on the whole question, that they would prefer not to act upon it. I am still of the same opinion, that it would have been advisable at that time to deal with the question in that way; though now I am strongly of opinion, after the ample inquiry which has taken place, that it would be unreasonable not to deal with the three pressing points of reform together. I am of opinion that the conjoint scheme would be relatively of great advantage, but I am also of opinion that, the thing having been discussed as it has been, it would be utterly hopeless to attempt to pass any Bill without a direct representation clause; the opposition would be so great, that it could not be got through the House of Commons. I think it would be a great pity to attempt to do the work piecemeal, because it would probably postpone indefinitely existing prospects. As to my remark that the Council sat till they had talked all the money out of the bank, and then dispersed, I did not wish to imply, nor do I think the inference can legitimately be drawn, that the Council were to be charged with corruption. I had no such idea in my mind. What I actually mean by this is, that this, being a body which is authorised to pay to its members so much a-day for each of their sittings, they have exhausted the funds available for fees, and declared them on more than one occasion inadequate for the purpose. I have simply stated a fact, not an opinion. No Medical Council should, in my view, be paid, reformed or unreformed, and I have already quoted examples to show the readiness of eminent men of all professions to serve without payment. I do not make it a complaint against the College of Surgeons that they should have acted as they have done with regard to their clinical examinations, for they may have been perfectly in the right; but I merely mentioned it as an instance of the ineffectiveness of the Medical Council's recommendation.

Dr. ANDREW WOOD was then called and examined.

By Mr. FORSTER: I have been a member of the Medical Council from the beginning, as a representative of the Royal College of Surgeons of Edinburgh. I have been President of the College of Surgeons of Edinburgh, and have been in practice as a general practitioner for forty-five years. The condition of the profession before the Medical Act was passed was not at all satisfactory. In the first place, there were nineteen licensing bodies, each separately regulating its own curriculum of study and examinations; secondly, there was no authorised standard of minimum qualification for practice; thirdly, there was no central controlling and supervising power; fourthly, only very partial preliminary examination in general medical education, and that only by a few bodies. At the time when I was first examining at the Edinburgh College of Surgeons, what is now preliminary examination was always taken at the time when the licence was granted. The College looked aghast at the proposal for instituting a preliminary examination, and, at my suggestion, it was made optional. It soon became popular; and in the course of a very short time no fewer than one hundred and thirty students came forward and offered themselves for the preliminary examination. That was immediately the Medical Council issued their recommendations. One great cause of the agitation for reform was the existence of several injurious monopolies of practice, and incompetent persons were too often licensed to practise. We sought to provide that none of the licensing qualifications of the various medical bodies should be granted, unless they came up to a minimum standard which should secure the possession by persons obtaining such qualifications of the requisite knowledge and skill for an efficient practice. I should say the object has been attained to a much larger extent than some of the witnesses have allowed. On the whole, the Medical Act has proved a beneficial Act, and would have proved much more so but for an unfortunate blunder, which was the enactment of Clause 31, whereby it was provided that every person registered under the Act should be allowed, according to his qualification or qualifications, to practise medicine or surgery, or medicine and surgery. Instead of that, the Act should have provided that no one should be registered who had not a complete qualification in medicine, surgery, and midwifery. This would have led, under Clause 19 of the Act, to the combination of boards. Although the College of Surgeons of Edinburgh was only entitled to qualify in surgery they never issued a diploma, unless they examined the man who came up for it in every branch, viz., medicine, surgery, and midwifery. Every practitioner should undoubtedly be qualified in midwifery as well as in medicine and surgery. I think it a very grievous error that any body should have ever given its diploma without. The Royal College of Physicians and the Royal College of Surgeons of Edinburgh, while they each give diplomas separately under separate regulations, have made arrangements by which under one series of regulations the student may obtain the diploma of both Colleges, the object of these conjoint examinations being to give to students facilities for obtaining from two separate bodies, and at less expense, a qualification in medicine and a qualification in surgery. Practically the same thing happens with the Universities, that they give a complete qualification. The Royal College of Physicians, also, made a similar combination with the Faculty of Physicians and Surgeons of Glasgow, which, though called that, is merely a Faculty to give diplomas in surgery. I have been Chairman of the Business Committee of the Council for nineteen years, having been re-elected every year. The Business Committee has not been paid. It was stated, I think, that the Business Committee used to give notice to the Council how long the sittings of the Council should last, and to assume that I was capable of such a thing makes my blood boil. I should explain that the Business Committee arranges the business of the session, and prepares the programme which has to be carried out. When the Council first met, it was a very curious concentration of accidents. We had always been at loggerheads, earwigging councillors, members of Parliament, and others; but we were embarrassed a good deal by the number of duties which devolved upon us all of a sudden. Some of the members of the Council had not been accustomed to much business, and I think at the very first meeting of the Council we began to consider education, and we proposed to issue recommendations on which to frame a code, and these have been altered and amended from time to time. Our work was not very speedy, and I have no hesitation in saying that the Medical Act for some years did not produce any tangible improvement—at least not nearly so much as we should have desired. The late Dr. Parkes—perhaps one of the ablest men who ever sat on the Council, and a very enthusiastic man—made revelations to us, which were obviously true, that many men came up for the army and navy medical examinations holding qualifications of licensing bodies which, on examination even on subjects of medicine and surgery, were found to be defective, and very few bodies were exempt from that. The effect produced was such, that the Council saw at once the necessity of setting to work to reform; and I believe I am right in saying that the number of failures in the army and navy examinations now are reduced to a minimum. The recommendations of the Council might have been enforced by representation to the Privy Council, but the latter would have been bound to hear the defence of the body in question before issuing an order, and the Medical Council might have been beaten. We have been twitted with not representing the College of Surgeons. I will explain why we did not. The General Medical Council came to a decision, by a small majority, that it was not desirable that apprenticeship should form the first year of medical study, which the College of Surgeons was in the habit of doing; but the majority being very small, and even they having some doubts, it was not considered right, against such a powerful body as this, who ought to have some means of knowing, to represent them; and I know for certain that some of those who formed the majority came to change their opinion about apprenticeship. Such a fundamental change as that should not be enforced, unless there was a large and decided majority. I do not think reform was lost by the Council's not enforcing; but that the Council did well to rest content with moral suasion. I think progress should always be gradual, and that we should not all at once effect medical changes without giving bodies time for consideration and urging reasons against. If the Council had had absolute power to enforce, without representation to the Privy Council, that would have resulted in putting the College practically in the place of the corporate bodies, and destroying their autonomy; and eminent men would have hardly cared to form part of the governing body of the College of Surgeons, if that had been done. I think it was the duty of the College to ascertain what were the courses of study which examining bodies adopted, but not to prescribe courses of study—because the Act gives power to ask for information and call for returns, and then, when they were consi-

dered, it was easy for us to see how far they were carried out. I am of opinion that the visitation of examinations by the Council has had an excellent effect; and if one thing has given me more vexation than another it is that, in consequence of the continued agitation for medical reform which has been going on for some years, these visitations have, for the last four or five years, been discontinued. The explanation is simply this: we were waiting for the Medical Bill, which was to change everything, and the bodies were waiting, too; otherwise, I know some of them would have adopted improvements. But they said: "If we are to be wiped off the face of the earth by the conjoint scheme, what is the use?" There were five visitations before the visitations were suspended. I myself was one of the visitors, and visited Glasgow and Aberdeen. The Edinburgh College of Surgeons has been visited three times, I think. The visitations ought unquestionably to be resumed, and to be systematically carried on. With reference to what has been said to the Committee as to the unusual large expenditure on fees to the members of the General Medical Council, I think the fees to the members of the Council might with advantage be reduced to three guineas a day; if they were, you could provide amply for the addition of six members, and the continued visitation of the different bodies. Such a saving of two-fifths of the fees would be a very large sum. Up to a certain point, I consider the Medical Act and Council have been a success; at all events, they have been a success in so far as not to require such revolutionary measures as are proposed by Her Majesty's Government. The position of the medical profession now, compared with what it was thirty years ago, is as different as night from day. I have been brought into contact with large numbers of my professional brethren, and I quite agree with what Sir James Paget says, that, for every person you meet in the profession who is ignorant, there are twenty who are well informed. I think the progress of education has, during the past ten years, been going on in an increasing ratio. The Medical Council, in one of their recommendations, said that they thought the examinations in general education should be remitted entirely to the national educational bodies. We have always had a very strict preliminary examination ourselves, and we consider it part of our right and privilege to uphold this. This examination is conducted by a special board, consisting of Professor Kelland, a very distinguished man; the examination in Latin and Greek is conducted by myself; that in French and German by Dr. Haldane; and the examination in English by Dr. Inglis; and all subjects in mathematics, such as geometry, algebra, arithmetic, and natural philosophy, are conducted by Professor Tait. Every student, before he can begin to study, must produce a certificate that he has passed a preliminary examination, in conformity with the recommendations of the General Medical Council, and that applies to all three kingdoms. The curriculum of study has been immensely improved and extended of late years, and is now quite as uniform as can be desired. The examinations are much more extensive than they were, and clinical examinations are now universal. I do not know any body which does not examine clinically, and I think, practically, the various clinical examinations come to pretty much the same thing. That the practical examination is a reality, is proved by the number of rejections. I have a table here of the results of examinations of the Royal College of Surgeons of Edinburgh and the Royal College of Physicians of Edinburgh, from January 1st, 1869, to January 1st, 1879, from which it appears that 21 per cent. of the candidates examined for the first professional single qualification, and 33 per cent. of those examined for the first professional double qualification, were rejected. For the second professional single qualification, 13 per cent. were rejected, and for the second double, 27 per cent.; 13 per cent. seems a small percentage for the second professional single qualification; but I believe the reason of that is, that the single examination has dwindled down excessively, while the double has been steadily increasing. But there is a great number of graduates of the University of Edinburgh who, having taken a degree, come to us for membership of our College, with the view of holding hospital appointments. I think the results of those examinations show that, if you were to push the standard of education up very much, you could not sufficiently increase the number of medical men. I have often found a difficulty in getting men to go up. The country generally, I consider, is pretty well supplied with qualified practitioners, but I do not by any means say there is not room for improvement. I should say the ordinary number of practitioners in this country is fully up to that of any country in the world. The statement that some of the Scotch bodies, in order to attract candidates, grant licences on easier terms than bodies in other parts of the kingdom, is a base insinuation. It is not a fact that the Edinburgh College of Surgeons grant diplomas almost without examination. I cannot answer for the College of Physicians, but there is no such thing as passing the conjoint board without a double qualification. It is true that many persons come from England to Scotland for examination, and I believe that is because they find the education in Scotland is very high indeed, and I have no hesitation in saying that the education in Scotland will compare with that of any other country in the world. One of the chief reasons why we have so many people coming for our licence in Scotland is supplied by the lack of facilities in England; because, as a student said to me the other day, "If I want a double qualification in England or Ireland, I must go through two separate examinations, by two separate bodies, and if I come here, one examination will do"; and that is the reason why people come to Scotland. By the combination of the two bodies, we find that we can give the single qualification for fifteen guineas, and the double for twenty. I take quite the reverse of a pessimist view of the present state of things, and I think the Council should go on visiting and making recommendations where necessary. The change which I advocate, which would be almost sufficient for the legislature to undertake, would be the prevention of single qualifications. If it were resolved to have a more organic change, and if you are to have something of a conjoint scheme, then I say every good object will be gained by allowing universities and corporations to examine in all the subjects which they at present do up to a certain point, so that a man shall have the double qualifications from the College of Surgeons or Physicians and from the universities, and then, after they have got a certificate of having passed these examinations, that a board might be appointed—a conjoint board—to conduct clinical examinations. The clinical examination should, of course, be made conditional for the final pass. I do not deny that there is a *primâ facie* argument in favour of three portals instead of nineteen. I myself favoured it, and voted in favour of the resolution in 1870 for the conjoint boards; but it was an abstract resolution, and at the time, some of the Scotch bodies were in favour of it. I acknowledge I changed my mind, but not without sufficient reasons. I would not say that there is an unanimous feeling in Scotland against a conjoint board, but there certainly is in the bodies. An uniportal system of examination would not, in my opinion, be practicable. It would necessitate a very large number of examiners—a few could not undertake it—and the result would be that the large board of examiners must necessarily be divided into a number of committees, and then what becomes of your uniportal system? I do not think variety in examinations a very bad thing, provided you have an adequate standard. I think the tendency of a conjoint examination would be to level down. With regard to the constitution of the Council, I am satisfied that it carries out its duties in a much more capable way than some of the witnesses have stated. I am not told by my College what I am to do at the Council, and I would not take their instructions if I were. I have never given them an account of what has passed, but have taken every opportunity of suggesting any alterations that I thought necessary. You may depend upon my standing up for the College of Surgeons. I have long felt that one fault was that general practitioners were not represented in the Council—not that there are none, because I myself am one, and Dr. Scott Orr of Glasgow is another, and Mr. Teale I think is one; still there are not enough. General practitioners have unquestionably a grievance, and I have no hesitation myself in saying that more confidence would be placed in the Council if some means were adopted for the introduction of general practitioners into the Council. I am not prepared to say which would be the best way of electing them, whether by direct representation or not. I think four would be enough, because if you were to say six—four for England, one for Scotland, and one for Ireland—probably Scotland and Ireland would be overwhelmed. My object would be, not so much to get in direct representatives as general practitioners. As Chairman of the Business Committee for twenty years, I think the addition of four or six members, especially of general practitioners, would be an improvement; and if the fees were reduced to three guineas, there would be ample funds to meet the cost. If we had thirty members, we might to a large extent adopt a plan which we have more than once adopted, of dividing the Council into committees, and giving each committee a separate subject. These could prepare definite reports, and I think on the whole, instead of increasing the time occupied, it would very probably diminish it.

By Mr. MITCHELL HENRY: The examination of the University of Edinburgh is a higher examination than I think is desirable in the interests of the public. For our licence to practise, we require an examination in every subject. We accept the first examination of other bodies, but not the pass examination. The average number of fellowships we confer in a year without examination is, I believe, about fifteen or sixteen; but we give the diploma to no one who has not got a qualification in surgery somewhere. The honorary qualification, which is supposed by the public to mark superior eminence, can be obtained in Scotland upon terms on which it cannot be obtained at the College of Surgeons in England. I cannot answer what the College of Physicians of Edinburgh does in this respect.

By Mr. WHEELHOUSE: I consider it desirable to render it compulsory all over that there should be class examination. There is a schism, I think, in the profession with regard to examination being the sole test. With regard to the Council having power to make their recommendations compulsory, I should be very sorry to hand over the bodies to the Medical Council. I thought I was in favour of the conjoint scheme when I voted for it, but I did not understand it. I believe I understand it now. No doubt the revelations of Dr. Parkes had a large effect, and the visitation of examinations has had a large effect also; and I have no hesitation in saying that, if the agitation for medical reform had been silenced, and we had been allowed to go on considering examinations and visiting the bodies, a very much larger amount of progress would have been made.

By Mr. MAITLAND: In granting the higher degrees of fellowship to those who qualify elsewhere, we require testimonials of the highest character, and go into the minutest inquiry.

By Mr. ERRINGTON: Sir Robert Christison was as much opposed to a conjoint scheme as I am, and our opinions are shared by the most eminent medical men in Scotland. I think it would rob the bodies of their *raison d'être*. If the result of the inquiry should be to drop all these schemes and let things remain as they are, I do not consider it would be a very great misfortune. I feel convinced that many men who had to go through the conjoint examination would not trouble themselves to go on to the universities for their higher degrees.

By Mr. MILLS: I deny that the progress in medical education has not kept pace with the general education of the country; it has more than kept pace. At one time, I urged that obligatory powers should be given to the Council; but I certainly never went in for all that power which is proposed by the Government Bill. Reform is one thing; revolution another. I think the fact of the corporations being represented on the Council would induce them to be more loyal to the recommendations of the Council.

By Mr. HEYGATE: As compared with France, Germany, and Italy, I consider that medical science has advanced quite as rapidly in this country of recent years. It used to be possible to obtain results by "cramming", much more so than it is now.

By Mr. PLAYFAIR: With regard to the Edinburgh College of Surgeons granting fellowships without examination, I think the College of Physicians in London do the same. I believe it is in their charter.

The Committee met again on Tuesday, when the Chairman announced that no more evidence would be taken this session; and that what had already been given would be reported to Parliament, with a request that the Committee should be reappointed next session to take further evidence.

CORK.

A CORRESPONDENT has sent us this brief description of Cork city.

As the British Medical Association is about to honour the "City of the South", a few memoranda respecting its origin and progress may not be out of place at the present time. The name, Cork, is derived from an Irish word "Corcagh", a marsh; the entire flat of the city, including its finest and most commercial thoroughfares, being built on a morass, which in mediæval times was so subject to inundations, that it is surprising it was ever selected as a habitation for any branch of the human family. It may, however, be accounted for thus. The Danes or Northmen, in the tenth century, found an old town built of wattles and mud clustered around the walls of the Cathedral. This they burned to the ground, and for the purposes of merchandise built on the banks of the river Lee, and of the many navigable streams which intersected the low grounds. The river Lee, on which the present city of Cork is built, was the *Luvius* of Ptolemy. The territory was called by Irish writers *Corcagh-Luighe*, Marsh of the Lee.

The early history of the city is shrouded in the night of time. About A.D. 617, St. Fin-Barré, the first bishop, died at Cloyne, and was buried in his own Cathedral, then a mere cell. On this site, the visitor will now see the stately spires of the new Cathedral, which is the fourth church that has occupied this ground during a period of twelve centuries. Its two western towers are called the "Crawford towers", and the central one the "Wise tower", from the munificent benefactors at whose expense they have been erected. This magnificent pile, with its richly painted windows, the gifts of the citizens as memorials of departed friends, its episcopal chair, stalls, pulpit, screen, and choir-gates, also gifts, will soon amount in cost to £100,000. Its interior will repay a visit, though still far from completion.

The Queen's College in the immediate vicinity, which is to be the head-quarters of the Association, will speak for itself. Its library, laboratory, museum of natural history and pathology, hall, lecture-rooms, observatory, and palm-house, with its new and beautiful approach, all indicate the unwearied energy and zeal of the accomplished President. This is historic ground; here was a castle, in which the Lord President of Munster used to reside in the time of Queen Elizabeth. He loved the spot; his own horses and those of his retinue, as he himself expressed it, "found the most excellent feeding in the numerous islands beneath". This Castle fell down in the year 1738 after standing 980 years. A little to the east of the college-grounds was the site of the celebrated establishment called Gill Abbey, from its chief benefactor Gilla-Ada O'Mugin, who, as Bishop of Cork, attended the Synod of Kells; he died 1172. Opposite the Cathedral is "Queen Elizabeth's Fort", which was built on the ground occupied by the "Church of the Holy Rood". This church was nearly perfect in the year 1604. The steeple still more to the east is that of the Church of St. Nicolas. In this locality, there was anciently a group of churches; all that now remains is the tower of the Augustinian friary, founded in the reign of Edward I. It is commonly called the "Red Abbey", and is the oldest building in Cork.

The old city was, as usual, surrounded with walls, all traces of which have now disappeared. Within the walls were the ancient parish churches of the Holy Trinity (Christ Church) and St. Peter's, with their cemeteries; both are mentioned in the Decretal Epistles of Pope Innocent III (A.D. 1199). The ruthless hand of the iconoclast has always been busy in Cork. Not a vestige of the architectural antiquities of these churches remains, if we except a few grave-stones of the sixteenth century, with elaborately sculptured floral crosses, on some of which may be traced the names of the worthy burgesses to whose memory they were once set up. But there is no other city in Ireland which has more widely extended itself beyond its ancient limits, than the city of Cork, within the last half century, or where more costly public buildings have been erected within the same period.

Hills bound the river on all sides, and, with their picturesque slopes dotted with the dwelling-places of the resident aristocracy, and crowned with woods of the richest and greenest foliage down to the water's edge, give an unsurpassed grandeur to the entire scene. The stranger, as he plies his way on the river Lee towards Queenstown, will feel it difficult which side he may the more admire; whilst the vistas up the numerous estuaries, the entrance guarded by some feudal castle, will suggest numerous subjects for the pencil of the artist of landscape painting.

To return to the city, the south side of which we have already visited, the visitor standing on St. Patrick's Bridge, will naturally inquire, "What is that 'pepper box looking steeple', rising on the top of yonder hill?" That is Shandon steeple, the praises of whose bells have been sung all the world over.

> "'Tis the Bells of Shandon
> That sound so grand on
> The pleasant waters of the river Lee."

The learned and witty author of this celebrated song now sleeps in peace beneath the shadow of the steeple. The word Shandon is the Irish *Sean dun*, "The Old Fort". The stately tower that looks so graceful a little to the north of Shandon is the Roman Catholic Cathedral of St. Mary's, also undergoing restoration. It has a very beautiful and imposing interior, and will repay a visit. In approaching Shandon from Pope's Quay, a few steps lead to the fine portico of the Dominican Church, internally decorated in the highest style of Italian art. Opposite the steps leading up to Shandon is the Cork Butter Weigh House and Hide Market. This is the centre of the wealth and commercial greatness of Cork, and will well repay a walk through it.

St. Patrick's Street, a principal thoroughfare, has a curious bend or curve all through, from the houses, as they were built, following the channel of an ancient watercourse. It contains the Church of SS. Peter and Paul. Nothing can excel the beauty of the pulpit in this fine church, with its elaborate carvings, high canopy, and tracery; it is the work of foreign artists, as is also the sedilia.

Among the educational establishments may be mentioned, as well worth visiting, the Christian Brothers' Schools, and the Industrial Schools attached to St. Nicholas' Church. A roam through the city will reveal, here and there, traces of old Cork: stones with curious devices in relief, sometimes a quaint inscription or the armorial bearings of some citizen, whom prosperity favoured in former days. Wherever the members of the Association may present themselves, either collectively or individually, they may calculate on a hearty and hospitable welcome, the desire of every member of the community being that they go away with a pleasing remembrance of their visit to the City of Cork.

DR. GAIRDNER ON ALCOHOLIC INSANITY.

THE main topic of Dr. Gairdner's address, as President of the Glasgow and West of Scotland Branch, was "Alcoholic Insanity". We understand that the whole address is likely to be published, in possibly a still more complete form, in connection with the Morison lectures on Insanity, lately delivered in Edinburgh; the following abstract, however, contains the substance of what was stated.

According to Sir Edward Coke, the drunkard is a voluntary demon or devil, and "hath no privilege thereby, but what hurt or ill soever he doth his drunkenness doth aggravate it". Authorities were here quoted showing the position of the English law on the subject, and tracing the principle laid down in Coke back to Aristotle. The points which Dr. Gairdner wished to bring out by these quotations were that the English law and custom recognised fully the resemblance, and indeed identity, of the state of drunkenness with a true insanity or *dementia* (as Sir Matthew Hale puts it) in almost all respects except its origin and its transitory duration; that, nevertheless, the difference arising from its being a voluntary *dementia* gave rise to a completely reversed relation of it to crime as a defence; that in this respect the English advisedly differed from the Roman law, especially in the case of capital punishment; that the English law advisedly aimed at punishing drunkenness, not through the act of drunkenness itself, but through the consequences of the act, and this even while it recognised the fact of these criminal consequences being (as the old commentator Plowden has it) done *ignoranter;* that, under certain circumstances (not, perhaps, very exactly defined), the excuse of ignorance and insanity extended even to acts of drunkenness; that the remoter results of habitual drunkenness were, under certain circumstances, recognised as being of the nature of an habitual or fixed phrensy—a true legal insanity, carrying all the legal consequences of an insanity, even though this madness was contracted by the vice and will of the party. The offence of notorious and excessive drinking was formerly punishable in Scotland with fine or imprisonment, or by corporal pains, under several statutes of the Scots Parliament. All of these were now in desuetude, and the mere indecency of getting drunk did not now in the general case subject the offender to any punishment, though it frequently led to greater crimes.

The distinction in law shown to be established between artificially induced morbid states and diseases proper was a principle in accordance, not only with the genius of the law, but with the habits of thought of the physician in dealing with bodily disease. But the peculiar difficulty in the case of alcoholic insanity (understanding by that term broadly all the phases of disturbance of the mind arising from the abuse of stimulants) was that the diagnosis between the artificially induced state and the state not artificially induced landed us in such an extreme contrast of legal results that, whereas an insanity, technically recognised as such, conduced to or necessitated an acquittal absolutely, an induced state, even if accompanied by as complete and absolute loss of self-control, did not in the slightest degree tend to acquittal, but rather (if Coke be right) to an aggravation of the legal offence. In fact, to put it broadly and yet truly, the law refrained from punishing drunkenness as an offence *per se* to the point of being almost an invitation to the offence; while, on the other hand, it visited the consequences of drunkenness, even if taking place under conditions of mind that would otherwise exempt from criminal responsibility altogether, with the full measure of legal sentence and penalty. And this difficulty was greatly increased when, from an individual act of drunkenness, one proceeded to the whole train of physical and moral evils which a skilled medical observer easily recognised as springing from many such acts—the habits acquired, the complications arising, the diseases (unequivocally such) both of body and of mind connected with long-continued or habitual drunkenness. For the medical man, who was bound to study and deal with these as at all events approximating to the realm of disease, or at least required to be viewed in relation to "care and treatment", was completely paralysed in his efforts to impose a limit on the ruin wrought by the habitual drunkard when he was informed—1. That, up to the very verge of the drunken paroxysm, and also in the intervals of many such paroxysms, the drunkard was to be considered as having a full measure of self-control, so that he could by no means be legally restrained from getting drunk, and that as often as he pleased; 2. That, in the actual paroxysm, he was legally responsible to the full amount for everything that he did in the way of crime or violence; and 3. That, even if he should, under pressure of necessity, or in a fit of remorse, abandon voluntarily his position as a free agent, it would be restored to him by the law whenever he pleased, and this to any number of times, and in the face of any amount of evidence of the ruin arising from such restored liberty. [In this last particular only, the law will be, to a certain extent, modified by the provisions of Dr. Cameron's Act.]

In advocating from the physician's point of view certain changes in the attitude of the law towards the drunkard, Dr. Gairdner by no means agreed with those who would treat the latter simply as a diseased or insane person, exempt thereby from all responsibility for his own bad habits. But he held that, amid the long train of evils arising from habitual drunkenness, it was impossible to draw the line practically, and at the same time fairly, between sanity and insanity absolutely—*i.e.*, so that individuals should be ruled as absolutely on the one side or the other of the line. And accordingly he held that the law erred—1. In not giving effect to drunkenness, or at least to habitual drunkenness, as an antisocial habit or offence *per se*; 2. In not allowing the ruin that arises from such habits to be checked by provisions taken in accordance with the proved incapacity of the habitual drunkard for self-control; and 3. In not permitting an intermediate verdict between guilty absolutely and not guilty by reason of insanity. [The last of these heads, Dr. Gairdner intimated, had been more fully discussed in a more general aspect as bearing upon insanity of all kinds in the Morison lectures, while the others had been, in 1869, expanded into certain "suggestions", which were in the first instance privately printed for legal and other authorities, and afterwards published in the *Transactions* of the Social Science Association, which met that year at Bristol.]

In the remaining portion of his address, Dr. Gairdner adverted to the various forms of drink-madness familiar to the physician, from the acute, often febrile, delirium tremens to the most chronic and inveterate degenerations produced by, or concurring with, alcoholism, and presenting almost every type of insane mind observed in asylums, from mania to extreme dementia and general paralysis. He regarded the influence of hereditary tendencies to mental disease as being often clearly shown forth in these cases, and held that there was a marked difference between the amount of responsibility of a man who, by merely vicious or unruly instincts, allowed himself to be dragged knowingly into the abyss, and one who, either inheriting or having acquired the fatal infirmity of an unstable, if not positively unsound, nervous system as a foundation on which all manner of diseases might be built up, was precipitated into a deeper and deeper degradation of physical and moral ruin by the facilities presented to him for getting and abusing drink, from even the ordinary use of which he, above all men, ought to have been restrained long before such consequences occurred.

Dr. Gairdner then referred to some cases to which his attention had been directed by Lord Deas, in which that eminent judge had directed juries that weakness or aberration of mind not amounting to insanity might legitimately form an element in the question between murder and culpable homicide; one of these being a case of genuine dipsomania, with hereditary tendencies to mental disease (the evidence of which, however, was excluded by the opinion of the judges), and with very obvious mental instability of many years' standing; the other, a case of murder done evidently under the mania in suspicion in acute delirium tremens. In reference to this second case, Dr. Gairdner said that his medical instincts wholly revolted from the bare possibility (which Lord Deas, while dissenting from it in this instance, admitted to be quite in accordance with law) of submitting such a case to a jury at all as one of murder; since, if delirium tremens were not to be regarded as an insanity in law, there was no form of transitory mania in any asylum at all entitled to the name. But, on the whole, Dr. Gairdner hoped that the judgment of the meeting would ratify his in this, that medicine as a science recognised in Lord Deas's principles as applied to criminal cases an important advance, viz., in this respect, that it tended to the throwing down of the hard and fast line that the law had generally tried to establish between the sane and the insane, and which, in all forms of insanity of doubtful application, was peculiarly inapplicable to the many forms and complications of habitual drink-madness in all its stages. In that advance, they might well feel grateful to his lordship, but they could not avoid hoping that in future yet more would be done to bring the law into accordance, he did not say with their views, but with the facts of Nature, which would not submit themselves at all to legal categories, as long as it must absolutely be affirmed by verdict or otherwise that an individual was sane or insane without qualification; and in the particular case of drink-madness he looked forward to one, or perhaps both, of two things—first, that the law should permit it to be affirmed of a man that he was a habitual and confirmed drunkard, or an insane drunkard, one or both, in such a way as to carry consequences; second, that drunkenness *per se* should be in some way noticed by the law apart from its more distinctly criminal consequences, and especially when it became so habitual as to threaten absolute ruin.

Dr. YELLOWLEES thought the abuse of alcohol was a subject on which the profession was specially bound to speak out. He was disposed to regret that the old Scottish statutes quoted in the admirable address had fallen into desuetude, and agreed with Dr. Gairdner that, when a drunkard was not only injuring himself, but was a nuisance and

a danger to others, he ought to be punished, without waiting till his drunkenness had produced some greater crime. He said drunkenness might be a cause, an early symptom, or a result of insanity. He agreed generally with Dr. Gairdner as to the forms of insanity caused by drunkenness, but gave more prominence to the "insanity of intemperance" as defined and classified by Dr. Skae, of which, he said, suspicion, jealousy, and temporary hallucinations of the senses were the chief symptoms. He also adverted to the cases in which the evil wrought by habitual intemperance appears in later life, even after years of abstinence, when some emotional cause upsets the brain which former excesses had weakened, and induces melancholia of an unfavourable type. Sometimes drinking was merely one of the early signs of insanity, and one of the indications of the general loss of control which often preceded it. In such cases, it was frequently and erroneously assigned as the cause. The drinking which resulted from mental disorder was, he said, the true dipsomania. It usually followed and grew out of the vice of drunkenness, and hence the hesitation often felt in calling it a disease; but it might arise from quite other causes, such as an injury to the head or a sudden shock. Its three forms, acute, periodic, and constant, were referred to, and also the moral deterioration which was so invariable and characteristic a feature. As to criminal responsibility, no definite line could ever be drawn between sanity and insanity, for none existed in Nature; it was a gradual slope which connected the two territories. There were all degrees of insanity; the law should, therefore, recognise degrees of responsibility and impose corresponding gradations of penalty. When a prisoner's condition was such that he could not be acquitted on the ground of insanity, and yet the jury were satisfied as to the presence of a mental disorder, they should declare him "entitled to mercy on the ground of his mental condition", and the judge should determine what mitigation of punishment such mental condition demanded. Dr. Yellowlees strongly urged the members of the Association to assist in giving effect to the provisions of the Habitual Drunkards' Act, and to support the retreats which might be established under its provisions.

Dr. MUNRO of Kilmarnock suggested that the Branch should move in the direction suggested by Dr. Gairdner, of getting drunkenness, or at least habitual and public drunkenness, made punishable by law.

METROPOLITAN PROVIDENT DISPENSARIES.

THE provisional committee to prepare a scheme to be submitted to a subsequent meeting, appointed at the meeting at the Cannon Street Hotel, on Saturday, June 21st, 1879, for the establishment of a metropolitan association for the purpose of arranging, on provident principles, for the ordinary medical treatment of the industrial classes in due relation to the hospitals, was ultimately constituted as follows: *Chairman:* The Right Hon. James Stansfeld, M.P. *Members of the Charity Organisation Society:* Sir Charles Trevelyan, Bart., K.C.B.; Mr. W. Bousfield; Mr. J. R. Hollond. *Members of the Governing Bodies of Hospitals:* Sir Thomas Fowell Buxton, Bart.; Sir Rutherford Alcock, K.C.B.; Mr. E. H. Lushington. *Members of the Medical Profession in the Metropolis:* Mr. Timothy Holmes; Mr. Ernest Hart; Dr. Joseph Rogers. *Representatives of the Saturday Hospital Fund:* Mr. A. W. Mackenzie (Chairman of Council); Mr. E. Byne; Mr. Robert Frewer (Honorary Secretary). *Members of the Ancient Order of Foresters:* Mr. C. Radley; Mr. J. W. Cripps. *Members of the Independent Order of Oddfellows* (*Manchester Unity, West London District*): Mr. R. Herne; Mr. Alfred Newman (Secretary to the District). *Member of the United Patriots National Benefit Society:* Mr. William Armstrong (Senior Trustee). *Member of the Druids:* Mr. T. M. Witted (District Grand Master).

At the first meeting of the Committee, at No. 8, Grosvenor Crescent, on Tuesday, July 22nd—present, the Right Hon. James Stansfeld (Chairman), Sir Charles Trevelyan, Bart., K.C.B., Sir T. Fowell Buxton, Bart., Sir Rutherford Alcock, K.C.B., Mr. W. Bousfield, Mr. A. W. Mackenzie, Mr. E. Byne, Mr. R. Frewer, Mr. C. Radley, Mr. J. W. Cripps, Mr. R. Herne, Mr. A. Newman, Mr. W. Armstrong, Mr. T. M. Witted, Mr. W. Allam—it was resolved first: That the Right Honourable James Stansfeld, M.P., Sir Charles Trevelyan, Bart., Sir Rutherford Alcock, K.C.B., Mr. Timothy Holmes, F.R.C.S., Mr. C. Radley, Mr. R. Frewer, and Mr. R. Herne be appointed a subcommittee to prepare the first draft of the scheme.—Second, That the scheme be based on the following principles: 1. That, as the dispensaries are intended to be for that portion of the population which is between the class able to pay the usual professional fees and the destitute class provided for by the poor-law, the rates of payment and the expenses should be arranged in accordance with that view. 2. That the rates of payment at the dispensaries be sufficient to defray the current expenses, including the due remuneration of the medical officers. 3. That the best mode of providing for the preliminary expenses and outfit be specially considered by the subcommittee. 4. That a carefully considered arrangement be prepared for the prompt interchange of cases among dispensaries, and between dispensaries and hospitals, according to the respective requirements. 5. That an arrangement be also made to secure skilled and experienced nursing for dispensary patients when necessary.—Third, That Mr. W. Allam be appointed provisional agent to the committee.—Fourth, That the subcommittee commence its labours after the recess, and that its first meeting be held in the first week of November.

THE SELECT COMMITTEE ON THE CONTAGIOUS DISEASES ACTS.

THURSDAY, JULY 24TH.—The following members of the Committee were present: Mr. Cavendish Bentinck (in the Chair), Colonel Alexander, Mr. Burt, Sir Harcourt Johnstone, Mr. Shaw Lefevre, Mr. O'Shaughnessy, General Shute, Mr. Stansfeld, Sir Henry Holland, Mr. Kavanagh, and Mr. Tremayne.

Mr. BARR, Medical Officer of the Lock Hospital at Aldershot, was for the third time called in and examined.

By Colonel ALEXANDER: On being asked as to his experience when resident at the female department of the London Lock Hospital, part of which is devoted to Government purposes under the Contagious Diseases Acts, Mr. Barr replied that ninety-nine out of a hundred of the women who applied for admission on the voluntary side of the hospital had been diseased for a long time, and only came there when their physical state had become too bad for them to continue their calling. When somewhat relieved by their stay in hospital, many of them refused to remain until cured. It was calculated that 25 per cent. of these prostitutes left the voluntary hospital before they were fit to be discharged. On the side of the hospital where the patients were under the Acts, a speedy improvement was noticed in the character of disease. The patients at first sent there were as severely diseased as the patients from unprotected districts still are; but, after a time, the patients sent under the Acts were less gravely affected, and consequently a shorter period was necessary for their cure. Voluntary admission of prostitutes into hospital, and compulsory detention there until cured, would not answer. If the women knew they would not be able to leave when they wished, they would not go in until their disease had made great progress and they had spread disease widely. Every prostitute, when discharged from hospital at Aldershot, was advised to give up her mode of life, and was also offered aid to help her in doing so. Clandestine prostitution must now be very limited in extent; those who practised it ran great risk of being exposed. If the Acts were repealed, the consequences to the army and navy would, in Mr. Barr's opinion, be disastrous. The evidence of soldiers as to the prostitute from whom they had contracted disease was worthless: first, because they generally shielded the woman and gave the name of some prostitute already in hospital; and also because the soldier was frequently drunk at the time, and consequently unable to point her out, even if willing to do so. There was great difficulty in procuring the conviction of a brothel-keeper for knowingly harbouring diseased women.

In reply to Sir HARCOURT JOHNSTONE, Mr. Barr reiterated his belief in the necessity for compulsory examination of prostitutes.

Mr. STANSFELD, after again questioning the witness as to the voluntary side of the London Lock Hospital, as well as concerning voluntary Lock hospitals in general, referred to a report made by Mr. Simon, when Medical Officer of the Privy Council, to the effect that the extent of these contagious disorders had been greatly exaggerated. As the right hon. gentleman laid great stress on this opinion of Mr. Simon (published in the appendix to the eleventh report of the Medical Officer to the Privy Council), it may be well briefly to remind our readers of the circumstances connected with it, as given in the Fourth Report on the Operation of the Contagious Diseases Acts. Mr. Simon's investigations were carried out by official inspectors who visited a few of the general hospitals and dispensaries of London, during periods varying from one day to one week, with the object of getting some notion of the proportion of venereal to other kinds of sickness treated gratuitously in London. At the charitable institutions visited, 10,220 persons of all ages were seen; of these, 902 had some form of these diseases, and of these again 467 had true syphilis, 39 being children with inherited disease, and 251, or 53 per cent., of the syphilitic patients being adult males. During these few days' investigation, Mr. Simon considered that one-fourth of the sick who applied for relief at the charitable institutions of London in that period came under observation; but, as no account was taken of Guy's Hospital, nor of the *Dreadnought* Hospital, nor of the male out-patients of the Lock Hospital, and other institutions having a particularly large number of such patients, there can be little

doubt that the estimate that one-fourth of the contagious patients of London were seen, is calculated on insufficient data. But admitting, for the sake of argument, the accuracy of Mr. Simon's calculation, that only about 3½ per cent. of the total sickness of the metropolis was due to true syphilis, and taking the number of persons then annually treated gratuitously in London at 1,500,000, there would have been 52,500 persons yearly suffering from a disease that maintains its contagious condition for months and sometimes for years in the sufferer. Even supposing Mr. Simon's idea of the exaggeration of the extent of these diseases to have been correct in 1869, it by no means follows, as was pointed out by Mr. Barr, in answer to a question put by Mr. Cavendish Bentinck, that it should hold good now, so many changes having occurred during the last ten years.

A few more questions by Sir HARCOURT JOHNSTONE concluded Mr. Barr's examination.

Dr. FREDERICK ROBINSON, Surgeon-Major Scots Guards, was next called in, but his examination had not proceeded far when the Committee rose.

YELLOW FEVER IN NEW ORLEANS.

FROM the report of Dr. Holt, Sanitary Inspector of the fourth district of New Orleans, it appeared that, in 1878, out of a population of about 36,000 persons, there were upwards of 6,000 cases of yellow fever. Of these, 4,419 occurred among the white population, and 908 among the black, 795 being doubtful either as regards locality or colour. Of the whole number, 2,688 occurred in persons under fifteen years of age, and the general mortality was 9 per cent. Of the whites, 569 died, or 12.8 per cent; whilst of the blacks, 29 died, a mortality of only 3 per cent. Under fifteen years of age, the mortality was 12.6 per cent. The sanitary condition of the district would appear to be bad, and to this Dr. Holt attributes the fever, although the insanitary condition is constant, and yellow fever only occasional. "There are", he says, "precisely the same reasons for declaring yellow fever to be *ab initio* the product of human filth, as malaria to be the product of a marsh or swamp". Dr. Holt believes that it is limited geographically, is very infectious—"perhaps of all specific poisons the most intensely infectious"—that it runs a rapid course, and that one attack protects usually from a second. Of several unsanitary conditions existing at New Orleans, Dr. Holt places first the "privy vault system". Thousands of these had been originally huge boxes, which, having become destroyed through time, permit saturation of the soil with human excrement to such an extent that water, taken from a depth of ninety-five feet, has yielded fifty-three grains per gallon of urea and organic matter. In the wet weather, these boxes (now pits) fill with water and overflow, "flooding yards and gutters with ordure", whilst in the day they are largely emptied by their fluid contents soaking into the ground, thus saturating the soil with human excrement. "In this respect", says Dr. Holt, "it may be properly stated that the people have a huge privy in common, and that the inhabitants of New Orleans live upon a dung-heap". In many parts of Dr. Holt's district, the gutters are below their outlets, and thus form stagnant pools, besides being otherwise badly constructed. Building on "low lots" and overcrowding is a third kind of unsanitary condition in New Orleans; and a fourth, and probably the most important, is a deficient water-supply. Rarely a year passes, it appears, without two protracted droughts, and two weeks of dry weather suffice "to empty many of the cisterns", and three weeks produce a widespread water-famine, which becomes at times so severe as to compel the poor to have recourse "to the street-gutters to obtain the water which is to supply all of their wants to be used in cooking, drinking, washing, etc." The cause of this appears to be the selfishness of the landlords. "It is they", says Dr. Holt, "who have built these hovels in the mud, the very construction of which makes grovelling wretches of the men and women whose necessities deliver them into the hands of men who are themselves dead to any instinct higher than the clutching of a penny." This condition of things it is difficult to think of as actually existing in the free and enlightened republic of the United States. The description which he gives of the Locust Grove Cemetery, or Potter's Field, is deserving of consideration. This is one square of ground in which are buried the pauper dead of the entire city. Having been used for many years, the same graves were made to receive the bodies of many dead—as many as six occupying a single grave. Dr. Holt witnessed the burial of a corpse. The grave was prepared by uncovering a coffin, opening it, raking the bones together and throwing them out, breaking up and prizing out the old coffin, and depositing the new in the mould of the former. When laid in its resting-place, the lid of the box, like that of the one preceding, was two inches below the surface of the earth. To hide it, the earth formerly removed was piled upon the coffin in a mound about two feet high. In this covering he counted the skulls of three former occupants, besides observing other bones. So filled with bones was the earth as to make the use of the spade extremely difficult. Another coffin-lid, warped by the sun, displayed the body of a poor wretch who had died a few months before; the stench was disgusting. The whole surface of the ground was strewn with ribs and small bones, like pebbles upon the hills. Here and there, huge thigh-bones served as head and foot stones to the unknown dead. The citizens living in the vicinity presented a petition to the City Council, March 13th, 1877, wherein they set forth in the strongest terms the horrible facts relative to this graveyard. Requested by these people, and having made repeated inspections, Dr. Holt appended to the petition his official report, declaring this graveyard an outrageous nuisance; first, as a sanitary violation of the most serious kind, not only prejudicial to the people of the immediate neighbourhood, but dangerous to the entire city, inasmuch as the bodies of those who had died of infectious diseases were brought from one end of the city to the other, through densely inhabited quarters, to be buried here; second, as a violation of the plainest laws of humanity and instinctive decency, in the infliction upon the helpless of such loathsome sights and disgusting smells; thirdly, as injurious to the people in the depreciation of their property in value. He earnestly recommended the selection of a site for a Potter's Field in the neighbourhood of the cemeteries, far in the rear of the centre of the city, out of sight of habitations, and directly approachable from all parts of the city without having to traverse its length. The City Council was about to establish a new pauper graveyard. This petition, numerously signed, was presented at the City Hall, and was buried in a pigeon-hole; no special record nor account was kept of it. A square of ground, however, was at once selected, adjoining immediately the first.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

THIS institution was founded in the year 1823 by the late Joseph Hodgson, and is one of the oldest special hospitals in the country. The hospital contains forty-five beds, and has a large out-patient department, with an average attendance of nearly 100 cases daily during six days in the week. In the year 1878, the in-patients amounted to 774, and the out-patients to 10,750, of which number, 9,451 were new cases; the total attendance of the out-patients was 29,844. The income of the hospital is derived partly from invested property and partly from voluntary contributions. The reserve funds, including the value of the present hospital and the hotel adjoining, amount to nearly £25,000; the subscriptions and donations in the year 1877 reached £1,600 in round numbers; the total receipts being £3,126, and the total expenditure, including an extraordinary item of £472 for additions and alterations for improving the ventilation and sanitary condition of the hospital, £2,747. It will thus be seen that no less than £457 was invested during the year 1878, and, so far as funds are concerned, this hospital is in a very flourishing condition; although a large outlay is required for a new building.

During the last five or six years, and indeed for a longer period, the medical staff have been much annoyed by intermittent outbreaks of erysipelas, etc. They have, from time to time, drawn the attention of the Committee of the Institution to the unhealthy condition of the hospital, and, as a consequence, in the year 1877, they reported that the appearance of erysipelas had rendered it necessary to restrict the number of admissions into the hospital on two occasions in the autumn of the year. In order to meet this difficulty with determination, the Committee made an investigation into the arrangements connected with the drainage, and took into consideration the sanitary condition of the hospital generally. After due consideration, they called in the aid of the architect, and instructed him to thoroughly examine the entire system of drainage, and to reconstruct whatever he might find objectionable. By these measures, it was thought possible to place the sanitary arrangements in a more efficient condition. In reporting this determination on their part, the Committee stated that the building was old, and less suitable for the purposes of a hospital than could be desired; at the same time, the house is roomy, sufficiently so to afford separate day and night accommodation for the patients. They found the obstacles to perfect ventilation serious, but, with the advice of the architect, Tobin's system of ventilation was introduced throughout the wards, and they declare the result, in their opinion, to be satisfactory. At the same time, the Committee desired to keep before the subscribers the necessity of providing a more suitable building when the proper time should arrive. The most pressing need for a new building arose from the increasing demand on the out-patient department. The numbers attending it were fifty per cent. greater than they were ten years ago. Sometimes as many as 150 patients came to the hospital in one morning, and this

number was often materially increased by the large number of friends who accompanied them as guides. There was no proper accommodation for such a number, and no possible means of providing it in the premises now allotted to the use of the hospital. The above statements are more than borne out by the reports of the medical staff for the years 1877 and 1878. These reports allude to the defective sanitary state of the hospital, and express regret that it has been necessary to restrict the number of admissions, especially as a large number of deserving cases which ought to have been treated, have been, perforce, refused admittance. Although the extensive system of ventilation introduced into all departments of the hospital has tended to modify its unhealthiness, the medical staff draw special attention to "the continued unsanitary state of the building". It will thus be seen that, whereas both the General and Medical Committees are agreed as to the unhealthiness of the hospital, and although both admit its unhealthy condition, the Medical Committee have not succeeded in inducing the lay authorities to remove the institution to more suitable premises.

With a knowledge of these facts, we made an inspection of the Birmingham Eye Hospital a few weeks ago, when we found all the evils above referred to to prevail to an extent dangerous to the health of the patients. An inspection of the drainage arrangements has convinced us, in spite of the alterations that have been made, that it is scarcely possible, without expending a sum out of all proportion to the doubtful improvements which might possibly ensue, to effectually remedy the evils which exist at the present time. The hospital has five water-closets situated within its walls, the majority being in the centre of the hospital. The soil-pipes from all the closets empty into an old barrel-drain about eighteen inches in diameter, which passes along the open passage on the north-east side of the building. Into this barrel-drain a number of water-closets from the adjoining buildings, probably more than a dozen, also empty themselves. This barrel-drain is laid almost horizontally. It has been found that it is always more or less choked with fæcal matter, and, what constitutes a glaring defect in the drainage arrangements, the interior of the building is in direct communication with this unventilated and overloaded drain, and, through it, with the main sewers of the town. On testing the atmospheric current, by placing a lighted candle at the opening to this barrel-drain, the candle was blown out more than once by the current of air in the soil-pipe which emptied into it. These air-currents were in every case found to be in the direction of the water-closets, and consequently towards the interior of the building; while the fœtid gases, which, owing to the fermenting filth in the main drain, are continually being generated in the soil-pipes, are thus forced into the hospital proper. It is true that each closet is protected by the ordinary trap, but experience has proved, over and over again, that the resistance thus offered will soon be overcome, under similar circumstances to those we have described, and thus sewer-gas must penetrate into the wards by this means. Further, it cannot be doubted that sewer-gas also enters into the interior of the hospital through the pipes connected with the various lavatories, urinals, and sinks. It is fair to add that various devices have been resorted to with the view of checking this latter source of contamination, but the results are reported to be wholly unsatisfactory. Another point of importance may be mentioned. We found that the wall on the side of the main staircase was both damp and offensive. On descending to the hall, the effluvium from beneath the staircase was very perceptible. On examination, we ascertained that the soil-pipes from the water-closets on the south-west side of the hospital, are fixed to one of the inner walls, and that they pass immediately under the flooring of the hall of the hospital. The water-closets for the out-patients are situated immediately under the dispensary, the flooring of which has been raised to make room for them. The soil-pipes from these water-closets also empty themselves in the barrel-drain to which reference has been made, and, owing to defective joints in the pipes, a disagreeable smell is frequently present in the basement. In this basement the kitchen is placed, and in other portions of it the whole of the provisions are kept. The staircase communicates from the basement with the men's wards of the hospital. At one side of this staircase a lift has been placed, in order to convey the food, etc., from the basement to the wards. This lift is very imperfectly ventilated, and on inspecting it, we had undoubted proof that, by its means, foul gases are conveyed from the basement to the wards. The wards themselves are for the most part of insufficient height, those on the top floor being only eight feet; and in every instance, the superficial area per bed is totally inadequate. The average cubic space per patient in each ward is 605 feet, the minimum being 483 and the maximum 722 cubic feet. There are two day-rooms, one for men and one for women. The former allows 182, and the latter 327, cubic feet per patient. In the morning, before the patients leave the wards, we are informed, and can quite believe, the atmosphere is often very offensive. It is true that a Tobin's tube has been placed in each ward; but, not only are these tubes in every case too small and inadequate for the purpose, but in no single instance was any proper outlet provided. Further, each of these tubes can be opened or shut by means of a key, which is placed in charge of a nurse. On the day of our visit, although no patients were in the wards, in almost every instance these tubes were closed, and in no case could we trace the entrance of air into the dormitories by their means. Altogether, it is doubtful if more sanitary evils are to be met with in any similar institution.

Turning now to the out-patient department, it may be said that the present arrangements are not only dangerous to the health of the visitors and their friends, but that the situation of the out-patients' waiting-room must necessarily increase very largely the impurity of the atmosphere of the wards. This waiting-room is situated at the back, and on the south side of the building, being entered by a door which is placed at the foot of the main staircase. Into this room, which contains but 5,700 cubic feet, and which possesses no proper means of ventilation, more than 100 people are crowded together, for a considerable space of time. On ordinary days, the atmosphere of this apartment soon becomes almost unbearable. But when to the other evils are added that of damp clothing, which on a wet day is unavoidable, owing to the distance many of the patients travel in order to obtain advice at the hospital, the state of affairs becomes indescribably bad.

It will be admitted by all competent observers, that the present state of affairs at the Birmingham Eye Hospital must be speedily altered. For years past, as we have already said, the medical staff have urged the lay committee to erect a new hospital suitable for the requirements of the midland counties. It has been shown that the invested property of the hospital is adequate for this purpose. We do not doubt, however, that so old, so famous, and so deserving a charity, possessing, as it does, a numerous and influential body of governors, could command, were the facts plainly stated and an appeal issued, more than sufficient support to warrant the Committee in proceeding to remove the institution without further delay.

MEDICAL HEROISM.

A CORRESPONDENT at Bucharest pays a splendid but well merited tribute to the memory of a young surgeon who came lately to a melancholy end, the result of mental aberration. He writes: In your obituary column of April 17th, I saw the name of Frederick Lyndon Attwood. A modest and chivalrous spirit has gone to its long rest, but I hope that a brief sketch may serve to convey some idea of a man whose life was devoted to the good of his fellow-beings. I first met Mr. Attwood at Belgrade in the summer of 1876, when he came there with the gallant little band of young English surgeons sent out by the National Aid Society to assist the sick and wounded in the Servo-Turkish war. In company with his comrades, Attwood went to the front, and did noble service on the battle-fields of Alexinatz and Deligrad, until they were recalled to Belgrade to take charge of the English Hospital established there. On the 1st of December, the National Aid Society decided to close its hospital. There were then about seventy patients under the charge of Attwood and his two assistants, Drs. Hume and Battie. Attwood declared it was cruel to turn these poor fellows over to the crude care of the native surgeons, and notified the Servian Government and the National Aid Society that he would individually assume the burden of carrying on the hospital until the patients could be discharged. The brave-hearted young fellow procured native nurses, and fed them, together with his assistants, at his own table; he drew on his own bankers for the funds to keep up the hospital, and it was maintained until about the 1st of April, when the patients were all cured or convalescent. Some subscriptions were received from various sources towards the hospital expenses, but there was a heavy balance met by his private purse. Dr. Attwood was of very delicate *physique*, but when the Russo-Turkish war broke out he was one of the first to leave for Constantinople. He knew that the Russian ambulance was very rich in supplies and had a numerous staff of surgeons, while the Turks had nothing. His place was always on the side of the unfortunate, and, therefore, he accompanied the Moslem hosts in the campaign. He was at Shipka in the summer of 1877, and when Gourko swarmed over the Balkans and poured his gallant Guardsmen down the valley towards Adrianople Attwood was in the neighbourhood of Pangurishte with his ambulance. One of his assistants, Dr. Sandwith, went to Tatar Bazardjik with their hospital supplies, but the Russian cavalry cut him off from returning to Attwood. Hume and Sandwith retreated to the Ægean Sea with the troops of Suleiman Pasha, and from there took steamer to Constantinople. Attwood had not been heard of since Sandwith left him on the road to Tatar Bazardjik—nearly a month had then passed, and we could but conclude that our gallant

friend had been murdered by the Bashi-Bazouks or by the Bulgarians. I went to all the Russian head-quarters, but could find no trace of him; no one knew of the capture of any English physician in that part of the country. At last, as we were almost despairing of ever hearing of Attwood again, we ascertained that he had been captured by Russian cavalry, and, singularly enough, the squadron was commanded by an officer he had known as a volunteer in the Servian army at Alexinatz. The Russian General told Attwood that he was free to go where he pleased, but at the same time said there were one hundred and twenty Turkish wounded lying at Pangurishte without medical attendance, and that the Russian troops had scarcely any stores with them on account of their rapid march and the difficulty of getting supplies over the Balkans in the dead of winter, so that, under the circumstances, they could do nothing for these poor suffering Turks. I saw a letter written by Attwood to this General, saying that he would stay at Pangurishte and do all he could for the wounded men. In this letter, he made a request for medical stores. Dr. Hume went up to Tatar Bazardjik with the necessary supplies. He found Attwood insensible from fever, and scarcely breathing. Hume attended him like a brother, and after some weeks' delay he was able to bring him to Pera, still so low that he was generally unconscious. I know of many noble deeds of charity performed by the man whose useful career has thus untimely ended, but I knew of them only because I was the means of conveying his gifts to their recipients, so that they should never know who their benefactor was. What he did through others I can only imagine, as he never spoke of those things to anyone. Attwood was a great student, and had a deep knowledge of his profession, which he exercised chiefly to relieve the sufferings of those who could not afford to pay for regular medical attendance. Since his return from the Turkish Ambulance Service, he had been a constant sufferer from the effects of the campaign. He will be mourned sincerely by all who knew and understood him; but the greater part of those who would grieve over his early death belong to the humblest classes, who are beyond the reach of the press, and who will never know that their benefactor is no more.

CORRESPONDENCE.

THE NEW UNIVERSITY AND ITS MEDICAL DEGREES.

SIR,—Your able and temperate article on the new University in relation to its medical degrees emboldens me to hope that you will give the same publicity to a few lines in defence of them, which has been accorded elsewhere to their opponents.

I would have preferred to write anonymously; but, as a member of the Senate of Owens College, I think it more frank to give my name, and to state at the same time that I have not communicated in the remotest degree with any of my colleagues, and that I am solely and individually responsible for my remarks.

I assume at once that Englishmen, unless possessed of considerable wealth and leisure, have hitherto had no fair chance of attaining medical degrees which carry with them the culture that ensues from association with those following other professions or pursuing the arts and sciences for their own sake. On account of this, they have been placed at a great disadvantage, compared with those residing or educated elsewhere. In fact, an English medical Home-Rule agitation would have been fully justified. Let me illustrate this by a few figures taken almost at random. The Senate of our own College contains six medical members; all of them have taken medical degrees; four of them are Scotch, two only are English. The Manchester Royal Infirmary, among its honorary and consulting staff, has thirteen members who possess medical degrees; of these, six are Scotch, five are English, and two are foreign. The Liverpool School of Medicine, a body of gentlemen who will doubtless soon become connected with the new University, have twelve graduates in medicine among their number; of these, eight are Scotch and four English. The College of Physicians of London has 292 graduates in medicine in its roll of fellowship; of these, 158 (or actually more than half) are English, 110 are Scotch, 3 are Irish, and 21 are foreign. Oxford and Cambridge graduates furnish a large increment to the English element, out of all proportion to their relative numbers in general society; and this is easily accounted for by the enormous endowments of these Universities, and by the social position usually occupied by their graduates. Nevertheless, I think we have in the roll of the College of Physicians a proof that Englishmen are not inferior to their fellow-countrymen, and could, with equal advantages, maintain an equality, if not a superiority, in the higher walks of professional life.

For the first time in recent English history, an opportunity is now likely to be afforded to Englishmen of moderate means and of average physical and mental capacity to obtain at home a degree in medicine, combined with a certain amount of university residence and culture; and, owing as I do nearly the whole of my own success in life to the fortunate guidance which took me away from England to be educated and to graduate in medicine, I find it somewhat difficult to account for the opposition which is now offered to our children to remain at home.

It is true that the north of England will reap the main advantages of the change; but a far larger population than that of Scotland will thus be covered; and University College, or some similar institution, may safely be trusted to do for London and the south what Owens College has done for the north.

That the new University will be empowered to grant degrees in medicine as well as in other subjects, may be taken for granted. Any restriction of its powers in this or in any other direction would imply doubts as to its teaching capacity which ought to have forbidden the grant of a charter. That it should refrain from exercising this power is a different question; and those who conceive this restraint desirable will have to address themselves to the governing body of the University.

The only real argument which has been adduced against the new medical degree is, that it will add one more to the already too numerous portals to the profession. The absence of endowments which would place our lecturers on the same footing as those of any other university school of medicine might fitly have been urged in addition; but this does not seem to have struck any of those who have furnished us with their kindly criticism.

In deciding the question of the new medical degree, the interests must be considered—first, of the general public; second, of the medical profession; and last, though not least, of the new University itself.

1. As regards the general public, I cannot think otherwise than that one more close association of its medical advisers with the highest sources of mental culture will be a great gain in every way. It need surely have no fear, also, of a medical degree which will be supervised by Her Majesty's Privy Council, and by the Medical Council of Education, as to its requirements, and the examination for which will be conducted to a large extent by gentlemen wholly independent of the University.

As regards the medical profession, the addition of one to the other nineteen portals of entrance to the profession will hardly be disadvantageous, when it is considered that it will hold out inducements and afford opportunties to so large a number of our population for the acquirement of a higher medical education and degree, although it may thus starve out a few of the existing corporations. Morever, it is almost certain that, when there is a lull in party political warfare, the legislature will agree to create one sole national portal; and that all medical *degrees* will carry with them only the weight which is due to them as indications of practical or scientific superiority in their possessors.

3. As regards the new University itself, all previous experience shows that an University which teaches as well as examines can hardly exist without an intimate connexion with one or more of the learned professions. However much one may admire mere culture for its own sake, neither Oxford nor Cambridge, Edinburgh nor Dublin, Heidelberg nor Munich, would long remain other than schools for big boys were it not for their connection with the Church, the Bar, or Medicine. It would be utterly suicidal, therefore, on the part of the new University, to loosen its hold on the only one of the professions which it can largely attract, and through which it can alone leaven the general public with a higher educational tone. Moreover, if it were now to withdraw from the teeming populations of Lancashire and Yorkshire any one of the educational advantages which it seemed about to offer, it would incur an amount of discredit which would greatly impair its usefulness and popularity.—I am yours, etc.,

Manchester, July 1879. J. THORBURN, M.D.Edin.

THE OWENS COLLEGE MEDICAL SCHOOL.

SIR,—The publication of the annual returns of the Royal College of Surgeons, showing the results of the examinations held during the last year, having attracted great attention, and having been quoted with the object of proving that the medical department of Owens College is inefficient as contrasted with other medical schools, I venture to address you the following remarks, which will, I trust, fully clear the institution with which I am connected from the injurious imputation, and call attention to a system which I believe to be as undignified as it is unjust.

I think it might have been foreseen that the system inaugurated many years ago by the Royal College of Surgeons, of publishing annually the total number of students sent up by each school, with the number of candidates rejected and passed, would be open to serious objections,

and would utterly fail as a test of the comparative teaching efficiency of the medical schools.

The pressure of competition amongst the numerous medical schools of England led to the establishment of so-called *test* examinations, to which all students are subjected, and at which they are expected to acquit themselves satisfactorily before having the schedules signed, which are a necessary condition of admission to the examinations of the College. Theoretically, these examinations may perhaps be defensible, as enabling the medical schools to advise students with precision as to the expediency of going up for an examination, or the reverse. In practice, however, they usually lead to those who fail being more or less peremptorily refused certificates to which they have acquired a legal title. With the growing stringency and efficiency of the examinations of the Royal College of Surgeons, the test-examinations have grown in stringency also. The returns of the Royal College of Surgeons afford, indeed, a means of judging of the comparative efficiency of these test-examinations, but little more.

After mature consideration, the authorities of Owens College arrived at the conclusion that this system (which, it is to be noted, is only adopted in the case of candidates for the examinations of the Royal College of Surgeons) is utterly indefensible. If a student have attended the requisite courses of instruction with diligence and regularity, and have thereby acquired a legal right to a certificate, it appears in the highest degree harsh—indeed, unjust—to refuse him permission to present himself for examination on the ground that, by his failure, he may injuriously affect the returns relating to his school. Holding this opinion, Owens College has abandoned test-examniations. We profess to teach our students to the best of our ability. We require that they shall attend our courses of instruction with regularity; and, if they will ask us our advice, we willingly advise them (and I believe, as a rule, with accuracy) as to the expediency of presenting themselves or not for any particular examination; but we do not condescend to a system which is unjust to the student and distasteful to the teacher, who takes upon himself the invidious task of deciding an issue which ought to be left to the decision of the examining boards.

That my statement is correct as to the returns of the Royal College of Surgeons being returns which exhibit the comparative efficiency of the test-examinations conducted at the different medical schools, rather than the comparative efficiency of medical schools, may be proved by citing our own case. In the years during which my colleague Dr. Watson and I conducted test-examinations which were imposed upon all candidates for the primary examinations of the College, our school stood among the highest in the returns of the Royal College of Surgeons. Now that the test examinations have been abandoned by us, we share with University College the lowest position in the same returns. In the list just published, the percentage of rejections in the case of the Birmingham school amounts to 15.7 per cent.; in that of St. Bartholomew's, to 30.3 per cent.; in that of University College, to 48.5 per cent. Are we to conclude, however, from these numbers, that, of all the schools in the country, that of Birmingham, with its low percentage of failures, is the most efficient; that St. Bartholomew's, with a proportion of failures nearly double that of Birmingham, possesses only half the efficiency; and that University College and Owens College stand lowest in the list? The statistics of the College of Surgeons have been used as arguments to show the inexpediency or injustice of granting to the proposed "Victoria University" the privilege of conferring medical degrees; and the question has been asked more or less directly, "Upon what grounds does Owens College seek a privilege which is not generally possessed by the medical schools of England?"

The answer which is to be given is the following. The medical department of Owens College forms part of a great institution, which has for many years past discharged the most important functions of an university for the district of England in which it is situated—of an institution which has numbered and numbers amongst its professors men who have contributed very largely to the advancement of science and letters—an institution in which there actually exist the means of pursuing a complete education in arts and sciences as well as medicine, and in which a legal department of considerable efficiency exists. The position of Owens College as a teaching institution is indeed exactly comparable to that of one of the Scottish universities, or to that of University College or King's College, London. Had it not been proposed to confer a charter upon a new university which is to include Owens College to any other colleges which come up to a certain standard of teaching efficiency and completeness, there would never have been a desire to acquire powers which would give to the medical department of Owens College the advantage which appears to have caused so much apprehension on the part of our colleagues in the Liverpool School (to whom the whole present agitation against us is to be referred). As, however, the medical element constitutes an important place in the one college which has given a *raison d'être* for a new university, we may be pardoned if we object to a charter which would constitute us an university without a faculty of medicine.

No one is more aware than I am of the bad influence which has been exerted upon medical education by the competition which has existed amongst certain of the medical licensing boards of the country, and no one wishes more ardently than I do for a legislative measure which shall place some control upon certain of these bodies. At the same time, I am strongly of opinion that the universities of Scotland, though certain of them may have been in the past, may actually be at present, too lax in the granting of their degrees, have been amongst the most efficient of the medical schools of the country, and have conferred signal benefits upon the medical profession and upon the country at large. Had it not been for their appreciation of the intimate relations of the sciences to medicine, can we doubt that the position of medicine in this country would have been altogether different from that which it occupies to-day?

The promoters of the "Victoria University" seek to confer, not only upon Owens College, but upon any other similarly constituted institution, the means of developing a system of education which shall not be less efficient or less complete than that of the highest of the Scotch universities.—I remain, sir, your obedient servant,

ARTHUR GAMGEE, M.D., F.R.S.,
Dean of the Medical School of Owens College, Manchester.

July 28th, 1879.

THE DISCOVERY OF THE ANÆSTHETIC POWER OF CHLOROFORM.

SIR,—Mr. Henry Brown will find some information as to where Mr. Jacob Bell obtained his authority in regard to the anæsthetic property of chloric ether in the *Dental Physiology and Surgery* (1848) of John Tomes, at p. 349. "Previous to the discovery of the anæsthetic effects of chloroform, Mr. J. Bell brought to the" (Middlesex) "Hospital a little chloric ether, or terchloride of carbon as it was then called, that its effects might be tested"; the results of only one case—a dental one—is reported, and it was not satisfactory: "as the disposition to faint" (*i. e.*, after the recovery) "was no doubt caused by the chloric ether, I did not again use this drug".

I feel sure, however, it must have been employed in other cases, as I can well recollect Mr. Bell describing its effects to me, when quite a youth, at his father's house at Wandsworth. I agree with Mr. Henry Brown that the name of Mr. Jacob Bell must not be overlooked in regard to this subject; and, in a paper read by myself before the Odontological Society in February 1862, I observed—"the introduction of the so-called chloric ether, in the year 1847, by the late Mr. Jacob Bell has, I think, failed to receive the merit it deserves.....Had the nature of this compound been fully known at the time, the cause of uncertainty in its action would have been discovered, and chloroform brought under the notice of the profession. This discovery, however, was left for Dr. Simpson of Edinburgh, whose labours in the work of rendering operations painless cannot be too highly praised".—I am, etc.,

19, Savile Row, July 26th, 1879. ALFRED COLEMAN.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 18 in every 1,000 persons living. The rate was 16 in Edinburgh, 17 in London, 18 in Glasgow, and 25 in Dublin. The highest rates in the twenty English towns were the following: Leicester 20, Plymouth 20, Oldham 21, Manchester 21, Brighton 21, and Sunderland 21. The highest zymotic rates were 3.9 in Sheffield and 4.7 in Salford. In London, there were 1,208 deaths, which were 535 below the average, and gave a death-rate of 17.4. The 1,208 deaths included 6 from small-pox, 49 from measles, 58 from scarlet fever, 8 from diphtheria, 33 from whooping-cough, 15 from different forms of fever, and 25 from diarrhœa; being 194 deaths altogether, or 348 below the average, and giving an annual zymotic rate of 2.8 per 1,000. The deaths from diseases of the respiratory organs, which had been 185 and 169 in the two preceding weeks, rose again to 182 last week, and were 33 above the average. No fewer than 14 cases of suicide were registered, or more than three times the corrected weekly average. At Greenwich, the mean temperature of the air was 57.4°, and 5.4° below the average. The general direction of the wind was west; and the horizontal movement of the air averaged 14.9 miles per hour, which was 5.2 above the average. Rain fell on five days of the week, to the aggregate amount of 1.09 inches. The recorded duration of sunshine in the week was equal to 14 per cent. of its possible duration.

ASSOCIATION INTELLIGENCE.

BRITISH MEDICAL ASSOCIATION: FORTY-SEVENTH ANNUAL MEETING.

THE following communications have been promised in addition to those mentioned in last week's JOURNAL.

SECTION B. SURGERY.—*Subsection of Ophthalmology and Otology.*

BLAKE, Clarence J., M.D. (Boston, U.S.A.). The Occurrence of Exostoses within the External Auditory Canal in Prehistoric Man.

HERMANN, Professor (Breslau). New Investigations on the furthest limits of Perception of Colours by Direct Sun-light and by Electric Light.

LÖWENBERG, Dr., Paris. Fungus Ear-Disease.

Mr. Lennox Browne will exhibit and demonstrate Professor Hughes' Audiometer for testing Hearing.

SECTION C. OBSTETRIC MEDICINE.

ROPER, George, M.D. The Condition of the Cervix Uteri in cases of Placenta Prævia.

SECTION D. PUBLIC MEDICINE.

THOMPSON, James, M.D. The Responsibility of Notification of Infectious Diseases.

SECTION E. PSYCHOLOGY.

WADE, W. F., F.R.C.P. On the Prevention of Suicide.

SECTION F. PHYSIOLOGY.

SIGERSON, G., M.D. The Function of certain Nerves supplying the Tongue and Soft Palate, considered in connection with the Sense of Taste.

FRANCIS FOWKE,
General Secretary of the British Medical Association.
161a, Strand, London, July 29th, 1879.

GLASGOW AND WEST OF SCOTLAND BRANCH: ANNUAL MEETING.

THIS Branch met on Thursday, June 26th, in the Rooms of the Faculty of Physicians and Surgeons, kindly lent to them. Dr. FERGUS, the President, took the chair, which he afterwards resigned to the President-elect, Dr. W. T. GAIRDNER.

President's Address.—Dr. GAIRDNER, in taking the chair, said that the first duty of his position was to express to the Branch his sense of the great honour that had been done to him, most unexpectedly on his own part, last year in electing him their President. After some remarks on the objects of the Association, he briefly thanked the members present, and said that it would be his special desire to preserve the harmonious feeling and united co-operation that had made the Glasgow and West of Scotland Branch so decidedly successful.

Two deaths had taken place during the past year among the members of the Branch, viz., Dr. Martin of Cambuslang and Dr. Robert Moffat of Glasgow. With the former gentleman, he did not happen to have been personally acquainted; but the latter was well known to him, and he could not avoid on that occasion a few words on a loss still so recent as to carry to the full the impression of sadness which always must attend the sudden close of a career that seemed just to be opening; the premature end of a life which, so far as it had gone, was pure and true and noble in its aspirations, but had only just begun to be marked by a visible success. Another death, though not of a member of the Branch, must be in the minds of most of them—for who that knew him well could forget John Coats, a man who had been for forty years or more one of the most valued and trusted of all their professional brethren, the soul of honour and of high-minded courtesy, whose truthfulness of character was so transparent that no one ever suspected him of anything unfair or unbecoming, and who had the remarkable experience of having practised his profession during all these years almost withou at break until the time of his fatal illness, and with the uniform goodwill of all his brethren as well as his patients? Yet another great loss by death had come to the whole profession quite recently, on which he might be permitted to say a few words as of the ending of an almost life-long friendship. The sudden arrest of the great and noble career of Charles Murchison, when at the height of his fame and seemingly in the full tide of his activity, was one of those events that necessarily engaged the attention of all the journals, and to them he would leave the record of that life and its work. But it was often possible for one who had favourable opportunities to bring cross-lights to bear even upon the characters that were best known to the public; and a character like Murchison's was in every respect a lesson to each one of us. His thoroughness and conscientiousenss (said Dr. Gairdner) in all that he did were, indeed, conspicuous throughout; and his professional industry was not less than marvellous, considering the fatal disease which must have to some extent impaired his bodily energy and weighed upon his spirits during at least the last seven or eight years; during which, nevertheless, some of the best of his work was done, and by far the busiest and most responsible part of his work as a consulting physician. To think that a nature like Murchison's could continue thus active up to the very moment of the sudden loosening of the silver cord, without a single week of his time (except on his annual holiday) being withdrawn from the public service, was in itself a remarkable proof of the supremacy of mind over matter. But that this was in accordance with the deliberate purpose of his later life, was shown by what occurred in 1872, when in one of those hard-earned holidays he came down to Arrochar expressly to consult two old friends then residing there about his own condition, which had only lately been revealed to his own mind as one of danger from aortic valve disease. It was impossible, of course, to deny the fact; and equally impossible to conceal from him the significance of it. No doubt, too, the shock to his nerves from the first intelligence obtained in London of the flaw in the action of that cardiac valve, the "little rift within the lute" that was to change the whole prospects of his future life, was very great; but what was particularly to be remarked was that there was never a moment of flinching, nor of cowardly abandonment of the fixed purposes and duties he had set before himself as the real objects of his life on earth. His most urgent question to Dr. Gairdner then and afterwards was, "How long can I live?" in other words, how long did medical experience lead one to believe it reasonable for one to look forward to a life of activity and usefulness? The question was a difficult one to answer, but the answer was made easier by the spirit in which the question was put; for it was evidently the expression of a desire to shape his means to his ends and to use aright the span of life remaining to him, which alone dictated the inquiry. In the same spirit, he observed and noted the most minute details of his own case, and of the observations of others upon it, as Dr. Gairdner had since his death had an opportunity of knowing through MS. notes sent by his widow. These notes, at times carried on almost from day to day, at other times with comparatively long intervals, were in all respects like those he would probably have made, with his extremely accurate habits, in any indifferent case having more than usual scientific interest to him; but they did not throw any new light upon the sudden ending. "I know that you will join me in regarding these brief revelations as interesting, bearing as they do on a character that was nothing short of heroic in its high resolve, its patient, continuous, and effective performance, and in the thorough self-forgetfulness that carried him through so much labour on behalf of science and humanity, in the face of personally disabling circumstances that would have converted many men into hopeless invalids, or even, perhaps, hypochondriacs bent only on studying their own inner sensations. In this respect, I think, the lesson for each of us from Murchison's life is worthy of this short pause in our duty here, and it is pleasing to me to pay even this inadequate homage to his memory." After some further remarks, Dr. Gairdner proceeded to the main subject of his presidential address, viz., "Alcoholic Insanity".

On the motion of Dr. FRASER (Paisley) and Mr. A. D. STEWART (Greenock), a vote of thanks was awarded to Dr. Gairdner.

Report of Council.—The Council submitted their annual report and financial statement. The report stated that the membership of the Branch was the same as at last annual meeting. It also made reference to the passing of the Habitual Drunkards' Bill, expressing a certain degree of satisfaction, but recognising that this Bill only conferred a small portion of what was really desirable, inasmuch as it gave no power for the treatment by control except in the case of persons who voluntarily submitted themselves to such control. It also suggested to the members of the Branch that they should do their best under the limited powers conferred by the Bill to demonstrate the advantages to be derived from such treatment. The report also referred to the question whether more frequent meetings of the Branch might not be held. In a subsequent discussion, it seemed to be the general feeling that at least one other meeting in the year would be desirable; but it was left to the Council to decide whether it should be held, and when. The financial statement showed that the Branch was in a very prosperous state as to funds.

Office-bearers.—The election of office-bearers was held with the following results:—*President:* W. T. Gairdner, M.D. *President-elect:* Bruce Goff, M.D. (Bothwell). *Vice-Presidents:* G. H. B. Macleod, M.D., and A. Fergus, M.D. *Honorary Secretaries:* Joseph Coats, M.D., and J. G. Lyon, M.D. *Council:* A. M. Buchanan, M.D.; G. Buchanan, M.D.; J. Grieve, Esq. (Port Glasgow); T. Lapraik, M.D.; D. Macleod, M.D. (Kilmarnock); W. J. Marshall, M.D. (Greenock); R. Renfrew, M.D.; Hugh Thomson, M.D.; D. Yellowlees, M.D.

Dinner.—The Branch afterwards dined in the Grand Hotel, where a pleasant evening was spent.

CAMBRIDGESHIRE AND HUNTINGDONSHIRE AND EAST ANGLIAN BRANCHES.

A CONJOINT meeting of these Branches was held at the Guildhall, Bury St. Edmund's, on Friday, June 27th, under the presidency of JOHN KILNER, Esq.

Preliminary meetings of each Branch specifically for the transaction of Branch business were held before the general meeting at the Suffolk General Hospital.

EAST ANGLIAN BRANCH.

Report of Council.—The following report was read.

"The Council of the East Anglian Branch, in presenting their annual report, have satisfaction in stating that the Branch continues to increase in numbers. There are now 137 members against 124 last year, and there are seven candidates for election as members, whose names will be submitted to you to-day. There are still upwards of thirty members of the Association in East Anglia who as yet are unconnected with our Branch, and there are also many members of the profession whom they would gladly welcome as members of the Association.

"The Council congratulate the Branch upon the success of the first autumnal meeting at Aldborough; and, encouraged by its success both as regards the members present and the large and valuable contribution of papers, they have made arrangements for an additional meeting in September next at Cromer, Norfolk. The Council desire to record their warm thanks to Mr. and Mrs. Newsom Garrett for the very hospitable reception given to the Association at Alde House.

"The Council recommend to the Branch that their general and individual support should be given to the Medical Act Amendment Bill (No. 2), introduced by Mr. Mills, M.P., whose object is direct representation of the profession as well as of the medical corporations upon the General Medical Council. The Council are watching with anxious care the many recommendations for improving the system of administering the system of out-patient relief in our hospitals and dispensaries which is so much needed, not only in the interest of the profession, but to maintain the self dependence of the working classes. They notice with satisfaction the success that has attended the self-supporting provident dispensaries which have been established in some few towns; they believe that, if carefully organised, they may be an efficient means of relieving the great abuse of gratuitous medical advice. In some districts of East Anglia, the Suffolk County Medical Club has attained much success. The Council feel, however, that great watchfulness must be exercised in its development, in its management, and particularly in the admission of members."

The Autumnal Meeting of the Branch was fixed for Friday, September 12th, at Cromer, Norfolk.

Representatives of the Branch in the General Council.—The following were elected: T. E. Amyot, Esq.; W. Cadge, Esq.; B. Chevallier, M.D.; G. C. Edwards, Esq.; J. Kilner, Esq.; J. B. Pitt, M.D.; R. V. Gorham, Esq.; F. Bateman, M.D.; and W. A. Elliston, M.D. (Honorary Secretary).

New Members.—The following were elected: T. A. C. McArthur, Esq. (Southwold); — Owen, Esq. (Walton); Surgeon-Major J. Sparrow, A.M.D.; C. E. Wing, Esq. (Bury St. Edmund's); H. S. Burton, Esq. (Norwich); A. A. Henley, Esq. (Woodbridge); Walter Hutchinson, Esq. (Newmarket). The following members of the Association were elected members of the East Anglian Branch: R. H. Lucas, Esq. (Bury St. Edmund's); A. C. Mayo, Esq. (Great Yarmouth); A. R. Manby, Esq. (East Rudham).

After the meetings of the Branches, the members, to the number of seventy, were entertained at luncheon in one of the large wards of the hospital by the President. After luncheon, Mr. Sutton, F.C.S., of Stourmarket, gave a demonstration of Professor Tuson's new antiseptic "sporokton", a combination of sulphurous acid and chloride of zinc.

COMBINED MEETING OF THE TWO BRANCHES.

President's Address.—The President-elect, JOHN KILNER, Esq., having been introduced by Mr. Amyot of Diss, delivered his address.

A Vote of Thanks to the President was proposed by Dr. DURRANT (Ipswich), seconded by Dr. BRADBURY (Cambridge), and carried.

The Case of Mr. Millerchip.—Dr. ANNINGSON (Cambridge) alluded to the case of Mr. Millerchip, and solicited subscriptions for the fund being raised on his behalf.

Papers.—The following papers were read:

1. Peter Eade, M.D. (Norwich): Some After-effects of Railway Injury.
2. George Kirkwood, M.D. (Peterborough): On Cases (with casts) illustrating Dental Malformations dependent on Congenital Syphilis.
3. Professor Humphry, M.D., F.R.S. (Cambridge): Tumours of the Bladder and their Treatment.
4. W. A. Elliston, M.D. (Ipswich): On Some Causes of the Mortality of Childbirth.
5. J. B. Bradbury, M.D. (Cambridge): Cases of Spasmodic Spinal Paralysis, with Remarks.
6. Charles Firth, M.B. (Norwich): Notes of Ten Cases of Completed Ovariotomy at the Norfolk and Norwich Hospital. (These cases were published in the JOURNAL of July 12th.)

Animated discussions upon the various papers were sustained by Dr. Humphry, Dr. Durrant, Dr. Eade, Mr. White (Norwich), Dr. Elliston, and Dr. Bateman.

At five o'clock, the members adjourned to the President's house, where they were entertained with afternoon tea, and subsequently visited objects of interest and the Botanical Gardens, where the band of the West Suffolk Militia played from five to six.

Dinner.—Later in the evening, many members and guests dined together at the Angel Hotel. Through the kindness of the President, the excellent band of his regiment played during dinner. The usual loyal toasts, the health of the President, and Success to the British Medical Association were eloquently given by Dr. Humphry and by Dr. Mackenzie Bacon; and thus one of the most pleasant and enjoyable meetings ever held in the district was brought to a close.

NORTH OF ENGLAND BRANCH: ANNUAL MEETING.

THE fifteenth annual meeting of this Branch was held in the Library of the Infirmary, Newcastle-upon-Tyne, on Tuesday, July 1st. There were present twenty-five members and six visitors.

Dr. BARRON, Honorary Secretary, read a letter from the retiring President, Dr. GEORGE MOORE, of Hartlepool, expressing his regret that he was unable to be present. He then introduced the new President, Dr. G. H. PHILIPSON, of Newcastle, who took the chair.

President's Address.—The PRESIDENT, after expressing his thanks for the very unusual distinction that had been bestowed upon him, in being raised from the position of Honorary Secretary to that of President of the Branch in one year, delivered a very interesting address, retrospective as to the advance of the science of medicine during the present century. Bright's recognition of albuminuria; Laennec's application of the ear to discover the normal and abnormal actions of the heart and lungs; embolism; tubercle and its relationship to phthisis pulmonalis; and sanitary science—were among the chief subjects touched upon.

Vote of Thanks to the President.—It was moved by Mr. MORGAN, seconded by Dr. FRAIN, and carried by acclamation: "That the grateful thanks of the meeting be accorded to the President for his able address, and that the address be printed and circulated amongst the members."

Vote of Thanks to the Retiring President and Officers.—It was moved by Mr. BROADBENT, seconded by Dr. DENHAM: "That the warmest thanks of the meeting be given to the retiring President, Dr. George Moore, the Council of Management, and the other officers, for their valuable services during the past year."

Election of New Members.—The following gentlemen were unanimously elected members of the Association and Branch: C. M. Douglas, M.D., Army Medical Department, Newcastle; W. O. Lambert, M.D., Sunderland; A. B. Low, M.B., Sunderland.

Report of Council.—The Council reported favourably of the position and usefulness of the Branch. During the year, seventeen new members had been elected. At the present time, the Branch consists of two hundred and forty-seven members. The Council offered its grateful thanks to the members who during the year had read papers and the records of cases.

Treasurer's Account.—The Treasurer's account showed that the receipts, including a balance of £17 16s. 1d., amounted to £62 4s. 1d. The balance, after all payments, amounted to £17 15s. 9d.

Officers for 1879-80.—Dr. STAINTHORPE proposed, Mr. HORAN seconded, and it was unanimously carried: "That the next annual meeting be held at Sunderland, the autumnal meeting at Durham, and the spring meeting at Gilsland, in conjunction with the Border Counties Branch; that G. B. Morgan, Esq., be President-elect; Dr. T. W. Barron, Honorary Secretary and Treasurer; and Drs. Gibson, Drummond, Frain, and Dixon, the Council of Management."

Representatives in the General Council of the Association.—It was moved by Mr. HAWTHORN, seconded by Mr. GAMMAGE, and carried unanimously: "That the following gentlemen be the representatives of the Branch in the General Council of the Association: H. E. Armstrong, Esq.; W. C. Arnison, M.D.; S. W. Broadbent, Esq.; W. H. Dixon, M.D.; J. W. Eastwood, M.D.; C. J. Gibb, M.D.; Charles Gibson, M.D.; G. H. Hume, M.D.; Andrew Legat, M.D.; George Moore, M.D.; G. B. Morgan, Esq.; G. H. Philipson, M.D.; and T. W. Barron, M.B., *ex officio*."

Representative in the Parliamentary Bills Committee.—Dr. EASTWOOD proposed, Mr. H. E. ARMSTRONG seconded, and it was unanimously carried: "That Dr. PHILIPSON be the representative of the Branch in the Parliamentary Bills Committee of the Association."

Vote of Thanks to the House Committee and Medical Board of the Newcastle Infirmary.—On the motion of the PRESIDENT, it was resolved: "That the grateful thanks of the meeting be accorded to the House Committee and to the Medical Board of the Newcastle-on-Tyne Infirmary, for their kindness in granting the use of the library for the purposes of the meeting."

Dinner.—The dinner took place at the Douglas Hotel. The President occupied the chair, and Dr. Barron the vice-chair. Among the guests present were the Mayor of Newcastle (Mr. Alderman Robinson), the Sheriff of Newcastle (Mr. J. G. Youll), and the Vicar of Newcastle (the Rev. Canon Martin).

BATH AND BRISTOL BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Bristol Museum and Library, on Thursday, June 26th; Dr. HENSLEY, President, in the Chair. There were present sixty-six members and one visitor.

New Members.—The following gentlemen were elected members of the General Association and of this Branch: F. B. Logan, M.R.C.S., Bristol; E. Field, L.R.C.P., Bath; J. M. Kirkman, M.R.C.S., Wotton Bassett. Thomas Webster, L.R.C.P., was elected a member of this Branch.

The Days of Meeting.—Mr. BOARD read letters from members and other medical men at Weston-super-Mare, asking that the date of the ordinary meetings of the Branch should be again altered from Thursday to Wednesday. This question was referred to the Council, on the proposition of Mr. ROSSITER, seconded by Mr. DOBSON.

President's Address. — Dr. HENSLEY resigned the Chair to Dr. BEDDOE, President-elect, who read an address on the Progress of Public Health.

It was proposed by Dr. SPENDER, and seconded by Dr. DAVEY—"That the thanks of the meeting be offered to Dr. Beddoe for his very able and interesting address." This was carried unanimously.

Report of Council.—Mr. BOARD, Honorary Secretary for Bristol, read the following report.

"Your Council reports with much satisfaction that the Branch continues in a flourishing condition; and, notwithstanding the losses that it has unavoidably sustained during the past year, the list of its members continues to increase. At our last annual meeting, our numbers were 217; they are now 218. Fourteen new members have been added to the Branch during the past session, including those elected to-day.

"Death has deprived us of seven of our members: Mr. Green, Mr. Burroughs, Mr. J. James, Mr. T. H. W. Davies, Mr. A. Smith, Mr. W. Y. Sheppard, and Mr. Tibbits. These are grievous and heavy losses, quite unprecedented in the annals of the Branch; and there are few among us who do not claim one of those gone as a friend or colleague. Mr. Green was a very old member of our Council, and one who formerly gave us many interesting papers and joined much in the discussions. For many years a member of the Infirmary staff, he was beloved by all for his kind and genial manners, and was a staunch conservative in surgery. Mr. Burroughs was one of the oldest medical men in Clifton, and practised here till within a few weeks of his death. Few except those intimately connected with him know how grievous his loss was to the poor around him, to whom he was ever ready and willing to give professional help. Both he and Mr. Green sat for many years on the Bristol Town Council, forming a valuable link between the medical profession and the municipal authority. By the death of Mr. Tibbits, the staff of the infirmary and the faculty of the medical school lost a most earnest and valuable officer. Enthusiastic in his love for his profession, he was most thorough and painstaking in the practice of it, and gave every promise of a brilliant career as an operating surgeon. Mr. James was senior surgeon at the Children's Hospital, to which he devoted a large amount of his time and attention. In addition, four gentlemen have resigned membership and two have left the neighbourhood, making altogether a loss of thirteen.

"Eight papers have been read and fully discussed during the session; viz.: Alcoholic Drinks in Health and Disease, by Dr. Beddoe; Observations on Dysentery, by Dr. Fyffe; Notes on a Case of Ascites, with Recovery, by Dr. Siddall; Are First Labours more dangerous than others? by Dr. Swayne; A Year's Experience in Gall-Stones, by Dr. Cole; Common Errors in Gynæcology, by Dr. Aust Lawrence; The best Mode of Tapping for Ascites, by Mr. Michell Clarke; and Notes on Cases of Ovariotomy, by Mr. Dobson. Two meetings have been devoted to the discussion of special subjects: that of December 12th, on Alcoholic Drinks in Health and Disease, introduced by Dr. Beddoe; and that of May 29th, on the Treatment of the Various Forms of Pleuritic Effusion, by Dr. E. Markham Skerritt. The large attendance on these occasions, and the amount of interesting and valuable discussion provoked, encourage your Council to recommend that the practice of setting apart for this purpose two evenings in each session be continued.

"The financial condition of the Branch is so far satisfactory that there is a balance in hand of £9 17s. 7d. Your Council recommend that a donation of three guineas be given to the Medical Benevolent Fund.

"The scrutineers report that the following gentlemen have been elected members of the several Councils:—For *Bath:* J. S. Bartrum, Esq.; R. W. Falconer, M.D.; C. Harper, Esq.; F. Mason, Esq. For *Bristol:* H. Marshall, M.D.; A. Prichard, Esq.; J. G. Swayne, M.D.; C. Steele, Esq. Dr. Burder and Dr. Spencer were found to have an equal number of votes; it is, therefore, necessary that a ballot be taken at this meeting."

A ballot was now taken, and Dr. Burder was declared elected.

It was proposed by Mr. CHADWICK, seconded by Dr. ANDREWS—"That this report be received."

President-elect.—It was proposed by Mr. MASON and seconded by Dr. BRITTAN—"That A. Waugh, Esq., be President-elect." This was carried by acclamation.

Vote of Thanks to Ex-President.—It was proposed by Dr. FYFFE, seconded by Mr. STEELE, and carried unanimously—"That the best thanks are due and are hereby tendered to Dr. Hensley for his able conduct in the Chair during the past year."

Secretaries.—Mr. W. M. CLARKE proposed, Mr. BARTRUM seconded, and it was resolved—"That the thanks of the Branch are due to the Secretaries for their services during the past year, and that they be requested to continue in office."

Invitation from the Gloucestershire Branch.—Mr. FOWLER read an invitation from the Gloucestershire Branch to meet the members of this Branch at a place and time to be arranged. It was referred to a Committee consisting of the President and Secretaries.

Representatives in the General Council.—The following gentlemen were elected to serve as representatives in the General Council of the Association: J. S. Bartrum, Esq.; F. Brittan, M.D.; E. L. Fox, M.D.; A. J. Harrison, M.B.; H. Hensley, M.D.; H. Marshall, M.D.; F. Mason, Esq.; A. Prichard, Esq.; C. Steele, Esq.; and A. Waugh, Esq.

METROPOLITAN COUNTIES BRANCH: ANNUAL MEETING.

THE twenty-seventh annual meeting of this Branch was held at the Ship Hotel, Greenwich, on Friday, July 25th, at 4 P.M. In the absence of the President, Dr. ANDREW CLARK, the Chair was taken by the President-elect, JOHN WOOD, Esq., F.R.S.

Report of Council.—Dr. HENRY, Honorary Secretary, read the following report.

"The Council of the Metropolitan Counties Branch, in presenting the twenty-seventh annual report, have very great pleasure in being able to state that the condition of the Branch, as regards both numerical strength and usefulness, has during the past year been highly satisfactory. At the last annual meeting, the number of members on the list was 617. Since that time, ten have died; nine have been removed in consequence of resignation, and two on account of not paying their subscriptions. On the other hand, there has been an addition—unequalled in any previous year—of 223 members, making the total number at present 819.

"The list of those who have died includes the names of Mr. E. H. Ambler, of Hemel Hempstead, a worthy representative of the class of country practitioners; Dr. Tilbury Fox; Mr. John Hilton; Mr. Henry Johnson, of Lambeth; Mr. William Martin; Dr. Charles Murchison; Mr. R. R. Mathewson, of Belvedere, Kent; Mr. G. W. Nichol, of Rotherhithe; and Dr. C. R. Nicoll.

"Your Council sympathise deeply with the profession in their expressions of regret at the premature loss of Dr. Tilbury Fox and Dr. Charles Murchison. Dr. Fox will be remembered not only as an able and scientific practitioner and an honourable man, but as one who did much to raise the professional position of that special department of practice which he followed. Dr. Murchison will survive in the memory of all who knew him as an excellent clinical teacher, a sagacious and successful practitioner, an author of works of the highest value in medicine, and in every respect a bright ornament of his profession.

"Mr. John Hilton, the late eminent surgeon of Guy's Hospital, had done much good work in his time; and his memory is held in venera-

tion by all who had the privilege of being his pupils or otherwise knowing him. He presided over the Section of Surgery at the annual meeting of the Association in London in 1873.

"In the death of Dr. C. R. Nicoll, your Council have had to lament the loss of a much esteemed member of their body. From the time of his election in 1877, Dr. Nicoll was one of the most regular attendants at the meetings of the Council, and his absence on recent occasions has been a cause of much regret.

"Your Council cannot leave the subject of the losses sustained by the Branch without paying a tribute of respect to the memory of an old and faithful officer of the Branch, Dr. Thomas Ogier Ward, who has died during the present year. Dr. Ward was one of the founders of the Branch; and, on its establishment at the end of 1852, he was appointed Honorary Secretary. He performed the duties of this office with exemplary honesty of purpose and unwearied industry until 1859, when he retired in consequence of leaving London.

"During the present year, the experiment of forming Districts of the Branch has been tried and has been highly successful. Three districts have as yet been organised: the East London and South Essex; the North London; and the South London. In each of these districts, several monthly meetings have been held, which have been well attended, and at which a number of valuable papers have been read and discussed. The meetings for the formation of these district societies were, in the unavoidable absence of the President, ably presided over by the President-elect, Mr. Wood. Your President took the chair at several of the earlier district meetings; and the Council desire to record their sincere thanks to him and to the President-elect for the active interest manifested by them in these undertakings, which has without doubt had much influence in their success. Thanks are also eminently due to those gentlemen who have kindly acted as honorary local secretaries—Dr. Alexander Grant, Dr. Dowse, and Mr. Nelson Hardy—for the zeal and ability with which they have conducted the business of the district meetings. Your Council trust that districts may soon be organised in other parts of the area of this large Branch.

"The only subject that has been brought before the Branch in general meeting has been that of Medical Education, with special reference to the General Practitioner of Medicine. A discussion on this subject was opened by your President at a meeting held on June 25th, and the debate was resumed at an adjourned meeting on July 16th. At the former of these meetings, a Committee was appointed to collect information on certain points from teachers in the medical schools of England, as well as from members of the Branch. A large number of replies to the questions issued have been received; and the Committee hope to be able to lay a report, founded on them, before a meeting of the Branch early in the ensuing session. The large attendance of members at the meetings, the valuable remarks made in the course of the discussion by eminent teachers and by general practitioners, and the large number of replies to the questions put by the Committee, all indicate that the subject of medical education is regarded as one of paramount interest, and, your Council think, fully justify them in the course which they took of causing it to be discussed. The thanks of the Branch are due to several gentlemen who, not being members, accepted the invitation to attend the meetings, and offered some valuable remarks; and especially to Professor Huxley, who, at the invitation of your President, kindly attended on the last occasion, and favoured the members present with a clear exposition of his views on medical education, to which subject he has devoted much earnest attention.

"The opinion of your Council has been asked on the part of the Committee of Council with respect to certain proposals for improving the relations between that body and the Branches of the Association. After due consideration, your Council approved of the proposals submitted to them, which were as follows.

"1. 'That it is advisable that power be given to each Branch, if it see fit, to send to the Committee of Council, instead of the Honorary Secretary, a representative of the Branch to be elected annually in general meeting.

"2. 'That it is advisable that a meeting of the General Council of the Association be held every year in May or June.'

"To these the Council added the following recommendation.

"'That it be a recommendation to the Committee of Council that the payment of the travelling expenses of the representatives of Branches who attend the meeting of the Committee of Council held next before the annual meeting of the Association shall be arranged for by the Committee of Council.'

"It has, however, been decided by the Committee of Council to take no further steps in the matter at present.

"The attention of your Council has been called to certain practices on the part of some members of the profession, which have been represented to them as deserving of blame. They accordingly took the matter into serious consideration, and agreed on the following resolutions.

"'1. That, in the opinion of this Council, the so-called 'Provident Dispensaries' kept by private members of the profession as an apparent means of gaining practice are degrading to the profession and injurious to the public; and that persons keeping such dispensaries are not worthy of the membership of this Branch.

"'2. That this Council disapproves of the practice, on the part of medical men, of keeping open shops for the sale of articles other than the medicines required in the treatment of their patients.'

"Regarding these resolutions, a few words of explanation may be necessary.

"The first resolution does not aim at the condemnation of those most useful institutions ordinarily known as provident dispensaries, which are managed by properly constituted committees, and in which the members pay periodical contributions during health for the purpose of ensuring medical attendance to themselves and their families during sickness. Its object is to express disapprobation of the conduct of certain medical men who—the Council are credibly informed—call their individual private establishments 'provident dispensaries' as an apparent means of attracting the public. In such institutions, there is not only an absence of the essential features of the true provident dispensary, but they tend to encourage those habits of improvidence and neglect which it is the object of the genuine provident dispensary to remedy.

"With regard to the second resolution, on the keeping of open shops, your Council wish it to be distinctly understood that they do not include open surgeries in their condemnation. In many—especially poor—localities, the open surgery is a necessity and a convenience alike to the practitioner and to his patients. But your Council most emphatically disapprove of medical men keeping shops in which are sold such things as patent medicines, tooth-brushes, and other articles which find a legitimate place in the druggist's shop. Those who keep such establishments compromise the dignity of their profession; and their conduct is unjust towards the tradesman, whose encroachment on the functions of the practitioner of medicine is regarded as improper.

"A memorial of the medical practitioners of Liverpool, protesting against the obligation of hospital medical officers to give evidence at coroners' inquests without fee, and praying that the necessary amendment be made in the Coroners' Bill before Parliament, was laid before your Council; who unanimously decided to support the prayer thereof.

"Your Council rejoice in being able to announce that the Bill for the Care and Treatment of Habitual Drunkards has received the Royal assent, and become the law of the land. Although the scope of this measure is more limited than was the original design of its promoters, your Council believe that it will be the means of effecting much good; and they heartily congratulate Dr. Cameron, M.P. for Glasgow, Mr. Stephen Alford, the Subcommittee of this Branch, and all who have laboured for the desirable object of rescuing the unhappy victims of habitual drunkenness, on the success which has so far attended their endeavours.

"In examining the claims of the large number of members of the Association who have sought admission into the Branch—and of whom the great majority have been enrolled in our list—your Council have had forced on their attention the necessity of a careful investigation of the professional character of each applicant. They have therefore decided to submit for your approval an amendment of the second law of the Branch.

"Your Council have issued voting-papers for the election of officers and members of Council of the Branch, and representatives of the Branch in the General Council of the Association. The result is shown in the subjoined list. *President*, John Wood, Esq., F.R.S.; *President-elect*, S. O. Habershon, M.D.; *Vice-Presidents*, Septimus W. Sibley, Esq., Charles Drage, M.D., Andrew Clark, M.D., A. P. Stewart, M.D.; *Treasurer*, Walter Dickson, M.D.; *Secretaries*, Alexander Henry, M.D., William Chapman Grigg, M.D.; *Ordinary Members of Council* (the names to which an asterisk is prefixed are those of members nominated in place of nine who retire, and of Dr. Nicoll, deceased), *William Allingham, Esq., F. A. Best, Esq., *W. H. Brace, M.D., G. D. Brown, Esq., *Charles Davidson, Esq., George Eastes, M.B., C. Hilton Fagge, M.D., *Robert Farquharson, M.D., *Henry I. Fotherby, M.D., *Cornelius B. Fox, M.D., Ernest Hart, Esq., *Jonathan Hutchinson, Esq., *Thomas Morton, M.D., William M. Ord, M.D., Frederick T. Roberts, M.D., Edwin Saunders, Esq., *E. Hart Vinen, M.D., Alfred Walker, M.D.; *Representatives of the Branch in the General Council*, Robert Barnes, M.D., W. C. Begley, M.D., John S. Bristowe, M.D., W. H. Broadbent, M.D., John C. Bucknill, M.D., F.R.S., G. W. Callender, Esq., F.R.S., Andrew Clark, M.D., T. B. Curling, Esq., F.R.S., C. Davidson, Esq., Walter Dickson, M.D., T. S. Dowse, M.D., C. Drage, M.D., Arthur E. Durham, Esq., R. Farquharson, M.D.,

Stamford Felce, M.R.C.P.Ed., John Goodchild, Esq., W. R. Gowers, M.D., Alexander Grant, M.D., H. Nelson Hardy, Esq., Ernest Hart, Esq., Christopher Heath, Esq., Alexander Henry, M.D., Berkeley Hill, Esq., T. Holmes, Esq., Jonathan Hutchinson, Esq., Sir W. Jenner, K.C.B., M.D., Norman Kerr, M.D., W. Mac Cormac, Esq., Henry Power, Esq., R. Quain, M.D., F.R.S., W. Rivington, Esq., F. T. Roberts, M.D., Joseph Rogers, M.D., S. W. Sibley, Esq., E. H. Sieveking, M.D., A. P. Stewart, M.D., Allen Thomson, M.D., F.R.S., C. M. Tidy, M.B., E. H. Vinen, M.D., A. Wiltshire, M.D.

"Your Council congratulate the Branch on the fact that the retiring President, Dr. Andrew Clark, has been chosen for the important and honourable duty of presiding over the Section of Medicine at the forthcoming annual meeting of the British Medical Association.

"In conclusion, your Council congratulate the Branch on the unprecedented stage of prosperity which it has attained, and on the amount of useful energy which it has displayed during the past year. In returning into your hands the trust committed to them, they feel assured that a still brighter future of prosperity and usefulness lies before the Branch, and that the eminence of its members and its increasing strength of numbers will both seek and find full employment in aiding the advancement of medical science, in maintaining the honour of the profession, and in promoting all measures calculated to alleviate human suffering and increase the welfare of mankind."

On the proposal of Dr. BEGLEY, it was resolved :

"That the report of Council now read be received, adopted, and entered on the minutes."

Treasurer's Account.—Dr. WALTER DICKSON, Treasurer, presented the financial statement. The income—including a balance in hand of £22 18s. 3d. at the annual meeting in 1878—amounted to £108 8s. 3d.; and the expenditure to £76 16s. 7d.; leaving a balance of £31 11s. 8d.

Mr. GANT proposed, and it was resolved :

"That the Treasurer's report now read be received, adopted, and entered on the minutes."

Vote of Thanks to the ex-President.—Dr. STEWART proposed :

"That the cordial thanks of the Branch be given to Dr. Andrew Clark for the able and courteous manner in which he has performed the duties of President during the past year; for the deep interest in the prosperity of the Branch which he has at all times shown; and for the most valuable aid which he has given in all endeavours to increase the usefulness of the Branch both to the profession and to the public."

He said that every member of the Branch would readily endorse every word of the resolution. All who had attended the meetings on medical education could testify to the admirable manner in which Dr. Clark had filled the chair. The Branch had derived honour from his presidency, quite as much as he had been honoured by being called on to fill the office of president. The Branch had had many very good presidents; but none had thrown their heart into the work more thoroughly than Dr. Clark had done. Referring to the concluding words of the resolution, Dr. Stewart said that there was no antagonism of interest between the medical profession and the public. That which promoted the welfare of the one promoted that of the other; and he wished that the fact was more generally recognised.

Dr. F. T. ROBERTS seconded the motion, which was carried unanimously.

Alteration of By-law.—Dr. HENRY proposed, Dr. BEGLEY seconded, and it was resolved, that the second By-law of the Branch be altered as follows :

"Any member of the British Medical Association residing within the area of the Branch, who is not disqualified by any by-law or resolution of the Association or of the Branch, may be admitted a member either (*a*) by the Council of the Branch, (*b*) by the votes of the members present at a general meeting of the Branch, or (*c*) at a meeting of a District Society; the admission in the last case being subject to confirmation by the Council of the Branch. Every member of the Association desiring to become a member of the Branch must signify his wish in writing to one of the Secretaries of the Branch or to a District Secretary, and must be recommended as eligible by at least two members of the Branch to whom he is personally known."

President's Address.—Mr. JOHN WOOD then delivered, as President, an address on Medical Education. It is published at page 162.

Mr. MACNAMARA moved, Dr. SEATON seconded, and it was unanimously resolved :

"That the best thanks of the Branch be given to Mr. Wood for his able address."

The Murchison Memorial.—A letter from the Secretaries to the Murchison Memorial Fund was read. The President recommended the matter to the favourable consideration of the members of the Branch.

Dinner.—The members afterwards dined together; John Wood, Esq., in the chair.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL APPOINTMENT.

HILL, Frederick A., M.D., appointed Medical Officer to the Out-door Poor in the Kilburn District, St. John's Parish, Hampstead, *vice* Thomas Morton, M.D., resigned.

PUBLIC HEALTH MEDICAL APPOINTMENT.

THOMSON, W., M.D., re-elected Medical Officer of Health for the Peterborough Rural Sanitary District.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Monday, July 28th.

Vaccination Prosecutions.—In reply to Mr. Serjeant Simon, Mr. SCLATER-BOOTH said : I am aware that proceedings have been taken lately against a large number of persons in the Dewsbury Union for neglecting to cause their children to be vaccinated, and I fear they may have been encouraged in that course by those who are entrusted with the administration of the law. Proceedings are taken under three heads—first, for a penalty for neglect to have the child vaccinated; second, there may be a summons to show cause why an order should not be made for the vaccination; and, third, there may be a summons for a penalty for non-compliance with the order. The vaccination officer has written to me, stating that in no single instance has he taken proceedings under the third head against a defaulter previously convicted under the first. That being so, his conduct has not been contrary to the instructions of the Local Government Board, nor to the spirit of the letter to the Evesham Guardians. No doubt, it is contrary to the resolution of the Dewsbury Guardians; but that resolution, as they have been informed, is illegal, and, in fact, a nullity. There seems to me no ground for putting an end to the system of payment of the vaccination officer by fees, which has been generally adopted and works well; nor is it found to encourage prosecutions. The fees are not regulated by the number of prosecutions, but by the number of cases of successful vaccination.

OBITUARY.

JOHN TREHARNE, M.B., B.Sc., F.C.S.

JOHN TREHARNE, who was born in 1847, died at Bournemouth on June 20th, at the age of thirty-two. He first studied at Glasgow University, where he took a medal in forensic medicine and several certificates of honour. He acted as assistant to the Pathologist at the Glasgow Royal Infirmary in 1871-72. He then proceeded to Edinburgh, where he graduated in 1873 as M.B. and C.M. Soon afterwards, he entered upon practice at Shipley, in Yorkshire, and was appointed medical officer of health for two districts. But, his health becoming impaired, he gave up general practice, and decided on devoting his attention to sanitary science. In 1877, he proceeded once more to Edinburgh, where he studied the various subjects required for the degree of Bachelor of Science in Public Health, which he received in April 1878. He worked assiduously in the chemical laboratory during the following summer; but his state of health obliged him to relinquish work, and he went on the continent for a time. In the autumn, he came to London, where he suffered for some time from severe pneumonia, which left one lung much injured. He was advised to reside at Bournemouth; but the change did not act beneficially as was expected, and he died of phthisis.

ANONYMOUS MUNIFICENCE.—At the recent meeting of the governors of the Chelsea Hospital for Women, the Earl of St. Germans (the President) received, at the hands of the Rev. Canon Fleming (one of the board of management), an anonymous donation of £1,000 towards providing furniture for the new hospital. In the spirit of true charity, it is given on the express condition "that no name is mentioned", it being simply acknowledged as "from a friend, per Rev. Canon Fleming". We know not which to admire the more : the munificence of the gift, or the manner of bestowment.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in anatomy and physiology, at a meeting of the Board of Examiners, on July 17th; and, when eligible, will be admitted to the pass examination.

Messrs. Maurice Gepp, J. S. S. Summer, W. S. Battiss, J. A. Hooker, and Joseph Bott (Students of the London Hospital); E. T. Power, A. T. G. Heath, J. A. P. Smith, Robert Beswick, and L. K Smith (of St. Bartholomew's Hospital); Howard Harris, A. H. Leech, and H. R. Mosse (of the Charing Cross Hospital); G. R. Butler (of St. Thomas's Hospital); A. D. Wilcocks (of King's College); and F. J. Lilly (of St. George's Hospital).

Seventy-two candidates out of the two hundred and one examined, having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for three months, including twenty-two who had an additional three months. With this meeting, the primary examinations for the present session were brought to a close.—The name of Mr. St. Clair Thomson, of King's College, was accidentally omitted in the list of July 12th, as having passed his primary examination on that day.

The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on July 21st.

Bowman, H. T., M.B.Durham, Newcastle-upon-Tyne (St. Bartholomew's Hospital and Newcastle-upon-Tyne School)
Davidson, John, L.S.A., Kilburn (King's College)
Dodd J. R., M.B.Durham, Newcastle-upon-Tyne (St. Bartholomew's Hospital and the Newcastle-upon-Tyne School)
Havens, E. J., L.S.A., Colchester (London Hospital)
Manners, Arthur, Hull (Manchester School)
Marsden, J. C., L.S.A., Madras (University College)
Martin, E. F., M.D.Edinb., Weston-super-Mare (Edinburgh School)
Pegler, Louis W. H., M.B.Edinb., Colchester (Edinburgh School)
Smith, E. B., M.B.Aberd., John Street, W. (St. George's Hospital)
Sprott, W. J., M.D.Queen's Univ., Irel., Dromore, co. Down (Belfast School)
Webb, C. A., L.S.A., Drighlington, Yorkshire (St. George's Hospital)

Thirteen candidates were rejected.

The following gentlemen passed on July 22nd.

Cowen, W. A. D., L.R.C.P.Ed., Gosport, Hants (St. Thomas's Hospital)
Dale, B. H., Scarborough (Bristol School)
Dales, William, Sheffield (Sheffield School)
Foster, William, B.A.Cantab. (Leeds School)
Frakes, H. S., Manchester (Manchester School)
Grace, W. G., L.R.C.P.Ed., Acton (Bristol School)
Hamilton, S. G., Queen Anne's Mansions, W. (St. George's Hospital)
Harbord, E. A., Wainfleet, Lincolnshire (Birmingham School)
Hodgson, John, Oldham (Manchester School)
Lewis, J. G. S., L.S.A., Ealing (Guy's Hospital)
Maile, C. E. D., L.R.C.P.Ed., Faversham (St. Thomas's Hospital)
Mellor, Thomas, L.S.A., Bury (Manchester School)
Milne, J. K., Manchester (Manchester School)
Payne, Henry, Bolton (Manchester School)
Peck, F. S., Clifton (Bristol School)
Porter, T. M., Liverpool (Liverpool School)
Smith, H. S., Axbridge (Bristol School)
Teskey, Luke, M.B.Toronto, Toronto (London Hospital)
Whitehouse, John, Smethwick (Birmingham School)

Ten candidates were rejected.

The following gentlemen passed on July 23rd.

Ballance, C. A., Lower Clapton (St. Thomas's Hospital)
Bennett, F. J., George Street, W. (St. George's Hospital)
Booth, T. C., Stalybridge (Manchester School)
Challinor, S. McM., Bolton (Manchester School)
Dimmock, H. P., Chelsea (St. George's Hospital)
Fisher, F.C., Cadogan Place (St. George's Hospital)
Flanagan, H. E. B., L.S.A., Woolwich (Guy's Hospital)
Goodridge, E. W. G., Child Oakford, Dorset (St. Thomas's Hospital)
Ho Kai, M.B.Aberd., Hong Kong (St. Thomas's Hospital)
Holland, E. W., Bath (St. Thomas's Hospital)
Huxley, F. E., Birmingham (Westminster Hospital)
Maitland, C. B., Haymarket (St. George's Hospital)
Pritchard, S. E., L.S.A., Beaumaris (London Hospital)
Warburton, Arthur, Crewe, Cheshire (University College)

Nine candidates were rejected.

The following gentlemen passed on July 24th.

Crew, W. T., Macclesfield (Guy's Hospital)
Davies, R. T. E., Aberavon, Glamorganshire (University College)
Deane, A. D., Henley-on-Thames (Guy's Hospital)
Dickinson, T. E., Sloane Street (St. George's Hospital)
Falla, Walter, Jersey (University College)
Hassan, Syed, L.R.C.P.Lond, Bedford Place (Bengal School)
Hine, J. E., Draycott, Derbyshire (University College)
Ingledew, George, Girdlers Road, W. (University College)
Kirsopp, Thomas, L.S.A., Hexham, Northumberland (St. Bartholomew's Hospital)
McDonnell, Denis, Pentonville (King's College)
Shaw, John, L.S.A., York Road, S.E. (St. Thomas's Hospital)
Shears, C. H. B., Norwood (St. Bartholomew's Hospital)
Shield, A. M., Gilfach, near Narberth (St. George's Hospital)
Skinner, B. M., Gloucester Crescent, W. (St. George's Hospital)
Steele, W. C., Dorchester (St. Bartholomew's Hospital)
Webb, J. G., St. George's Road (St. George's Hospital)

Seven candidates were rejected.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 24th, 1879.

Butterworth, John Tingle, Mosely, Birmingham
Henderson, Cecil, Pembridge Road, Clifton
Parsons, Herbert Flower, Frome, Somersetshire

The following gentlemen also on the same day passed their primary professional examination.

Barnes, Walter Stanley, University College
Currah, George Ingersoll, Guy's Hospital
East, Frederick William, London Hospital
Taylor, Thomas Percy, St. Bartholomew's Hospital
Tucker, Joseph, St. Mary's Hospital
Wilson, Henry Clark, London Hospital

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BRIGHTON AND HOVE DISPENSARY—Resident House-Surgeon at the Western Branch. Salary, £140 per annum, with furnished apartments, coals, gas, and attendance. Diplomas and testimonials to be sent to the Chairman on or before Monday, August 4th.

CARRICK-ON-SUIR UNION—Medical Officer for Piltown Dispensary District, at a salary of £100 per annum, and £20 per annum as Sanitary Officer, together with Registration and Vaccination Fees. Election on the 14th instant.

*CHILDREN'S HOSPITAL, Birmingham—Assistant Resident Surgeon. Salary, £40 per annum, with board, lodging, and washing. Applications to the Honorary Secretary.

CITY AND COUNTY LUNATIC ASYLUM, near Bristol. Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before the 20th instant.

GRANARD UNION—Medical Officer for Finnea Dispensary District, at a salary of £100 per annum; £14 as Sanitary Officer; Registration and Vaccination Fees. Age of candidates not to exceed 40 years. Election on 5th instant.

*HOSPITAL FOR WOMEN, Soho Square—Surgeon-Dentist. Applications to the Secretary, on or before August 6th.

*HULL GENERAL INFIRMARY—House-Surgeon. Salary, £105 per annum, with board and furnished apartments. Applications on or before August 6th.

*LEEDS AMALGAMATED FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION—Assistant Medical Officer. Salary, £120 per annum. Applications on or before August 2nd.

*LINCOLN COUNTY HOSPITAL—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to be made on or before August 11th.

*NORTHAMPTON GENERAL INFIRMARY—Physician. Applications not later than the 26th instant.

PARISH OF ST. JOHN'S, Hampstead—Medical Officer of Health. Salary, £125 per annum. Applications on or before September 1st.

*ST. MARYLEBONE GENERAL DISPENSARY—Obstetric Physician; also, Third Honorary Physician. Applications on or before the 5th instant.

*SHEFFIELD GENERAL INFIRMARY—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on or before August 16th.

*SUSSEX COUNTY HOSPITAL—House-Surgeon. Salary, £80 and £10 a year from each Resident Pupil. Applications on or before August 13th.

*TOWNSHIP OF MANCHESTER—Resident Assistant Medical Officer for the Workhouse. Salary, £140, with furnished apartments, fire, washing, etc. Applications not later than August 2nd.

WESTERN OPHTHALMIC HOSPITAL—Clinical Assistant. Applications to the Secretary on or before August 2nd.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

PHILLIPS.—On July 29th, at Broadwater House, Southend, Essex, the wife of Edward E. Phillips, L.R.C.P., M.R.C.S., of a daughter.

WHITLING.—On July 25th, at Croydon, the wife of H. Townsend Whitling, M.R.C.S.Eng., of a daughter.

MARRIAGE.

GREEN—FOX.—On July 24th, at the Friends' Meeting House, Holloway, T. Henry Green, M.D., of 74, Wimpole Street, London, to Charlotte Maria, daughter of the late Samuel Lindoe Fox, and step-daughter of Philip Debell Tuckett, of Southwood Lawn, Highgate.

DEATH.

*CARR, Charles, M.R.C.S.Eng., at Newcastle-upon-Tyne, on July 18th.

BEQUESTS.—Mr. George H. Fletcher, formerly of Liverpool, and lately of Carshalton, has bequeathed £500 each to the Birkenhead Borough Hospital, the Liverpool Royal Infirmary, the Liverpool Northern Hospital, and the Liverpool Southern Hospital.—Mrs. Amelia Idle, late of Shopwyke, Oving, Sussex, has left £1,000 to the West Surrey, East Hampshire, and Chichester Infirmary and Dispensary.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu., 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S.. 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

LARGE GALL-STONE PASSED PER ANUM.

SIR,—I anticipated seeing the diagnosis of Mr. C. H. Roberts in the JOURNAL of July 19th, page 116, challenged in this week's impression. Was it not an enterolith that was extracted *per anum*, similar to M. Foca's case, only smaller, referred to, in company with several others, in Section 882-3 of the *Medical Digest*?

July 26th, 1879. M.D.

SIR,—Can any of your readers tell me anything about the medical school established at Oxford by the Jews during the reign of William the Conqueror?—Yours faithfully,

Sheffield, July 1879 ARTHUR JACKSON.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE MURCHISON MEMORIAL.

THE following additional subscriptions have been received.

	£	s.	d.
The Earl of Derby	10	10	0
Septimus Sibley, Esq.	5	0	0
William Bowman, Esq., F.R.S.	10	10	0
Dr. Felix Semon	1	1	0
Dr. Gavin Milroy	1	1	0
Mrs. E. Garrett Anderson, M.D.	1	1	0
J. M. Burton, Esq., Lee	2	2	0
Dr. Slight	3	3	0
Dr. Joseph Walker	2	2	0
Dr. Albert J. Bernays	3	3	0
Dr. Wardell, Tunbridge Wells	1	1	0
Lennox Browne, Esq.	1	1	0
Dr. Clifford Allbutt, Leeds	1	1	0
Rev. H. Arnott, F.R.C.S.	2	2	0
Sir James Paget, Bart.	2	2	0
Dr. T. J. Maclagan	1	1	0
Dr. Boyd	2	2	0
Dr. Jackson, Frant	1	1	0
Dr. J. C. Workman, Teignmouth	1	1	0
James Dixon, Esq., F.R.C.S.	2	2	0
Dr. Bastian, F.R.S.	2	2	0
Dr. Frederick Weber	2	2	0
Spencer Watson, Esq.	1	1	0
Dr. Braidwood, Birkenhead	2	2	0
Edgcombe Venning, Esq.	1	1	0
Dr. Broadbent	3	3	0
P. H. McKellar, Esq.	1	1	0
Dr. Guy, F.R.S.	1	1	0
Sir Wm. Jenner, Bart., K.C.B.	5	5	0
J. Stitt Heslop, Esq.	2	2	0
Dr. George Johnson, F.R.S.	2	2	0
Dr. Wane	2	2	0
Dr. Hall, Brighton	2	2	0
Dr. Adey, St. Leonard's	2	2	0
George Critchett, Esq.	2	2	0
Dr. W. O. Markham	1	1	0
Dr. Wilks, Torquay	1	1	0
An Old Patient (per Dr. Ralfe)	5	5	0
Dr. Frederick Roberts	2	2	0

DR. ELLIOT (Carlisle) is thanked for his contribution to the literature of hydrophobia.

DR. LAIDLAW.—The enclosure shall have attention.

PROFESSIONAL ETIQUETTE.

SIR,—Not the least advantage of the British Medical Association seems to me to consist in the growing practice of making the editor a kind of referee for doubtful cases of professional ethics. I should like an opinion on the following.

A. is suddenly called to a case of labour, with the intimation that B. has been engaged and sent for; but that matters are progressing so fast that no time is to be lost, B. living some way off. A. goes at once; and after about an hour, concludes a case of twins. Being again sent for late, on account of after-pains, he then finds that B. arrived after he left; and subsequently he receives a note from B., who is a complete stranger to him, thanking him for his promptitude in attending his old patient, and expressing his intention of taking the case on.

The view I am inclined to take of the matter is this: either it is a matter entirely between A. and the patient, B. being a stranger to him, save in name, and not having sent the patient to him to stop a gap, in which case A. should send in his charge to the patient; or B. should have called on A. and offered him the fee. But I ask for an opinion, and am open to conviction. Of course, in the case of friends mutually obliging each other, the case is different. I may say that it is my practice invariably to offer the fee to any one who takes a case for me.—I am, etc.,

July 1879. M.B., M.A.

*** Whether "friend" or "stranger", it is the proper and usual practice for A., under such circumstances, to regard himself purely as *locum tenens* for the practitioner originally engaged, and at once to withdraw when that practitioner arrives This is a professional and not a personal courtesy, and is independent of private relations. A. has no claims upon either the patient or upon B. under such circumstances. B. may think it right to divide the fee, and usually does, unless opportunities of reciprocating the fee are likely to occur; but no claim can arise.

VACUUS.—Under such circumstances, we see no reason whatever why an adequate charge should not be made against the estate.

THE TREATMENT OF METRORRHAGIA.

SIR,—If Dr. Henry Bennet will take the trouble to re-read my report with reference to the discussion on the treatment of metrorrhagia, he will find that there is nothing in it that could lead to the inference that the plan therein referred to was "presented" by me "as a novelty". All I said was, that among the various plans recommended, M. Panas had "adopted" that of "plugging the cavity of the neck of the womb", which, in my humble opinion, I considered the best. Thus it will be seen that M. Panas did not even claim priority; and if I referred to the plan in my letter, it was simply as reporter of the discussion on the subject—not to "present it as a novelty", but "to draw the attention of the profession to its thoroughly practical character". It was not my purpose to seek the priority of the plan in question; but as Dr. Bennet has claimed it, you have done him ample justice.—I am, sir, your obedient servant, YOUR PARIS CORRESPONDENT.

Paris, July 26th, 1879.

L. M. (Rotunda).—We believe that the examination test of the Obstetrical Society of London will answer the requirement of our correspondent. He can obtain the regulations by writing to the secretary.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

IDENTIFICATION OF THE PRINCE IMPERIAL.

IN our issue of the 12th instant, we alluded to the importance of the teeth as a means of identification of deceased persons, and incidentally mentioned the fact that the Prince Imperial had had four small cavities filled with gold in the first molar teeth by Dr. Rottenstein of Paris, and had met with a slight accident in April 1876 from a blow on the front teeth, which made it necessary to file the tooth a little in order to smooth the enamel. Since then, we have received a communication from Dr. Evans of Paris, denying the facts above stated, and saying that "no one but myself ever operated upon the teeth of the Prince, and that the statement in your JOURNAL is altogether wrong", and calling on us to make "immediate rectification". It is a matter of no importance to the public who filled the teeth of the Prince Imperial; but on receiving Dr. Evans's communication, we took some pains to verify the information on which our statement was based, and we have it from the best authority that in later years the Prince had had dental operations performed, not only by Dr. Rottenstein of Paris, but at his suggestion by Mr. Oakley Coles of Upper Wimpole Street, and by Mr. Bull, now of Brussels, and that the statements of Dr. Evans on this subject are founded on imperfect knowledge.

M.D. (Winford).—Mr. Field has recently published the second edition of a very handy and practical little manual of diseases of the ear.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following questions in Surgery were submitted to the candidates at the written examination for the diploma of membership on the 18th July. They were required to answer at least four (including one of the first two) of the six questions. 1. Describe the general arrangement of the cervical fascia, and point out how it determines the course of purulent collections in the neck. 2. After ligature of the common femoral artery, by what arteries would the collateral circulation be carried on? 3. Describe the anatomical conditions which characterise talipes varus and valgus. 4. Give the causes, effects, and treatment of acute periostitis. 5. Describe how you would investigate a case of retention of urine in the male, in order to discover its cause. 6. In what part of the lacrymal passages, and by what causes, may obstruction be produced? Describe the symptoms and treatment of such cases.

The following were the questions submitted in the Principles and Practice of Medicine on the 19th. 1. What are the causes, symptoms, and pathological consequences of abscess of the kidney? By what routes may such abscesses discharge themselves? 2. What are the causes of regurgitant mitral valve disease? How would you detect its presence? and what are its pathological and clinical consequences? 3. Describe the physiological and therapeutical effects of opium; and enumerate the pharmacopœial preparations in which opium or morphia is present, stating their strength in opium or morphia, and their usual doses. Write a prescription for a child suffering from summer diarrhœa.

INSURANCE SOCIETIES AND DEATH-CERTIFICATES.

SIR,—Can an insurance society demand a certificate of cause of death without payment of fee? I have been referred to the family for my fee, the company considering themselves not liable, because not benefiting. An answer in the JOURNAL will oblige yours, etc., Y.

*** The only certificate which the medical attendant is bound to give is that for the use of the registrar for the purposes of burial.

TREATMENT OF NOCTURNAL CRAMP AND OF INTOLERABLE ITCHING.

R. D. begs to thank those gentlemen who kindly gave him suggestions as to the best means of relieving the above cases. No doubt Mr. Sarkies is right in stating that "the cause of the cramps is merely a mechanical one, due to pressure of the gravid uterus on the lumbar plexus; nevertheless, trying to sleep on either side or in the prone position did not prevent the occurrence of cramp. No means which R. D. tried were entirely successful; but one which did to a great extent lessen the frequency of the cramps he would recommend to L.R.C.S.I. in preference to resting content with *the happy thought* that time will cure: it is, that after the patient has retired to her bed, each limb (if the cramp occur in both) shall be raised for a few minutes and smoothed upwards, with the palm of the hand, from the toes to the groin. Whether the relief thus obtained is due to lessening of the engorgement of the veins of the lower extremities, R. D. does not pretend to say; but he is certain that in this instance and in others he has afforded relief to nocturnal cramp occurring during pregnancy by this means, and by raising the foot of the bed.

Intolerable itching in a case of jaundice from malignant disease was not at all relieved by the use of jaborandi, suggested by Dr. Douglas Maclagan. The itching was as great by day as at night; and morphia (suggested by Mr. Sarkiss) only benefited for an hour or two. This patient has since died, and the jaundice was found to be due to obstruction of the common bile-duct by malignant disease of the head of the pancreas and the glands surrounding it, and with secondary growths in the liver.

THE ROLL OF HONOUR.

SIR,—It has occurred to me that a complete and well authenticated "list of those who lose their lives prematurely in the exercise of our profession as well as in preparing for it" would at times be of the greatest use in influencing public opinion in our favour.

The list should include only those who have succumbed to risks to which the general public are not, or only slightly, exposed; and should be made as far as possible a measure of the dangers voluntarily incurred by those who devote themselves to the art of healing.

Perhaps neither private corporations nor the Medical Council can be expected to keep such a record. It would be, I venture to suggest, an object worthy of the attention of the British Medical Association to preserve the names of those who have thus fallen in the cause of humanity. Verification of published statements would only be required to the extent of preventing the general accuracy of this list from being impugned.

I leave it for your consideration whether such a record ought to be kept by the Association of which I am A UNIT.

*** We should be glad to see a Committee appointed to consider and report on this subject.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE MILLERCHIP FUND.

SIR,—Please acknowledge receipt of the undermentioned sums.

Dr. Corbin, St. Peter's, Guernsey	£0 10 0
Dr. Swallow, Clapham Park Road	0 10 6

33, Dean Street, Soho, W., July 31st, 1879. JOSEPH ROGERS.

M.R.C.S. (Derby).—We do not understand how a medical practitioner can be said to consult with a pharmaceutical chemist because he is seen riding in a coach with him; but we would suggest that if our correspondent think there is any serious ground for his complaint, he should bring the matter under the notice of the Council of the Branch. It is obviously too complicated a matter to be investigated elsewhere than on the spot.

A CENTENARIAN.

SIR,—If Dr. Woodward saw my letter which you kindly printed last week, he will perhaps endeavour to obtain the particulars which alone make the case of Mrs. Hartshorne interesting. Dr. Woodward says her age was "undoubtedly one hundred years and eleven months, and it was generally understood that it was a year more than this". It is these general understandings which throw a doubt upon cases of exceptional longevity. The baptismal certificate is the only conclusive evidence.—Your obedient servant, J. D.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald; The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir Henry Thompson, London; Dr. Cameron, M.P., London; Dr. Macnaughton Jones, Cork; Mr. Savory, London; Dr. Andrew Fergus, Glasgow; Dr. Edis, London; Dr. Löwenberg, Paris; Mr. J. McFarlan, Denny; Dr. Elliot, Carlisle; Dr. Carpenter, Croydon; Mr. Robinson, Dublin; Dr. W. Fairlie Clarke, Southborough; Dr. T. W. Evans, Paris; Dr. Norman Kerr, London; Dr. Joseph Rogers, London; Dr. A. Ogston, Aberdeen; Mr. Paramore, London; Dr. W. A. Sturge, London; The Secretary of the Metropolitan Hospital Sunday Fund; Dr. Buchanan Baxter, London; Mr. G. A. Hamerton, London; Dr. Alfred Hudson, Dublin; A Member of the B. M. A.; Dr. Lombe Atthill, Dublin; Mr. R. Garner, Stoke-upon-Trent; Mr. W. Thomson, Dublin; Dr. Wahltuch, Manchester; Dr. Bramwell, Perth; Surgeon-Major; Mr. Edmund Owen, London; Mr. Reginald Harrison, Liverpool; Mr. John Wood, London; Dr. W. Evans, London; Mr. Jackson Bull, Paris; Mr. Alfred Coleman, London; Dr. Warner, London; Dr. O. Sturges, London; Mr. R. Owen, Brecon; Dr. Arthur Gamgee, Manchester; Dr. Tilt, London; Mr. H. Leach, London; Dr. Sparks, Crewkerne; Dr. Eben Watson, Glasgow; Dr. D. H. Tuke, London; Dr. Wade, Birmingham; Mr. W. A. G. Laing, Truro; Our Paris Correspondent; Dr. J. Eaton, Cleator; Dr. J. K. Barton, Dublin; Mr. C. Steele, Clifton; Mr. J. J. Fagan, Belfast; Mr. Morgan, Bishopwearmouth; Dr. A. Meldon, Dublin; Mr. Spanton, Hanley; Mr. Arthur Jackson, Sheffield; Mr. Wyndham Cottle, London; Dr. W. Squire, London; Dr. O'Sullivan, Cork; Dr. T. Oliver, Newcastle-on-Tyne; Dr. Gillespie, Edinburgh; Dr. W. Thomson, Peterborough; Dr. Sheen, Cardiff; Mr. Nettleship, London; Dr. H. Mac Cormac, Belfast; Dr. A. Duke, Dublin; Dr. C. R. Williams, Ashby-de-la-Zouch; Signor Lombardi, London; M.D.; Bis dat qui cito dat; Sir E. Y. W. Henderson, London; Dr. Major, Wakefield; J. D.; Dr. Rottenstein, Paris; Dr. E. Ballard, London; Dr. Collie, Homerton; Dr. J. M. Howie, Liverpool; Dr. W. Walter, Manchester; The Secretary, Chelsea Hospital for Women; Dr. Thorburn, Manchester; M.D., Winford; Dr. Stowers, Tulse Hill; Dr. Lyster, Liverpool; Dr. Farquharson, London; Mr. R. Davy, London; Dr. Thin, London; Dr. T. More Madden, Dublin; W.; Dr. Allchin, London; Mr. C. Heath, London; Dr. Lush, Weymouth; Dr. Grigg, London; Dr. J. G. Garson, London; Dr. Spender, Bath; Dr. John Duncan, Edinburgh; Dr. Laidlaw, Tranmere; Dr. Macan, Dublin; Dr. R. E. Heath, Torquay; Dr. Saundby, Birmingham; Dr. Macewen, Glasgow; Dr. Maclaren, Carlisle; Dr. Mackey, Brighton; Mr. Carr, Newcastle-on-Tyne; Dr. Edwyn Andrew, Shrewsbury; Mr. Husband, York; Dr. Samuel Griffiths, Portmadoc; Dr. O. E. P. Chard, London; Dr. Davidson, Liverpool; Dr. Walter G. Smith, Dublin; Mr. Alford, London; etc.

BOOKS, ETC., RECEIVED.

The Causal Lesions of Puerperal Convulsions: a Paper read before the Pathological Society of Philadelphia, April 26th, 1878. By James Tyson, M.D. Philadelphia: J. B. Lippincott and Co. 1879.

Metropolitan Asylum District: Eighth Annual Report of the Committee of Management of the Stockwell Fever and Small-pox Hospitals, 1878. London: McCorquodale. 1879.

On the Value of Human Life; or, the Present History and Possible Future of our Hospitals. By the Rev. J. Dodd, M.A. Oxford and London; James Parker and Co. 1879.

Report on the Health and Sanitary Condition of the Borough for the year 1878. By Henry J. Yeld, M.D., F.C.S. Sunderland: Joseph Huntley. 1879.

American Nervousness; its Philosophy and Treatment. By George Beard, M.D., New York. Richmond: J. W. Fergusson and Son. 1879.

PRESIDENT'S ADDRESS,

DELIVERED AT

THE FORTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION,

Held in CORK, August 5th, 6th, 7th, and 8th, 1879.

BY

DENIS CHARLES O'CONNOR, A.B., M.B.,
Professor of the Practice of Medicine in Queen's College, Cork.

My Professional Brethren, Members of the British Medical Association,—I wish I could in suitable terms convey to you my deep sense of gratitude for the honour you have conferred on me by electing me to be your President. The gratification which I should feel on receiving this honour is, however, associated with a consciousness of my demerits, contrasting myself with the distinguished men who have filled this chair up to its latest occupant, Dr. Falconer, whose urbanity, courtesy, and high professional rank, largely contributed to the success of last year's meeting at Bath; but, above all, when I remember that the last and only meeting in this country was presided over by Dr. Stokes, whose name is fresh in the memory of every Irish physician, whose talents shed a lustre on his profession and country, and whose virtues—simplicity, truth, and honour—made him the idol of all those who had the happiness of his acquaintance. As I cannot deceive myself with the belief that I owe this elevation to superior learning or professional eminence, you, perhaps, give me credit for qualities of a less elevated character, which would enable me to represent worthily the dignity and decorum which will be sure to characterise your proceedings. The keystone of an arch is an important part of the structure, solely because by its position it establishes an equilibrium between opposing forces. The chairman of a meeting exhibits a similar passive resistance, in moderating the expression of contradictory opinions and preserving the calm necessary for the discussion of great subjects.

Of one thing I am certain that, whatever defects or errors may be seen in the execution of my official duties, they will meet with a favourable construction—more especially from the most distinguished members of my profession. The most charitable critics are those who themselves are beyond the reach of criticism.

Some of my predecessors in this chair, on occasions like the present, thought well of pointing out circumstances of interest associated with the locality of the meeting. In a few brief words, I will follow their example. Though you have not come hither for æsthetic enjoyment, still, the surroundings of Cork, which Spenser called the "beautiful citie", must attract your pleasurable notice on every side. This, added to the mildness of the climate, makes the vicinity of Cork an agreeable as well as valuable winter health-resort. In this character it is associated with Queenstown and Glengarriff, which has recently acquired a high repute. The sanitary condition of the city is exemplified by the low death-rate, and the gradual disappearance of typhus, which in the last century appeared every seven years; in the early part of this century, every ten years; and now, since the famine fever, we have had but one outbreak of any severity, and that nearly fifteen years since. We owe this to the admirable supply of pure water, and to an extensive system of sewerage, provided by the Corporation. I am far from saying that there is not still much to be done by the sanitary authorities. Pure air and pure water are not useful solely in preventing epidemics; they are also necessary for the preservation of a general healthy condition of the system.

It might not be without interest to mention that, a few paces from where this meeting is being held, stood Gill Abbey, one of those collegiate monasteries so famous in this country in the eighth and ninth centuries, to which, according to Camden and Venerable Bede, "the gentry of England flocked as to a mart of learning", and "which sent forth swarms of holy men all over Europe, spreading learning and religion". We see some resemblance to that happy period in this meeting, when Englishmen come hither to repay, with great interest, any literary indebtedness their ancestors might have incurred. I do not refer to this oasis in Irish history, as families in reduced circumstances display the portraits of distinguished progenitors, but rather to stimulate the present generation to imitate their great ancestors, and, like them, to seek distinction for themselves and their country in the practice of virtue and the cultivation of learning. Though entering late in the race of civilisation, if we take this city as affording an example of the general result, we will be found to have made rapid advances in a short time. Many years of this century had passed before any arrangements were made for the education of the poor, especially of the male sex. Now, nine thousand children are receiving gratuitous education—in some instances of the highest order. It may be paradoxical, but it is true, that in these instances it is better than could be obtained for any amount of payment. It is creditable to this city that it freely taxes itself for the support of a School of Design; and that it is the only city, as I understand, that pays a tax for the support of a Musical Academy. It has contributed a few distinguished names to the roll of British artists, in James Barry, Maclise, and Hogan; and to literature, in Magin, Father Prout (Mahony), and Justin McCarthy; and to both, a large number whose reputation is not so widely known. In sympathy with the poor — the highest function of civilisation—it will be found that ample progress has been made in this city. Within a very few years, ten different asylums have been established: for orphans, for the aged, or those who have strayed outside the confines of morality in early life. Five new hospitals have been opened, in addition to those already in existence. This has emanated, not from humanitarianism nor from utilitarianism, but from the spontaneous outpouring of christian charity. I make no distinction between different religious denominations. Happily the barriers that separated these have been removed, and, seeing each other from a nearer point of view, men have found good citizenship and brotherly love where they expected to meet aversion and hostility. The same good feeling has been manifested of late in the courtesy shown towards each other by the different sections of the Corporation; and may we not believe that it is owing to such teaching and example from the affluent, that serious crime is almost unknown in this city; and that, for more than half a century, no High Sheriff was under the necessity of carrying out the extreme penalty of the law within this borough?

Having, I fear at too great length, referred to the physical aspect of the city which you have honoured with this visit, and to the social and moral condition of its inhabitants, as they appear to me, I must proceed to make some observations on the composition and objects of this Association, which must appear trite to all but the most junior members or such of the public as take an interest in our proceedings.

When several thousand men, many of them the most distinguished and honoured in their profession for genius and learning, are banded together for one common object, we may readily assume that object to be large, comprehensive, and benevolent; and what purpose of greater magnitude can occupy the human mind or stir the human heart, than the effort to lighten the burden of sickness and misery, and to defer the inevitable death in which we all have a common inheritance? In forwarding this work, we follow our instincts as men, obey our duty as physicians, and receive a divine sanction as Christians. It can then be well understood how so many, leaving their homes, crossing the seas or ocean, have come hither to unite in this common brotherhood of benevolence. I only hope that the success of this meeting, by increasing our knowledge and diffusing throughout the entire medical community sound principles to guide our practice, may be the reward of their sacrifices.

A hasty survey of the composition of this Association, the brilliant genius of many of its members, and their continuous labours from year to year, would lead to a feeling of disappointment, that greater results have not followed, which would place medical doctrines on a firm lasting basis, rendering them free from doubt or controversy. This mode of thinking arises from comparing medicine with the physical sciences, in which all phenomena may be traced to a few general principles. Such complete generalisation is not to be expected in the science of vital phenomena, with such multitudinous details, varying under the influence of an equal number of circumstances. Still, to this end have been directed all our labours, hitherto attended by an ever-increasing approximation. We are not to reject what is useful because of the garb in which it is presented to us. Even in physical science, isolated facts were availed of for the benefit of mankind when the theories which explained them were still erroneous. Sailors could navigate their ships before the time of Copernicus, and the movements of the heavenly bodies were understood before Newton explained the cause, while the manner in which this cause acts is still a mystery, and the greatest mathematicians lament the shortcoming of their most accurate science. All knowledge appears to be but a fragment of truths beyond our reach. It is so with medicine. We can learn from sacred scripture, as well as from Homer, the estimation in which our profession was held from the earliest dawn of civilisation. If we had no other guide but the works of Hippocrates, our art would still be a great boon

to mankind. The discoveries of Harvey, Jenner, Hunter, and Laennec have each after the other added to our stock of knowledge, but did not efface what had previously existed. We are here to follow in their footsteps with the light they have shed on our path, and with aids to the investigation of physiological and pathological phenomena which they did not possess. A new point of departure has taken place in the application of the microscope to ascertain the minute structure of organs, and the changes made in them by disease, which has already produced splendid results. It need not, however, be feared that you will not have a sufficient scope for your labours, when the origination and transmission of nervous power is still undiscovered. The limited nature of our powers of observation and the vastness of the fields for discovery will for ever furnish fresh objects to stimulate the human mind and preserve it from stagnation, which is equally destructive of mental and of physical energy. If thus mental activity find stimulus to its energies in the cultivation of other sciences, how much more should it be in medicine, which may be called the science of sciences, not alone from the importance of its aims, but because every branch of natural knowledge is made auxiliary to its development, whilst the boundaries between physics and physiology are every day disappearing till the latter has become almost a branch of the former—its laws arranged with supreme wisdom for the production of vital phenomena. When the subjects to be investigated are so many and so diversified, we can see the necessity of an assemblage such as the present of men with minds equally diversified in character, each fitted to develop some particular branch of knowledge, and all uniting like converging rays of light, to illuminate the path of the practical physician. In this the economy of a division of labour is perceptible in nature's design as in the ordinary affairs of life.

Some there are who are destined by their nature to increase the stock of human knowledge. Uninfluenced by self-interest or personal ambition, seeking no other reward but the gratification of an instinct, fed by a hope of ultimate success, not disheartened by failures or by adverse criticism, they labour onward till through the darkness a light is seen breaking, which reveals to their receptive minds, as an established truth, that which was before an unsettled theory or a happy conjecture, and clearing away difficulties which for ages disturbed the minds of medical inquirers. In all the great centres of thought, though divided by space, still united for a common object, such men have by their joint labours, within the last half century, raised a solid superstructure of physiological and pathological knowledge which has all the characteristics of a true science. The briefest reference to the subjects which have been undergoing investigation by members of this Association since its last meeting (embracing the most important and abstruse problems in medicine) would show that they are imbued with the same disinterested zeal and filled with the same lofty ambition as those to whom I have referred. They do not, however, constitute a large section of this Association, and would not of any similar assembly. *Non omnia possumus omnes*—we cannot all do all things, but everyone can do something towards the common object. For the practical man—the everyday working physician—there is presented the important duty of collecting facts from which the man of genius will derive general principles, and thus assist in bridging over the large space which divides physiology and pathology from practical medicine. To make a good syllogism with physiology and pathology, as major and minor premisses, and the treatment of disease as the conclusion, remains still the difficulty to remove which all our energies are directed. Theories founded on imperfect generalisation cannot be adopted in medicine with as little injury as in other sciences. It is of no consequence to the student of optics whether the undulatory theory of light be true or false, or to the astronomer whether the Copernican system is capable of mathematical demonstration; but it is of great moment to the physician as to whether alcohol is a food or merely a stimulant, whether it is entirely or in part, or not at all, consumed in the body; and still contradictory statements of this kind have been propounded for the last twenty years in succession, each professedly founded on experiments. In this instance, as in many others, error passes by a species of exosmose to the general public, who adopt the views most agreeable to the senses, believing alcohol to be indispensable for the cure of all diseases, and for sustaining bodily health and mental energy. Happily, the timely declaration of two hundred and sixty of the most eminent London physicians—which might be printed in letters of gold—has placed the question on its true basis, stating that "while unable to abandon the use of alcohol in *some* diseases, no medical practitioner should prescribe it without a sense of grave responsibility, and with as much care as any powerful drug".

This and several other instances show that, although practical men should bow to the declarations of science, they should hesitate before accepting unfinished generalisations, which a fresh experiment or a newly ascertained fact might destroy. Even deductions derived from experiments on animals, to test the effects of medicines on the living organism, though of great value, must be received with a certain amount of caution—justified by the fact that certain deadly poisons for man are nutritive food to some animals; that zymotic diseases are not intercommunicable between men and animals, or rarely so; and that even age and idiosyncrasies modify the effects of medicines, so as to make it uncertain as to what may be the effects of a given medicine in one case when we see its effects in another. Add to this the unnatural condition in which the animal experimented on is placed. How modestly, and at the same time philosophically, does Dr. Rutherford express himself on this subject. After "fourteen hundred hours of hard labour", spent in his investigation, he says, "the experiment on the healthy liver of the dog, on the normal and abnormal human liver, are three sets of experiments closely related, but still distinct. The facts derived from any one of the three cannot be substituted for either of the other two. Each set of facts has its own proper place, and must be kept there." And then he advises the clinical observer to test in his practice the deductions derived from experiments on animals. We can thus see that, in the deliberations which will take place in the sectional meetings, there is a place for the purely practical as well as for the scientific man. Their views test and are tested by each other. Rationalism enlightens empiricism, and enlightened empiricism is a check—a drag-chain—on hasty theorising, from which medicine suffered so much injury through its whole history. Much as science has accomplished in establishing the physiological action of many medicines previously used empirically, the practical physician must still in most cases be guided by the results of the combined experience of wise men, free from egotism, vanity, self-interest, or other passions which cloud the judgment and prejudice its conclusions—while always hoping for and striving after a full knowledge of the relation between the medicine and its physiological effects. There are many diseases entirely under the control of medicines, others only partially and indirectly, and a third class, zymotic diseases, in which we can only apply our treatment to the cure of symptoms and regulation of functions, leaving to nature the task of bringing the disease to a favourable issue. I believe that all attempts to cut short these diseases are fruitless or injurious.

In the early part of this century, a different opinion prevailed, and attempts were made to arrest fever by strong purgatives and bleeding. This violent treatment was soon discontinued, but I cannot help thinking that there are again signs of a return to the old heroic treatment, when, in a work of the highest repute, I find it recommended to begin the treatment of typhoid fever with four doses of calomel, of eight grains each, six cold baths in twenty-four hours, twenty-seven to forty-five grains of quinine, to be given frequently in the course of the disease, and twenty-two grains of digitalis as an ordinary dose. We walk in darkness with a slow and cautious step; but here, where we are utterly ignorant of the processes by which the poison is eliminated from the system, we are recommended to give medicines which would test the constitution of one in perfect health. This treatment, though recommended by deservedly high authority, has not as yet found favour in this country, where confidence in the curative powers of nature in this class of disease still prevails. When we see the care with which each bodily organ is protected, and the wisdom with which the functions are regulated for the preservation of life, we cannot believe that Creative power which arranged those things so wisely would send the finished work adrift to combat with destructive forces without pre-arrangement for reparation in case of injury, internal as well as external, in fever as well as in fractured limbs, or in union by the first intention. The physiology of health is not more wonderful than what may be called the physiology of disease, by which disturbed functions are restored to their normal condition. It is not a humiliating office for the physician to study the means by which nature accomplishes her ends, and, as far as his knowledge permits, to imitate her. I know the assertion of a *vis medicatrix naturæ* is now nearly obsolete, and equally so the seeking of primary causes for vital phenomena. These old-fashioned ideas have been extinguished by modern philosophy, which asserts that all organisation and its operations are the result of blind chance, without a mind to fashion or to guide them. The physician, with his opportunities for observation, must be blind indeed who does not see beyond this darkness a clear light, showing him that all nature has been conceived and formed in beauty and order, the result of a divine purpose, directed by divine benevolence.

Whatever differences there may be in the expression of our views about treatment, or whatever disputes about theories, when we meet disease in a concrete form, in a fellow-man appealing to us for help, minor distinctions disappear, and we find we have been differing in words, not in substance; and as happens in cities, from frequent consultations, there is a levelling of extreme views, and an unwritten practice of medicine becomes established. The chaff is scattered to the winds,

and solid truth remains. "*Opinionum commenta delet dies; naturæ judicia confirmat.*"

Whatever drawback the physician might feel on the pride and satisfaction which ought to attend the practice of his profession, there is none from the study of Hygiene and the enforcement of its principles on governments, corporations, and the general public. Here he is the more than disinterested servant of humanity, elevated far above the ordinary pursuits of professional life. Much has been accomplished by legislation since Jenner reversed the sentence of death or deformity pronounced against millions of the human race, removing the dark shadow that hung over every cradle. Still this great science is only in its infancy, and must ultimately sweep from the nosology most preventable diseases. A most important branch of this subject—"Personal Hygiene"—is not influenced by legislation, each individual having the power of obeying or violating its laws, at his discretion—guided on the one hand by his intellectual and moral faculties, and on the other yielding to the cravings of his animal nature; the one tending to elevate, the other to depress and degrade, by subjecting the will to sensual gratifications and emotional instincts. The physician, in his private consultations, is the lawgiver in these cases; and never does his profession afford him greater power of doing good, by enabling him to give advice to each patient as to the food suitable to his age, occupation, and circumstances in life, as to the danger of luxurious living, and the deceitfulness of the senses, ever craving what is pleasing instead of what is useful: above all, by counselling extreme moderation in the use of stimulants, if they should be required at all. And when we find how weak man's nature is to resist animal enjoyments, particularly the weakly, the miserable, and the poor, who are willing to purchase an hour's exaltation of their depressed spirits at the cost of many hours' misery; and how impossible it is to stop the downward course *(facilis descensus)* once begun; we will find many to whom we may advise absolute restraint, and thus counteract the vitiated opinion which prevails amongst the public, that stimulants are useful in every form of disease—every derangement of health—which they commence to use as a cure, and continue as a poison. I cannot avoid speaking strongly on this subject, knowing the widespread destruction resulting from these erroneous views.

Having referred "feebly, I fear, and only in obedience to official custom", to some of the objects of the Association, I must conclude with a few remarks on the influence these meetings are calculated to produce on the personal and professional character of its members. It must stimulate the industry of each of us to see men from the remote corners of the earth, of different nationalities, speaking different languages, assembling, ready to lay down their prejudices, if any exist, or offer up any increase of knowledge they may have attained, at the common altar of science, in order that through all civilised nations there may be a uniformity of opinion and practice. The old man, no longer "*laudator temporis acti, castigator censorque minorum*", enters into free discussion with his younger brethren, claiming no consideration except what may be conceded to his knowledge. Perhaps his slowness to adopt new views, or unwillingness to discard old opinions any more than old friends, may temper the heat of the youthful mind which Horace, the Shakespeare of antiquity, describes thus: "*Colligit ac ponit temere et mutatur in horas*", each mind being thus the complement of the other; nothing is adopted merely because it is new, and nothing rejected for being old. The physician whose name has already reached the temple of fame, to be its permanent inhabitant, comes hither to have his opinions tested by the humblest member of the profession; and thus many, who have been hitherto contented with routine knowledge, will be stimulated to enter on a renewed course of study. We should always feel that, though receiving no supernatural mission, we have assumed responsibilities that attach to no other calling. We profess to be ready, night and day, to meet all emergencies. In the army, the officer when on duty is punished doubly for any offence or negligence committed; but the physician is always on duty, ever in actual combat: the enemies being disease and death. In years gone by, the physician asserted the speciality of his calling by pretentious peculiarity of dress. This generation does not tolerate class distinctions of this nature. By levelling up and levelling down, the gentleman and his groom, the young lady and her brother, have become very much alike. Still there is a dignity without pomp, a dignity associated with humility and simplicity of character, which the physician should possess, making him ever feel that society and his profession have a claim on his conduct and actions. His ministrations to the poor, in dispensaries and hospitals, if he would only spiritualise his motives, would raise him to the highest dignity attainable by humanity.

To show the estimation in which our profession is held by many outside of it, I will quote a few words from an English divine, Father Faber. Writing of St. Luke as a physician and painter, he says: "There is something kindred in the spirit of the two occupations. The quick eye, the observant gentleness, the appreciation of character, the genial spirit, minute attentiveness, and sympathising heart, the impressionableness to all that is soft and winning, weak and piteous—all these things belong to the true physician. He is the minister of love, not of fear, vested with a sympathetic office of consolation, which seems the more tender and unselfish because it is official." Few there are who could claim this portrait as their own. Still all should labour towards this ideal, however exalted. Unless the heart be kept warm by sympathy, familiarity with suffering will make it hardened; and the physician becomes a skilful machine, deprived of all moral enjoyment in his actions. Never could it be more necessary that our minds should be pure and our motives exalted, than when entering on the work of this Association. There is something solemn in the deliberations of large assemblies, which, like the force of gravity, attract individual opinions as to a common centre—rendering it all the more necessary that unalloyed truth, wisdom, and benevolence should characterise our proceedings. And, returning to your homes, this meeting may be ever associated in your minds with a recollection of duties conscientiously discharged; of the friendship of early life restored, and of new ones formed on mutual respect, similarity of tastes and pursuits; and of renewed devotion to the advancement of our great profession and the welfare of its members.

Allow me, before I conclude, to avail of this the first opportunity presented to me to express, on behalf of the profession in this city, our pride and satisfaction at the alacrity with which our fellow-citizens have come forward, in spite of adverse circumstances, to do honour to this Association on their arrival amongst them. In acting thus, they will transmit to a future generation the character for hospitality and respect for the stranger inherited from their ancestors. You have only to look through the College, at the excellent arrangements made for holding the various meetings, to know that there is another person eminently deserving of our gratitude, namely, the President of the Queen's College, who has never ceased, by counsel and by action, to aid us in the preparations for this meeting, as he does in every movement calculated to benefit his fellow-citizens. How can I speak, without apparent exaggeration, of the exertions of Professor Jones in promoting the arrangements necessary for the success of this meeting? When he first proposed inviting the Association to Cork, I was nervous and alarmed at the magnitude of the undertaking; but I soon became aware that he made no miscalculation, and that he was able to realise his original promises by unceasing energy, tact, and thorough knowledge of the subject. He was not only the first to suggest the invitation to Cork, but the first to form a local Branch in Ireland, thus establishing a cordial union between the members of our profession in the two great divisions of the empire. For myself, I have to express to him my warmest thanks for saving me much trouble and anxiety; and I am sure I can express the same feeling on behalf of every member of the profession in this city—Honour to whom honour is due.

BELPER RURAL DISTRICT.—This district is divided between two officers (Messrs. Gaylor and Allen), whose reports, issued in one pamphlet, are very good and complete. A separate account is given of the vital statistics of and sanitary action taken in each village in the district, besides a summary by each officer with regard to his own district. In the Wirksworth division, held by Dr. Gaylor, there were 522 births and 230 deaths in 1878. The general death-rate was 12.62 per 1,000. Seventy-two deaths occurred amongst infants; and, with regard to this, Dr. Gaylor observes that hand-feeding is in his district the direct cause of the high rate of mortality among the working classes. Other fertile sources of danger are the attempt to rear children upon the extensively advertised artificial foods, and the use of the so-called teething-powders. Twelve of the deaths were uncertified by a medical man. Only six deaths occurred from zymotic diseases. The question of sewage-disposal is vexing several parishes in the district; but the sanitary authority seems to be active in the performance of its functions. Mr. Allen reports that the Belper district under his charge has greatly improved during the six years that he has been medical officer of health, especially as regards the healthiness of the houses. The fatality from typhoid fever has, moreover, been largely reduced. During 1878, 250 deaths occurred in the district, 20 of which were from zymotic diseases: a great decrease on the numbers of former years. The general death-rate was 15.07 per 1,000, which is satisfactorily low. In his reports on individual parishes, Mr. Allen gives two cases of some etiological importance: one an outbreak of typhoid fever, apparently due to a stinking cesspool, and attacking nine persons in one family; the other a case of scarlet fever at a post-office, in the very room where letters were received and stamps sold.

ADDRESS IN MEDICINE,

BY

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LAENNEC: HIS LABOURS, AND THEIR INFLUENCE IN MEDICINE.

WHEN the Council of the British Medical Association did me the honour to nominate me to deliver the Address in Medicine on the present occasion, my great difficulty was the choice of a suitable subject: what to select from the wide field of the past, present, and future of medicine. For not only do subjects of especial interest seldom present themselves, but, moreover, while on these occasions there is, among men engaged in so serious and engrossing a pursuit as ours, much interchange of serious thought and of practical suggestion, it may be questioned if the motive of our coming together is so much a desire to learn, as a feeling that (to borrow the language of an eloquent prelate) "whatever takes us out of ourselves and throws us back into the past or forwards into the future, does us good if it makes us spend a few happier hours and relieves us from the weary monotony and the heavy drudgery of life".

To attempt a review of the triumphs of the present and recent past would be to follow, by unequal steps, in the path of those who have so ably and exhaustively treated the subject on many previous occasions, and to repeat to-day what you have read in the retrospects, records, and journals of yesterday; while to pourtray the glories of the future of medicine would require a prescience which I do not possess; besides, having arrived at an age when a man naturally becomes a *laudator temporis acti*, I felt attracted to the consideration of the more remote past, and I resolved to offer a few observations on the history of its several epochs and of their representative men, and more especially of the great revolution which was in progress in my student days, when the era of nosology was superseded by that of pathology; when the theoretical deductions of Cullen and his predecessors were replaced by the inductive method of the present day, as inaugurated by Laennec.

In a comprehensive review of the past, three things attract our attention: its history, its progress, and the lives of the men who have marked its successive epochs.

Such a task differs from that of the student, or of the worker of the present day, in that, while the one necessarily seeks for advanced knowledge in the most recent sources, and the other founds his conceptions on those of his more immediate predecessors, a retrospect of the kind involves some notice of men whose works are now obsolete, and whose names have become mere traditions in the history of the science.

Its history has not always been one of progress, but rather a record of barren hypotheses and fanciful systems; of the lives and labours of men, often of marvellous ability and industry, whose aim was to attain that which was unattainable:

> "Crying for the light,
> And with no language but a cry".

These men have been sometimes compared to giants, who, taking us in their arms and lifting us above their heads, have disclosed to us countries and prospects which they themselves could never discover. Living before their age, and being unable to explain observed phenomena by the aid of the imperfect science of the time, they resorted to hypotheses evolved out of their own consciousness, which were really not explanatory of diseased processes, while their ideas of therapeutics were made to correspond with these imaginary conditions. Not that their labours were altogether useless; for, as has been well said: "As in the growth and development of the body the daily death of the tissues is in strict relation with the activity of life, so in the organic growth of thought through the ages there is a corresponding decay or consumption of erroneous doctrines—a death of the false in strict relation with the growth of the true."

The comparison of the growth and development of science to that of the human body is by no means a novel one, and it is employed by Lord Bacon in terms peculiarly applicable to clinical medicine: "As young men", says Bacon, "when they knit in shape and perfectly, do seldom grow to a further stature, so knowledge, while it is in aphorisms and observations, is in growth; but when once it is comprehended in exact methods, it may, perchance, be farther polished and illustrated, and accommodated for use and practice, but it increaseth no more in bulk and substance." The different stages of this comparison of progress correspond with the lives and labours of the great men who have marked the successive epochs of the science. While those of Harvey and of Haller are associated with the birth and progress of physiology, and Hunter is commemorated periodically as the founder of scientific surgery, the great names of Hippocrates, Morgagni, and Laennec correspond to the eras of aphorism, observation, and method, which each of them in turn illustrated by his life and works—each life, moreover, affording practical lessons of value. Thus the life of Hippocrates teaches the value of that early acquaintance with the objects of his future study, now too much overlooked. We are told that "amid the sports of childhood he received from the mouths of his parents the elementary notions of medical science. By viewing diseases, he learnt to distinguish them". Himself convinced of the superiority of this method of practical instruction, Hippocrates wrote: "In order to improve to a certain degree the knowledge and practical skill of the physician, it is necessary (independent of natural genius, the place of which nothing indeed can supply) that he be placed from early infancy amid all the objects of his researches, and that every means of instruction be employed with unremitting assiduity."*

Of the character of his writings, Cabanis remarks: "He brought the science back again to its natural channel, that of rational experience. He freed medicine from false theories, and formed for it sure and solid systems. His books of aphorisms have in all ages been regarded as models of grandeur of conception and precision of style. Through the whole of them we may remark that truly universal method, the only one which is adapted to the mode in which our intellectual faculties are exercised, and which in every art and in every science, by making the principles flow naturally from the observations that have been collected, transforms the deductions from facts into general rules." This writer adds; "If the disciples of Hippocrates had understood his lessons well, they might have laid the foundation of that analytical philosophy by the aid of which the human mind will be henceforth enabled to create to itself, as it were daily, some new and improved instruments of advancement." It is scarcely necessary to remark how exactly this prediction has been realised in the history of physical diagnosis and in the life of Laennec.

The traditions of Hippocrates and his natural method, having outlived the centuries of dogmatism and of successive systems, have survived to the present day, transmitted through the dark ages of medicine in the aphorisms of Lommius, Baglivi, Boerhaave, Stoll, and others—aphorisms which, while comparatively free from the dogmatism of the age, contain matter of the highest practical value. One of the most illustrious of these writers (Baglivi) devotes two chapters to treating of the hindrances (*impedimenta*) of progress arising from neglect of ancient aphorisms and observations, and love of new systems, maintaining that "the entire value of the history of diseases depends on the careful and patient description of that which the observer, skilled in the mode of invasion, the progress, and issue of diseases, has perceived". The writings of these men, like those of their great master, are especially distinguished by the fidelity of their descriptions of symptoms and the sagacity with which they anticipated sequences. They read the prognostic signs of disease with an accuracy and an insight whose

> "— Old experience doth attain
> To something like prophetic strain",

and are for these reasons, if for no other, worthy of the careful study of the practitioner. By the side of these names we place that of the English Hippocrates, Sydenham, the great observer, who, says the editor of his works, now stands out, at nearly the end of a second century, as the great representative of the practical medicine of practical England.

The influence of Sydenham is especially seen in the writings of the succeeding century, of Grant and Huxham, of Pringle, and others whom a distinguished American writer on fever terms "those glorious old British observers—the types and ornaments of a school never since surpassed by their countrymen". And I may here remark that the study of these and the abovementioned older writers would greatly tend to moderate extravagance of doctrine and exclusive devotion to special methods of treatment in our own day. These British writers, as Dr. Bartlett observes, clearly recognised the distinction between the two great forms of continued fever, which the great majority of the British physicians in his day "refused to admit, or to endeavour to ascertain"; while, of the wisdom and breadth of their views of treatment, no higher

* It is worthy of remark that in the course of a discussion on the subject of education in the General Medical Council in 1877, Sir James Paget stated, as the result of his own experience, that everything is in favour of putting a student at once to the daily honest practice of his profession by apprenticeship in the country for the first year. (Reported in the *Medical Times and Gazette* of June 2nd, 1877.)

testimony need be adduced than the candid acknowledgment of Dr. Stokes, who says in his memoir on the state of the heart and use of wine in typhus fever: "I confess that it was not until several years after I commenced practice that I became fully aware of the erroneousness of what is termed the anatomical theory of disease; and I feel certain, humiliating though the confession may be, that the fear of stimulants, with which I was imbued, was the means of my losing many patients, whose lives would have been saved had I trusted less to the doctrine of inflammation and more to the lessons of experience given to us by men who observed and wrote before the times of Bichat or of Hunter."

I would add one remark to the above. It is, that a careful perusal of the excellent, albeit somewhat antiquated, chapter of Lommius on the diet of a fever patient, might help to guard the young practitioner from the too prevalent perversion and abuse of Graves's famous saying, "He fed fevers".

In England, these great observers were succeeded by others scarcely less noteworthy; by Fothergill and Fordyce, Heberden and Currie, whose writings will live as long as the art is cultivated.

Contemporary with these men were others: men of great ability, but who aimed at generalisations rather than observation, and strove to construct systems to which the medicine of the future should conform. I need not tell you that the systems of Cullen, of Brown, and of Darwin, have long become things of the past and forgotten.

But we pass on to the epoch of Pathology and Clinical Medicine inaugurated by Morgagni and his contemporaries and successors. In an admirable address, delivered before the Glasgow Pathological and Clinical Society in 1864, Professor Gairdner thus tersely describes the character of Morgagni's work.

"In investigating the *seats* of diseases, Morgagni is not content to record the *coincidence* of a lesion in an organ with the symptoms apparently due to disordered function in that organ.

"For the first time almost in the history of medical inquiry, he insists on examining every organ, as well as the one suspected to be chiefly implicated; not only so, he marshals with the utmost care from his own experience and that of his predecessors, all the instances in which the symptoms have existed apart from the lesion, or the lesion apart from the symptoms. He discusses each of these instances with severe exactness in the interest of truth, and only after an exhaustive investigation will he allow the inference either that the organ referred to is, or is not, the seat of the disease.

"And in like manner in dealing with causes: a group of symptoms *may* be caused by certain organic changes—it may be even probable that it is so—but, according to Morgagni's method, we must first inquire into *all* the lesions of organs which occur in connection with such symptoms; in the second place, we must know if such lesions ever occur, or occur without the symptoms; and, again, if such symptoms can be attributed in any cases to other causes in the absence of such lesion."

Did time permit, I would fain add to Dr. Gairdner's illustrations some examples of the glimpses of facts pointing to future observations and discoveries which are scattered through the portion of Morgagni's work relating to thoracic diseases. Such are his remarks on the connection between disordered states of the nervous system and deranged respiration (Letter 15); his notice of the sound heard on applying the ear to the præcordial region in a case of pericardial effusion (Letter 16); of the decubitus in empyema and the displacement of the liver in that disease; of the signs of dilatation of the right ventricle, and the clear explanation of the phenomenon of jugular pulsation, and the wonder he expresses that the increased bulk of the heart is not attended to in the histories of asthma; and of the curious case (quoted by Wardrop in his work on the heart) of alteration in the radial pulse, caused by a fall on the spine, and inexplicable until the discovery of the vaso-motor system of nerves; to lesions of which similar cases have been referred by Dr. Russell Reynolds and Dr. J. W. Ogle.

To those who, like Dr. Gairdner, look to what Morgagni has done for pathology and clinical medicine "in the light not only of his own researches, but of those of his successors", it would seem difficult to over-estimate the value of his work and influence. But that the work itself was regarded by his more immediate successors rather as a record of symptoms and morbid appearances than an exposition of morbid processes in the living body, as wanting the explanatory why, and consequently of little assistance to the practitioner at the bedside, appears from the language of Corvisart, who, after stating that it will immortalise its author, adds the remark that this great work "neither helped nor hastened the art of diagnosis"; adding, in a foot-note, that "he himself had formerly read a memoir to the Institute, expressing the idea of a work analogous, but in an inverse sense from that of Morgagni, with the title 'De sedibus et causis morborum per signa diagnostica investigatis, et per anatomen confirmatis'; but that, for such a work, at least another Morgagni would be required".*

The hour and the man were both at hand; and, as it has been said of Harvey, "that on the doctrine of the circulation the dawn had long been visible", and when Harvey came the sun arose; "so Laennec appeared, and realised the prevision of Corvisart by substituting a living for a dead pathology, and revolutionising clinical medicine by a method of diagnosis which, by revealing the seat, nature, and *progress* of disease at the bedside, anticipated the disclosures of the *post mortem* theatre, and endued the dry and unexplained facts of both symptoms and morbid appearances with meaning and with power".

"Time", says Dr. Stokes, "has shown that the introduction of auscultation and its subsidiary physical signs has been one of the greatest boons ever conferred by the genius of man on the world.

"A new era in medicine has been marked by a new science, depending on the immutable laws of physical phenomena, and, like the discoveries founded on such a basis, simple in its application and easily understood—a gift of science to a favoured son; one by which the ear is converted into the eye, the hidden recesses of visceral disease opened to view; a new guide to the treatment, and a new help to the early detection, prevention, and cure, of the most widely spread diseases which affect mankind."

I have alluded to men who lived before their time, who were in advance of their age; Laennec was fortunate in living at the exact period at which he did, when Bichat had just created the science of general anatomy, and Haller and Hunter that of physiology; when Morgagni had grouped such a mass of his own observations and those of others on the results of disease as to entitle him to be called the founder of morbid anatomy; and when the first essay in physical diagnosis by Auenbrugger, long neglected, had been taken up and translated by Corvisart, who employed percussion as an aid to the diagnosis of cardiac diseases with much success. Laennec had thus, in the works of his immediate predecessors, the materials necessary for his system, which needed only the spark of his genius to burst into life and beauty.

I cannot but think it also fortunate that he did not live at a later period. He might perhaps have then anticipated some of the improvements which have followed from the modern advances in the correlated sciences; but I can imagine that, had the pathological anatomy of the period ripened into the histology of the present day—a science which, says Dr. Gairdner, "can only be sounded through the absolute devotion of a lifetime to its new methods of research"—his active and inquiring mind might have been altogether diverted from the study of the diagnosis of disease at the bedside to the researches of the dead-room and the laboratory, which, however important, must be held to be subordinate and secondary to the other. Laennec would seem to have so regarded it, when he wrote that "if the causes of severe diseases are sought for in mere microscopical alterations of structure, it is impossible to avoid running into consequences the most absurd; and, if once cultivated in this spirit, pathological anatomy, as well as that of the body in a sound state, will soon fall from the rank which it holds among the physical sciences, and become a mere tissue of hypotheses, founded in optical illusions and fanciful speculations, without any real benefit to medicine."

The life of Laennec, like the lives of other illustrious men, is not without its lessons. Although of feeble constitution and delicate health, it was marked by mental activity and incessant work. Like his great prototype Hippocrates, be became early familiar with disease, and, while a youth, showed a decided predilection for morbid anatomy and clinical observation, the future studies of his life. At the early age of eighteen, he served as assistant-surgeon in the military hospitals, and in the following year he became a pupil of Corvisart at La Charité. Here he proved his diligence in the study of clinical medicine by drawing up a minute history of nearly four hundred cases of disease, which, it is known, furnished the groundwork of all his future researches and discoveries.

On taking his degree, he wrote a thesis on the doctrine of Hippocrates, as applied to practical medicine, which, says M. Bayle, proved him to be no less skilled in the knowledge of the Greek language than deeply read in the writings of the father of physic. In the previous year, he had commenced a course of lectures on pathological anatomy, which he continued for three years, when ill-health obliged him to discontinue them. From this time until 1816, he continued to contribute articles on general and morbid anatomy to the *Dictionary of Medical Sciences*, and other publications; but on his appointment as

* "Dans un des memoires que j'ai lus anciennement à l'Institut j'avais émis l'idée d'un ouvrage analogue mais en sens inverse pourtant à celui de Morgagni; il aurait eu pour titre, *De sedibus et causis morborum per signa diagnostica investigatis et per anatomen confirmatis.* Mais pour un tel ouvrage il foudrait au moins un autre Morgagni." (*Sur les Maladies du Cœur. Discours préliminaire*, p. ix.)

physician to the Necker Hospital they ceased, and having made the discovery of mediate auscultation, he devoted himself solely to the perfecting of the new system of diagnosis which he founded on it, and to the clinical teaching of his method to the numerous students who resorted to him.

The history of this discovery is well known, but Laennec's observations on it are too important to be passed over without notice. "From this moment," says he, "I imagined that the circumstance might furnish means for enabling us to ascertain the character, not only of the action of the heart, but of every species of sound produced by the motion of the thoracic viscera, and, consequently, for the exploration of the respiration, the voice, the rattle or rhonchus, and perhaps even the fluctuation of fluid extravasated in the pleura or pericardium. With this conviction, I forthwith commenced at the Hospital Necker a series of observations, which have been continued to the present time. The consequence is, that I have been enabled to discover a set of new signs of diseases of the chest, for the most part certain, simple, and prominent, and calculated, perhaps, to render the diagnosis of the diseases of the lungs, heart, and pleura as decided and circumstantial as the indications furnished to the surgeon by the introduction of the finger, or sound, in the complaints where these are used."

I have quoted this passage at length, as showing the strictly inductive character of the process of this discovery: first the observed fact, followed immediately by the anticipation based on previous knowledge of the pathological conditions of other diseases; then the repeated experimental trials, and the confirmation of the anticipation by repeated *post mortem* examinations.

The narrative illustrates several important principles common to the histories of scientific discovery.

First, it was apparently, but only apparently, accidental. "Men", says Whewell, "are fond of repeating that such discoveries are most commonly the result of accident; and we have seen reason to regret this opinion, since that preparation of thought by which the accident produces the discovery is the most important of the conditions on which the successful result depends." Then, it conformed to the usual conditions, viz., distinct general notions, careful observation of many facts, and the mental act of bringing together these elements of truth.

Regarded as an epoch in scientific discovery, this, like other inductive epochs, had a prelude in the preceding period, which led immediately up to it, and to which I have already referred. It has also had a sequel of verification and connection during which the discovery has acquired a more perfect certainty and a more complete development among the more advanced thinkers and improvers, has been diffused to the wider throng of the secondary cultivators, and traced into its distant consequences in its influence on the practice and teaching of medicine and on the status of the profession.

This discovery, nevertheless, did not at first excite much interest in the profession generally. It was announced in the *Edinburgh Medical Journal* of the day in these terms: "M. Laennec has discovered that, by interposing a tube of paper or wood between the ear of the observer and the chest of the patient, much information may be acquired concerning the diseases of the chest. The pulsations of the heart are thus rendered more audible, and in phthisical patients the voice seems to proceed from the chest when one end of the tube is placed over those places where there are tubercles, and, according as the sound is clear or rattling, we may judge whether the cavity is clear or contains pus."

After such a notice, it is not surprising that the practitioners of the day did not much concern themselves about the new method of diagnosis, or that Sir John Forbes should write, three years after the appearance of his translation, that up to that time not even a single case of the use of auscultation had appeared in any British medical journal. Some of us can remember how the stethoscope and its inventor were sneered at and ridiculed by a few of the teachers of our own day. The new light was too strong for older eyes; and it is possible that, had not Laennec survived his discovery for some years and continued to demonstrate its employment and results to the younger generation, it might have left as slight an impression on the minds of the profession as had the treatise on percussion by Auenbrugger, which preceded it.

Sir James Paget tells us that, "although Hunter was in high repute as the chief anatomist and naturalist of the time, yet in his great work of comparative anatomy and physiology not one of the young men of science imitated him—in the highest sciences he had not one true disciple". With Laennec it was different: unlike Hunter, he was "apt to teach", and had the opportunity afforded by his connection with the Hospital Necker of training numerous disciples from this and other countries, one of the most distinguished of whom (Dr. Williams) still survives. Others who, like our own Stokes and Corrigan, had not the advantage of his personal teaching, drank the knowledge from his published writings, and drew therefrom an inspiration and an impulse which carried them far into the field of discovery.

It only remains to remark that from Laennec's first observation till his death only ten years elapsed, two years of which were spent in the country, while suffering from disease which afterwards proved fatal. Few men have contributed an equal amount of such valuable work within the same space of time. Of its appreciation by men of kindred genius and pursuits, I have already given one example in the eloquent words of Dr. Stokes; let me add another in those of Dr. Addison. "Were", says Dr. Addison, "I to affirm that Laennec contributed more towards the advancement of the medical art than any other single individual, either of ancient or of modern times, I should probably be advancing a proposition which, in the estimation of many, is neither extravagant nor unjust. His work *De l'Auscultation Médiate* will ever remain a monument of genius, industry, modesty, and truth. It is a work, in perusing which every succeeding page only tends to increase our admiration of the man, to captivate our attention, and to command our confidence. We are led insensibly to the bedside of his patients; we are startled by the originality of his system; we can hardly persuade ourselves that any means so simple can accomplish so much, can overcome and reduce to order the chaotic confusion of thoracic pathology; and hesitate not in the end to acknowledge our unqualified wonder at the triumphant confirmation of all he professed to accomplish." But is he still appreciated as he deserves? Is he still the living oracle, or rather is not his name now rarely mentioned—fast becoming a mere tradition among practitioners and students? His work has been long out of print in both languages, but neither the old nor the new Sydenham Societies have thought it worthy of a re-issue. For the one it may have been too new—not yet fossilised; and it may be supposed that the council of the new society have passed it by while translating and re-editing works of inferior merit, because it is too old. I am glad, however, to see an announcement in a recent number of the *Lancet* that, "Thanks to the late Minister of Public Instruction, who granted a subsidy for this purpose, the Faculty of Medicine have been enabled to publish a new edition of Laennec's work upon auscultation, which has long been out of print. This is intended as a national monument to the illustrious pioneer in physical diagnosis; and it is to be sold at a low price, in order to bring it within the reach of all." The old saying seems still to be true: "They manage these things better in France."

Having touched on the *prelude* and the *epoch* of Laennec's discovery, it only remains to glance at the immediate sequel, or at what he did and what he failed to do, since to follow up the paths of investigation to which his method has led would indeed be a task equally illimitable and interminable.

Time would fail me were I even to attempt an analysis of his work. I shall merely notice a few salient observations in the more important chapters, occasionally referring to the corrections and additions of succeeding writers.

Of his chapter on exploration of the chest it is impossible to speak too highly. Unlike most authors of new systems, he did not commence with destroying the work of his predecessors; while no mere improver he yet was not a revolutionist. Not only does he repeatedly urge the value and necessity of the study of rational symptoms, but he avails himself of those physical signs which had been observed from the time of Hippocrates by physicians and surgeons, and more especially of the discovery of percussion by Auenbrugger, whose method, he says, acquires a fresh degree of value when combined with auscultation. It must be confessed, however, that in some instances he undervalues the more ancient methods as in the case of measurement and of palpitation, and he evidently was unaware of the diagnostic value of vocal fremitus as perceived by the hand. His observations on percussion are minutely accurate, take for example the distinction he draws between the sound elicited, and the tactile sense of elasticity or the contrary. The same may be said of his account of the stethoscopic signs, of the felicitous comparisons by which he describes them and his explanation of the physical conditions indicated by them.

One serious oversight he made which had important results, namely, the non-recognition of the friction sound produced by the exudation of lymph on the serous membranes of the pleura and pericardium. Had he recognised this he would probably not have left the diagnosis of pericarditis unwritten; but he seems to have considered friction murmur to be caused by interlobular emphysema exclusively.

His chapters on the different forms of catarrh are excellent—that on dry catarrh especially so. His original description of dilatation of the bronchi deserves the eulogy of Trousseau, who pronounced it to be "complete, although probably thrown off at the first dash". He first gave a complete account of emphysema of the lungs, but erred in his explanation of the mode of genesis, as demonstrated by Dr. Gairdner,

and perhaps also in regarding dry crepitous rattle as the pathognomonic sign of the interlobular form.

His chapter on pulmonary apoplexy is, as he himself states, original, and contains some valuable observations, *e.g.*, the occasional occurrence of bellows-murmur in the heart and larger arteries; the rise of temperature, diagnostic of the supervention of intercurrent pneumonia, and the fact that in this, as in some other cases, the abstraction of blood by leeches seems sometimes to excite hæmorrhage. He does not notice the accentuation of the second sound of the pulmonary artery present in this disease and in phthisis, as well as in mitral stenosis. Dr. Balfour is the only writer who, so far as I am aware, assigns its due importance to this valuable sign in pulmonary as well as in cardiac cases. Of course, Laennec had no knowledge of the connection between hæmoptysis and the hæmorrhagic infarction caused by thrombus in the branches of the pulmonary artery, nor does he appear to have had any knowledge of the source of hæmorrhage in aneurisms of these arteries in the later stages of phthisis, so fully described by Rasmussen, and also by the late Dr. Cotton and by Peacock.

In his chapter on pneumonia, he gives what may be considered as a fairly complete anatomical description of the ordinary sthenic croupous form of the disease, apparently the form with which he was familiar. To his account of the physical signs I would take one exception, namely, the attributing to the crepitating *râle* the character of a pathognomonic sign of the first stage. His enumeration of symptoms needs only the addition of the altered pulse-ratio, the importance of which was, I believe, first insisted on by Dr. Walshe, and more thorough information regarding the temperature, the peculiar sensible character of which was first noticed by Dr. Addison, while Wunderlich and others have shown that the value of the thermometer is second only to that of the stethoscope in the study of this disease.

Regarding the treatment. I question if he overestimates the good effect of tartar emetic in the sthenic form of the disease, and I do not know a more plausible theory of its mode of action than his own, namely, by "promoting interstitial absorption". He bled freely, as was the fashion of the day, and may be, perhaps, the fashion of the future—only that we know better why we bleed; not to cure pneumonia, but to relieve congestion and avert impending suffocation; urgent dyspnœa being, as Dr. Wilson Fox well observes, the only positive indication for this remedy, with the exception of a very high amount of pyrexia in the early stages.

Laennec recognises, though briefly, some exceptional forms which succeeding writers have described more fully, such as that prevailing during an epidemic of influenza in which hepatisation did not occur, or was long delayed—a form corresponding apparently to the blue pneumonia described by Sir D. Corrigan in the *Dublin Hospital Gazette*, and by Dr. Gordon in the twenty-second volume of the *Dublin Quarterly Journal of Medical Science*. He also refers to an epidemic form which corresponds to the pythogenic pneumonia described by Drs. Grimshaw and J. W. Moore; and to an outbreak of it which occurred on board some of the ships of the Royal Navy in 1860, due to ochlesis generated by overcrowding, and becoming communicable by contagion. His opinion that abscess is a comparatively rare termination of pneumonia is generally received, and the same remark applies to gangrene, of which he says: "It can scarcely be ranged among the terminations of the pulmonary inflammation, and still less can it be considered as the consequence of its intensity.....It would, on the contrary, seem in most cases to approach the nature of the idiopathic gangrenes, etc."

His division into the two forms of uncircumscribed and circumscribed gangrene has been adopted by subsequent writers as being well founded.

I do not think he mentions that occasional result of pneumonia described by Rokitansky under the name of indurated hepatisation.

Of complications, Laennec refers especially to the cerebral and biliary. The former he ascribes to determination of blood to the head; but, as he remarks that it occurred in old persons, and ran into the third stage in a few hours, one would be inclined to think the "coma" was probably due to uræmia, in which complication Dr. M'Dowel has shown that pneumonia possesses the tendency to run rapidly into purulent infiltration.

Of the biliary complication, I may remark that the acute yellow softening of Rokitansky is an occasional and invariably fatal complication of pneumonia.

His chapter on the different forms of pleuritis is full of valuable observations. I can notice but a few.

Dry pleurisy he regards as usually a mere complication of some more serious disease, as pneumonia or phthisis. He remarks on the mistake of supposing that pleuritis terminates by effusion, whereas it (the effusion) may occur in the course of a few hours from the attack. He anticipates the late Dr. Greene's observations on vicarious purulent expectoration in empyema. He notices the frequent confusion of chronic pleuritis with phthisis. He lays down judicious rules for paracentesis, and advocates an early operation, on the ground that compression of the lung against the spine renders the success of the operation at a later period doubtful. He observes on the sanguinolent nature of the effused fluid in cancerous pleuritis—a fact often noticed in Dublin, and fully confirmed by Dr. Bowditch, who states that, in his experience of eighty-five cases, "sanguinolent fluid, when following the first puncture, was almost certainly fatal, and a consequence of some malignant disease of the lung or pleura."

No chapter in Laennec's work displays more patient and original research than that on pulmonary phthisis, but none has been more severely criticised by two classes of pathologists, by eminent clinical physicians and histologists. For a statement of the views of the former, I may refer to the second chapter of Dr. Williams' work on Consumption, and to the writings of Drs. Addison, Graves, Andrew Clarke, and Niemeyer. It is in the researches of the histologists, however, that Laennec met his Nemesis for the depreciation of microscopic investigations; one of the many instances proving how unwise are those vaticinations of future failure and of finality in science, which seem to say to the ever advancing tide of discovery, "Thus far shalt thou come, and no farther; and here shall thy proud waves be stayed".

Virchow and Reinhardt in Germany, followed by many others in England, have initiated a controversy which, like its subject, might, to use the expression of Dr. Wilson Fox, be termed illimitable; which has led to much original microscopical research, and to many doubtful experiments on those quasi-scrofulous animals, guinea-pigs and rabbits; and to a most interesting and valuable discussion in the Pathological Society of London, in which Laennec's views, with slight modification, were advocated by Drs. Wilson Fox and Moxon—namely, that all phthisis is tuberculosis—W. Fox holding that caseous pneumonia is pneumonia running a particular course in the presence of tubercles, and Moxon maintaining that the "anatomical characters of phthisis, as seen by the unaided eye, are positively sufficient to separate it from all other pulmonary diseases, and to gather all phthisical cases into one natural group, practically coinciding with the tuberculous phthisis of Laennec and Louis". Dr. Bastian, on the other hand, considered those views so erroneous that he would expunge the word tubercle from the medical vocabulary; while Dr. Williams maintained the opinions published in his valuable work on consumption, namely, that in inflammation of the adenoid tissue, the general result and future history of the inflammatory product are determined by its composition and vital endowments; and that it is by a scrofulous type of inflammation of the adenoid tissue that miliary indurations are developed, tending to caseation, softening, and spreading, and the formation of cavities. To those who wish to see an able *résumé* of the opinions of the numerous British and foreign writers on this vexed question, I would recommend a perusal of Dr. Foote's lectures on tuberculosis, published in the *Dublin Medical Journal* for May and July 1877.* I would also direct attention to an argumentative essay by Dr. Finny on "Pulmonary Hæmorrhage as a cause of Consumption" in the same journal for May 1873, in which several cases are detailed in support of the doctrine of phthisis ab hæmoptoë; all, however, occurring in patients of a strumous diathesis.

A review of the controversy shows the balance of opinion in favour of Laennec's views, with little modification, and that not only the eminent pathologists to whom I have referred, but others so distinguished as MM. Charcot and Rindfleisch, maintain their substantial accuracy—the former stating that, to his mind, "Nothing is better established than the existence of infiltrated or discrete tubercle, as a fundamental element in the different forms of pulmonary phthisis; on the other hand, nothing is more doubtful than the existence of caseous pneumonia independent of tuberculosis, and constituting the prime agent in the phthisical process"; while the other, in his article on Tuberculosis, in Ziemssen's *Cyclopædia*, asserts the similarity and close

* I cannot help expressing my conviction that the views of those who, like Dr. Williams, believe in the inflammatory origin of phthisis, have an important bearing on its treatment, while the same remark applies to the treatment of those intercurrent attacks sometimes regarded (erroneously) as relapses, which ensue from exposure to cold or other acts of imprudence during the progress of the disease. I have seen several cases in which the life of the patient was prolonged for years by the vigorous treatment of an attack of pneumonia or pleuritis, or bronchitis occurring in a more or less advanced stage of the disease; while as regards the earlier stage, it has been my practice, in all cases in which the exciting cause was cold and the symptoms and physical signs those of any form of inflammation or congestion, to commence by the employment of such measures as moderate local depletion (say by the application of from three to six leeches to the axillary region), counterirritation, and the free administration of iodide of potassium, and bicarbonate of potass, conjoined with sedatives. I could cite not a few cases in which this treatment has apparently averted the disease; but I usually followed it up by that which I uniformly adopt in the more advanced or the infective stage of the disease—namely, large doses (usually half a drachm) of dilute hydrochloric acid, with succus conii and the chlorides of barium and calcium, which latter, from experience, I regard (*malgré* the want of faith of Laennec, *vide* pp. 370, 371), with the iodide, as remedies of powerful efficacy in affections of the lymphatic system.

connection of scrofulous infiltration and tubercle, and the mutual relations between scrofula, scrofulous inflammation, and tubercle, maintaining that, "like certain animals—guinea-pigs, rabbits, and monkeys—scrofulous persons only need to have some local inflammation set up, in order to become tubercular. The tuberculosis depends on the resorption of the individual's own inflammatory products." Rindfleisch thus approaches to the views so strongly expressed by Graves in the second edition of his *Clinical Medicine*, as well as to the opinion of Laennec, namely, that tubercle and the matter of scrofulous glands are absolutely identical (Forbes's translation, p. 328).

But, after all, the wonder is not that Laennec's pathology should be questioned, but rather that he should have grasped so much of the truth—if not the whole truth—for, as Mr. Buckle rightly observes, "the philosophic pathologist is as different from a physician as a jurist from an advocate, or an agricultural chemist from a farmer. The two sets of functions may be united, and occasionally, though very rarely, they are, but there is no necessity for their being so." They were so united in Laennec, though in different degrees. He was a pathologist before his discovery; but ever after, his pathology was made subservient to the great object of his life—the improvement of clinical medicine by the application of physical diagnosis. To justly estimate his merits and the influence of his work, we should realise the truth, that "the progress of every science is affected more by the scheme according to which it is cultivated, than by the actual ability of the cultivators themselves"; and, as the writer I have quoted justly remarks, "whoever has reflected much on the different stages through which our knowledge of biology has successively passed, must be led to the conclusion that, while fully recognising the great merit of the (microscopic?) investigators of the animal frame, our highest admiration ought to be reserved not for those who make the discoveries, but rather for those who point out how the discoveries are to be made".

The second part of Laennec's work, though marked by great ability and originality, is confessedly inferior to the former, as also to the mass of the observations of subsequent writers. And first we observe that, while his explanations of the physical signs of the lungs may be said to have received few corrections, his theory of the sounds of the heart in the healthy and diseased states has been proved to be erroneous. Starting from a sound principle, that the ear judges more correctly of the intervals of sound than the eye of the intervals of motions corresponding to these, he yet vitiated his conclusions by ascribing to the contraction of the auricles the sound produced by the sudden tension of the semilunar valves. To estimate the important consequences of this error, which could scarcely have been committed had Laennec borne in mind the hydrostatic law of the equal pressure of fluids, we have but to recall to mind the phenomena of a case of aortic patency which Laennec seems not to have observed, but which, a very few years after, was so thoroughly investigated by Sir D. Corrigan, in a masterly memoir, which threw much light on the pathology and treatment, not only of this, but also of other diseases of the heart, showing more especially the true conditions indicating the use of digitalis in cardiac affections.

Other disciples of Laennec examined and corrected his theory by experiments on living animals, and by clinical observation—notably Drs. Hope and Williams, and I would add Dr. Billing and Mr. Bryan, whose researches have scarcely been appreciated as they deserve.

That the subject of the heart's motions and sounds continues to occupy the minds of eminent physiologists and pathologists in this and other countries, we have proofs in the most recent works on physiology, in the monographs of Walshe, Balfour, and Hayden, and in the contributions of clinical observers in the periodicals of the day.

Laennec's erroneous explanation of arterial murmurs has been amply corrected by the experimental researches of Williams and Corrigan, while the mistake he made of locating the continuous murmur heard in the neck in the carotid arteries was long since corrected by Dr. Ogier Ward, who conclusively proved that it is seated in the large veins. Another erroneous explanation is that of the genesis of a loud musical murmur audible at some distance from the patient, since proved by the clinical observations of Drs. Banks, Stokes, and Corrigan to be due to the presence of a vibrating tongue in the heart or aorta.

With regard to the application of physical diagnosis to the diseases of the heart, Laennec has been accused of an amount of confidence which is not justified by its results in his own hands. But such an accusation does not appear to be warranted by his language, for he not only rather over-estimates the difficulty "of the study of the heart's actions in health", but, while maintaining the insufficiency of the general symptoms—which he has sketched with great terseness and power, but without any attempt at differentiation—to characterise or indicate disease of the heart, and the consequent necessity of recourse to mediate auscultation, he adds, that "even it more frequently fails in this case than in any of the other diseases which it is calculated to discover". And again, that in these diseases "we shall be most liable to commit grievous errors in diagnosis, more especially if we restrict our exploration to a few minutes, and fail to take into account the general symptoms and the diseases which may complicate those of the heart".

Of the additions made to Laennec's description of diseases of the heart, the most remarkable is the case of pericarditis. We cannot realise his admission that the stethoscope scarcely furnishes us with any certain signs of this disease, now, when the contrary is so generally acknowledged. But for many years after Laennec, the general belief, as enunciated by Andral and others, was that the diagnosis of pericarditis could only be arrived at indirectly and by a process of exclusion. It was reserved for Dr. Stokes to expound so fully the physical diagnosis of this disease, as to leave "what had been the most difficult the most easy of detection in medicine" (Sibson). True, the friction murmur had been noticed by Collin, and Watson, but these were scattered rays converging to and concentrated in a burning focus in the exhaustive memoir of Stokes.

Perhaps no chapter in Laennec's work is more worthy of admiration than that on softening of the heart in fever. His description of the colour and consistence of the organ; of the analogous condition of other muscles; of the diminution of the heart's impulse and occasional loss of its sounds; of the slowness of its action and occasional fits of excitement; of its non-inflammatory nature, and of the indications for wine, which, he says, "is indicated in case the affection supervenes to a severe fever, *and if the patient bears it well*"; and of its curability in convalescence under tonic treatment, are excellent; and I may add that he evidently recognised the coexistence of softening and hypertrophy (the failing hypertrophy of Fothergill), although ignorant of the fact, since demonstrated by Rindfleisch, that this febrile softening is a true fatty degeneration. I need not remind my hearers how these observations, with those of Louis, suggested the admirable researches of Dr. Stokes, and led to the placing of the indications for the exhibition of wine in typhus upon a sound and certain foundation.

On the great subject of fatty degeneration of the heart, Laennec's claims to originality have been ignored by some writers, while others, as the author of the article in Ziemssen's *Cyclopædia*, have fully recognised them. He was, in fact, familiar with both forms,—fatty infiltration and fatty degeneration,—the latter of which he defines to be an actual transformation of the muscular substance into a substance possessing all the chemical and physical properties of fat, thus anticipating the idea which Dr. Quain afterwards developed and proved to be a fact by the original and elaborate experiments detailed in his memorable essay in the *Medico-Chirurgical Transactions*, researches of which Sir James Paget says: "Dr. Quain has candidly referred to many previous observers by whom similar changes were recognised, but the honour of the full proof and of the right use of it belongs to himself alone."

Perhaps no subject in medicine has since occupied a larger share of the attention of the profession than this, as is proved by the contributions of numerous English and continental writers; the recorded cases in the *Transactions* of the Pathological Societies of London and Dublin; the monographs of Walshe, Balfour, Fothergill (who gives a masterly description of the general symptoms); of Hayden, who has carefully collected and tabulated the cases reported since Dr. Quain's memoir, with many of his own; and of Stokes, who first, I believe, expounded the differential diagnosis of degeneration of the right and left cavities, based upon the preponderance of respiratory or cerebral secondary affections.

Not to follow this review further, I may remark that a careful perusal of these chapters will disclose some observations and suggestions worthy of notice; such, for example, as his account of the signs of contraction of the mitral orifice (pp. 647-8), as his observation that "the severest diseases of the heart consist in defects of proportion, and yet a slight disproportion between it and other organs, or between some of its own constituent parts, is compatible with a state of health"; that dilatation of the right ventricle without hypertrophy is of rare occurrence; that digitalis is of no benefit in hypertrophy; that simple hypertrophy without dilatation is much more rare in the right than in the left ventricle; that intermission of the pulse is often due to the alternate feeble contraction of the ventricle; that the capillary circulation is in some sort independent of the general, a fact now recognised by pathologists; and, not to multiply instances, his theory of angina pectoris, of which Dr. L. Clarke says, "Laennec's view of the proximate cause has been materially supported by recent inquiries" (*Pathological Transactions*, vi).

What has been Laennec's influence on practice, on clinical teaching, and on the public estimate of medicine? By his introduction of differential diagnosis—the essential prerequisite of scientific therapeutics—the treatment of diseases of the chest, previously directed to a name, a

group of symptoms, or often to a single symptom supposed to be pathognomonic of a certain affection, has become differentiated; and a case of pneumonia is no longer treated as one of pleuritis, nor one of diseased heart; or of emphysema as one of hydrothorax—the universal practice during the preceding era. Auscultation, also, by enabling us to recognise the tendency of diseases to recovery, or the contrary, becomes a powerful adjuvant in their treatment. Moreover, we have, in the recognition of the vital condition and innervation of the heart, a most valuable guide to the treatment of various diseases, notably with regard to the exhibition of wine in fever, and the treatment of the cerebral anæmia of fatty heart and of other cerebral affections; and, in the field of preventive medicine, auscultation co-operates by detecting the germs and vestiges of disease, as the early signs of phthisis or the organic sequelæ of acute disease.

With regard to Laennec's influence on clinical instruction, we might well ask what would such instruction be, if physical diagnosis were omitted? Without it, the knowledge gained at the bedside would be mere cramming. "*Teaching*", says Dr. Moxon, "is the storing of knowledge—it may be done quickly. *Training* is the creation of an organ for use of knowledge—it needs much time, it is a slow process. The trainer has to convert the pupil's knowledge into motive, his desire into patience, his will into skill. Every good trainer aims to raise up in his pupil's mind *a self-training faculty*, which shall itself continue to train, more and more, knowledge into motive. By such training, knowledge becomes power." This is exactly what physical diagnosis does. Following the method of Laennec, the clinical teacher trains the pupil to the use of his senses in the observation of sensible phenomena, then to the associating these with the physical conditions from which they arise, and finally to their relations with principles of pathology and of treatment. No greater improvement has ever been effected in medical education than by the introduction of this method into hospital teaching by the late Dr. Graves, as described in his work on clinical medicine.

It were more easy to say what should be than what is the influence—indirect, of course—of Laennec on the public estimate of medicine. This, we know, has never been high; and physicians have been the objects of satire for centuries. A hundred years ago, Zimmerman wrote: "I sometimes hear pretended wits affecting, with a tone of raillery, that physic is still such as it was in the time of Hippocrates, and that the best informed physicians know only that which he knew." Later, we have the question gravely propounded by Sir William Hamilton: "Has the practice of medicine made a single step since Hippocrates?" and the late Dr. Symonds, in a Presidential Address on this subject—since published in his *Miscellanies*—referred to passages in two leading reviews of the day, too long for quotation, both representing medicine as uncertain, always changing, resting on arbitrary assumption, etc. One oracle asks: "But can any one at this moment seriously declare that there is such a thing as a science of medicine?" "What there is is this: there are a few facts—a very few—distinctly known and beyond the reach of controversy, and the number of these increases but slowly, if it sensibly increases at all."

Our answer to such nonsense is to point to what Laennec has done. Is the influence of medicine in directly saving life called in question, we may refer to the physical diagnosis of cases which, without medical or surgical interference, run on inevitably to a fatal termination: *e.g.*, of empyema, or of a foreign body in the bronchus; to the advantage of the early detection and treatment of phthisis, or certain diseases of the heart, or aneurism of the aorta.

In regard of that power of prognosis which Hippocrates recommended physicians to cultivate, with a view to securing the confidence of those who consulted them, I need not remind you of what we owe to Laennec; and in the detection of latent disease, in the numerous cases in which the aid of the physician is sought by insurance companies or Governmental departments, from whom do we obtain help so largely as from Laennec, either alone or in conjunction with Bright? If, then, we challenge the public estimate for our profession as a science, it is to Laennec we owe much of the grounds of our claim; and if it be said that the art is conjectural, to a portion, at least, we say he has contributed a degree of certainty almost amounting to law.

"As soon as any department of knowledge", says Mr. Buckle, "has been generalised into laws, it contains, either in itself or its applications, three distinct branches: namely, inventions, discoveries, and method."

Laennec combined all these. His invention was as perfect as simple, tried by the test for such—"will it work?" His discoveries have led to others, only second in importance to his own, by those who have adopted his method. He was not a generaliser like Cullen, and perhaps scarcely deserves the eulogy of Sir William Hamilton on that great man, whom he seems to praise for that "he had not made the discovery of a single phenomenon". He did not undervalue theory, which he calls the "scaffolding of science"; he reasoned—not downwards from general principles to facts, but in the contrary direction; and having seen and seized on the "enlightening fact", and pursued what Bacon calls the "*experimenta lucifera*" through a lengthened series of observations on the living and on the dead, he developed and has bequeathed to us a method "comprehensive and exact" in its induction, which, however it may hereafter "be further polished and illustrated, and accommodated for use and practice", can never be dispensed with in the present, or superseded in a future age of medicine. To him we may fitly apply Cowley's well-known lines on Bacon:

> "From these and all long errors of the way
> In which our wandering predecessors went,
> And, like the old Hebrews, many years did stray
> In deserts but of small extent;
> Bacon, like Moses, led us forth at last;
> The barren wilderness he past,
> Did on the very border stand
> Of the blest promised land,
> And from the mountain top of his exalted wit
> Saw it himself, and showed us it."

Allow me to trespass on your patience for a moment longer, while I express my personal regret for one whose recent death, I may truly say, is deplored by the entire profession; and whose loss to this Association may be judged of by this, that his last public act, so far as I am aware, was in reference to the arrangements for the present meeting.

On reading the short biography, accompanying the announcement of his death, in the BRITISH MEDICAL JOURNAL, I was struck by the resemblance of his career to that which I have feebly attempted to sketch.

Like Laennec, Dr. Murchison was a diligent and highly distinguished student; he, also, early devoted himself to the cultivation of pathology and clinical medicine, and became a great clinical teacher; like Laennec, he compressed the labours of a long life into a comparatively short period; and like him, his name will ever be associated with a great work—a work which must live, inasmuch as it is not only the most comprehensive and exhaustive which has ever appeared on the subject, but also marks the epoch of that sound and scientific classification of fevers which the late Dr. Parkes, in his admirable address in 1873, pronounced to be probably "our greatest advance in practical medicine". That advance, mainly due to the researches of Stewart and Jenner, has been secured, and rendered permanent, and illustrated by the great work of Charles Murchison.

WEST KENT.—This is an extremely interesting report, and, what is unfortunately too rare amongst reports of this character, is perfectly comprehensible to the outside reader. It commences with a brief description of the extent and character of the district, and then proceeds to compare, in a variety of valuable tables, the mortality for 1878 with that for preceding years. There is evidence throughout of the zeal and promptitude of Dr. Baylis, who seems to be especially successful in stamping out threatened epidemics of disease. For instance, small-pox, which broke out in the district 27 times during the year, was only able to make headway in one instance, where the disease was unrecognised and unreported. The effect of this was that the seeds of infection were sown broadcast; and, before the disease could be quelled, 69 cases, and 13 deaths had occurred. Nearly all these 27 outbreaks were caused by importations from London; and it is a matter for regret, therefore, that only one of the twelve authorities in the combination has provided a hospital for infectious diseases. The West Kent district stands alone in having taken seriously in hand what may well be called county drainage. One large scheme for draining a considerable part of the district has been nearly perfected; and the works for another to drain the Darenth Valley, are about to be commenced. Considering the difficulties which small districts have to encounter in planning drainage works for themselves, we could wish that the system which has been adopted in West Kent should be largely extended. During last year, 2,559 deaths occurred in the whole district, a number equal to a rate of 16.8 per 1,000, as against 16.2 in 1877, 16.6 in 1876, and 18.5 in 1875. Of these 2,599 deaths, 608 were children under one year, 282 in children between 1 and 5, and 816 in persons above 60 years of age. Zymotic diseases caused 376 deaths, 23 of these being from small-pox, 83 from whooping-cough, 44 from fevers, and 94 from diarrhœa. The diarrhœa deaths were not only the most numerous, but showed the largest increase upon the average. Whooping-cough was fatally prevalent, being five per cent. above the local average. The fever deaths were equal to the average; but measles, scarlatina, and diphtheria taken together show a decrease of no less than one half. The general impression left upon the mind after reading Dr. Baylis's account of the sanitary action in the several districts is that, at least in this combination, the Public Health Act is working well, and that to Dr. Baylis the largest share of this gratifying result is due.

ADDRESS IN SURGERY,

BY

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Surgeon to and Lecturer on Surgery at St. Bartholomew's Hospital.

ON THE PREVENTION OF BLOOD-POISONING IN THE PRACTICE OF SURGERY.

WHEN honoured by the invitation of your Council to give this year the Address in Surgery, I had to consider on what subject I might venture to speak to you, I could not help regretting that one had not been chosen for me. I was embarrassed by the range of choice. Working as I am at surgery in general, there is no particular subject on which I am entitled to speak with especial authority; with any authority indeed beyond, or even equal to, that which many of those whom I address can claim. But then, on reflection, I could not doubt that, if the members of this Association had been called on to select a subject for this address, the majority at least would have chosen that which is, I think, not only in itself the first and largest in surgery, but also the one which of late years has occupied the attention of most surgeons far more than any other, and concerning which the most opposite opinions are entertained by those who have the fullest opportunity of studying it.

Need I say that I refer to the subject of Blood-Poisoning and its prevention? I think I am speaking advisedly when I call it the largest and the first; for it is not only an evil spread over the whole field of surgery—in what class of cases is its deadly presence unknown? but it is, if not the sole one, almost beyond comparison the chief evil which waits upon the surgeon's own work. It seeks its quarry not only in disease and accident, though here might be found scope enough for its powers of destruction; but it hovers over every operation, and by its fell swoop can destroy the best work and fairest promise of the surgeon. Yes; truly it has been the scourge of surgery. Is it so still? Would I could say it was altogether a thing of the past—of history only; that we are able now to cast it out. No; I cannot state this. When will some successor of mine in this honourable but responsible position be able fairly to affirm so much? But this I may say, that of late a vast amount of the best work has been done in this direction; of work so worthy, that if the demon has not been altogether exorcised, in its power of mischief it has been so trodden under foot that now, when it moves among us, we are startled as by some strange thing. Let those who think my language overcharged look at the records of surgery in the last generation only, and in this they will see somewhat of the good which has been wrought—but a fraction of it; for it is only in our own time that anything like an accurate record has been kept of the number of lives thus destroyed. How many lives were so sacrificed in former times, no one can tell? for the nature of the mischief being then unknown, its fatal work was set down to the account of various other causes. It is only in time within the reach of many of us, that its presence came to be recognised with sufficient distinction to have a name; and surgeons, you know, are not slow to find names for new things, whether real and actual, or mere imaginings. Yes, surely the chief triumph of this era of surgery is the successful war it has waged with blood-poisoning in all its various forms.

To avoid risk of confusion, let us consider for a moment what is to be understood by the term blood-poisoning. I shall employ it in its comprehensive sense, to express the sum of the effects produced by the introduction of matter changed by the action of septic poison into the blood. By septic poison, I understand matter capable of producing or promoting putrefaction. This septic matter is thus, of course, separated from all inorganic and vegetable poisons commonly so called, and by its effects, at least in the economy, from those zymotic poisons which produce such diseases as small-pox, scarlatina, measles, and the like. But I need hardly add that I include in this view, not only the affections called pyæmia, septicæmia, ichorrhæmia, and so on, but some others which perhaps would not be so universally accepted to be within the pale, as, for example, erysipelas, certain forms of erythema, boils often, and carbuncle, and some other affections more vague and transient, which perhaps I need not now further particularise, for on this subject I have already spoken elsewhere. Of course, I do not forget that concerning the pathology of erysipelas, for instance, contrary views are still entertained. For my part, I consider it to be fairly well established that erysipelas is due to some infection of the blood; that it is the result of some form of blood-poisoning, and very closely allied to the affections called septicæmia and pyæmia. Nor shall I now trouble you with any discussion of the relation of the affections called septicæmia and pyæmia to each other. But, in order to be clear, it is as well to say that I do not think there is any evidence at all sufficient to show that these affections are different in kind or in nature. So far as I can see, they differ only in degree—a degree probably determined, at least chiefly, by the intensity of the poison which operates. I can find no reason for assuming a difference in the nature of the poison itself. For the grounds of this opinion, I must refer you to former papers on the subject.

The cause, then, of the blood-poisoning of which I speak is the introduction of putrid matter to the blood. I say its introduction, for if it ever originate in the blood itself, such an origin is at present beyond research. We know nothing of it. All we do know is, that it may be introduced from without. The current belief—may I say the established fact? is, that the agents of putrefaction exist in the form of solid organic particles, some so minute as to be beyond the range of the highest powers of the microscope, which float freely in the air, and are now commonly called germs, and which abound in decomposing organic matter of various kinds; notably, and this is of chief interest to us, in decomposing animal fluids.

Let it be observed however, in passing, that although the germ-theory in its present form is of very modern growth, the belief that the admission of air to recent wounds is in some way injurious is not a new one. It extends at least beyond the era of the introduction of subcutaneous surgery, which is founded on it.

Now it is necessary for me, in order to avoid being misunderstood in what I have to say hereafter, to state thus much; but I do not propose to enter further into, to disturb the vexed questions that arise therefrom. I am considering the subject now only from a clinical point of view. Therefore, I turn from any farther inquiry into the more precise nature of these septic particles. In what sense, for instance, they are entitled to be considered alive need not trouble us here, or whether they are more akin to vegetable or to animal life. That they are organic, and possessed at least of the fundamental attributes of living matter, seems proven by their behaviour, and by some of the tests that we can apply to them. It is enough for us that they are septic; that they can produce and promote putrefaction; and further, that fluids so changed by them may provoke those terrible effects which are only too well known as blood-poisoning. I speak thus of the fluid which poisons, saying changed by, rather than charged with, bacteria or their germs, according to evidence; but I need not now consider this question. You will remember that it was discussed in a masterly manner in 1878, by Dr. W. Roberts, in his Address on Medicine. Neither have I now anything to say concerning the particles of matter at present called bacteria. Everyone knows how they are prone to abound when putrefaction and kindred changes occur. For the most part, I suppose their presence may be regarded as the signal that such changes are in progress; but the exact relation they hold to such changes is at present with many a vexed question, and it is not necessary now to disturb it.

I have only one further remark to make on this portion of my subject. I have said that we have no knowledge that these mischievous particles ever originate within the blood. We do know that when fluids so changed by them find an entrance from without, they are prone to provoke grave mischief. But we also know that such fluids, potent for the gravest mischief, may be produced within the body, deep among the tissues, far away from any chance of direct communication with the air, and this without previous wound or injury of any kind. Upon the passage of such matter into the circulation, the most fatal form of blood-poisoning may supervene. This significant fact, which is beyond question, has been of late strangely set aside, I would almost say wilfully overlooked, in very much of what has been written within the last few years; a fact significant, indeed, in a twofold sense. But to this I shall presently return.

It will be admitted, I trust, even by those who unreservedly accept what is known as the germ-theory, that I have not been in any way unfair in what I have thus said on the subject. Some, I know, would not go so far as I have gone, but I am anxious not to do injustice to this view. But now I turn to another side of this great subject: a side which throughout the discussion has been curiously lost sight of; which, so far as I know, in the vast amount that has been said and written, has been almost entirely ignored. If the germ-theory in its past and present state contained the truth, the whole truth, and nothing but the truth, what possible explanation is to be given of that which is witnessed daily and hourly—the kindly repair of exposed wounds? I will venture to say that any one who had no clinical experience, but who accepted all that he could read on the germ-theory, would inevitably come to the conclusion that to expose any wound unguarded to the atmosphere would be to seal the fate of the patient. But what is the fact? Who requires to be informed? Then is it not clear that the whole truth has not yet been told? Nay, further still, not only are

exposed and unguarded wounds constantly to be seen in healthy process of repair, covered with secretion which presents no evidence of putrefaction, but wounds are sometimes seen bathed in fluid, which, if injected into the blood, would forthwith produce all the effects of blood-poisoning in the most intense degree. And yet further: not only may such fluids lie in contact with open wounds without provoking any evidence of mischief, but a collection of the foulest fluid, in a state of the most active putrefaction, may be pent up in a closed cavity under considerable pressure; as, for example, in an anal or pharyngeal abscess or in an abscess around dead bone—I say a collection of matter large enough and poisonous enough to destroy a host of persons, if passed into the blood, may remain thus pent up in the body for a long period without any visible disturbance of the general health. It is obvious, then, that the contact of wounds and raw surfaces with even putrefying fluids is not always enough, for this is seen continually without evil effects. They must be transmitted to the blood. I hardly know what would become of the practice of surgery if this were a matter of course. In point of actual fact—a fact second in importance to none in surgery, but which it is the fashion just now resolutely to ignore—I say, in point of fact, it is very far from it. The transmission of such fluids, when they are present, is the exception, not the rule. Now, here again I am content to take the fact itself; and I do not propose to enter, at all events at any length, into any attempt at explanation. I do not think, however, that we are altogether in the dark. All wounds, except the most recent, when tolerably healthy, are covered, as we all know very well, by a newly formed delicate structure sometimes called granulation-tissue; sometimes presenting other but kindred forms; but which in any case constitutes a continuous layer interposed between the blood and whatever may be on the surface; and it seems to be pretty clear that this animal membrane has, like similar structures of the class, the property of separation; that it has the power of allowing the transmission of certain substances and of rejecting others, and that upon this simple action of dialysis health and life very often depend. I say this explanation has been made reasonable by observation and experiment; but whether it be wholly or partially true or not, the fact—the vital fact—which it attempts to explain remains. Pause, if only for a moment, to think of it: a fluid all-potent for mischief, intensely poisonous on the one side, the blood, to which if it gain access follows destruction on the other, and a very thin, very delicate, most fragile membrane only intervening! Truly enough, to the patient ignorance of this is bliss; and surgeons just now talk, and write, and practise, as if it were folly to be wise.

But such terrible transmission is sometimes effected, and there is blood-poisoning. It remains, then, to inquire under what conditions the poison can gain entrance to the blood. I think the clinical study of this subject impresses us with some striking facts. First of all, this mischief is least likely to happen in healthy wounds during the process of repair; and, when it does occur, it is either in a wound unhealthy in character or flagging in action, or in one so recent, or in which the process of repair has been so delayed, that little or no new and healthy tissue has been produced on the surface. In other words, when the newly formed tissue is healthy and entire, it is tolerably impregnable, and whatever interferes with its integrity gives the opportunity for mischief. I say the mischief is less likely to happen in proportion as the wound is healthy and repair is rapid; but exceptions to this we know to occur; and it is reasonable to suppose, in some cases at least it has been almost demonstrated, if in some obscure corner reparative action has not failed, that from some violence or accidental disturbance or other cause, the continuity of the new structure has been broken or its integrity somehow impaired, and so the poison has passed in.

And now I hasten anxiously on to prevent the possibility of misapprehension even for a moment. But no one, I trust, could imagine from what I have been saying, that I am not to the last degree impressed by the mischief which may arise from the presence in wounds of any kind of decomposing fluid; that in the most absolute and thorough cleanliness—not in the common sense only, but in a surgical one also—can a patient be at all secure. I shall return to this; but I shall not be in any way misunderstood here. My present purpose is to insist upon the fact that two conditions at least are required for the mischief of blood-poisoning; and that of late, in the concentration of attention upon the other, one of these has been strangely overlooked. There must be a fluid potent for evil, and there must be a surface ready to transmit it. Obviously, then, the means of preventing mischief, of conducting our patient safely through recovery from wounds and injuries, lies in fulfilling the opposite conditions: in the rigid prevention or exclusion, so far as it is practicable, of all putrefying or decomposing or foul fluid, and in keeping wounds in as healthy a state as possible, in fostering the soundest and most rapid process of repair. If either of these conditions be fulfilled, the patient may escape the mischief we dread; but undoubtedly the duty of the surgeon is, by all means within his power, to secure both. He is below the mark if he can ever be satisfied with less than this.

Furthermore, be it remembered that these two conditions, as the rule, are found in company. The fresh fluid upon the surface of a wound which is healthy and in process of repair is innocuous. No mischief of this kind lurks in fresh healthy pus; and if the fluid which bathes the surface of a wound become foul or putrescent, the character of the wound itself is apt to change and the integrity of the surface to suffer. Therefore, a healthy wound in process of repair and a fluid on the surface which is innocuous, as the rule, go together.

Animal fluids exposed in open vessels to the air after some time become putrid, the length of time varying with the state of the air; and so it is forthwith concluded and argued by many that if fluid upon the surface of a wound be exposed to the air, it must while there become putrid too. But the fact is, that any one who cares to witness it may see fluid at any time upon the surface of exposed wounds which is not putrid. And the explanation of this most familiar fact is simple enough: that the fluid in the vessel has been kept until it has become foul, while the fluid upon the surface of a wound in process of repair which is duly watched and properly managed is ever being renewed. The same fluid ought not to be allowed to remain long enough to undergo mischievous change. There is, after all, some difference between stagnant water and a running stream.

Dr. Roberts, in his memorable address last year, said: "Before we can understand the pathology of septicæmia, we must have clear ideas on the relation of septic bacteria to our bodies. We see in our laboratories that dead animal tissues, when exposed to ordinary air or ordinary water, invariably breed septic organisms; in other words, contact of septic germs with the dead tissue never fails to produce successful septic inoculation. But this is quite otherwise with the same tissues when alive and forming part of our bodies. You cannot successfully inoculate the healthy tissues with septic bacteria. It has been proved over and over again that these organisms, when separated from the decomposing medium in which they grow, can be injected in quantity into the blood or tissue of a healthy animal, or applied to a sore on its skin, without producing the least effect. The healthy living tissues are an unsuitable soil for them; they cannot grow in it; or, to put it in another way, ordinary septic bacteria are not parasitic on the living tissues."

"This fact", he continues, "is of fundamental importance in the discussion of the pathology of septicæmia. We have a familiar illustration of its truth in the now common practice of subcutaneous injection; every time you make a subcutaneous injection you inject septic germs into the tissues."

Thus the surgery of the present day, in this respect, is characterised as antiseptic; that is to say, since surgeons have duly recognised this great impending evil, they have, as their chief aim, striven to avert it. Here, at all events, increase of power has followed closely on the advance of knowledge. One has not, I repeat, to turn far back in our literature before all evidence of any suspicion of what is now known as blood-poisoning disappears. Our knowledge of the fact of even the existence of such an affection is of recent date; and for several years after the subject first attracted the attention of surgeons, the comparatively clear and simple view of its pathology which at present prevails was for a while obscured by theories and doctrines which drew observation away from the actual cause to speculations on phlebitis, thrombosis, and other changes which are often associated with it. The history of our present knowledge of blood-poisoning is an interesting and instructive one. At first, all attention being naturally concentrated on the changes wrought in the body, the origin and cause of the affection was sought only within those limits. Then when the truth began to dawn that the actual poison was derived from without, the pendulum of opinion, according to its wont, swung at once to the opposite extreme, and I venture to think that of late the opposite error has prevailed, of regarding only the conditions under which the poison is formed, and losing sight altogether of the conditions under which it affects the blood.

Antiseptic surgery! Unhappily there is much confusion in the current employment of this phrase. This ought to mean—and with some, but a few only, it does mean—the principle which aims to secure healthy wounds and their repair as speedily as possible (for while they last there is always risk) by the most scrupulous cleanliness—by cleanliness, I repeat not only in the common, but in the surgical sense, which means the prevention or removal or destruction of all matter which may prove poisonous. This, I take it, is the only adequate conception of antiseptic surgery; and, as thus understood, the term antiseptic ought in

fact to become superfluous, being thus simply equivalent to good surgery. Less than this, should mean unwholesome practice. But somehow there is a weakness among us for exuberance of this sort. What a run the phrase "conservative surgery" had, for instance, nay, still has in certain quarters, as if surgery itself were worth anything, could have any value, or even deserve its name, if it were not in the truest sense conservative. The employment of the term conservative ought surely to mark an inadequate conception of our art, and I would fain say the same of the word antiseptic. If surgery be not antiseptic in the sense I have endeavoured to indicate, it must foster most dangerously, by covering with its sanction, the prevalence of mischief. But antiseptic surgery, as more commonly understood, implies the liberal employment in practice of special agents, which are collectively known as antiseptics; and the number of these—their name is legion—which has been introduced to the profession and the public, and the amount of many of them which is consumed, testify abundantly to the extent of opinion in their favour. But in this sense, again, I suppose all surgeons now-a-days practise antiseptic surgery. Perhaps an instance hardly ever occurs now in the treatment of a wound in which an antiseptic of some kind is not in some way employed during its progress; never, perhaps, in what should be called civilised surgery, if we allow—as we should allow — free ablution with clean water, adequately used, to be amongst the simplest, safest, best of antiseptics.

And lastly, the term antiseptic is employed, and this most commonly of all, to express a particular method of carrying out this great principle; the method which has attracted, and is still attracting, so large a share of attention. Of course, I allude to that which has been devised by Lister, and which is more precisely termed Lister's plan or method of dressing wounds.

It would be a matter of comparatively little moment in which of these senses the term antiseptic were used, if only the present degree of confusion could be avoided; but some mischief arises, I think, when the principle itself is confounded with any special mode of practice.

Now, since some light has been thrown on the nature and cause of this affection, what has surgery done to avert it? Yes, there are grounds for congratulation in this direction. This would surely be the answer given by the general experience of surgeons, and vague and full of fallacy as this necessarily always is, it must, and especially in this case, be allowed to go for very much. And this is the answer given by statistics, which, although too often laden with fallacy also, speak, I believe, plainly and conclusively on this point. I have no intention of trespassing on your patience now with any formidable array of figures; but rather by way of illustration than of complete proof of the truth of what I state, I would ask you to regard for a moment the facts set forth in this table.

Tables showing the Statistics of Blood-poisoning after Operation or Injury in St. Bartholomew's Hospital for the Years 1876-77-78.

	1876.				1877.				1878.				The 3 Years.	
	Male.	Female.	Total.	Per ct.	Male.	Female.	Total.	Per ct.	Male.	Female.	Total.	Per ct.	Total.	Rate per cent.
Cases of Injury	665	250	915	—	686	191	877	—	807	263	1070	—	2862	—
Cases of Operation	268	133	401	—	274	144	418	—	225	191	416	—	1235	—
Deaths after Injury.....	56	19	75	8.19	51	15	66	7.52	53	20	73	6.82	214	7.47
Deaths after Operation ..	24	3	27	6.73	17	6	23	5.5	14	8	22	5.28	72	5.82
Cases of Pyæmia after Injury	—	—	—	—	4	—	4	.45	1	1	2	.18	6	.29
Cases of Pyæmia after Operation	2	—	2	.49	4	1	5	1.19	3	1	4	.96	11	.89
Cases of Erysipelas after Injury	10	3	13	1.42	3	—	3	.34	4	2	6	.56	22	.76
Cases of Erysipelas after Operation	9	6	15	3.74	3	5	8	1.91	10	5	15	3.60	38	3.07
Deaths from Pyæmia after Injury	—	—	—	—	4	—	4	.45	1	1	2	.18	6	.29
Deaths from Pyæmia after Operation	2	—	2	.49	4	—	4	.95	3	1	4	.96	10	.80
Deaths from Erysipelas after Injury	2	—	2	.21	1	—	1	.11	1	—	1	.09	4	.13
Deaths from Erysipelas after Operation.....	3	—	3	.74	1	1	2	.47	2	1	3	.72	8	.64
Cases of Blood-Poisoning after Injury..	10	3	13	1.42	7	—	7	.79	5	3	8	.74	28	1.05
Cases of Blood-Poisoning after Operation	11	6	17	4.23	7	6	13	3.11	13	6	19	4.56	49	3.96
Deaths from Blood-poisoning after Injury	2	—	2	.21	5	—	5	.57	2	1	3	.28	10	.42
Deaths from Blood-poisoning after Operation	5	—	5	1.24	5	1	6	1.43	5	2	7	1.68	18	1.44

All the operations, you observe, upon which this table is based are of some magnitude, most of them capital ones; trivial operations have been eliminated. From these calculations, too, for various reasons, you see that operations for hernia, ovariotomy, and operations on the eye have been excluded.

This short table, then, presents a summary of the results of the surgical practice of St. Bartholomew's Hospital, in this relation, during the last three years. I have had no hand in the work of preparing it. It has been drawn up by Mr. Macready, who is one of our surgical registrars; and I need not assure those who have the pleasure of knowing him that it is a faithful, independent, and trustworthy record. In the labour of it he has had no cause to serve but that of truth.

I may add that our hospital statistics are published yearly, of course on a far more extended scale, and that in those tables and in our own case-books the facts, which are open to any one, are fully set forth upon which these figures are founded.

What, then, is here shown? That in 1876 the absolute number of deaths from pyæmia after operation were 2, which is at the rate of .49 per cent.; or including erysipelas in the common term of blood-poisoning they were 5, at the rate of 1.24 per cent. In 1877, the number of deaths from pyæmia were 4, at the rate of .95 per cent.; or including erysipelas they were 6, at the rate of 1.43 per cent. In 1878, the deaths from pyæmia were 4, at the rate of .96 per cent.; with erysipelas 7, at the rate of 1.68 per cent. Once more, during the three years there was a total of 18 deaths from blood-poisoning after 1,235 operations, and this is at the rate of 1.44 per cent.

Now, so long as any instances whatever of this mischief occur, we shall regard our work in this respect as defective, and strive to do it better. I, at least, am ready to change my present plan of management when there is evidence of this character that better results can be accomplished by any other means.

Yes, I think it cannot be doubted that the occurrence of blood-poisoning during the progress of wounds and recovery after operations has been of late very far less common than formerly, and is, I venture to believe, daily becoming yet more rare. It is far less frequent now than it was, I will not only say many years ago, when we cannot estimate its frequency from lack of any adequate record—because, indeed, then its actual occurrence often escaped even passing notice—but it is now far less frequent than it was only a few years back, within even the memory of younger surgeons. But congratulatory, I had almost said triumphant, as are the statistics of the present day, I must own that it is necessary to regard these with a jealous eye, and in many instances at least not to accept them without reserve: for this chief reason. Since the prevention of blood-poisoning after wounds and operations has become the great theme of surgery, surgeons almost everywhere have been naturally and very laudably anxious to gain credit for the best results. A keen, active, and noble rivalry has sprung up between surgeons and between institutions. A splendid struggle now goes on throughout England, Europe, and the civilised world to reduce the mortality from this cause after operations to the lowest possible terms. Beyond all doubt, the gain to human life and health from this has already been immense—who shall say how great, or how much greater still it will be? But then, you know, in such a case it is almost inevitable but that the judgment will be swayed by the desire; that, in one's anxiety to escape what happily has become almost the disgrace of the occurrence of blood-poisoning in any case under one's care, the signs of it are rather open to be misinterpreted, or explained away, or called by some other name. The mischief that arises and perhaps kills is set down too readily to some other cause, to any cause rather than this. In short, it is met as a disreputable acquaintance and not recognised. But, gentlemen, even this is by no means without excuse, if only such sophistry is the outcome of enthusiasm and does not wilfully pass beyond the limits of honesty. It leads nevertheless to error, and of course is to be avoided if possible: For my part at least, then, I do not accept statistics here (or for that matter statistics of any kind) without reserve. Statistics on this head, to be fairly trustworthy, should state not merely the fact of death, but in each fatal case after operation or injury, when not attributed to blood-poisoning, a plain statement of what is actually disclosed by an examination after death should be given; and this would be yet more valuable if such a record were made by some independent observer. Or, failing this, I would rather take as a standard the total number of deaths which occur after injury or operation, to whatever cause or causes they may be attributed; for, excepting distinctions which can be safely drawn, such as immediate death, or death supervening within an hour or so, and obviously from direct exhaustion or death from hæmorrhage, and excluding the results of certain operations—as tracheotomy and trephining, and those for hernia— in which death is often due rather to the disease or injury for which the operation is performed than to the operation itself, I should venture to say the difference is very small in-

deed between death after operation from any assigned cause whatever, and death from poisoning of the blood.

And now, furthermore, by what particular means have these results been achieved? Hitherto, I say advisedly, the best results by the simplest means.

Forgive me if I refer again to the records of my own hospital—St. Bartholomew's—for evidence of this responsible statement. I claim from our statistics this—and if I am in error you will reject the claim—that the result to which they testify has not been, on the whole, surpassed. I believe they may challenge comparison with those from any other trustworthy source.

Now, considering all the various details in the treatment of wounds and the management of cases after operation, the practice of no two surgeons of the staff is precisely alike. Each one of the surgeons perhaps carries out certain details in some way different from the others, but on the chief objects in view we are undoubtedly in accord. We aim at the most scrupulous cleanliness, in the most comprehensive sense of the term. We strive to secure this by all possible means. We watch very carefully the actual state of wounds, and we use very freely antiseptics of various kinds. And, with cleanliness, we attach for the most part the highest importance to rest. We are careful to disturb wounds during the process of repair as little as possible. Cleanliness in its surgical sense and rest in its physiological sense may be said to be the leading aims. But we are by no means satisfied with directing attention only to wounds. We are most jealous of the state of the atmosphere of our wards. We keep the air as pure as possible. We have no particular or patent system of ventilation. Ventilation is effected only by open windows and large chimneys. But we are proud of the habitual state of our wards, even when most closed, as during the night-time. We should not for an hour tolerate any unpleasant or suspicious odour. We are very careful to avoid, as far as practicable, any tendency to overcrowding of wounds in the same ward, and each patient has from 1,100 to 1,400 cubic feet of space. Lastly, we attach the highest importance to the state of health and condition of our patient before operation, and never, when we have choice and opportunity, do we inflict an injury without previous inquiry in this direction very fully carried out. Well, what of all this? will perhaps be said. Of course, all this is done everywhere. So much the better. The results, you see, are not due to anything beyond the observance of the recognised principles of surgery. I have said our individual practice differs in detail; but my conviction is, that our results are due to the strict observance of sound principles of surgery. For the rest, I shall take the liberty of trying your patience for a few moments by describing somewhat more in detail the practice I follow, because I believe that results equal to the best hitherto obtained may be thus reached.

Well, then, taking a case—say, of amputation through the thigh, or of excision of the breast—I should treat the wound in the way following. Having carefully arrested all hæmorrhage, using most probably the carbolised catgut ligature, and having gently removed any particles of blood-clot that may have lodged on the surface, employing only clean water or sponges just rinsed out of it, I should, without any further interference with the surface of the wound, bring the edges together, adapting these as nicely as possible with silver wire sutures. I should not in this way attempt to close the wound completely, but I should leave spaces between the sutures, perhaps from one to two inches long. Then, over the course of the wound and for some distance on each side of it, I should place a layer of folded lint which had been previously well soaked in olive or almond oil containing one part in about fifty of carbolic acid. Over this again I should place two or more layers of dry lint, either with or without cotton-wool; so arranging this as, by gentle and equable pressure, to secure without any violence, as far as practicable, the accurate adaptation of the surfaces of the wound throughout, avoiding thus any considerable cavity in the interior. I should secure all this by strapping or bandage, or both, so adjusting these that they may be hereafter removed with the least disturbance. I should place the patient and the wound in the most comfortable position possible, having especial care to the fact that fluids, as they form, may flow outwards. Thus, for instance, after excision of the breast, I have, for some time past, placed the patient, not on her back, but on the opposite side, so as to make the inner angle of the wound the most dependent part of it. I am convinced that this assists greatly in promoting speedy and satisfactory repair. It is much better for fluid to escape at the inner than at the outer angle, and this more especially when the axilla has been disturbed by the removal of glands. The cellular tissue is so very much less abundant and less loose towards the sternum, that the chance of infiltration of it by fluid is very much less. As a rule, perhaps, I do not disturb this arrangement for forty-eight hours, although very often I change the dressing and inspect the wound after twenty-four. I am guided in this matter of time chiefly by the state of the patient; whether spare or full-bodied; his sense of local and general comfort, freedom from or complaint of pain; and the season or temperature. But whenever I am in any doubt, I change the dressings. These, then, are removed with the utmost gentleness and the state of the wound carefully inspected. Especially is attention directed to whether there is any tendency to the lodgment of fluid; whether that which forms can escape freely; whether there is much tension of the edges. I am bold enough to think that a surgeon who understands his business can tell, without any painful handling, whether the surfaces of the wound are fairly in contact, or whether there is any tendency to the accumulation of fluid separating them. But if any doubt arise on this important point, a perfectly clean probe or director, lightly applied to some portion of the wound, will solve it, and secure ample vent; if at all necessary, I should not hesitate to remove one or two or more sutures. If the wound presented no other evidence than that of satisfactory repair, I should dress it as before, and proceed in this fashion, dressing and examining it daily or less frequently, according to circumstances. But if at the first dressing, or at any time afterward, the discharge became at all profuse, or the surfaces did not remain in contact, or there were much tension or a blush at the edges, I should forthwith substitute a bread-and-water poultice for the previous dressing, and probably continue to employ this until at least all the deeper portion of the wound had closed. When I dressed the wound, I should wash it probably from the first with tepid water, perhaps containing some permanganate of potash in the form of Condy's fluid, or other potent antiseptic of the least irritating kind. I should accomplish this washing out, if I thought fit, portions or even the whole of the interior by the use of a syringe, avoiding contact of sponges or other substances with the wound. I aim here at the utmost possible cleanliness, having at the same time due regard to the avoidance of any unnecessary disturbance, that the process of repair be not interrupted. And withal I endeavour, by means I need not indicate, to secure for my patient the most complete rest and the purest air.

With regard to the substitution of a poultice or water-dressing, or some other form of application for the simple dressing used in the first instance, I think one can tell for the most part beforehand if they are likely to be required at all, or early in the management of the wound. In young persons in tolerably good health and spare, most wounds, when not worried, heal very directly. It is in those advanced in life, with flabby textures and much loose fat among them, that wounds give most trouble. These pour out fluid freely and are prone to flag, and, while the process of repair is delayed, may fall into mischief in various ways.

Now, I am sure you will allow that this mode of treating wounds in general which I have thus slightly sketched, is characterised by its simplicity and the entire absence of all novelty; my purpose being to interfere in the least degree possible with the work of nature. Some years ago, it would not be worth recording; and now perhaps it will excite surprise to find that any plan of treatment with so little in it is still adopted. Allow me yet to trouble you with a few comments.

In the first place, at the time of the operation, or immediately afterwards, you see, nothing is applied to the wound but water; as a rule, no antiseptic of any sort, provided the surface of the wound is healthy: because I believe that such healthy natural surfaces are in the state best adapted to satisfactory repair; and that, as a rule, in proportion as they are changed by the application of foreign agents, so are the changes which initiate repair hampered or arrested. I would ask, if it be wise thus to wash the surfaces of recent wounds with antiseptics, why not treat all wounds so; as, for example, in the operation for hare-lip? Antiseptics, at this time especially, are irritants in some degree; and, unless they are very strong, and therefore very irritating, their power to arrest mischief is lost before the period for that mischief has arrived. Therefore it seems to me, for the employment of antiseptics from the first to become reasonable, the wound throughout its progress must be kept thoroughly under their influence; and of this particular plan I shall speak presently.

Then you see, as a rule, I do not employ drainage-tubes. Now, the employment in routine of drainage-tubes is so fashionable; they are just now, and for some time past have been, so high in favour with surgeons in general, that I must ask your indulgence to bear with me while I venture to criticise their action. The purpose for which they are so habitually employed is undoubtedly clear and sound enough: to avoid the accumulation of fluids in wounds. These fluids, when they have become changed, are the most common and active source of mischief; and the less lodgment there is of these in a wound, the safer it is for the patient. But is there no other means than this of providing for the escape of such fluids? You will perhaps gather, from what I have already said, that I for one believe there is, with ordinary care and skill. I think, if the edges of a wound be not allowed to close before the deeper

parts, and that by position the outlet be made sufficiently dependent, as a rule all dangerous accumulation may be avoided. There are instances, however—exceptional, I think, after operation, but of more frequent occurrence in other cases—in which the insertion of something between the edges of a wound, or deeply into its substance, or throughout may be very useful; and then for the most part I should employ a strip of thin gutta-percha or some threads of carbolised catgut. I am most disposed to insert something of this sort where I expect the process of repair to be least direct, where the wound is large and irregular, and where the secretion is likely to be profuse and rapid. For example, after the removal of a breast in a very fat person, I should probably, at one or two parts, insert a narrow slip of gutta-percha. But why not, then, do this in every case? Well, I think there is no material objection to it; and, where otherwise the progress of the wound cannot be watched in a trustworthy manner, it is better to adopt it. But I repeat that, as a rule, in the management of the simpler wounds, under the care of a surgeon who knows his business, there is no need of it. But, in my mind, there are positive objections of great weight to the employment of drainage-tubes. At first sight, indeed, for their chief purpose, they are very plausible instruments; but do they after all effectually discharge their duty? Does the greater portion of the fluid which forms in a wound where they are as a rule escape from them? From my own experience, I should say, No; and I do not think I am at all singular in this observation. It has been more than once publicly pointed out—and I am sure the fact must have been often witnessed—that when a drainage-tube is withdrawn from a wound, a gush of fluid will follow it; and almost always some fluid, more or less, trickles after it, more than enough to provoke mischief if it be poisonous and can pass into the blood. In any case, the fluid which forms in a wound will flow downward to the deepest parts, and not upward unless under pressure; and if from the position of a wound the aperture or apertures be at the dependent part, it will escape without tubes. If it be not, if there be a cavity within deeper than the outlet, what power, I should like to know, have drainage-tubes to draw it upward out of this? I think, then, if the position be satisfactory, and the vent sufficiently free, they are needless; if the position be not satisfactory, they are useless. I say, therefore, as a rule, drainage-tubes are not effectual instruments for their chief purpose. But, furthermore, their presence is often directly and actively mischievous. They are foreign bodies in a wound. They act, of course, as foreign bodies in almost all circumstances do; they irritate, they provoke suppuration and the formation of fluids. Those who are accustomed to witness with complacency the escape of fluids along drainage-tubes hardly reflect that the drainage-tube has been a cause—perhaps the prime cause—of the formation of the fluid which flows out. When I see these tubes moved to and fro in a wound with the escape of pus, I am forcibly reminded of what I have often seen in former years, the action of setons. A drainage-tube is, in fact, a seton. Even when they are retained only for a short time, not long enough to induce further mischief, they are fatal to the chance of direct union of a wound. And is this, the best of all results, to be now altogether given up as a visionary idea? Is union by the first intention to become a thing of the past? When I see, for example, a fatty tumour, small or of moderate size, removed from under the skin, and then the edges of the wound stitched closely together over a drainage-tube lodged throughout its length, it seems to me simply idle to talk of principles of surgery. That such wounds do at length close in spite of this treatment, I know; but I think I know also that they will heal more quickly and kindly, directly without disturbance, if they are simply closed in the way to which I have already alluded to. It is surely very rare indeed for such wounds, if thus naturally treated and duly watched, to give rise to any anxiety or trouble. For my part, I do not think the risk, such as it is, at all lessened by insisting on a more circuitous process of repair.

I do not contend that drainage-tubes ought never to be employed. In exceptional cases, I believe the advantage outweighs the evil of their use, as, for example, in the after-treatment of empyema, where they are very useful in enabling us in a far more satisfactory manner to wash out the chest; and this, by the way, is an advantage often claimed for them, and with some force, in other instances. But I do not believe there can be usually much difficulty in washing out the interior of a wound, without the necessity for that purpose of the permanent insertion of a drainage-tube.

And withal a word or two on behalf of that much abused application, a common bread-poultice. Its absolute and relative value in surgery can be determined only by experience; and, if the surgeons who condemn it have done so only after having given it a fair trial, then all I can say is that their experience on this subject is very different from mine. Having many years ago, like, I suppose, most surgeons at one time or another, been prejudiced against poultices (for, if not skilfully made, they are ugly and clumsy things), I have more than once cast them aside in favour of some other application; but again and again I have been driven back to their use by the plain fact, as it appears to me, that they fulfil certain conditions better than any of their rivals. I do not undertake to explain how they are thus excellent. I find certain qualities possessed by them in an eminent degree; but to what precise extent these are instrumental in the result I cannot say. A well-made bread poultice (which I make bold to suspect some of you have never seen) preserves ample moisture and equable warmth; it is everywhere very soft, and adapts itself with singular uniformity to all irregularities of surface. In my experience, this homely article far more frequently draws from the patient the word "comfort" than any other form of dressing. "Yes, that is comfortable," is a familiar expression after the application of a poultice. Poultices, of course, like all other appliances, are liable to abuse; and I think that years ago they lost favour chiefly on account of the reckless way, as mere routine, in which they were employed, the faulty manner in which they were too often prepared, and the length of time during which they were allowed to remain unchanged. But I venture to repeat that, when applied in appropriate cases, they give, so far as my experience goes, more comfort to the patient and satisfaction to the surgeon than any other substance. Moreover, in certain cases of unhealthy wounds and of foul discharges, they become a most convenient vehicle for the use of charcoal and other agents; and I for one, in spite of all our present proud array of antiseptics, should be sorry to lose altogether the help of the old-fashioned charcoal-poultice.

But now I must pass on to speak of that particular plan of practice which aims at unconditional security—the plan the purpose of which is to exclude all risk of blood-infection by the rigid exclusion of living germs; notably of that particular method which has been introduced by Lister, and at present known everywhere as Lister's method. Now, the relative value of this mode of treating wounds may be tried—should be tried, I think—first by the facts which have been ascertained in regard to it; and, secondly, by the arguments which can be advanced for or against it.

First, then, with regard to actual facts: are there any trustworthy statistics to show that hitherto the results obtained by Lister's plan are better than the best results obtained by any other method? I think most will admit that this is a question of considerable weight. Well, I take, for instance, our hospital statistics, to which I have already referred, on the one hand, and—I seek in vain for any parallel results on the other. And, while this is so, I shall consider that I am justified in the conviction that hitherto the best results have been achieved by the simpler method. I must add too that one seeks in vain for statistics of any kind from sources from which I submit we are entitled to expect them. Why are such statistics withheld? Are they not worth the trouble of collection? And, if they have been collected, why are they not published? But let this pass. I say I know of no results from Lister's method like those which I have given. Indeed, many of the statistics which have been so triumphantly presented to us make but a sorry figure by the side of the best, and they admit only of excuse by comparison with former results from the same place. And here I cannot help thinking that confusion and fallacy prevail on this matter; that, to answer this prime question, old and new results are constantly compared. Some hospitals, in which for several years the results have been much more unfavourable than those which can now be shown, have adopted this method, and the contrast has been striking; that is, the old and new statistics of the same institution have differed widely; and this shows that a great improvement has been wrought there by the adoption of Lister's method; but it by no means shows, as many seem to accept that it does, that the best results of all can be obtained by this plan. For the fact is, conclusions drawn from comparisons of former and present practice at the same hospital are, in all probability, charged with this fallacy: that almost everywhere, from the attention which has now been for some time past directed to the subject, and from the greater care and caution exercised, the mortality after injury and operation has been considerably reduced. I might give you illustrations of what I mean in figures which have been published in triumphant demonstration of the superiority of this method. What do they actually show? Why, that, while the adoption of Lister's plan has effected a vast improvement in the death-rate of a particular institution, the results obtained by it are still far below those which have been obtained by other methods. The contrast between the results of Lister's plan and the records of what I would fain hope may now be called former days is most marked where the previous mortality was highest; and it is easy to understand why the most enthusiastic reports in its favour come from those places where the sanitary conditions are worst. Beyond all question, I should say, in too many instances, it has proved far better than that which it has replaced; but

to conclude from this that it is better, or in its results equal to every other plan at the present time adopted, is to set the simplest rules of logic at defiance, to foster error and confusion. No; Lister's plan must be tested (it would be an insult to its author to propose less), not by contrast of former with present statistics, but by comparison of its results with the best results which now are obtained otherwise.

But on this question of actual fact I must remark farther that, from observation of the method in cases in my own hands or under the care of my colleagues, I am impressed with the conviction that, as a rule, wounds heal more satisfactorily, more directly and quickly, under simpler plans. But an error of a like kind prevails here. An operation is performed in a sufficiently simple and straightforward case; this mode of dressing is adopted; all goes well; the wound heals; and the result is forthwith registered as demonstrative. The majority of wounds heal very well under various plans; heal, for the most part, in spite of many hindrances, if these do not exceed certain limits; and the majority of wounds heal under this particular plan. But I need hardly observe that the great question at issue is not at all touched by this kind of evidence.

I ought, however, to allude to a fact of which I, and probably many others, possess some evidence, that Lister's method has been both charged and credited with results that do not belong to it. A satirist might, indeed, have found ample scope for indulgence during the last two or three years in the treatment to which wounds have been subjected under the auspices of this plan. Very often, I should say, they have been converted into germ-traps and hotbeds for the cultivation of bacteria. But I repeat my conviction, that when the plan is accurately carried out, as a rule, it delays the repair of wounds.

The use just now of the word logic recalls a curious instance of the kind of evidence which in various ways has been offered on this question. In the November number of the *Fortnightly Review* for 1876, Professor Tyndall published a discourse delivered before the Glasgow Science Lectures Association, entitled "Fermentation and its Bearings on the Phenomena of Disease". In this article, after remarking "that while against unsound logic a healthy mind can always defend itself, against unsound experiment without discipline it is defenceless"; and "it is only by practice among facts that the intellect is prepared to judge of facts, and no mere logical acuteness or literary skill can atone for the want of this necessary education", at page 562 he tells the following story.

"A few years ago, I was bathing in an Alpine stream; and, returning to my clothes from the cascade which had been my shower-bath, I stepped upon a block of granite, the sharp crystals of which stamped themselves into my naked skin. The wound was an awkward one, but, being in vigorous health at the time, I hoped for speedy recovery. Dipping a clean pockethandkerchief into the stream, I wrapped it round the wound, limped home, and remained for four or five days quietly in bed. There was no pain, and at the end of this time I thought myself quite fit to quit my room. The wound when uncovered was found perfectly clean, uninflamed, and entirely free from matter. Placing over it a bit of goldbeaters' skin, I walked about all day. Towards evening, itching and heat were felt; a large accumulation of matter followed, and I was forced to go to bed again. The water bandage was restored, but it was powerless to check the action set up; arnica was applied, but it made matters worse. The inflammation increased alarmingly, until finally I was ignobly carried on men's shoulders down the mountain and to Geneva;" "where, on the morning after my arrival, Dr. Gautier discovered an abscess in my instep at a distance of five inches from the wound. The two were connected by a channel, or *sinus*, as it is technically called, through which he was able to empty the abscess without the application of the lance."

And the Professor continues: "By what agency was that channel formed; what was it that thus tore asunder the sound tissue of my instep, and kept me for six weeks a prisoner in bed? In the very room where the water dressing had been removed from my wound and the goldbeaters' skin applied to it, I opened this year a number of tubes containing perfectly clean and sweet infusions of fish, flesh, and vegetable. These hermetically sealed infusions had been exposed for weeks both to the sun of the Alps and to the warmth of the kitchen without showing the slightest turbidity or sign of life. But two days after they were opened the greater number of them swarmed with the bacteria of putrefaction, the germs of which had been contracted from the dust-laden air of the room. And, had the matter from my abscess been examined, my memory of its appearance leads me to infer that it would have been found equally swarming with these bacteria—that it was their germs that got into my incautiously opened wound; and that they were the subtle workers that burrowed down my skin, dug the abscess into my instep, and produced effects which might well have proved fatal to me" (pp. 562, 563).

Now what is to be said on the "soundness" of such "scientific data" as these? Those who know anything of the details of the practice of the "antiseptic system" will smile at the professor's mode of excluding germs by "dipping a clean pocket-handkerchief into the stream". If such an all-important condition can be fulfilled in this way, what is to be said of the sprays, lotions, and dressings; of the elaborate details which have been contrived to kill or exclude them? One can imagine with what scorn the professor would have replied to anyone who pretended to exclude germs by the application of a "clean pocket-handkerchief"; how triumphantly he would have appealed to the "searching beam"; how he would have introduced tiny fragments of the handkerchief, and perhaps drops of the stream, into his skilfully prepared infusions, and have shown them presently swarming with bacteria. But to go on. "The wound when uncovered was found perfectly clean," etc. Now in days of yore, this very harmless and simple plan of treating wounds was common, and no one wondered to see them, after four or five days of rest, "perfectly clean, uninflamed, and entirely free from matter". But what followed? He "walked about all day. Towards evening, itching and heat were felt", etc. If there be any difficulty in explaining the facts here set forth, surgery has assuredly long been under a strange delusion regarding the influence of rest and motion and position on the course and progress of wounds. Then "arnica was applied, but it made matters worse". Of course. But Dr. Tyndall throughout all his trouble can see no agency at work but the germs.

Some may say, perhaps, that Professor Tyndall is not a surgeon, and has, therefore, no claim to be heard on this subject. But whatever Tyndall says or writes must have weight, and is sure to be heard by many, let him speak on what subject he will. And after all, this is not so much a technical question of surgery, but rather one on the nature of evidence. Moreover, it is an eminent example of the kind of testimony which to an overwhelming extent has been published, and much of it even by surgeons, on this question. I think, therefore, no apology is needed for what some may consider a digression. I have even introduced the narrative at length, that you might lose none of the charm of his luminous style.

But, failing evidence of this kind, it is said that, under this plan, we are enabled to perform certain operations with success, to achieve results in surgery which cannot be attempted with any reasonable prospect of success by other methods. I take leave to doubt whether these assertions are borne out by facts. In my humble opinion, operations are sometimes performed, both with this method and otherwise, which in any case had better be left undone; but I believe that patients have escaped with life after operations as full of risk to it, with other methods as with this. But this sort of statement, because it admits of no direct refutation, is never wanting in favour of any novelty. Has any new plan of treatment ever been proposed, unsupported by abundant illustrations of its excellence? Are those who can tell of wonderful results from this method in a position to state that none equal to them have been accomplished in other and more simple ways? If it were not for the interests at stake, one might find some amusement in hearing and reading, in the light of experience, of the surprising triumphs of "antiseptic surgery". But this is an old story; a tale too often told. With reference to this, Bryant has well said, "The publication of isolated cases, however good, proves nothing, whereas the withholding of the whole suggests much".

So far as actual facts, therefore, are at present concerned, and it seems to me that the time has arrived when we may use such records, if I am to adopt that line of practice in which the mortality is lowest, I cannot see that I have as yet adequate grounds for relinquishing the plan of treatment I at present follow.

To the next point. This particular plan of dressing wounds is founded on the accepted fact that the germs in the air are the sole cause of blood-infection, and its purpose is the prevention of this by their rigid exclusion or destruction. Is then, let it be asked first of all, this purpose by this means fulfilled? Does blood-poisoning ever occur in this practice? In point of fact, it does from time to time occur, and sometimes proves fatal. Everyone is aware, of course, of the answer which is given to this, that it is due to the mode of dressing being imperfectly carried out; to some flaw in the management of the details. To this again it may be replied that, although the contrary does not, from the nature of the case, admit of proof or actual demonstration, such a catastrophe has undoubtedly occurred; does still not unfrequently occur in skilful and experienced hands, in the practice of excellent surgeons, enthusiasts in this method. And if this be so, it practically, you see, amounts almost to the same thing. If the plan be only ideally perfect, and liable, in spite of such care and dexterity, to fail in practice, it still misses its aim. Indeed, here is the critical question: If it be not absolutely, unconditionally protective, in what relation does

it stand to other methods? Why, so far as we have facts to guide us, as I have already stated up to this time, it has not made out its case. And, then, are there no positive objections to it? It shuts out the wound from view—to my mind, no trivial drawback. The wound cannot be examined without an elaborate process of change of dressing always involving disturbance, if not risk; and although it may be said that confidence in the safety of this plan dispenses with such need, the question again arises whether it is reasonable to give such confidence as this. But it is further urged that one can tell by other signs what is going on in the part; that local mischief is revealed by rise of temperature or of pulse. Yes, after a while, but not until the system has been disturbed by it. I think that when a wound or injury is under ready inspection, we may detect the tendency to go wrong earlier than this; and upon the earliest detection of such tendency I think very much may turn. I do not believe this objection can be explained away. Then this mode of dressing very often irritates; as the rule, more or less, sooner or later. This local irritation, as the result of their repeated action, is, I should say, one of the most annoying objections to the use of antiseptics in general. They will do this; and although for a great end, this may, within limits, be endured as a comparatively trivial circumstance, yet it not unfrequently proves to be of more serious moment by interfering with and so delaying the process of repair. Thus certainly their employment in this way is not favourable to the best results of surgery in the repair of wounds by the simplest and most direct process. But while I think it must be conceded that this mode of treatment is not favourable to union by the first intention, it is claimed for it that, when wounds close by a more circuitous route, this process is shortened and simplified. I say to this—not proven; on the contrary, that the evidence is the other way. It has been affirmed that, under this plan, the constitutional disturbance, as indicated by rise of temperature which usually attends the repair of considerable wounds, is very much reduced in degree. I have often heard the assertion made that there is usually little or none. I have reason to believe that many very exaggerated notions prevail in regard to the amount of constitutional disturbance attending the repair of wounds when managed otherwise. As a rule, there is more or less constitutional disturbance shown by rise of temperature during the repair of large wounds under any plan; but the evidence at present before us by no means shows that with this method it is less than under any other.

Again, much has been made in this matter of the formation of pus. It was, I believe, once contended that the formation of pus is prevented by this means; and now, that the process of suppuration is very materially reduced; that it is serum or a serous fluid, rather than pus, which wounds so treated pour out. Well; but when wounds have to heal by granulation, is laudable pus a cause or sign of mischief? I am not speaking of profuse and long continued suppuration, which is really out of the question here; but of such suppuration as usually occurs during the repair of a wound. For my part, I confess I am neither ashamed nor afraid to see well formed pus covering the surface of granulations; nay, I accept it as a very favourable sign. I am accustomed to watch it carefully; for I think, in the change of character of this secretion, we have often the first signal for good or for evil, and, as a rule, the condition is satisfactory under a layer of laudable pus. I say, then, even accepting the statement, it remains to be shown that a serous speaks of a better state of things than a purulent discharge.

Then, for me at least, and for the reasons I have given, the constant and prolonged employment of drainage-tubes is a serious objection. I am convinced, I repeat, that they too often prove sources of local and general irritation. Thus I have seen a large chronic abscess opened and dressed carefully with the rigid precautions of Lister's method. I have seen the patient day after day but little disturbed, with a temperature one or perhaps two degrees above the normal; and then, at the end of a week, or of nine or ten days, I have seen all the dressing hitherto applied suddenly removed, the drainage-tube withdrawn, and a common bread-poultice applied to the now fully exposed surface. The result has been that the temperature has quickly fallen to the normal point; and my belief is that, in more than one instance, the reduction of temperature was mainly due to the removal of the tube, which, as a foreign body in the wound, was a source of irritation.

I say, then, I cannot admit the claims of Lister's method; because, although undoubtedly very good results are to be obtained by this practice—better ones, no doubt, than most of those which were reached in former years, or are still in many places—yet that it has not shown results superior or equal to those which have been otherwise achieved; that it has, moreover, grave drawbacks from which simpler plans are free; that if it fail, it is worse than useless by increasing the risk; and, therefore, that it has not established any title to supersede all other methods in the practice of surgery.

The principle of Lister's practice is an easily intelligible, and, therefore, a very attractive one to the public—I mean the more educated portion of it, even to men of scientific attainments, who have little or no knowledge of clinical surgery; for the one fact can be seen so plainly, while all other questions which are forced on the attention of the surgeon are shut out from them.

But the principle on which it rests is a sound one; the logical outcome of established facts. Granted most freely and fully, so far as in this direction it goes. But is every other plan of treatment without principle and opposed by logic? Let me recall your attention to some words which appear to me to be among the wisest which have been spoken on this subject. In 1877, in his Address on Medicine, Dr. Roberts said: "We should probably differ less about the antiseptic treatment if we took a broader view of its principles. We are apt to confound the principle of the treatment with Lister's method of carrying it out. The essence of the principle, it appears to me, is not exactly to protect the wound from the septic organisms, but *to defend the patient against the septic poison*. Defined in this way, I believe that every successful method of treating wounds will be found to conform to the antiseptic principle. Take, for example, the open method of treating wounds, which is sometimes compared in its results with Lister's method. What is this treatment but another way (only less ideally perfect than Lister's) of defending the patient against the septic poison? Because, if the surgeon succeed in providing such free exit for the discharges that there is no lodgment of them in the wound, either they pass out of it before there is time for the production of the septic poison, or, if any be produced, it escapes so quickly that there is not enough absorbed to provoke an appreciable toxic effect." Which plan, after all, takes most cognisance of all the facts before us? While it is true that the air contains germs which can so change animal fluids that if then they pass into the blood they may poison it; it is also true not only that fluids which have never been in direct contact with the atmosphere may be pent up, far from the surface, in various parts of the body without infecting the blood, but also that open wounds may be and are continually freely exposed to the air, and yet remain all the while healthy, being the process of repair carried on without let or hindrance, or any disturbance of the health; that fluids which bathe the surface of wounds may be saturated with the air and all it contains, and still escape before they have undergone any mischievous change; that, lastly, and not least, fluids may thus become changed to putridity on the surface, as in the interior, and yet may not give rise to infection of the blood. In the discussion of this great question, it is too often implied, though not explicitly expressed, that if the unpurified atmosphere be allowed to come into contact with wounds it produces mischief. And if it be said that, assuming the risk to be ever so small, why not adopt means which avoid it altogether? the answer is, that it has not yet been shown that any such means exist. Blood-poisoning from wounds, though happily now in the best places extremely rare, still, under whatever mode of practice be followed, does occasionally occur; and so it seems to me most reasonable to follow that practice which is shown to be, on the whole, safest by its results, it being, moreover, the simplest and least objectionable in other ways. In short, it is clear enough that Lister's plan, while it deals with one cause only of danger, provides by no means absolute security against this. When seriously tested by a bad atmosphere, it has hitherto obviously left a wide margin of mischief. Compare, for example, German and other statistics with our own. And when hygienic conditions are as favourable as possible, the risk from the single source of which this method takes heed is so far reduced that the good it can effect, beyond other measures in this direction, is not equivalent to the harm it does in other ways; as, for example, by irritating the wound, and so interfering with the process of repair.

Observe, if you please, that I am not saying that Lister's practice is to be in every case, and under all conditions, eschewed. I can very well imagine—nay, I know of circumstances where I have no doubt it would be far safer to employ it than to run the great risk of exposure. It is preferable to a pestilential atmosphere. But I submit that, while in such places and with such arrangements, if operations must be performed or wounds treated, this, or something like it, should be adopted, it would be far better, wiser, more humane, to stop the practice of surgery altogether until these places had been made clean and reasonably pure. I refer again to the records from Germany. When we observe the rate of mortality before and after the adoption of Lister's method, we are tempted to ask, what would have been the result if all possible care and forethought had been directed to the improvement of the sanitary state of the hospitals? Why should they have been, why are they still, so far behind others in this respect? You will remember the story of the Norfolk and Norwich Hospital as Mr. Cadge told it; and you are not likely to forget the ghastly sketch Lister drew after his visit to some of the continental hospitals only four years since. It is the evil of this, or of any special or peculiar plan of dressing, that it tends to limit our view, and, by fixing the attention on a number of details, each of

which is made of prime importance, diverts the mind from the observance and consideration of far larger questions. Yet notwithstanding the veil which has for a time been drawn before the eyes, there are already signs that the field of vision is extending. It is now many months ago that I read of a distinguished German professor using, as he tells us, extraordinary precautions: "that, on an operation morning, he gets up early, and washes himself all over; that his assistants wash themselves; and that the patient is also washed"; and although a famous Scotch surgeon, who relates the story, adds, "Surely all these washings are unnecessary", let us hope that, in interests besides those of surgery, the expectation, at least of an operation, may become of daily occurrence. We cannot, indeed, render the air absolutely or "optically" pure for the practice of surgery; but I think, under fairly favourable conditions, and with the means at our command, operations may be performed and wounds treated in an atmosphere not so impure but that, on the whole, the least risk is run by the practice I have ventured to advocate.

One word farther. I have spoken without reserve—as I take it I was bound to do if I spoke at all—of this now famous plan of treatment. By this I think I have shown the truest respect for the author of it. If I esteemed the practice of Professor Lister less, it would have been easy to offer him the homage of flattery, to congratulate him on his renown. It appears to me that I have evinced more regard for his authority, and placed a higher estimate on his work, by studying to the best of my ability the method he has introduced; by not expressing an opinion adverse to it in public, or from a position of responsibility such as this, until my conviction had grown clear and strong; and then I think I best mark my appreciation of his purpose by thus speaking out freely and fully. And though I am thus—not on principle, but in practice—opposed to him and many others whose ability and knowledge I admire and respect, I know very well that on a yet greater issue—the advance of surgery—we are heartily together; and, with unfeigned diffidence of my own judgment, I have yet farther consolation in the assurance that, if I am in error, these words of mine, even from this place, will prove no serious obstacle to the progress of truth.

Whatever defects may be charged against surgeons in the practice of their art, indisposition to accept new ideas, or lack of zeal in testing new proposals, cannot be reckoned among the number. And if in some the desire may appear to be excessive, it must be remembered that this is the natural outcome of discontent at the inadequacy of the resources they can at present command, and that such dissatisfaction is the parent of progress and improvement. A curious list, indeed, might be drawn up of the numerous novelties which from time to time have been introduced into surgery, and which, after attracting much attention, have been tried and found wanting. And if it so happen that this particular mode of dressing wounds should share their fate, still, like many others, it will have served some useful purpose; for it will at all events have helped largely to fix the attention of surgeons on a great source of danger from wounds. Nor is it perhaps likely to be superseded altogether by any plan of management which does not include among its chief objects the reduction of this risk to the utmost extent possible. Henceforth, no doubt, as the result of all the attention and discussion which have been given to this matter, the words cleanliness and purity will have a wider, deeper, fuller significance for the surgeon. Hospitals and all institutions where the practice of surgery is carried on will soon, let us trust, be no longer open to the shame of even a suspicion of their state. They must not only be made free from all doubt that in their wards mischief may be fostered; but they must offer year by year in their records the surest guarantee that they are the safest places for patients. At present, in the worst, antiseptics are the only means employed for counteracting this gigantic evil; and its proportions may, perhaps, in some degree, be measured by the lavish manner in which antiseptics are consumed. But, after all, they fulfil their purpose but imperfectly, and are themselves not free from evil. Is it rash to affirm that the future practice of surgery will be most successful when it is carried on, not where antiseptics are most largely used, but under conditions least in need of antiseptics? Nay, is not this so now?

The study of blood-poisoning, the attention which of late has been directed from all sides on this great subject must prove of advantage to surgery in another way. For some time past, and to the prejudice of our profession, a wall of partition between medicine and natural science has been gradually built up. Physicians and surgeons finding enough, and more than enough, to do in their own immediate work, have of late years passed by the study of natural science, even that branch of it which most immediately concerns them—physiology or biology—with hardly a glance. And the loss from this, which was formerly allowed to be considerable, comes now to be actually questioned in some quarters as a fact. Nay, those who have never made any effort to find opportunity for this pursuit are wont to assert boldly the uselessness of it, and speak of it plainly as waste of time. The study of blood-poisoning in its present form has effected for us in our profession this great good. It has led us back into paths which have been too long untrodden, and forced upon many of us, in a most attractive way, some little knowledge at least of the first principles and leading facts of biology. It has, at all events, in great measure imposed silence on those who have been accustomed to talk loudly of what they call practical work, and to meet every inquiry not likely to pay with the vulgar version of *cui bono?* And while, on the one hand, we have been thus forcibly reminded that surgery can never, without degradation, be divorced from physiology; on the other, this fertile field has proved to be common ground on which natural philosophers and surgeons may with mutual advantage, and in furtherance of the same immediate result, work together. It is true enough that no progress of any kind can be made in natural science without advantages in which medicine and surgery must always largely share; but still it is something just now to have a subject like the present one, in which the truth is made so plain upon the tables that he may run that readeth.

And it may be remarked that surgery, while it works in this direction, fulfils its highest purpose, for it aims at the prevention of disease. Heretofore our art has not escaped the reproach that, whatever it may have effected in the way of relief or cure, it has done little or nothing in the work of prevention. But what shall be said of the progress which has been made in averting the occurrence of blood-poisoning; in preventing the most fatal of all affections, which waits alike upon accidental wounds and the surgeon's own work? In accomplishing so much, it has not only thrown light over one of the darkest regions of pathology, but also, by reflection, on the laws which govern health and life.

ADDRESS ON PUBLIC MEDICINE,

BY

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PREVENTATIVE OR STATE MEDICINE.

WITHOUT wasting your time in apology or preface, allow me to introduce State Medicine, past, present, and future, dwelling specially on the two first as the subject of my remarks at this time. Up till a comparatively recent date, the public mind, both professional and lay, seemed thoroughly impressed with the idea that the whole function of medical men began and ended with the treatment, and if possible the cure, of the sick. This led to a twofold evil; it first produced too strong a belief in drugs, and tended to make the profession degenerate into a mere trade, the success of which greatly depended on the quantity of drugs the unfortunate patient could be got to swallow. The second evil was the neglect which it occasioned of all preventative medicine. It is gradually dawning on the present age that medical science can possibly do a little more; and that, in addition to the treatment of disease, something may be done towards its prevention. Hence we have what is supposed to be a new department of medical science; namely, preventative or State medicine. I use the word "supposed" advisedly, because I hold that State medicine as a very important branch of the medical profession is not new, but reaches back into times of the most remote antiquity, and was then probably better understood and more thoroughly carried out than any other branch of the healing art. If you will turn to the thirteenth chapter of Leviticus, you will there find a medical officer of health endowed with absolute authority to separate the sick from the healthy, and also to isolate infected persons so completely as to prevent the disease from spreading further. Due provision is made that the isolated patient be inspected from time to time, so that, in case of recovery, or of the disease assuming a non-infective type, he might be set at liberty. No doubt, science has made great progress since the time of the Mosaic dispensation; but if we are ever to get quit of zymotic diseases, it will be by adopting the laws of Moses in regard to them—rigorously separating the sick from the healthy. Let us hope the time is not far distant when every medical officer shall be endowed with the same stringent powers as were possessed in the time of Moses, who, we must not forget, in what he did for Israel, acted directly under the Divine authority and guidance, as well as being learned in all the learning of the Egyptians, at that time the most cultivated race in the world.

No doubt, under the general term leprosy, many diseases would be included; possibly all affecting the skin might be so; and hence the humane provision that, after a time of probation and repeated inspection, some were restored to society. It is foreign to my subject to enlarge on this topic—interesting though it is—or to try to trace out the various diseases, such as cancer, leprosy, elephantiasis, etc., which are described in Leviticus. I shall confine myself to the evidence we have in favour of the antiquity of State Medicine, and that the most learned body in the community acted as medical officers of health. It is quite evident that different diseases were dealt with. In verses second and third of the chapter above referred to, leprosy or some other infectious disease is indicated. Verse fourth describes a doubtful disease, or at least one without all the symptoms of leprosy; and accordingly the medical officer shuts the patient up for seven days. At the end of that time, he is again inspected, and rules are given whereby he may be set free if it be safe to do so. But if, on the other hand, the disease should be found to have spread, he is pronounced "utterly unclean"; and his complete isolation is strictly enjoined in verses 44 and 45, and succeeding verses: "Without the camp shall his habitation be." We do not hear of leprosy till after the exodus from Egypt, and some have supposed that the prevalence of this disease was the cause of the expulsion. Everywhere in Jewish history the leper was considered ceremonially unclean; he was isolated from all intercourse with his fellow men, and he was punished with eighty stripes if he approached the mountain of the temple. The law for the leper was: "His clothes shall be rent, and his head bare; and he shall put a covering upon his upper lip, and shall cry, Unclean, unclean." (*Leviticus*, xiii, 45.)

Various speculations have been indulged in as to what is meant by the plague of leprosy in garments; and it has been supposed by some to be simply their being saturated by the discharge from the open sores of persons diseased with leprosy. An attentive perusal of the whole passage, however (verses 47 to 59), shows that it must have been something which spread into and destroyed the garment, which could not have been done by any known discharge from a sore. But whatever it may have been, the orders in regard to it were equally stringent. After milder means to check its progress have failed, the medical officer uses the most powerful disinfectant we possess, viz., fire. The edict goes forth, "It shall be burned in the fire". "Thou shalt burn that wherein the plague is with fire."

It is still more difficult to understand what could constitute leprosy in a house. Some have imagined it to have been merely the emanations from the sick, and think the cleansing much of the same nature as the repapering of a room in modern times after infectious disease; but the passage does not favour such an interpretation, and even the "dry rot" of our own day fails to explain it, as the leprosy was in the plaster and stones of the infected house. We should incline to believe that some sort of fungous growth was indicated; but whatever uncertainty may remain as to the nature of the outbreak, there is none as to the steps to be taken immediately in regard to it. The house was to be emptied and given in charge of the sanitary inspector, and by him shut up for seven days. At the end of that time, if the appearance had spread, he commanded that they take away the stones in which the plague was, and cast them into an unclean place without the city. Fresh stones and mortar were then supplied, and the house was again shut up; if the leprosy appeared again, it was to be destroyed utterly, and the materials removed to an unclean place without the city.

It was not among the Jews merely that lepers were thus treated. In the middle ages, in other countries, they were obliged to live apart from the general community, and if they went abroad they had to intimate their presence in various ways; sometimes by rent clothes and a cry of "Unclean, unclean"; sometimes by using clappers to signify their approach, or as in some countries by wearing two bands of *white* wool (no doubt thus symbolising the nature of their disease), one on the head and the other on the breast. So anxious were communities to carry out preventative medicine in the most complete manner, and avoid all possibility of contagion, that the lepers were interred in separate burying-places. Strange to say, sufferers from this disease became dead, in the eye of the law, as soon as the disease was fully developed; they could not hold property, nor inherit it, nor dispose of it; in short, they lost all rights of citizenship. Not content with this, in the middle ages, the church went through the ceremonial of a leper's funeral by a special service, which was retained in the French ritual till a comparatively recent date. The priest, wearing his stole, and holding up the crucifix, sprinkled the leper with holy water, and conducted him to church, singing the usual burial verses as they went along. In the church, his clothes were removed, a funeral pall thrown over him, and the mass was celebrated, with the full service for the burial of the dead. He was again sprinkled with holy water, clothed in a leper's dress, and conveyed to a leper hospital, where the priest, to typify his burial, sprinkled him with earth, and warned him never to appear otherwise than barefooted and wearing his black garment, never to enter a church or any place where corn was ground or bread baked, never even to approach a well or fountain.

It has been supposed that leprosy in Europe was spread by the return of the Crusaders; but there is not sufficient evidence of this, though no doubt it overran Europe about that time, and invaded even the most northern countries; and we can form some idea of its prevalence when we are told that in the thirteenth century there were upwards of two thousand leper hospitals in France. When the first hospital was founded in Scotland I cannot tell; but at Prestwich there was one, which if not founded by King Robert the Bruce, was at least amply endowed by him. It is still a matter of dispute whether or not the king himself was a leper. In the year 1350, we learn that the Lady of Lochow built a leper house at the Gorbals of Glasgow; but some hospitals were founded much earlier, even more than two hundred years before the Glasgow institution. Of course, these hospitals were not like modern hospitals, numbering their inmates by hundreds; but still so general was this disease in the kingdom, and so much was the necessity of isolation considered a duty and a safeguard to the community, that there were about one hundred leper hospitals in England and Scotland, which were under strict regulations, while the most stringent rules were also enacted to prevent the sick from mixing with the well. In some, under certain precautions, the inmates, on particular days, were allowed to leave, to buy provisions; while, in others, they were punishable by death if they left the hospital; and to emphasise this regulation a gallows was erected in front of the leper house. With regard to the Glasgow house, in the burgh records for 1573, we find that the then magistrates ordered four persons supposed to be lepers "to be viseit, and gif they be found so, to be secludit of the town in the Hospital at the Brigend".

In the Parliament held at Perth in 1427, the following is a clause from an Act then passed: "Item that na lipper folke sit to thig (beg) neither in kirk nor kirk-zaird nor other places within the burrowes, but at their own hospital, and at the port of the towne, and other places outwith the Burrowes." The Act afterwards tells us who were then the sanitary inspectors. The third clause is as follows: "That the Bishoppes, offichalles, and deanes inquire diligentlie in their visitation of ilk Paroch Kirk gif one be smitted with lipper, and gif any sic (such) be found in that they be delivered to the King if they be Seculares, and gif they be Clerkes to their Bishoppes, and that the burgesses gur keepe this statute under the paine intimit in the statute of Beggars..... and quhat leprous that keepis not this statute, that he be banished for ever off that Burgh quhair he disobeyis and in likewise to landwart." After the Reformation, the kirk sessions took upon themselves the duty of looking after lepers. Of their dealings with them, records may be found in their minutes of meetings.

Some of the hospitals had ample endowments; but most of them had but scanty permanent support, and derived a precarious income from alms, which were sometimes deposited by passers-by, they being invited to do so by one or other of the inmates soliciting them by loud cries. Occasionally, the lepers were allowed to beg in person (with this protection to the public, that they were obliged to use a clapper to warn people to keep from contact with their person). Another curious source of support was from confiscated food. The Scotch Parliament in 1366 enacted: "Gif ony man brings to the markit corrupt swine or salmond to be sauld, they sall be taken by the bailies, and incontinent without any question, sall be sent to the leper folke, and gif there be no leper folke, they sall be destroyed alluterlie." This shows also that there were inspectors of food in those days.

The regulations for the separation of the plague-stricken were quite as complete and stringent. The sick and their families were obliged to remove out of town. Their friends, under the charge of an officer, could visit them after eleven o'clock, and anyone going before that hour was liable to death. The houses were cleaned, and the clothing of the infected was boiled in the open air. The parties who discharged those duties, and those who were employed as bearers of the dead, were obliged to wear a grey gown, with a white St. Andrew's cross before and behind; the bier was covered with a black cloth with a white St. Andrew's cross. A bell was also attached to it, so that it might ring as it passed along, to warn any person to get out of its way. In September 1584, the authorities of Aberdeen built ports to prevent the entrance of people who might bring the infection. This does not appear to have been successful, for we find that in May next year the magistrates erected gibbets, "ane at the nearest cross, ane other at the brig of Dee, and the third at the haven mouth, that in case any infectit person arrive or repair by sea or land to this burgh, or in case ony indweller of this burgh receive, house, or harbour, or give meat or drink to the infectit person or persons, the man to be hangit, and the woman to be drownit". As recently as 1645, two lads who had received change at a public-house

which was shut up on account of the plague, were next day separated from the family and shut up for a fortnight, their food, etc., being handed in to them. The pocket with the change was cast into the fire. There are many other curious regulations to be found both in Imperial and Burgh laws. I have merely cited the foregoing to show the antiquity of preventative medicine.

Having seen how strict and severe, we might almost say how brutal, were the laws of early times, it becomes an interesting question how all regulations as to preventative measures were allowed to lapse, and not applied to other diseases, such as sm..ll-pox, the most obvious as well as the most repelling of our zymotics. It has been imagined that the Reformation might have had some influence on this, but there is no evidence of its being so, and we have already seen that in Scotland the kirk sessions took charge of the leper hospitals. In the minutes of the Kirk Session of Walls in Shetland, there is a record, under date March 17th, 1742, of a resolution to hold a day of thanksgiving for the extinction of leprosy, and the last mention of leprosy in the same session books is in 1776, where there is an order to separate a leper, and to provide food, which was to be brought daily. It may possibly have been the growth of civil liberty which rendered people impatient of any interference with their domestic concerns, while another reason may be that some zymotics have no outward visible eruption, while in others it is so slight as not to be recognised by the public at large.

It is still difficult to get some people to believe that like produces like, not merely in ordinary organic life, but also in the region of epidemic disease. Formerly these diseases were attributed to the direct will of the Almighty, the appearance of comets or other physical phenomena, the conjunction of certain planets, or some other astrologer's nonsense. Possibly also, as regards some zymotics, they had taken such hold of the community before they were publicly recognised, that it was in vain to attempt to stop their progress. We need not inquire further into the reason why, but simply accept the fact obvious to all, that till quite recent times no attempt has been made to stay the progress of modern zymotics or improve the health of the community.

This brings us to the consideration of the results that have been achieved by the labours of the sanitarian, and to do this in the most impartial and fullest manner possible I proceed to analyse the whole of the Registrar-General's returns. In No. 8, page 38 of Mr. Simon's Reports to the Privy Council, there is a table of all the deaths up to that date. I have brought the table down to the present time, and have somewhat changed it, for, while the original is merely a table of gross results, I have made a table of the proportion of deaths in each million of the population at the respective dates, and also given the population for each year. I also endeavour to bring some of the results before you in the form of diagrams.

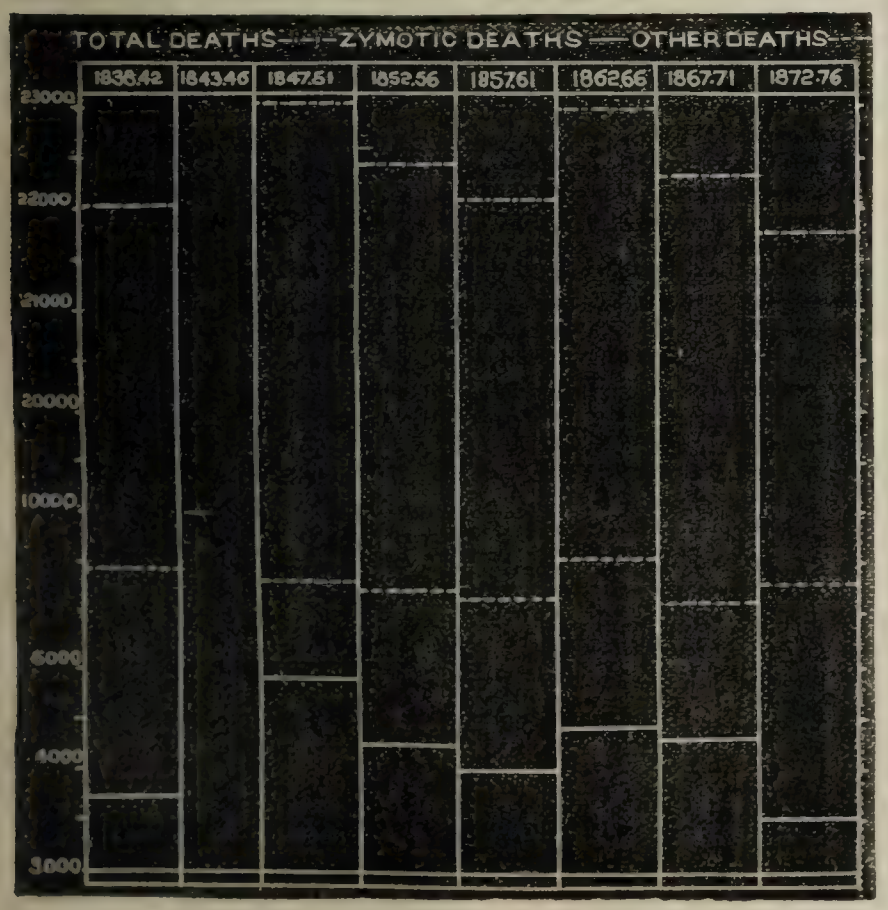


TABLE *showing the Number of Deaths per Annum in England and Wales, from certain Zymotic Diseases separately, and from other Causes taken together, for each Million of Living Population—1838-71.*

	Year.	Population.	Dths. per Annum for each Million of Living Populatn. Croup.	Diphtheria.	Dysentery, Diarrhœa, and Cholera.	Scarlatina.	Fevers.	Measles.	Whooping-cough.	Small-pox.	Total from these Causes.	Total from other Causes.	Total from all Causes.
	1838.....	15,287,699	292	..	225	380	1228	426	596	1,064	3919	18,502	22,421
	1839.....	15,514,255	270	..	225	665	1010	705	526	589	3720	18,130	21,850
	1840.....	15,730,813	276	..	305	1260	1092	593	390	663	4303	18,562	22,865
	1841.....	15,929,492	238	..	264	889	932	433	508	400	3426	18,160	21,586
	1842.....	16,130,326	249	..	472	794	1004	542	502	168	3482	18,186	21,668
		*											
	1847.....	17,150,018	194	..	911	857	1807	507	540	246	4868	19,814	24,682
	1848.....	17,356,882	217	..	899	1181	1270	396	395	398	4539	18,497	23,036
	1849.....	17,564,656	230	..	†4222	746	1045	311	547	265	7136	17,962	25,098
	1850.....	17,773,324	243	..	810	752	865	398	437	263	3525	17,236	20,761
	1851.....	17,982,849	232	2	1004	756	997	521	440	389	4109	17,879	21,988
	1852.....	18,193,206	223	4	1196	1034	1025	321	441	402	4423	17,955	22,378
	1853.....	18,404,368	199	2	1114	851	1008	266	609	171	4021	18,859	22,880
	1854.....	18,616,310	215	11	†2261	984	1015	498	525	151	5445	18,078	23,523
	1855.....	18,829,000	235	10	799	910	875	390	541	134	3659	18,950	22,609
	1856.....	19,042,412	273	12	836	732	850	374	484	119	3407	17,100	20,507
	1857.....	19,256,516	274	16	1248	723	988	310	526	204	4015	17,786	21,801
	1858.....	19,471,291	319	248	822	1309	918	476	598	332	4703	18,390	23,093
	1859.....	19,686,701	286	487	1046	1011	807	485	456	195	4487	17,903	22,390
	1860.....	19,902,713	221	262	562	486	654	480	430	138	3012	18,227	21,239
	1861.....	20,119,314	218	225	1044	451	767	450	612	66	3615	18,012	21,627
	1862.....	20,352,140	278	241	622	729	920	482	603	80	3677	17,774	21,451
	1863.....	20,590,356	338	316	816	1480	875	551	548	290	4876	18,137	23,013
	1864.....	20,834,496	325	262	881	1426	965	400	411	369	4714	19,070	23,784
	1865.....	21,085,139	281	197	1228	839	1092	406	410	304	4476	18,806	23,282
	1866.....	21,342,864	242	141	†1529	547	989	513	739	142	4600	18,860	23,460
	1867.....	21,608,286	203	120	1006	569	781	305	550	116	3447	18,354	21,801
	1868.....	21,882,059	205	138	1482	1001	900	531	422	94	4568	17,396	21,964
	1869.....	22,164,847	202	118	969	1247	829	465	495	71	4194	18,131	22,325
	1870.....	22,457,366	191	120	1211	1449	798	336	530	116	4560	18,387	22,947
	1871.....	22,712,266	181	111	1136	818	695	409	456	1018	4643	18,026	22,669
	1872.....	23,067,835	158	93	1033	517	611	369	598	827	4048	17,291	21,339
	1873.....	23,356,414	183	108	995	563	583	317	412	101	3079	18,008	21,087
	1874.....	23,653,959	212	151	951	1054	584	518	438	91	3787	18,477	22,264
	1875.....	23,944,459	190	143	1056	855	548	258	596	40	3496	19,326	22,822
	1876.....	24,150,571	174	130	953	699	447	412	437	100	3178	17,953	21,131
Quinquenniums.	1	Mean of 5 yrs., 1838-42	265	..	298	798	1053	540	504	577	3770	18,308	22,078
	2	,, ,, 1847-51	223	..	†1569	858	1197	427	472	312	4835	18,278	23,113
	3	,, ,, 1852-56	229	8	†1241	902	955	370	520	195	4191	18,188	22,379
	4	,, ,, 1857-61	263	248	944	796	827	440	524	187	3966	18,064	22,030
	5	,, ,, 1862-66	292	231	†1015	1004	968	471	542	237	4468	18,530	22,998
	6	,, ,, 1867-71	196	121	1161	1017	800	409	491	283	4282	18,059	22,341
	7	,, ,, 1872-76	183	125	998	738	555	375	496	232	3519	18,210	21,729

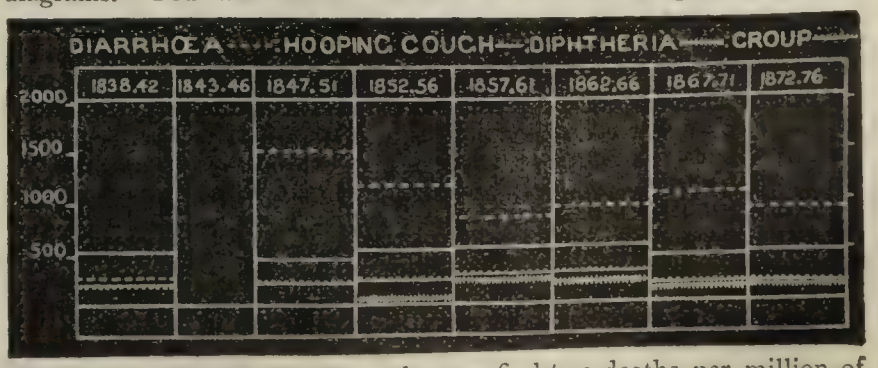
* Details for 1843, 1844, 1845, and 1846, not in Registrar-General's returns.
† Including an epidemic of Asiatic cholera, general in 1849 and 1854, partial in 1866.

TABLE II.—*Deaths from Fevers, 1869-76, per Million of Population.*

	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.
Typhus.....	193	146	121	81	70	75	63	49
Typhoid	390	387	371	379	376	375	372	311
Simple continued...	245	261	201	149	134	132	110	83

For reasons which will be stated hereafter, I have added a separate column for croup, and, to save tedious details, I have placed at the bottom of the table the average for each five years, and for facility of reference have numbered these first, second, etc., quinquennium.

I shall not trouble you with observations on each year, but shall rather dwell on some leading features which are represented in the diagrams. You will observe that there is not a single death from



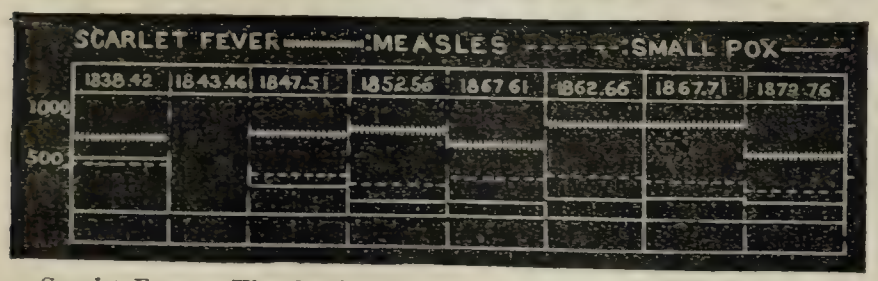
diphtheria registered till 1851, when we find two deaths per million of the population. It did not spread rapidly, for in 1857 there are only sixteen deaths in the same. It then rises very suddenly, and reaches its maximum in 1859, when there were as many as four hundred and

eighty-seven deaths per million of the population. Since then, it has fluctuated greatly, but has only once been under one hundred deaths *per annum* for every million of the population. I have no doubt it will occur to many of you, possibly to most of our younger members, that, although there were no cases of diphtheria registered before 1851, still deaths from it did occur previously to that, but were registered by some other name.*

The disease most likely to be confounded with diphtheria is, of course, *croup*. If, before the appearance of diphtheria as a cause of death in the returns, it had helped to swell the number of the deaths from croup, then, as soon as it became a considerable figure in the Registrar's returns, there should have been a fall in the croup column. To ascertain whether this was the case, I procured a table of the deaths from that disease, and now show you in a diagram all the deaths both from croup and diphtheria. We generally find that when the death-rate from diphtheria is high, the death-rate from croup is high also; and I think it is not unfair to conclude that many of these last were in reality deaths from diphtheria.

I now crave your attention to the *diarrhœal* group, the table in regard to which brings out singular results. Beginning with the small number of 225 deaths per million in 1838, we find that they amount to 472 in the last year (viz., 1842) of the first quinquennium. It would be tedious to go over the table year by year; you will see the progress of these diseases in the diagram, and you must bear in mind that the years 1849, 1854, and 1866 are exceptional, each of them having been marked by an outbreak of cholera. I ask you to compare the first five years with the two last completed periods of like duration. You will find that the average for the first five years, viz., 1838-1842 was 298; for the five years 1867-1871, it was 1,161; and for the last completed five years 1872-1876, 998. In none of these periods was there the disturbing element of epidemic cholera. It is not a little surprising to find that in the second last period there were nearly four times as many deaths from this group as in the first period, and that even in the last quinquennium there were more than three times as many deaths from the diarrhœal group as in the first period of five years.

If we consider the other zymotics mentioned in the table, we shall in some of them be able to trace the benefits resulting from the labours of the sanitarian. First comes small-pox, the deaths from which vary from a maximum of 1,064 per million of the population in the first year, viz., 1838, to a minimum of 40 in 1875. If we look to the quinquennium, we find that the fourth is the lowest, 1857-61, with 187, and the first is the highest, viz., 577, while in the last quinquennium the deaths are 232. It is to be hoped that, as vaccination and revaccination are more stringently carried out, there will be a great diminution in the deaths from this disease. It is most desirable that the prejudices against vaccination should be removed, and possibly this might be greatly helped by the use of animal instead of human vaccine.



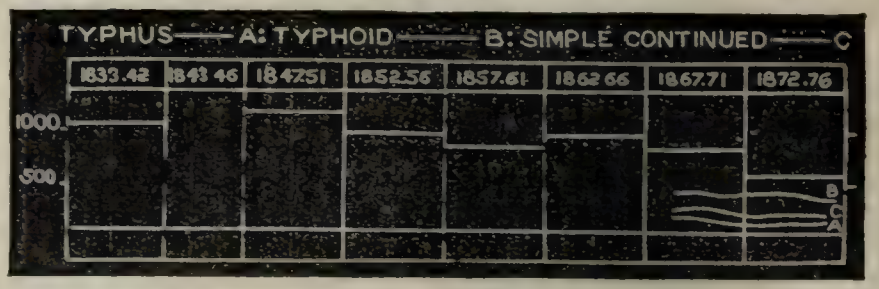
Scarlet Fever.—The deaths from this disease vary considerably in the individual years, but not to such an extent if we look to the averages for five years. It is very satisfactory to observe that the last quinquennium has the lowest mortality, viz., 738 in the million of population.

Measles.—The highest mortality from this disease occurs in the first quinquennium, and is 540; the lowest, viz., 370, is in the third; and in the last the number is very little higher, being 375.

Whooping-cough varies less than any of the other zymotics, the maximum death-rate being 542 in the fifth quinquennium, and the minimum 472 in the second.

Fevers vary greatly; the first and second quinquenniums are the highest, viz., 1,053 and 1,197 respectively, while the last is by far the lowest, viz., 555, and there can be no doubt that this great improvement is owing to what sanitarians have effected.

Better house-accommodation and the supervision of medical officers of health have tended in a most marked manner to diminish typhus, which prevailed during the first two periods. This is made plain when we look to the relative prevalence of fevers, since in 1869 they were divided into three groups. We find that typhus falls from a death-rate of 193 that year to 49 in the last year, viz., 1876.



Typhoid does not show so well, but the maximum is still in the first year, and the minimum in the last; the numbers for each individual year being 1869, 390; 1870, 387; 1871, 371; 1872, 379; 1873, 376; 1874, 375; 1875, 372; and 1876, 311.

Simple continued fever gives almost as favourable results as typhus, the maximum in 1869 being 245, and the minimum in 1876 being 83. Allow me to direct your attention to the totals of the zymotics mentioned in the table, which you will find lowest in the first and last quinquenniums. If, again, you look to the total deaths per million of the population, you will observe that the last quinquennium is the lowest, viz., 21.729; the fourth is next, viz., 22.030; and next to it the first, viz., 22.078.

One other fact is brought out by the study of these returns, viz., how very little change has taken place in the death-rates during all these years. This fact has been noticed by actuaries, and Mr. A. H. Bailey, one of the Vice-Presidents of the Institute of Actuaries, thus writes: "Mortality.—In discussing this well-worn theme, the first feeling must be one of disappointment. An impression prevails, among medical men especially, that the duration of life is extending, and that it will be yet further advanced by sanitary improvements. Is there any evidence of this? There has now been a systematic registration of deaths in this country for forty years, and censuses have been periodically taken. During these forty years, large sums of money have been expended in sanitary improvements, and what has been the effect on the mortality of the population? Discarding individual years, in which there had been fluctuations in both directions from various causes, it happens curiously enough that in each of the three decennial periods 1841-50, 1851-60, and 1861-70, the rate of mortality has been identical, namely, 22.35 per 1,000" (*Journal of the Institute of Actuaries*, July 1878, vol. xxi, p. 120).

We now turn our attention to the future of State Medicine, and would observe that the standard to be aimed at should be both practical and attainable. I have been in the habit of saying that we should never rest contented till our towns are as healthy as rural districts. The healthiest district over a series of years is Glendale in the north of Northumberland, in which the death-rate is but 15; and if we had this death-rate all over the kingdom the result would be a diminution of nearly one-third of all the deaths. In the pursuit of this aim, let us inquire whether we can draw any lessons from the Registrar-General's returns.

The first facts that strike us are the increase in the diarrhœal group, the addition of a new zymotic, viz., diphtheria, which does not appear till 1851,* and the small diminution of typhoid in the fever group.

If we bear in mind that these are excremental pollution diseases, I believe we shall find the reason of this increase in the fact that we have been careless in the disposal of our excreta, and have been drinking water and breathing air contaminated by it in a state of decomposition.†

When I first turned my attention to public health, I had the most

* I may be excused if I notice shortly my first introduction to diphtheria. I had heard of it under the name of the Boulogne sore-throat, and had a vivid impression of the sensation occasioned by the death of Gilbert à Beckett, a London police magistrate, from diphtheria; but it was not till after twelve years' experience as a practitioner that I saw my first case. In November 1857, in visiting one of the then largest houses in Glasgow (which is now the Hall of the Faculty of Physicians and Surgeons), after seeing my patient, the lady of the house asked me to see her little boy, telling me at the same time that there was not much the matter. A bright little fellow of seven trotted into the room, who certainly did not appear to be ill. By the peculiarity of his cough, however, I was led to look into his throat, and there saw what I had never seen before, and what none of us ever see now without grave anxiety as to the result.

* In regard to this, Mr. Simon asks "Why diphtheria, which scarcely had had a place in history till it overran Europe in the sixteenth century, and which since then had but rarely been spoken of, has for the last ten years been an important disease in England? (Eighth Report, page 37, year 1865.)

† I wish to quote a single paragraph from Mr. Simon's second report to the Privy Council, page 64, in which he confirms Dr. Greenhow's report, and says: "And in this respect one paragraph from the following paper—a paragraph which expresses the most definite result of Dr. Greenhow's observations in all the diarrhœal districts, and which accords with all the best experience previously obtained in other like investigations—deserves to be well remembered. 'The excess of mortality has in all places been coincident with one or other of two definite local circumstances—(*a*) the tainting of the atmosphere with the products of organic decomposition, especially of human excrement; or (*b*) the habitual drinking of impure water'."

perfect faith in water carriage for the removal of the refuse of communities, but investigation, experiment, and experience have obliged me to change my opinion.

My first investigations referred to decayed soil-pipes, and from observation and analysis I was led to conclude that the decay was produced by gas. I shall not enter into detail on this subject, but merely mention one point of practical importance, that pipes open at the top to the external air last longer than those which are closed.* (Figures 1, 2, 3, and 4 represent specimens of decayed soil-pipes.)

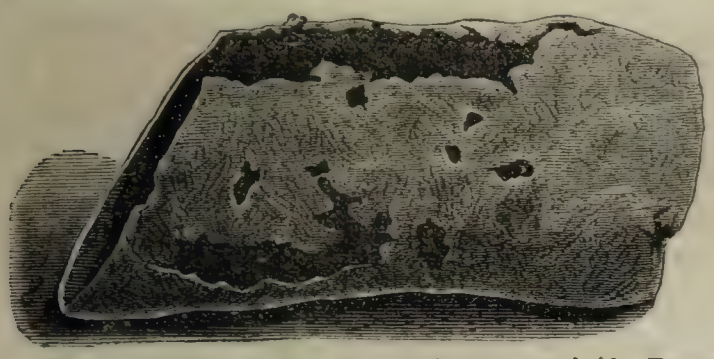


Fig. 1.—Pipe removed from a house where there was typhoid. Two months before, it was taken out, the watercloset had been renewed, but the plumber had failed to detect the state of this pipe.

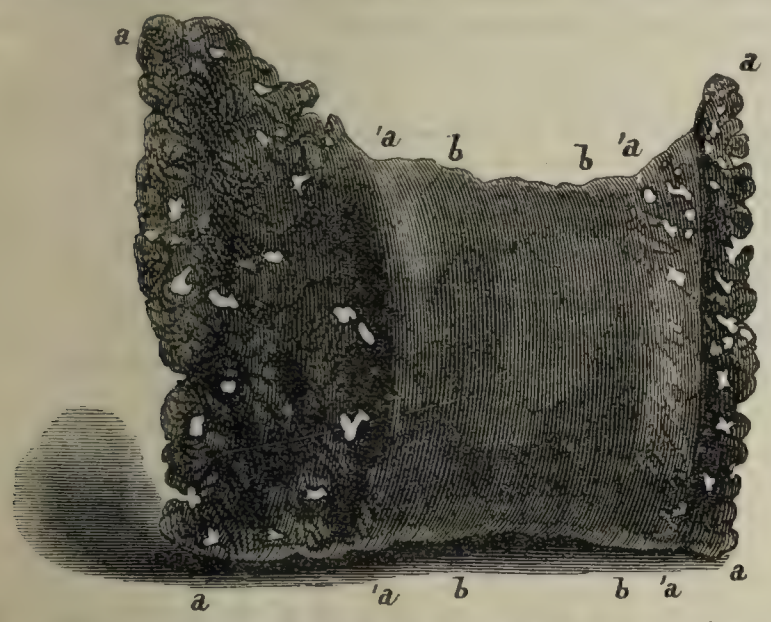


Fig. 2.—Soil-pipe laid open, in which, so numerous were the perforations that very little of the lead required to be cut. The sides *a*, *a*, *a*, *a*, are irregular owing to these perforations, and they may also be seen over the whitish part. The spaces between *a a* and *á á* are the parts of the soil-pipe covered with the whitish deposit spoken of in the paper. The part within the *b*'s is the lower segment of the pipe over which the sewage flowed. It is quite sound —not in the least decayed or worn.

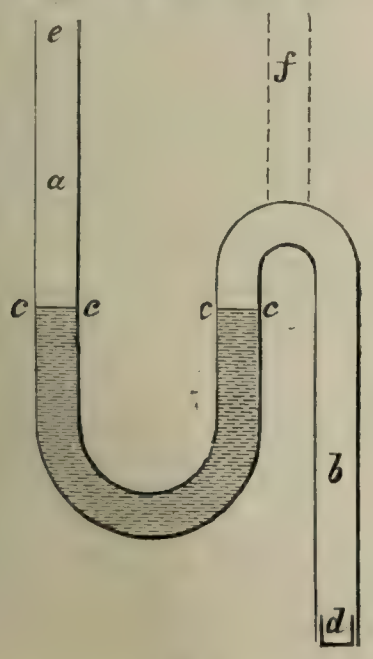


Fig. 5.

* For full details, see the *Social Science Transactions*, 1874, and *Edinburgh Medical Journal*, February, 1874.

It was many years after my conviction that the pipes were destroyed by gas before I could satisfactorily explain how it got into them. I knew that there is always decomposition going on in most traps, but the quantity of gas generated there did not appear to me sufficient to



Fig. 3.—Pipe from Edinburgh. The solder has not decayed.
Fig. 4.—Main descending soil-pipe, showing the perforations.

account for this action on all lead pipes that had been long enough in use. Tension in sewers occasionally overcoming the traps, being only an accident, could not be an important factor in a constant result. After much consideration, I was helped to a solution of my difficulty by Graham's experiments on the diffusion of gases. I argued that if these diffuse so readily through gases, they might probably do the same through water; and thus, after first being absorbed on the sewer side of the trap, they might be discharged on the house side of the same. I experimented on the subject as follows. A bent tube such as the annexed (Fig. 5) was used—*a* representing house side of trap or soil-pipe; *b*, sewer side of same pipe; *c*, *c*, *c*, *c*, level of water in trap; *d*, small vessel or test-tube, from which the gas was evolved; *e*, position of the test employed; *f*, position of tube subsequently added to ventilate the trap.

In the first experiment, a small glass tube was placed at *d*, containing solution of ammonia; in fifteen minutes, it passed up the tube, through the water, and discharged the acid, with which litmus paper had been reddened, suspended at *e*. In another experiment, instead of litmus paper at *e*, a small test-tube containing a little Nessler solution was introduced; in half an hour, the reaction of ammonia was very distinctly visible. The tube was left suspended by metal wire all night, and in the morning the wire was eaten through, and the test-tube had fallen to

the bottom. An objection was taken to these experiments, because ammonia is lighter than air, and has a strong affinity for water. Other gases heavier than air were then tried; the results were much the same, as will be seen from the table now given.

Gas.	Sp. Gr.	Source.	Test.'	Time for Reaction to show.
Ammonia	.50	Solution.	Litmus.	15 minutes.
,,	.50	,,	Nessler.	30 minutes. Ate through a small wire in less than 24 hours.
Sulphurous acid	2.25	,,	Litmus.	1 hour.
Sulphuretted hydrogen.	1.25	,,	Lead paper.	3 to 4 hours.
Chlorine.....	2.50	,,	Iodide of starch paper.	4 hours.
,,	2.50	,,	Litmus water in trap.	Began to show in a few minutes. In half-an-hour the whole was bleached.
Carbonic acid	1.50	Generated	Lime water in trap.	1½ hours.
,,	1.50	,,	Litmus suspended at *e*.	3 hours.

Against these experiments, it was urged that the result would be different if the trap were ventilated. To meet this objection, they were repeated with the trap somewhat modified by the introduction of a ventilating pipe, which is represented by the dotted lines in the figure. The results were much the same, except that the reaction was a little longer in showing itself. Mr. M'Tear, F.C.S., repeated these experiments with larger tubes, with similar results. He found that the gases passed in a peculiar mode through the water; he says: "A curious fact, and yet one quite to be expected, is here shown, viz., that light gases pass through by the top of the bends, and heavy gases at the bottom; also, that the gas does not saturate the water in the trap by any means, but that it first saturates the surface next the vapour, then the gas seems to sink down in a fine stream, and gradually travels through the liquid to the other side, when it again spreads out and begins to diffuse both into the atmosphere above it, and downwards through the water in the trap; in fact, the most apt illustration of the general appearance is the gradual dispersion of a so-called smoke ring from the funnel of a locomotive."

Another point I had to consider was the behaviour, if we may so term it, of water and excretal matter. If the kidney and bowel secretions are kept separate, decomposition goes on very slowly; if they are mixed, it is more rapid, and if water be added it is much accelerated. It is a popular opinion that water is a purifier, but in regard to these matters it is a mere shunter. It merely removes the nuisance from my door to deposit it somewhere else; it conveys organic refuse, but does not destroy it; it merely carries the nuisance from the city to make it a source of pollution in the river. Chemical science tells us that water of itself and by itself has no purifying power; if you could shut up pure water and pure filth (if we may use such a term), they would remain the same for all time, the only purifying element in the water being the small modicum of air dissolved in it. In a shallow brawling stream, this exercises a considerable power, as the water is constantly being reaerated, but very slight in a deep sluggish stream, and hence the ready pollution of our rivers by organic refuse. I hope I shall not be misunderstood and considered as in any way defending the abounding abominations of the old privy system, when I say that the change to water-carriage was adopted without sufficient investigation, and with no adequate conception of the results which would follow. The system was hailed as a great boon both to comfort and decency, and it was at that time supposed that if these offensive matters were once out of sight there was an end of them, and no evil consequences were dreaded.

But another most cogent reason against passing these offensive matters into our rivers or the sea, is the consideration that such a course is directly opposed to the laws of Nature, in the economy of which there is no such thing as waste. Earth is the original mother of all organised matter, and her law of rotation seems to be first plants, from which animals draw their support. What is given off from animals should be restored to the earth again. We know that the carbonic acid so freely given off by animals is at once utilised for the growth of plants; but I believe if it had been left to our own disposal, the whole world would have been asphyxiated long ago. The other excretions of animals are equally necessary for the growth of the vegetable world. After years of further study and investigation, I can only adhere to my opinion expressed many years ago, that "if it is true that organic poisons producing disease may pass from sewage; if it is true that cholera, diphtheria, typhoid fever, and diarrhœa are traceable to taking into our systems by air or water the results of decomposition of human excreta; if it is true that these diseases, and others from the same causes, swell our death-rate and carry off some of the most valuable of our population, then, gentlemen, I affirm that the only true sanitary solution of our difficulties is, that all excreta shall either be returned to the earth or subjected to chemical action, rendering decomposition impossible: and I am furthermore sure that if a tithe of the time, skill, and ingenuity, and one-thousandth part of the money that have been devoted to water-carriage had been spent in investigations in this direction, the problem of the sewage question would have been solved long ago".

There is not time to go into details on other matters which have an important bearing on the future health of the community; I must, therefore, content myself with a bare enumeration of some of them. The most important is the appointment of a minister of health, who ought to be non-political—*i.e.* not removable with each change of government, Next in importance is the registration of disease, especially of all contagious diseases. This would be followed by the separation of the sick from the well, and the surveillance of the latter for a longer or shorter period, according to the nature of the case. Another point which I am inclined to consider as of almost equal importance with the two foregoing is, that the medical officers of health should devote the whole of their time to the duties of their office, and have no entanglement of private practice. A number of minor provisions must be made, amongst which may be mentioned proper inspection of food, dairies, shops in which food is sold, separation of them from dwellings, supervision of all places in which people are congregated, whether for work, education, or domestic life. In a word, we must not rest till our whole population have restored to them the birthright of our common humanity—viz., pure air, pure water, and sunlight free from smoke and noxious vapours. These may not all be attainable at once; but I am confident, from what I know of the noble band of men engaged in the different branches of public health, that there will soon be a considerable amelioration in the condition of the people. Our own profession has never been behindhand in unselfish labour and in personal sacrifice for the good of our fellow-men, and we can proudly look back and acknowledge that we inherit this, with other equally priceless gifts, from the great founder of our art, who, when ambassadors were sent with the most lavish offers to tempt him to the Persian court, answered:

> "Go tell your Sire, the Persian King,
> That dazzling proffers here you vainly bring.
> What are the pride and pomp of state,
> Pages around and slaves within the gate,
> To him who bends the weary knee
> Before the shrine of meek philosophy,
> And strives to fill up life's contracted span
> With kindliest offices to fellow-man?"

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF MEDICINE,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

By ANDREW CLARK, M.D., F.R.C.P.,
Physician to the London Hospital; President of the Section.

MEDICAL EDUCATION—PRESENT STATE OF THERAPEUTICS—PROSPECTS OF EXPERIMENTAL INQUIRY.

It has been the practice of the previous occupants of this chair to open the proceedings of the Section by a general address. Usage has transfigured this practice into a rule, and now with very limited time at our disposal and important subjects pressing for discussion and promising in manifold ways to repay it, I am constrained by the forces of custom and expectation to make sacrifice of some precious time at the shrine of this Procrustean tyranny.

When I examine the addresses of my predecessors, I find them occupied in setting forth the dignity of medicine, the greatness of her achievements, her increasing services to mankind, the spirit in which she is to be cultivated, and the self-sacrifice demanded of her cultivators. They are all stately hymns of praise. There is not in one of them a hint of imperfection or a thought of wrong. What completion, what perfection, what greatness has this medicine! How good a thing it is to be numbered, however humbly, in her ranks! There we can rejoice in the thoughts of the furthering of knowledge and in the doing of good. There our satisfactions need have no check from doubts, from reproaches, or from fears. There is our Utopia. Come let us extol and give thanks.

And who, understanding the difficulties, the responsibilities, and the

anxieties of medicine, who knowing her toils, her sacrifices, her triumphs, and her meagre rewards, would grudge her liberal tributes of grateful praise. No one with any pretensions to a just and generous mind. Surely not I. As her merits are beyond measurement, so let her praise be without stint. But there is another side to considerations of this kind, and it may not be forgotten without serious peril. Medicine cannot stand still. Changes go on within her, changes inseparable from her history go on around her, and they are not always either parallel or congruous. And yet, if medicine is to advance, they must be continuously readjusted and harmonised; left unadjusted from blindness, from indolence, or from calculations of self-interest, medicine must decline. Nothing in this matter contributes more to imperfect vision as well as to imperfect action than self-satisfaction. In professions, in individuals, and in peoples alike it is an obstacle to progress and a prelude to decay. He, therefore, who truly loves his profession will not fail to warn her of this peril, to remind her that she has defects to make good and errors to correct, and to show her that in the pursuit of an ever widening ideal alone can she find the fulness of her knowledge and strength of her larger uses to the race and of her just honour among men.

In the medicine of these days, there are many topics, both of polity and of practice, which urgently demand and would amply repay the fullest consideration and discussion. But on the present occasion neither will time nor circumstances permit the free handling of even one of them. I must content myself with merely touching upon a few of the more important, and with hoping that I may excite in minds abler than my own such an interest in their further consideration as will lead to their juster settlement.

There are three questions upon which I desire to offer reflections. They are the questions of medical education, of the present state of therapeutics, and of the prospects in this country of experimental inquiry.

Now, as respects this question of medical education, it seems to me to be in a gravely unsatisfactory condition, and to require the immediate and earnest attention of the profession. Jostled on the one side by quackery, and on the other by science, it is failing in its true work of training students to be sound practitioners of the art of medicine. Medicine *is* an art, and its end is practice, and the worth or worthlessness of any system of education must be tried by the degree in which it helps or hinders this end.

Tried by this test, the present system of medical education is, for the following among other reasons, found wanting.

1. That, whilst it has added to the curriculum and enlarged the range of examination, it has left the time for study the same. This is destructive of that thoroughness in learning which should be a prime object in education.

2. It has introduced into the curriculum, or it has left in it, subjects difficult to acquire, worthless as mental gymnastics, useless in practice, and speedily forgotten when acquired.

3. It makes no sufficient separation between the various stages of medical education; it permits the one to interfere with the other—the lowest with the highest, so that when the student should be in the wards studying disease and the effects of remedies he is somewhere else committing to memory botanical characters of plants or the complex formulæ of chemical compounds.

4. It does not enforce the regular attendance of students in the wards; it does not require them to take a personal share in the clinical work; and it does not insist upon a period of unencumbered practical study sufficient for the acquisition of that knowledge of disease and remedy which should never fail upon an emergency and be always ready for immediate use.

5. Its examinations are so constructed, or have acquired such a construction, that they determine the nature, character, and extent of the previous instruction, and that the student when he has passed them finds himself in possession of knowledge which he does not need, and lacking that which he should have acquired in the wards, and which, now leaving the hospital, he cannot afterwards obtain. Almost no future industry and almost no experience in private practice will ever fully compensate for defective clinical study and training in the hospital wards, when the mind is plastic, and the student learns disease as a child learns speech.

6. It sanctions imperfect and even vicious methods of teaching. The student is told, not taught. The teacher describes rather than demonstrates; and, instead of making the student follow him step by step in his methods of observing, collecting, comparing, testing, and recording facts, and of reasoning thereon, the teacher leaves them to be learned by being described, forgetful that they can be learned only by being practised.

7. Careless of the manner in which knowledge is acquired, and sceptical as to the permanent educational value of discipline, training, and habit, it makes examination the test of fitness, the answering of questions at intermittent periods an adequate guarantee of continuous practical work.

8. The main tendency, then, of the present scheme of medical education is to give students smatterings of scientific knowledge at the cost of that thorough knowledge of their art which is essential to its successful exercise.

It will, doubtless, be objected to any scheme proposed for remedying the defects and correcting the errors of the present system that it will injuriously restrict the limits and degrade the character of medical education, and that it will hinder rather than help the development of scientific as opposed to empirical methods of inquiry. But such objections spring from misapprehension of the aims and end of science. Science is not a subject; it is not an object. It is merely a regulated method of inquiry in a certain attitude of mind into relative truth and its conditions, and is the same in its nature and its uses, whether dealing with the problems presented by sickness in man, or with the problems presented by catastrophes in the crust of the earth.

There is a cant in science as well as in religion, and both are alike base and baleful. Surely nothing can be more unscientific than discursive dabblings in many subjects. Nothing can be more scientific than the training of the mind to habits of minute, careful, methodised observation and registration of the phenomena of disease. Nothing is more ignoble than ignorance of the calling which we profess to know and are trusted to exercise. I, for my part, shall continue to believe that the physician, in investigating the phenomena of disease, and the laws which regulate their association, succession, and issues, may be as truly scientific, and may become as highly cultured, as any chemist in speculating upon the constitution of organic radicals, or any astronomer in calculating the times and distances of unknown stars, or any natural philosopher who, from his inquiries into matter and force, propounds conclusions opposed to the ineradicable instincts of the human race.

I turn now for a few moments to the second question upon which I proposed to touch, that is, the present state of therapeutics.

When, but a little while ago, Sir William Hamilton asked quite seriously if the practice of medicine had made a single step in advance since the time of Hippocrates; when we hear that the leaders of medicine both here and abroad are sceptical of the curative influence of drugs upon disease; and when we know that experienced practitioners are divided in opinion as to the effects upon the body of the commonest medicines, we cannot doubt that this, the highest department of our art, and one of its chief ends, is in a backward and unsatisfactory condition, and demands, like the question of education, the serious consideration and action of the profession. Beyond the inherent difficulties of the subject, which are undoubtedly many and great, the reasons of this lie near at hand, and are not difficult to discover.

In the first place, although there are many and excellent books on the actions and uses of drugs, there does not exist as far as I know with one exception, any treatise on therapeutics in the full sense of that term; neither do I know of any physician of experience and authority who teaches the subject. What is taught in the schools is materia medica; and it is taught at a period in medical education when the knowledge of the natural history of diseases, which is the fundamental starting-point of therapeutics and the true criterion of therapeutical success is almost a blank. Of some forms of acute disease—of pneumonia, for example, we have trustworthy and almost sufficient knowledge; but of the natural history of most chronic diseases; of their course from first to last; of the modes in which the organism, uninfluenced by drugs, and favoured only by the conditions of health, deals with these maladies in their origin, in their modes of progression, in their influence upon other parts, and in their issues either in recovery or in death—we know almost nothing, and certainly not enough for the commonest purposes of therapeutic art.

In the third place, we have no trustworthy knowledge, and therefore no distinctive teachings, of the respective provinces and powers of nature and of art in bringing about recovery from disease.

In the fourth place, we have no exact information as to the conditions in which, when nature unaided fails to bring about recovery, we may employ the known physiological properties of drugs with any sure prospect of success. This is the province of physiological therapeutics, and in whatever quarter or from whatever point of view we examine it, there appears the richest promise of future discovery.

In phthisical patients attacked with bronchitis, there is a condition of the bronchial mucous membrane fraught with peril, not only to the lung, but to the life of the patient. The membrane is congested, swollen, dry, and coated with a thin but tenacious and irritating secretion. This condition may continue for days, producing fever and

paroxysms of ineffectual coughing, which exhausts the strength of the patient and puts him in peril of hæmorrhage. In ordinary cases, nature brings about relief by free secretion from the affected membrane. In the cases under consideration, nature fails, and the problem is, how to induce this stage of free secretion, which our knowledge of the natural history of the malady assures us will bring speedy relief and safety to the patient. Here becomes available our knowledge of the physiological properties of drugs. There are several that will excite free secretion from the bronchial mucous membrane. There are, for example, ipecacuan and antimony. The latter is the better; and if we give a twenty-fifth of a grain of it every hour, the mucous membrane, after a dozen doses, will begin to secrete, the patient's cough will become looser, and he will cease from suffering and from peril.

In the fifth place, we have no accurate account of the phenomena, physiological, pathological, or chemical, which accompany the administration of remedies, the effects of which are in some degree certain, but the modes of action of which are utterly unknown. This is the province of empirical therapeutics, and one which would have speedily enlarged but for the checks which unhappily have been put upon experimental investigation by the hysterical clamour of sickly-minded humanitarians.

In the sixth place, there exists an assumption which, in any general sense, is at once unproved and doubtful, that the physiological effects of drugs upon living textures or organs in a state of health are identical with the effects of the same drugs upon textures or organs in a state, and in almost any state, of disease.

In the seventh place, there is the almost absolute neglect of any comprehensive and connected cultivation of animal chemistry in its relation to pathological and therapeutic processes. And yet it is certain that chemical changes accompany, if they do not determine, the genesis, growth, development, retrogression, and recovery, not only of every pathological product, but of every pathological condition. Nor is it improbable that chemical changes due to chemical errors are the initiative and constituent factors of many diseases. Indeed, the problems presented by diabetes, acidity, lithiasis, oxaluria, gout, rheumatism, intra-vascular blood-clotting (inopexia) and fevers, require for their solution but a slight advance of our knowledge of the chemistry of nutritive metamorphosis. In rickets, it has been found that the bones and the tissues immediately investing them contain lactic acid; and it has been supposed, with some show of probability, that it is to the solvent action of this substance that the disappearance of mineral matters from the rachitic bone is due.

In the eighth place, there is the strange and fatalistic theory, that diseases are immutable, and that the types of morbid action are for ever the same—that out of certain conditions in the early history of the race and its environments, never to recur, diseases arose, were stereotyped, and have retained their primitive characters unto this day.

But to accept such a theory as this would be to make the better part of historical and scientific knowledge impossible, and to cast us back into the ages when observation, experiments, and reason were the slaves of authority and superstition. Undoubtedly there are affections, such as colics and catarrhs, which have been common to man, and which have retained their likeness from his birth until now. This, however, is but a fragment of the truth; and when one comes to examine with a critical understanding the history of the race, and the moral and physical agencies influencing it in its progress through the successive ages of the world, we are forced to admit that diseases have come and gone, that successive epochs have had their characteristic maladies, that different regions of the globe possessed their pathologies as well as their floras, and that the disorders of man took form and character and colour from the changing climates and civilisation in the midst of which he dwelt, and of which, in a cosmical sense, he formed a constituent part.

Indeed, from a theoretical point of view, all this must be so; nay, it is even demonstrable that it is so. Man, in his journey through time, has been witness to the most stupendous terrestrial revolutions; the lineaments of the globe have oftentimes changed; seas have taken the place of continents, and continents of seas; races of animals have arisen, have flourished, and have become extinct; arctic cold has been displaced by tropic heats; scorching droughts with endless rains; tribes and peoples and nations, with their varying barbarisms and civilisations, have passed across this mighty stage. Change has followed after change upon the earth, until now its physiognomy and its climate have become so transfigured that, if its earlier denizens were to revisit the scene, they would no longer recognise it as their primeval dwelling-place.

How then is it possible, in the midst of all these cosmical, terrestrial, and human changes, that the disorders and the diseases of man alone should remain unchanged? By what show of facts and arguments can this pathological immutability be explained and vindicated? By none, I think, capable of sustaining a just criticism. But what may be conceded to indefinite duration may be denied to the narrow age in which we live. Geological epochs may count for something in their influences upon the human constitution, but the span of modern civilisation for nothing. This position also, I think, is untenable. We are living at a time, in conditions, and under influences when, with a carefully trained eye, we may see that the human organism is readjusting itself to its progressively varying environments. The man of to-day is not the man of two hundred years ago. The nervous system cultivated in every direction and strained and hurried by an intenser life, has assumed almost new relations to the other parts of the organism, altered the complexion of accustomed diseases, and engendered disordered states unknown to the literature of the past. The syphilis of Jean de Vigo and even of Collis is so little like the syphilis of these days, that the accuracy, and even the veracity, of those writers might not unwarrantably be questioned. There was a time when it was not; and its later history justifies the hope that a time will come when it will cease to be. The groups of nervous affections which cluster round an intensified physical self-consciousness were unknown even to Whytt, and yet they constitute a large and growing proportion of the troubles which afflict the more highly cultivated men and women of the present time.

In the increasing duration of the menstrual epoch, in the greater age into which powers of mental work are prolonged, in a slowly deepening intolerance of alcohol, in the steady growth of our comparatively new sense of the beauties of nature, in the expansion of our capacities for scientific inquiries and for abstract discussions, in our views of the foundations and force of ethical relationships, and in our perfect tolerance (signalised by some flagrant exceptions) of intellectual and religious freedom, we see evidences that the race is undergoing a constitutional change; and we know that this change must modify the diseases and the treatment of the diseases of mankind.

But I must hurry away from this attractive, although outlying, part of my subject to say, in the ninth place, that another fertile source of failure in therapeutics is the absence of an adequate recognition of the enormous influence exerted upon disease and its treatment by all that is implied in the individuality of the patient—by hereditary temperament, education, habit, the prevailing attitude of mind to the future, and all the circumstances of the higher life. There are few principles in medicine, and, in this sense, it is certainly one among the most unprincipled of arts. Every case is a law to itself, and contains within itself the conditions for its own management. It is the quick perception of these conditions, and the ready and happy use of remedies for their control, which makes skill in therapeutics. Lastly, there lies a serious hindrance to therapeutic progress in a still prevailing looseness of therapeutic investigations, and in a painful want of accuracy in recording the results of these. One cannot review the therapeutic history of the last quarter of a century, without experiencing a feeling of shame, as well as of sorrow, for the pretentious and baseless statements with which it abounds. A few crude and ill-digested experiments upon animals, supplemented by some equally crude and undigested observations on man, tricked out in the phraseology of science, surrounded with much parade, devoid of accuracy, completeness, or strength, make up the substance of many of these scientific investigations; and their conclusions are committed to the profession, in words of sublime audacity, with as much confidence as if they were the conclusions mathematically demonstrable of chemistry and physics. The authors of such statements as those to which I allude are not merely intellectually, they are also morally, deficient; and, if a just criticism lived amongst us, they would be scourged into becoming silence. We long for the advent of another Socrates, who shall put these sciolists to a pitiless cross-examination, and prove to them out of their own mouths that they have nothing in them of the spirit of science, and know not even the true meaning of the name which they appropriate and desecrate.

And now, with a few more words upon the subject of experimental inquiry, I shall cease to trespass upon your indulgence.

I believe that it is to experiment upon animals, in some shape or another, that we owe the bulk of our recent gains in medicine; and that it is to experiment, aided by practical chemistry and physiology, that we shall have to look hereafter for our most substantial additions to the knowledge both of the nature and of the treatment of disease. "Its importance, indeed, cannot be overrated; for through its help we shall have often to look for the criterion of uncertain doctrines, the solution of unsettled problems, the organisation of fresh inquiries, the annexation of outlying truths, the discovery of unknown facts and laws." (Dr. Andrew Clark's Introductory Address, 1876.)

Undoubtedly experiment has also its other side; and, disregarding its inherent difficulties, which are neither few nor slight, it is beset with

dangers which must be watched with a jealous eye and guarded against with a firm hand. By the *prestige* of precision, often unmerited, which they carry with them, experiments sometimes cover the most flagrant errors and give currency to false or inadequate generalisations. Even when every precaution has been taken to secure precision and accuracy in every particular, it cannot safely be inferred that the results of certain experiments upon animals will be identical with those which would happen in man submitted to like conditions. Nor, without other authority, would it be justifiable to use those results in the explanation of physiological, pathological, or therapeutical facts; for, however numerous may be the results of experiment, however important may seem to be their bearing upon the progress of science, they will be of no avail to medicine, and it will not be safe to use them in her service, until they have been filtered through the checks and counterchecks of clinical experience, and have responded to the tests and countertests of clinical trial.

Now, experiments cannot be performed upon animals without the infliction of suffering; and we, whose lives are spent in aiming at its relief, ought not to be indifferent to this inevitable and painful fact, nor regardless of the solemn responsibility which its existence imposes upon us. I rejoice to believe that we need not reproach ourselves for this sin; and that, as a body, we have never transgressed the limits set to our inquiries by the order of nature, the exigencies of human suffering, and the sanctions of wise and good men.

Three years ago, a certain section of the publiic thought otherwise; and, by dint of clamorous outcries against our humanity and the circulation of accusations of cruelty either exaggerated or false, forced the Government into a hasty legislation, which, whilst it permitted the show, sacrificed much of the substance, of freedom in this matter. Since then, although crippled in every limb, inquiry has managed to limp along and to do some useful work. No experimental atrocities have been heard of, and no occasion has arisen to make men and women forget their loyalty to charity, to justice, and to truth. In these circumstances, whilst conforming in good faith to the conditions imposed upon us, we might justly have expected to be left to travel unmolested along our narrow and difficult way. But it is quite otherwise, and I have learned upon undoubted authority that means are being rapidly collected for a fresh crusade, that no quarter is to be given in the coming conflict, and that no peace will be concluded until the liberty of inquiry by experiments upon animals is unconditionally extinguished.

It is hard to understand the reasons of this passionate antagonism, and still harder to believe that it has no other foundation than the desire to protect the lower animals from unnecessary suffering. For, if this be true, why do our antagonists confine their warfare within such narrow limits? The infliction of suffering for ulterior ends everywhere manifest in nature, now adjusting the balance of nations or establishing the anatomies of peoples, pervades the whole structure and relations of civilised life. What is all the suffering inflicted by all the vivisectionists of all the world, in comparison with those hecatombs of suffering which political experimenters have inflicted upon mankind in their vain attempts to settle the question of the balance of power in Europe? Are the sufferings of men of less account than the sufferings of brutes? Is their blood less precious? Are the countless woes of countless human hearts to be reckoned but as dust in the balance against the wounds of guinea-pigs and frogs? Surely the love of knowledge is as pure and true a human desire as the love of sport; and, whilst the fruits of this die with the individual and his interests, the fruits of that live for ever in growing uses to the race.

If it be true, then, that we are again in peril of a fresh attack, and that the one object of it is to be the unconditional extinction of experiment upon animals, I trust that we shall not stand idly and timidly by whilst this great evil is being done. I trust that every member of our great profession, and every thoughtful man beyond its pale, will unite to make this cause their own, and will offer to threatenings of fresh legislation such an implacable opposition that the statute-book of England shall never again be sullied by penal enactments against the just liberties of knowledge. The highest heritage of humanity is in our keeping; all the past and all the future conspire to make us loyal to this sacred charge; and, at whatsoever cost, of whatsoever kind, we must hand down the right and the freedom of inquiry unmortgaged to future generations.

And now, having occupied rather more than the sacred quarter of an hour, I shall no longer interpose between you and the important discussions which are before us. I shall content myself with expressing the hope that, each effacing himself and uniting together for the higher objects of this Association, our deliberations and discussions may issue in some advancement of knowledge and its still wider application to the uses of men.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF SURGERY,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

By WILLIAM KEARNS TANNER, M.D.,
Professor of Surgery, Queen's College, Cork; President of the Section.

A RETROSPECT—SURGERY IN CORK.

On taking the chair in this Section, I cannot but express myself deeply sensible of the great honour and pleasure bestowed upon me, an honour of which I feel myself unworthy when I behold around me men, not merely of local, of British, of European, but of world-wide fame; men whose brilliant attainments in the noblest field of philanthropy, in the alleviation of pain and suffering, which are the allotted portion of mankind, have cast a brilliant halo on this British Medical Association. Any one of such men could preside among you far better than my unworthy self; but since I am informed that it is one of your customs to place a local man in this post of honour, I assume it, feeling uncommonly like a Lilliputian who is suddenly placed upon a Brobdignagian pedestal, and rendered, by reason of his advancement, only still more conscious of his own diminutiveness, or perhaps like a glowworm exposed to the penetrating rays of many suns. However, gentlemen, the great pleasure which succeeds this honour, the pleasure of seeing, of hearing, and of bidding you a right hearty "Cead mille failtha" to this southern capital of our Emerald Isle, is indeed a pleasure dear above all others to an Irish heart. During my lifetime, it has happened that many associations have assembled in this my native city for the furtherance of objects political, social, and scientific; for we Irishmen, and in particular we the southern inhabitants of Erin, glory and delight in assemblies, whether they be for Fenianism, Home Rule, for purposes of scientific investigation, or even for the promulgation or abolition of temperance; but a gathering such as this has never been witnessed in this locality: an association, a together-coming of *socii*, of friends and brothers, truth-searchers and comrades, armed with patience, courage, and perseverance, illumined by knowledge and science, directed and assisted by our Divine Captain, The Great Physician, assembled *pro bono publico* (taking this term in its widest acceptation) to conquer, and beat back still further, disease, the dread foe of the human race. Yes; this day is indeed one which should be marked with a white stone in the annals of Cork city.

That special subject which falls to the lot of this Section is *the* one with which I have been identified for the past forty-two years in this town. During this long period, I have regarded, with mingled feelings of wonder and pleasure, the giant strides which surgical art has made in our native land, as well as in foreign countries. This progress I consider mainly due to two causes: first, to a more scientific insight into the etiology of surgical affections, from the increased and ever increasing study of physiology, histology, and pathology; and, secondly, to the augmented intercourse among members of our profession, which brings about our pleasant and beneficial meeting of to-day. This has been, of course, effected principally by the great improvements in travelling of modern days; an improvement of which our local railway and steamer companies will be most happy to give a good practical exemplification to such of you as choose to take part in the excursions which have been organised for the recreation of members of this Association. I find I must add to this a third cause: the increased number and spread of medical journals, magazines, and periodicals, by which means are easily afforded of chronicling the smaller additions to the sheaves of medical knowledge, waifs and strays which might otherwise be lost. Again, on referring to the earlier pages of my life's history, I perceive that France was the main educational surgical body of Europe; for although Great Britain possessed many illustrious men, such as the Coopers, Brodie, Syme, Home, Crampton, and Colles; yet these men were to an extent isolated in their endeavours, and, if I may be permitted to call them so, were pioneers heralding the general advance of the present day; an advance along the whole line I may term it. This great multiplication of eminent men has, moreover, produced in our country not merely this advancement, but also an equalisation among the members in the ranks, an equalisation which did not exist so generally in former days in our profession, and, which I take leave to remark, results not only from the improved education, but chiefly from the increased intercourse, the friction which brightens and polishes the intellect, casting more luminous rays into the dark country of unexplored medical science. Again, gentlemen, on comparing the past and present,

albeit our own land has been one of the most prominent, if not the most prominent, in the onward march, she is not alone, France, Germany, and America accompany us, and rival us in a glorious contest for the universal benefit. France, although greatly altered from the severe losses which she has within the last twelve years sustained in such men as Jobert, Civiale, Velpeau, and Nélaton, has still found others who have stepped into their leaders' places, and aid in advancing the standard. Germany, the home of massive thought, is producing legions in every branch of our art, more especially in the realms of histological and pathological science; Berlin, Vienna, Leipzig, Bonn, Breslau, Heidelberg, and the annexed Strasburg, stand out most prominently to-day among the Teutonic Universities, as having still further improved our imperfect art of healing, by the extra power afforded from the increased attention to these sciences; and the cause of this will be found in the names of Virchow, Stricker, Pflüger, Cohnheim, Ludwig, Wagner, and von Recklinghausen, men who by their great attainments and indefatigable research show us the way in these subjects; while in our own special and more strictly practical demesne, we have—and long may he, I trust, continue to lead the van—my friend von Langenbeck, the ever-young veteran leader of the Vaterland's surgical science; while with him are Volkmann, Busche, Billroth, Nussbaum, Lucke, Esmarch, Thiersch, and Bardeleben, whose names speak for themselves. Again, our next-door neighbour, America, with the same energy which stamps our cousin's character, has gone on in the advance. For example, in the present day, there are no more valuable text-books in the hands of our students in every branch of medical literature than those emanating from Columbia, and to such men as Gross, Wood, Sayre, the Flints, Meigs, and Thomas, and many such like, is our western neighbour indebted for occupying that foremost position in our medical world, which by many an older nation is ardently coveted. I beg leave to term her a near relation; because if she be the first cousin of sister England, shall not emigration and the hosts of Irish in America tend to draw still closer the bonds of amity and relationship between Erin and Columbia; and I feel both proud and happy at being able to welcome some eminent transatlantic members of the profession this day to our assembly.

Gentlemen, I think it right to inform you that when I was offered and accepted the chair in this Section, I was completely unaware that it was expected of me to prepare and read an address, because I then understood that Mr. Savory was to read *the* address in surgery; accordingly I rested tranquilly on my oars until a very short time ago, when I was told that there were two addresses in each section, and that one was given by the President of each. This intelligence came on me suddenly; and, being at that time in very indifferent health, I did not know to what topic I should incline. I thought to investigate the subject of medical education; but of that we are satiated of late—it would partake too much of the character of a solo on the big drum, there being a kind of pleasing monotony about it; moreover, it is a subject to debate, not to dogmatise upon.

Therefore I considered it might perhaps be better and more edifying if I employed the time in giving you a brief account of any medical men of literary interest who have dwelt in, or who date from, this good city or county of Cork; saying a few words *en passant* about our medical schools, and winding up with a few remarks in connection with the immediate subject of our Section.

Although Cork has been the mother of many illustrious men in the various departments of literature and the fine arts, I regret to say that of medical writers she is rather deficient; but there are many reasons which account perfectly for this. The first cause is to be found in the natural strength of the Hibernian constitution; a second, in the limited but healthy dietary of our labouring population; and much as our national vegetable may be despised, this at least can be said in its favour: that it forms the staple food of the peasantry of two nations, viz., the inhabitants of Saxony, known in Germany as the *kartoffle Sachsen*, and the people of this island, both nations remarkable in no small degree for the health of their sons and their procreative powers. A third cause is yet again to be found in our mild and equable climate, which at present, I regret to say, is suffering under some aberration from its wonted track. This I have lately heard curiously accounted for thus: that our American weather-prophets had kept all the good weather for themselves, and sent us over the bad. At any rate, gentlemen, I consider that from these three causes a reason may be deduced for any local deficiency in the paths of medical literature.

The first medical work written in this district was, I find, the production of a non-medical man, the Rev. Denis Keogh, who wrote a book on *Herbs*, treating in particular the therapeutical and medicinal uses of the same. He was chaplain to the Lord Kinsale, and lived in the earlier part of the sixteenth century.

The next medical author on my list is Edward Barry, M.D., F.R.S., His Majesty's Physician-General to the Army in Ireland. He studied physic at Leyden, and published a work on *Consumption of the Lungs* in 1728, besides many other medical tracts.

Dr. Joseph Rogers also published an essay on *Epidemic Diseases* in 1734, paying special attention to the epidemic fever which raged in 1737, and endeavouring to account for the same. As an appendix to this book will be found a very curious treatise entitled *Medicina Statica Hibernica*, or Statical Experiments to examine and discover the Insensible Perspiration of the Human Body, 1734, by G. R. These initials stand for the author, George Rye, an ancestor of the present Ryecourt family in this county. I should like to mention here a very curious circumstance which took place in the year 1740. The clergy of the diocese of Cloyne were summoned to a meeting in order to discourage witchcraft and prevent the people having resort to so-called supernatural influences; for the peasantry were in the habit of giving infants born with any abnormality to drink of *lushmoore*, which was a decoction of the *digitalis purpurea*, or "fairy fingers". This drink was supposed to be a specific for the expulsion of fairies; and so many children were poisoned, that at the request of some of the medical faculty of the district, the clergy were called to aid in expunging this singular and pernicious custom from our country.

Dr. Maurice O'Connell, born near Mallow, published a work containing observations and inferences on the air and diseases of the city of Cork. I find, in the year 1820, a very interesting communication, furnished by Dr. Pickles of Cork, concerning a girl who, having eaten some earth off a saint's grave in the south of this county, vomited several times in the presence of indisputable witnesses beetles and flying insects.

Next, turning our attention from mere individuals, I find that the first school of medicine in Cork had its origin from the zeal and exertions of one man—the late Dr. Woodroffe, justly honoured and esteemed for his erudition as an anatomist and physician, and his skill, judgment, and tact as a surgeon. This school was started in the year 1814, and was from the first a success, albeit the strong prejudices of the non-medical community might have proved detrimental were it not that we, being placed as a centre for the South of Ireland, and possessing even as we did at that time two general hospitals—the North and South Infirmaries—numbers of cases flowed in from all sides; hence a great opportunity was afforded for clinical investigation, and all that lacked was theoretical and anatomical instruction, which deficiency Woodroffe supplied, and many pupils, who afterwards rose to great eminence, received their primary medical education at this school: amongst the number Dr. Butcher of Dublin; moreover, Maclise the artist and Hogan the sculptor both took out the anatomy classes, and it is related that the former used frequently to get nauseated and sick during lecture, but his moral courage enabled him to triumph over his bodily or rather gastric infirmity, for he concluded the course, and acknowledged long afterwards the benefit he had there received. This school, in which I had the honour to be a demonstrator, was continued, after Dr. Woodroffe had retired into private life in 1841, by Dr. Cæsar, until some time after the foundation of this Queen's College, and had many pupils attending its medical curriculum; but the death of Dr. Cæsar—"aut Cæsar aut nullus"—proved the termination of the school's existence.

Now, about the present school of medicine in this college, I have only to say that its rapid progress has been accelerated to a great extent by the untiring efforts of Dr. Sullivan, our indefatigable President. For the work it has accomplished, we point with pride to our daily increasing list of eminent medical graduates.

Turning now to our local surgical practice, I was hoping to lay before you a short statistical *résumé* of the surgical affections most common in this part of Ireland, and my experience in their management; but I found, on entering upon the subject, immense obstacles in my path, both from the difficulty of finding proper details, which impediment I might have overcome had I the time afforded me to communicate more fully concerning them, and also from the impossibility of finding anything worthy of your special attention. Most of the various classes of interesting surgical affections, common enough in other parts of this realm, are rarely met with here; for instance, stone, a subject to which I have always devoted much attention. I find, on investigation, that I have cut for, or crushed, thirty-two cases in my lifetime, and was fortunate enough not to lose a patient. This list, which constitutes the major number of cases treated in this city for thirty years, is extremely small in proportion to our population, and is insignificant, considered in connection with such prolific stone-districts as Norwich or Glasgow, or with Sir Henry Thompson's magnificent collection of three thousand successful cases. Again, hernia, which is so common in England, is, comparatively speaking, rare here. It is an affection for the relief of which, when strangulated, I in my earlier days was ordinarily wont to operate; but for these last twenty years I have always been able, by a careful application of a modification of the taxis, successfully to reduce

every strangulated hernia without resorting to the knife and without untoward results.

Aneurism is decidedly diminishing in this country, and operations for its cure (which used to be frequent) have become as rare as fine weather this past summer. This lessening I ascribe chiefly to a diminution of the abuse of mercury in the treatment of specific disease.

Concerning antiseptic surgery (to which I have given a fair trial, with the best possible results), I have come to the conclusion that the more recent be the wound the better its prospect, if treated antiseptically, and if the method of procedure according to Lister be carried out in its integrity. Although I have heard this treatment receiving severe handling from many eminent surgeons both at home and abroad, yet my firm and unaltered belief is that it has only to be thoroughly undertaken to be believed in; and what I say of the management of wounds in general I believe to apply more decidedly to all injuries of joints, whether they be the result of an operation or accident. I am not disposed to enter at present into a laudation or defence of antiseptic surgery; but I merely state what I find by experiment to be the fact, and, from a retrospect both of hospital and private cases, that it ameliorates and diminishes the discharge from a wound, promoting thereby its more speedy union, and is an effectual preventative to any fever resulting in the absorption of septic substances. I must say, in addition, that, where it is impossible to apply this system in its entirety, I have experienced the most happy results from the use of tow-dressing, advocated by Bardeleben of Berlin.

Respecting bloodless surgery (the invention of Esmarch), I am sorry not to be able to add my quota in its favour *as a general line* of treatment; for, although it conduces enormously to the immediate success of the operation, yet still I regret to say that the after-results are not so happy. Whether it be from the production of plethora, or from the forcing of septic particles into the circulation, or whether the pressure on the vessels produces afterwards a corresponding paralysis in them and tends to a congested state of the wound, I will not here pause to debate; but I find this treatment chiefly advisable in anæmic cases.

Bearing the fact in mind, gentlemen, that you are to receive an address from Mr. Savory, which will be infinitely more interesting than any remarks which I could have it in my power to make, since, with his genius and research, he treats of the *progress* of surgery, whilst I am merely dealing with a faint *retrospect*, and being moreover cognisant that the time allotted to this Section for the reading of the several papers is so limited that it is quite possible all of them cannot be gone through, I shall refrain from inflicting any more remarks of mine upon you, and will take this chair, thankful that it has been my happy lot to have it in my power (drawing near the close of a long and I hope a not altogether useless career) to welcome so many of my professional brethren as I at present see around me to this *statio bene fida carinis;* and I can only hope and trust that the contributions to the advancement of surgical science which are to be received in this Section, and the general success of the meeting, will give each one present, in the words of Prout, an additional

"Cause to ponder,
Where'er they wander,
And still grow fonder,
Sweet Cork, of thee—
With thy bells of Shandon,
Which sound so grand on
The pleasant waters of
The River Lee."

MURIATE OF PILOCARPINE IN ECLAMPSIA.—Dr. Braun relates, in the *Berlin. Klin. Wochenschrift* for June 16th, a case of puerperal convulsions successfully treated by subcutaneous injections of pilocarpine. The patient was a robust, healthy, young woman, who had been recently delivered of her first child. About an hour after the child's birth, violent convulsions set in and were frequently repeated. When seen by the author, five hours after delivery, she presented all the symptoms of a severe attack of eclampsia. The convulsions followed each other rapidly, and during the intervals the patient was insensible. The bladder was empty; no urine had been passed since her delivery. Large doses of chloral-hydrate were prescribed, and a subcutaneous injection of two *centigrammes* of morphia made; but without effect. During the next twenty-four hours, the patient's state assumed almost a hopeless aspect; when it occurred to Dr. Braun that, as the eclampsia of puerperal women is caused by uræmic intoxication, a diaphoretic drug would diminish the tension in the arterial system and free the blood of toxic matter. He accordingly made a hypodermic injection of three *centigrammes* of muriate of pilocarpine. This was followed by very profuse perspiration and salivation. During the next half-hour, the muscles of the eye and the face twitched a few times. No more eclamptic fits came on, and the patient recovered quickly.

FORTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CORK, August 5th, 6th, 7th, and 8th, 1879.

FIRST GENERAL MEETING, TUESDAY, AUGUST 5TH.

THE chair was taken at 3 P.M. by Dr. FALCONER, the retiring President. The minutes of the meetings at Bath were read and confirmed.

Address of the Retiring President.—Dr. FALCONER, as retiring President, asked the Association to accord him a few minutes while he narrated some of the occurrences and work of the Association during his year of presidency. Probably some of these would be stated in the annual report; but they were still worthy of being mentioned by him. When the Association paid its first visit to Ireland—in the ever memorable visit to Dublin in 1867—[*cheers*]—it was under the presidency of the late Dr. William Stokes, whose remarkable ability, geniality, and hospitality made the gathering a marked success. The year following, the Association went to Oxford, when Dr. Stokes vacated the chair to the Regius Professor of Physic in Oxford University, remarking with pride that, since the visit to Dublin, the number of the Association had increased to three thousand. Now, however, on this second visit to Ireland, it was his (Dr. Falconer's) pride to say that the Association had more than doubled its numbers since the presidency of Dr. Stokes, for it had now 7,810 members; and, moreover, four Branches of the Association had been established in Ireland since the meeting in Dublin, and they formed a great addition to the strength of the Association. [*Cheers.*] The present meeting, so well begun in Cork, was an augury of still greater success, and of still larger additions to the strength of the Association. Among the points upon which he desired to touch was the work of the Scientific Grants Committee; and the members would be rejoiced to learn that, added to the fruits already gathered, was the publication of Dr. Roy's paper on Epizootic Pleuropneumonia, as well as the promised presentation at this meeting of a report upon the interesting subject of hydrophobia by Mr. Callender, and drawn up by him and Dr. Burdon Sanderson. [*Cheers.*] Again, by the assistance of Dr. Cameron, M.P., the measure which the Association had long supported for the restraint of habitual drunkards had passed into law under the title of the Habitual Drunkards' Act; and it was not to be forgotten that, in the work done by the Habitual Drunkards' Committee, Dr. Alfred Carpenter, the President of Council, had been a "leading hand". [*Cheers.*] Then there had been the question of hospital out-patient reform dealt with; and when he stated that Mr. Timothy Holmes would present the report, he had said sufficient to convince the members that the subject had been dealt with energetically and with the greatest judgment. [*Cheers.*] The matter of medical reform he would not deal with now, as the question was not in a position to be discussed; but the members knew that there had been a Committee sitting upon it, under the presidency of a member who for years had spared no labours—who had scarcely, indeed, spared his health—in the endeavours to obtain the recognition by Parliament of the principles which the Association had early adopted; and he had great pleasure in mentioning the name of Dr. Waters of Chester, who had shown this self-sacrificing spirit on behalf of the profession of which he was so bright an ornament. [*Cheers.*] It was with pleasure, too, that Dr. Falconer stated, among the events of his year of office, that the Council of the Association had awarded to Surgeon-Major Reynolds, V.C., the Gold Medal of the Association for "distinguished merit"; and Dr. Reynolds would have his name added to that long list of heroes whose native soil was on that green island called by the the eloquent poet Moore,

"The emerald gem of the Western World." [*Cheers.*]

In conclusion, Dr. Falconer commended his successor to the notice of the members, and described Dr. O'Connor as the representative of the highest standard of professional integrity and probity, and as one who had throughout his life maintained the honour of his profession. Besides his high character as a gentleman, he was the senior medical officer and Professor of Medicine in Queen's College; and no one was held in higher esteem among his professional brethren than was Dr. O'Connor. [*Cheers.*] Dr. Falconer was certain that the incoming President would discharge the onerous duties of his office with honour to himself and advantage to the Association; and Dr. Falconer trusted that the prosperity which had hitherto marked the Association would continue year by year. [*Cheers.*]

Amid renewed cheers, the new President was inducted into the presidential seat.

Honorary Degrees of the Queen's University.—Dr. T. D. SULLIVAN, President of Queen's College, Cork, said: Mr. President, before you proceed to read your address, permit me to make an announcement which may be of interest to this great assemblage. The British Medical Association, in this gathering, has met, for the first time in its history, in one of the Colleges of Queen's University. By the statutes of that University, its senate cannot hold their meetings outside Dublin, or we should have held a meeting here to perform the duty which I can now only announce to you the senate has resolved to perform. The senate of the University felt that they could not allow this occasion to pass without showing their esteem and appreciation of this Association's work, and the graces have passed that which I beg to communicate to you, that, in order to mark their appreciation of this work, they will confer the honorary degree of M.D. upon your outgoing and your incoming presidents. [*Cheers.*] I am sorry, as I have said, that the degrees cannot be conferred here within the walls of the College, and the only thing I can do is to say that degrees will be given at the proper place whenever the gentlemen will present themselves. [*Cheers.*]

Vote of Thanks to the Retiring President.—Dr. WATERS (Chester) said he was in the proud position of having the honour to propose a resolution of thanks to the retiring President. As an old member of the Association himself, it had been his lot to sit under many Presidents—men remarkable for the positions they had achieved, not only in the profession, but the world. Yet he could say that he had never sat under any President whom he had more highly esteemed than he had the ex-president, Dr. Falconer. [*Cheers.*] That might probably be due to his own intimate knowledge of Dr. Falconer, to his acquaintance with Dr. Falconer's private character as well as with his public character. [*Cheers.*] It was his lot to be acquainted with Dr. Falconer when he was President of the Medical Society of Edinburgh, and he could say that the characteristics which distinguished Dr. Falconer in the present day distinguished him in those long past days. Dr. Waters had the pleasure of seeing Dr. Falconer discharge his duties there to the advantage of that Society, which was composed of the most distinguished students of Edinburgh. Having achieved that position as a student, Dr. Falconer embarked in practice, and in practice he became acquainted with the defects of the curriculum through which he had passed; and after distinguishing himself in practice, he again embarked as a student in one of the metropolitan schools. Dr. Falconer emerged from this second state of scholarship an accomplished scholar and gentleman—the descendant of a race of scholars and gentlemen at the Bar, in the Church, and in that which all there would regard as the noblest profession of all. [*Cheers.*] And having attained this position, he devoted himself as a servant of the Association, in which he had filled all the duties of the arduous office of Treasurer during a period when the finances of the Association were far from being in a flourishing condition, but he only left that office when the future of the Association in that respect was secured. [*Cheers.*] He then filled the office of President of the Council, discharging its duties with that ability and courtesy which ever distinguished him. Then the Association elected him President, and last year the members met under his successful management. [*Cheers.*] No doubt the present President would discharge the duties of his high office with grace and ability; but the members had to speak of work accomplished, and not of work to be done, and Dr. Waters begged to move: "That the best thanks of this Association are due, and are hereby given, to Dr. R. W. Falconer for the able and courteous manner in which he has discharged the office of President during the past year."

Dr. A. CARPENTER (Croydon) said that, as President of the Council, it was his privilege to second this motion. It had been his fortune, in the year of office of Dr. Falconer, to appeal to him for his assistance, and he could attest that Dr. Falconer was ever ready to yield up himself for the work of the Association. [*Cheers.*]

The PRESIDENT, in putting the resolution, said that he was sure that Dr. Falconer had nothing to conceal. His character was plainly written upon his face, and it was not a bad character either.

The resolution was put and carried with acclamation, and acknowledged by Dr. Falconer.

Visitors.—Dr. CARPENTER next read a list of the eminent foreigners who were present, among whom were the following: Dr. Hirschberg, Berlin; Dr. Weber Lieb, Berlin; Dr. Loring, New York; Dr. Agnew, New York; Dr. Seguin, New York; Dr. L. A. Sayre, President of the American Medical Association, New York; Dr. L. A. Sayre, jun., New York; Dr. Beard, New York; Dr. Palmer, Michigan; Dr. L. Turnbull, Philadelphia; Dr. Byford, Chicago; Dr. Yandell, Louisville; Dr. Cordes, Geneva; Professor Giacinto, Turin; Dr. Ball, Paris; Dr. Gueneau de Mussy, Paris; Dr. Gallard, Paris; Dr. Lutaud, Paris; Dr. Boggs, Paris; Dr. Bonafont, Paris; Dr. Martin, Berlin; and Professor Charcot, Paris.

President's Address.—The PRESIDENT then delivered his address, which is published at page 201.

Report of Council.—Dr. A. CARPENTER, President of Council, read the following report.

"For the second time your Council have the pleasure of meeting you in Ireland. Welcomed by the warm hospitality of the profession of the South of Ireland, and especially of those constituting the first Irish Branch of the Association, your Council feel assured that this meeting will not only prove agreeable to the members of the Association, but will also largely contribute to its influence and increase, and enable it still further to promote professional unity by bringing the English and Scotch members into closer intimacy with their Irish brethren.

"The increase of members has again been satisfactory. The number of members admitted during the year is 650; but your Council regret to report 87 deaths and 172 resignations; the total number of members now on the register is 7,810.

"The Financial Report has been for some time in the hands of the members, by which it was seen that the receipts for the past financial year amounted to £12,433 4s. 7d., and the payments to £12,939 9s. 9d. Thus the payments exceeded the receipts by nearly £500; but the revenue, or profit and loss account, shows a balance in favour of the Association on the year of £769 16s. 10d. Last year was exceptional, as the cost of adapting the office-premises to the business requirements of the Association, the larger number of Journals printed owing to the increase in the number of members, legal charges for two years, larger expenses of Committees, and other items, have rendered the expenditure unusually heavy, and part of this will not necessarily recur.

"Your Council think that you may be congratulated on the financial position of the Association. The total excess of assets over liabilities at the close of the year amounted to £6,219 8s. 6d.; and your thanks are due to the Journal and Finance Committee, and to your Honorary Treasurer, who have given so much time and consideration to the work.

"Last year, your Council reported that they had decided to undertake the printing of the JOURNAL, and had secured premises, in which there would be not only offices and committee-rooms for efficiently carrying on the business of the Association, but also ample room for printing the JOURNAL and other work. Your Council now have to report that these intended changes have been fully and satisfactorily carried out, and the whole of the plant, type, alteration of premises, and furniture, have been paid for entirely out of the ordinary income. The reserve fund, therefore, remains intact.

"The increased size of the JOURNAL, its new form with cut edges, which makes it more acceptable to members, and its enlarged circulation, have materially improved its value as an advertising medium. The JOURNAL continues to maintain its high literary character; and its circulation year by year is more and more satisfactory, as many who are not members of the Association become its readers by purchase.

"The new offices have been found satisfactory. The Committee of Council meet with comfort on the premises of the Association, and the Committees and Subcommittees find the position convenient.

"At the meeting of the Committee of Council held on Wednesday, July 9th, 1879, it was unanimously resolved: 'That, in consideration of the extraordinary professional services rendered by Surgeon-Major James Henry Reynolds, M.B., V.C., at Rorke's Drift, Zululand, South Africa, on the 22nd and 23rd January, 1879, in his constant attention to the wounded under fire, in consideration of his eminent bravery in voluntarily conveying ammunition across an open space under a heavy cross fire, and also of the remarkable intelligence, coolness, and tact evinced by Surgeon-Major Reynolds under circumstances of great danger, the Gold Medal of the British Medical Association 'for distinguished merit' be, and hereby is, awarded to him.'

"The work of the Habitual Drunkards' Committee has been fairly successful. Dr. Cameron's Bill has become law, and the principle of detention of the habitual drunkard has been affirmed by both Houses of Parliament. There will be less difficulty in applying its principles to the cure of the many, when it has been conclusively shown that those who voluntarily submit themselves to its provisions are ultimately restored to a condition which fits them for again mingling in society. There is still work to be done in bringing the Act into operation, and your Council think that the Committee should be reappointed.

"There have been twelve meetings of the Committee on Hospital Out-patient Reform, and four conferences have been held with boards of important London hospitals during the past year. Public attention has been forcibly drawn to the urgent necessity for changes, as shown by the aid of the medical profession generally, and also by that of a large number of laymen interested in hospital administration, who are ready to co-operate with the Committee in promoting reform, as is shown by the report which is to be presented to you.

"In its report, the Medical Reform Committee will lay before the Association a full statement of their proceedings during the past year—the most important in its bearings on the decision of this question, of any that has elapsed since 1870. The situation was at one time sufficiently perplexing; but the bold course followed by the Committee, with the approval of its Parliamentary advisers, has been thus far justified by the result. The twofold object of the Committee, in redrafting and reintroducing Bill No. 2, was to present to Parliament, in a connected form, the views of the Association on the entire subject; and to compel a reference of the various measures to a Select Committee of the House of Commons, with the view of eliciting full information on the points in dispute. This end is now in course of attainment, by the examination of witnesses and the publication of their evidence. These materials will be of great value, when the work of legislation is resumed in next session, or in next Parliament; and cannot fail to strengthen the demands which the Association has so long been making, for the establishment, in each division of the kingdom, of a single door of entrance into the profession of medicine; and for the recognition, by the tardy concession of direct representation on the General Medical Council, of the right of the medical profession to a voice in the management of its own affairs, and the shaping of its future destinies. The Chairman of the Committee (Dr. Edward Waters of Chester), who during the previous twelve years had laid the Association under so great obligations, has during the past year exceeded all his former services; and by a self-sacrifice, the extent and value of which are known only to a few, has entitled himself to the warmest thanks, not only of this Association, but of all his professional brethren, whose battle he has been so resolutely fighting, and whose continued support may fairly be expected to crown his unwearied efforts with success.

"The Parliamentary Bills Committee have been occupied with several subjects of considerable importance to the profession. The representations of the Committee to the Secretary of State for War concerning the Army Medical Department, have included a careful review of the recommendations on this subject of the Departmental Committee appointed by the Secretary of State to inquire into the causes which tend to prevent sufficient eligible candidates from coming forward for the Army Medical Department. Many of the recommendations of this Committee were of a very satisfactory nature, including the abolition of the short term of service, as recommended to the Secretary of State last year by the Parliamentary Bills Committee, and other ameliorations in the position of medical officers. On other points, especially the abolition of public competition, the Parliamentary Committee have made representations to the Government to the effect that they are convinced that no system of admission into the Army Medical Department which excludes fair and open competition will ever be satisfactory to the bulk of the profession, or to the public. A warrant is in course of preparation which will, it is believed, secure to the Army Medical Service the greater part of the benefits which the Parliamentary Bills Committee had aimed at obtaining for them. It is, however, understood that some financial objections are at present urged by the Treasury to the increased expenditure which would be involved. In view of the reorganisation of some of the arrangements of the University of Oxford by the Universities Commission, under the authority of Parliament, a memorial was prepared by the Parliamentary Committee praying that means may be taken to restore to the University an efficient Faculty of Medicine, to renew the prosecution of medical studies in the University of Oxford, and to utilise the large special endowments which the University possesses. The memorial was approved by the Committee of Council, and circulated in the JOURNAL by its authority, and has received the signatures of upwards of 2,000 members of the Association. Further reports have been made to the Select Committee of the House of Commons on the subject of the Coroners' Bill, and copies of the valuable reports from leading experts, which were prepared last year have been placed at the service of that Committee. The views therein contained have been thoroughly debated by the Select Committee, who have published a report, which is in some respects satisfactory, inasmuch as it aims at providing more complete means for ascertaining the causes of death, and assimilating the English to the Scotch system. On the other hand, the other proposals of this Committee are of a kind which will require much consideration in the coming session. The Parliamentary Bills Committee have co-operated with the Irish Medical Association in making reports to the Government on the subject of the present position of Irish Infirmary surgeons and medical officers of gaols, and the modification of the public health arrangements in Ireland. These subjects still remain in an unsettled position, but the Government has undertaken to give its best consideration to the representations which have been made to it, and the united action of the Parliamentary Committees of the British Medical and Irish Medical Associations must be regarded as affording a most effective method of influencing the opinion of the high officers of State, and of bringing before them public questions which affect the relations of the medical profession to subjects of national interest.

"Your Council regret to report the resignations of Dr. Andrew Davies, of the South Wales Branch; Dr. D. J. Leech, of the Lancashire and Cheshire Branch; Dr. Sawyer, of the Birmingham and Midland Counties Branch; and Dr. L. H. Tosswill, of the South-Western Branch, as Secretaries of their respective Branches. To all these gentlemen your warmest thanks are due for their honorary services for several years.

"Your Council regret to have to report that the deaths of members of the Association during the past year have been numerous, among whom may be mentioned Dr. Murchison, F.R.S., who was not only an author and physician of great eminence, but also an old member of the Association; Dr. Tilbury Fox, who was appointed Chairman of the Subsection of Dermatology at this meeting; Mr. H. Stubbs, Consulting Surgeon to the Liverpool Royal Infirmary; Dr. A. B. Steele of Liverpool, who for some years acted as Honorary Secretary to the Lancashire and Cheshire Branch, was also a member of the Committee of Council, and to whom many valuable suggestions are due; Dr. Vose of Liverpool, and Dr. Radclyffe Hall of Torquay, two of your oldest Vice-Presidents; Mr. Samuel Wood of Shrewsbury, who acted for many years as Honorary Secretary to the Shropshire Scientific Branch, and who some years since presented £25 to be given for the best essay on pyæmia, which has not yet been awarded; with others scarcely less distinguished.

"Regulations for the conduct of annual meetings were proposed two years ago, and notice given for their adoption at this meeting. Your Council, however, have withdrawn the notice, as important alterations have been suggested for their further consideration before they are submitted to the approval of a general meeting.

"Your Council, in conclusion, feel that much good work has been done by the standing committees, as will be shown by their several reports. The Branches also have been more than usually active during the year; and the Branch Secretaries are entitled to your warmest thanks, not only for work in connection with their respective Branches, but also for their unwearied efforts to promote the interests of the Association.

"Your Council feel strongly that the meeting together of the profession of the three kingdoms year by year to discuss and consider medical science and medical policy must lead to a great advance in the science of medicine, and also in the social standing of the medical practitioner."

[The statement of accounts was published in the JOURNAL of April 26th.]

Dr. GRIMSHAW (Dublin) moved: That the report of the Council, together with the financial statement for the year ending December 31st, 1878, be read, adopted, and entered on the minutes." He stated that it had been very gratifying to the Irish Association to find so many of their rules adopted by the British Association.

Mr. COOPER FORSTER (London) seconded the motion for the adoption of the report.

Dr. MARTIN (Portlaw) considered that the power of the editor had increased, was increasing, and should be restrained, and thought that some reference should have appeared in the report as to the powers of the editor. He thought that members of the Association who were the owners of private lunatic asylums should not have their interests attacked in the JOURNAL, as had been done, and thought that, in so doing, the editor had overstepped his duties. He had intended to move an amendment, but considering that the meeting was virtually with him in his views, he would leave the matter in the hands of the Committee of Council.

The motion for the adoption of the report was carried.

Reception by the President.—On Tuesday evening, a public reception by the President and Local Reception Committee took place at Queen's College, and was very numerously attended.

SECOND GENERAL MEETING, WEDNESDAY, AUGUST 6TH.

The second general meeting was held at eleven o'clock on Wednesday; Dr. O'CONNOR, the President, in the chair.

The Committee of Council.—The PRESIDENT OF THE COUNCIL reported that the twenty gentlemen nominated as members of the Committee of Council for the next year had been duly elected.

The Meeting in 1880.—It was unanimously decided that the next annual meeting should be held in Cambridge, and Professor Humphry was appointed President-elect.

The Address in Medicine.—Dr. A. HUDSON of Dublin delivered the address in medicine, which is printed at page 204.

A vote of thanks to Dr. Hudson for his address was proposed by Dr.

ANDREW CLARK, seconded by Dr. RINGROSE ATKINS, and carried unanimously.

Business of the Meeting.—The Sections and Subsections met in the afternoon.

THIRD GENERAL MEETING, THURSDAY, AUGUST 7TH.

The third general meeting of the Association was held at ten o'clock on Thursday; Dr. O'CONNOR, President, in the chair.

Reports of Committees.—The reports of the Medical Reform Committee, the Habitual Drunkards Committee, and the Scientific Grants Committee were read and adopted.

The Address in Surgery.—This address was delivered by Mr. SAVORY, and is printed at page 210.

The Gold Medal of the Association.—This medal, which is awarded for distinguished merit, was presented to Surgeon-General Crawford, who received it on behalf of Surgeon-Major Reynolds.

The British Medical Journal.

SATURDAY, AUGUST 9TH, 1879.

THE BRITISH MEDICAL ASSOCIATION AT CORK.

THE traditional hospitality and heartiness of an Irish welcome have been illustrated in the reception accorded to the British Medical Association by the citizens and the members of the medical profession of Cork. The meeting of 1867 in Dublin had left behind it so many pleasurable recollections, that it was natural that the guests and hosts should alike desire a fresh occasion to renew a meeting which had been fertile in agreeable and useful results, both social and scientific. From the Dublin meeting dated a new and more intimate union between the medical men of Great Britain and Ireland. It was freely intimated by some of the best friends and most sincere well-wishers to the Association in Ireland that the bond established by the entrance of a number of Irish members into the membership of the Association on that occasion would soon grow small by degrees and beautifully less. The result proved otherwise. Those who came to greet remained to read; and, although for many years after that meeting the JOURNAL continued to be the only organised channel of communication between the great body of British and Irish practitioners, its attractions proved sufficient not only to retain the majority of those who joined us in Dublin, but steadily to swell the numbers of Irishmen who valued this product of association sufficiently to join in membership; and thus the numbers grew year by year, till nearly one-third of the working profession in Ireland were members of the Association, and Dr. Macnaughton Jones, taking his courage in both hands, and, with that energy and sagacity which have enabled him brilliantly to carry out the present meeting, established the first Branch of the Association in Ireland. Dr. Duffey in Dublin soon followed that example; and Dr. Moore in Belfast and Dr. Kinkead in Galway have followed. Thus the Association has struck deep root in Ireland; and now the South of Ireland Branch, an infant in years, has with singular energy, with unbounded hospitality, and with great scientific earnestness, organised a general reception for the whole Association.

The members already at noon of the first day had gathered to the number of near four hundred, and will probably number in all not short of six hundred. They have found in the Queen's College a *locale* which could not be improved either for beauty or convenience. The whole of the numerous meetings, committees, and sections of the meeting—more numerous this year than they have ever been before—are provided for under one roof, in an academic building admirably designed, replete with convenience for academic and scientific purposes, and surrounded by pleasant gardens and groves. The administrative arrangements of previous meetings had been studied to good effect by Professor Macnaughton Jones, assisted by Dr. Ringrose Atkins, Dr. D. C. O'Connor, Dr. Pearson, Dr. Harvey, and Dr. T. Gelston Atkins; and they have been so conducted as to leave nothing undone which could be considered likely to add to the convenience of the guests or to facilitate the business of the Sections.

A considerable number of scientific guests from other lands are in attendance, who will add to the working value of the meeting by the important contributions which they bring of new knowledge, and increase the distinction of the gathering by the weight of their reputation as well as by the international character which their presence gives to it. Among them are Dr. Charcot, Dr. Gallard, Dr. Bonnafont, Dr. Cordes (Geneva), Dr. Weber-Lieb, Dr. Hirschberg, Dr. Turnbull (Philadelphia), Dr. Byford (Chicago), Dr. Beard (New York), who all bring valuable accessions of scientific work. The Sections are at once more numerous and more completely organised than on any previous occasion. The system of dividing the scientific business into Sections was first instituted at Dublin. This modification proved a source of great strength at subsequent meetings and has largely developed itself, so that from three Sections the number grew to six. At Cork, the general Surgical Section has split itself into two subsections—Surgery, and Ophthalmology and Otology; and the latter has undergone a further fission into two subsections. Medicine also has granted a subsection to Dermatology. Moreover, in each of these Sections, arrangements have been made to provide a programme for each day of a special discussion on subjects prearranged, and for which the opening speakers have been designated beforehand. In addition to these questions of the programme, a considerable number of papers have been offered, as is usual; and the scientific results of the meeting are such as are likely to be of great permanent value.

We publish, in the foregoing pages, as many of the addresses of the orators and sectional presidents of the year as we can find room for this week; and we shall endeavour, in our subsequent numbers, to present a complete review and abstract of the proceedings in all the sections, and later on to furnish the full text of many of the more important papers presented. For assistance in these matters, we are much indebted to the Secretaries of Sections, to whom we offer the thanks of the Association for the labour which they have taken upon themselves in preparing the programmes of their Sections, in organising the daily work, and in assisting us in laying out and reporting the sectional work. We would take this opportunity of asking those of the Secretaries who have not up to this date sent in their completed records, to do so without any delay whatever, in order that justice may be done to the proceedings of their Sections, and that all the labour gone through may be turned to its proper account for the instruction and interest of all the members, especially those who are unable to be present.

It will be seen from the report of the Council to the Association that its budget of 1878-9 is eminently satisfactory. The balance of profit on the profit and loss account of the year in favour of the Association amounts to 769*l.*; this has, however, of course, been a year of considerable extra expenditure—in the expenditure on fitting the new premises, purchase of type, plant, and fixtures, as well as other extra charges. A considerable part

of the extra charges of the year are such as will not recur in ordinary course, and are usually what are called capital charges; they are, however, being discharged out of the revenue, and the reserve remains intact; and the Honorary Treasurer is able to make the satisfactory announcement that the excess of assets over liabilities at the close of the year amounted to upwards of six thousand pounds.

The vital are not less satisfactory than the financial statistics of the Association. The strange manner in which events, apparently the most capricious and least easily calculable, arrange themselves in normal series and obey an unseen law has been brought out very clearly by Buckle; and he would have found a further instance, in addition to that which he collected, in the figures which illustrate the growth of this Association. Prior to the year 1867, the annual growth of the Association had, for a series of years, settled into a pretty regular increment of from thirty to forty; from that year—and we may be permitted to mention with pleasure that it was the year in which the present editor received office—it sprang into a much quicker growth, and made surprisingly rapid and even progress—it advanced annually by an increment of between four and five hundred. This year, although already the working bees of the profession are now pretty thoroughly hived, it retained its onward flight, and the new members number over six hundred; and the total growth, deducting inevitable losses, amounts once more to between four and five hundred. We have the further satisfaction of adding that the semi-annual extra issue of a copy of the JOURNAL, at the end of the half-year, to members of the profession outside of the Association has had its usual beneficial effect in attracting a large entry of new members, and it has again become necessary to print, since the beginning of July, two hundred and fifty more copies of the JOURNAL weekly. Moreover, the foreign, and especially the American, circulation has largely increased of late, so that the Association now numbers upwards of 7,800 members, and the JOURNAL circulates weekly nine thousand copies; while it contributes annually upwards of four thousand pounds to the funds of the Association by its constantly increasing value as an advertising medium, in virtue of a circulation which has no equal among medical journals.

Thus the report presented to the meeting has been of a character altogether encouraging as to the financial and numerical position of the Association; whilst of the scientific value of the work done; of the political influence which the Committees of the Association have brought to bear in behalf of the reform of medical education and examinations; of the amelioration and advancement of the public services; and of the improvement of the public health—the reports of the various standing committees will speak eloquently. This meeting itself is a testimony to the united spirit in which the whole profession is joining for these common objects, of the value which they attach to them, and of the success with which they pursue them.

We write at the commencement of the meeting, and shall therefore say nothing of the varied and brilliant programme of receptions, concerts, garden parties, and excursions which the liberality and sympathy of the citizens of Cork and the generosity of the profession in the South of Ireland have provided. If the weather, which has been fitfully fine thus far, prove not too capricious and unkind during the later days of the meeting, it will be safe to predict that the social glories of the Cork meeting will be undimmed by those of any meeting which has preceded it, or any which may be likely to follow it.

THE ADDRESS IN MEDICINE.

EVERYONE will read with interest and delight the eloquent Address in Medicine. The subject, old as it is, always comes home to us; for we have had our heroes, and the records of their heroisms are not dead words to us. The story of them still brings out harmonising echoes from private recesses of our inner selves, and we listen with pleasure to the praise of a glorious past and the foreshadowing of a yet nobler future for the science of medicine.

All must commend the judgment which led Dr. Hudson to select this subject, so specially suited to develop those gifts of eloquence which seem to be the happy birthright of Irishmen. We are accustomed to hear able addresses, characterised by that preponderance of matter over style which is appropriate to writings intended mainly to instruct. Dr. Hudson's professed aim was to please; and we feel sure that all who had the privilege of listening to his address, as well as all those who read it, will admit that he has succeeded admirably.

After sketching in outline the character of the work done by Hippocrates and Morgagni, whom the author describes as respectively representing the stages of *aphorism* and *observation* in the study of medicine, he devotes the main part of his address to the labours of Laennec as the initiator of *method*, and to the influences of his work on the progress of medicine. We who belong to the present generation are unable adequately to appreciate the revolution—for it is nothing short of that—which the discoveries of Laennec have effected in the study of clinical medicine. No one has considered sufficiently their influences upon the mental and moral development of the members of our profession. Perhaps it is treading on somewhat dangerous ground; but there are few who will doubt that the acquisition of the vast amount of subjective data upon which we now base our conclusions must tend to make us, as practitioners, more honest, more truth-loving and truth-seeking; and the growth of this method of Laennec is the great means by which we are becoming purified from the quackery and false pretension to knowledge which provoked those satirical attacks to which Dr. Hudson alludes, and which, we are happy to feel, are no longer deserved, and, having lost their point, will soon cease to be made.

Great as Laennec was both as a pathologist and a clinicist, his fame will always depend upon his clinical investigations. The French school have recently attempted to rehabilitate Laennec's pathology of tubercle; and there is no doubt that, so far as phthisis is concerned, the investigations of recent years have shown that there are no histological characters enabling us to say this is tubercular and this is pneumonic phthisis. As Dr. Green has shown, there is absolutely no change in phthisical lungs which is distinct from what may be seen in various chronic inflammations. Caseation may be fully admitted to be a change in which inflammations in strumous subjects are prone to terminate; and, were there no other tubercle but that seen in phthisis, there would be little difficulty. But there is, unfortunately, such a disease as acute tuberculosis; and it is this process which gives to tubercle the right to a specific recognition, and which makes Dr. Bastian and others think it desirable to expunge the word tubercle from our vocabularies, in order to be rid of the confusion of ideas which results from the nominal identity of such distinct clinical conditions. The observations of Alison, Addison, Niemeyer, Virchow, and Reinhardt have established facts of such clinical importance that the staunchest supporters of Laennec must admit that we no longer regard phthisis as he did. Our ideas as to the nature of specific growths are so much modified that, even if we did, our conception of the disease would differ considerably from his. In another disease, the description of which we owe to Laennec—cirrhosis of the liver—he imagined the nodules, now known to be atrophied groups of acini, as an infiltration of new growth. The microscope has not been applied in vain to the problems of morbid anatomy; and the greater insight that instrument has given us into the structure of healthy and diseased tissues has revolutionised our notion of morbid processes as much, if not as strikingly, as the stethoscope has altered our clinical practice.

This record of our heroisms concludes fittingly with the name of

Murchison, whose life and work have gained for him a memorable place in the annals of medicine. It would be unfair to institute a comparison between his genius and that of Laennec; but, while the latter stands by himself as an epoch-maker, we may associate them by their devotion to medicine and by that nobility of mind which enabled each to continue his unremitting labours in spite of failing health and the approach of death.

THE ADDRESS IN SURGERY.

MR. SAVORY'S address will be perused with all the interest necessarily excited both by the speaker and the topic. The latter is, in fact, *the* topic of the day; and would naturally occur to any speaker as the one most fit to attract the attention of a surgical audience. No amount of repetition can deprive of its surpassing interest the question of how best to prevent blood-poisoning; and certainly the success which has attended the efforts of surgeons in this direction hitherto, indubitably great as it has been, has not provided us with any answer, satisfactory to all practical surgeons, as to the details—though it has become more and more clear that increased care in following those principles which have long been universally admitted will be rewarded by diminished mortality, even when combined with much diversity of detail.

Mr. Savory's address might, of course, be regarded mainly as an attack on Lister's method of dressing. This, however, would be to do a great injustice to so thoughtful and weighty a contribution to the surgery of of the present day. By far the most important point in the address is the clear proof which it offers that, in hospital surgery, "the best results have been achieved by the simplest means". This, it is true, would, if admitted, be fatal to the claims which Lister's method makes to exclusive adoption; but the address is not on that account to be taken as an attack on the system. On the contrary, Mr. Savory endeavours to show how great is the value of Lister's treatment when it is necessary to carry on surgical practice in an unhealthy atmosphere; and he gives to the distinguished author of the system the credit which all the world allows to be his due for his successful efforts towards the attainment of the great object which all surgeons have, or ought to have, in common: the prevention of blood-poisoning.

First, then, in importance among Mr. Savory's topics is, as it seems to us, the proof afforded, not merely by the figures which he gives—striking and unmistakable as they are—but also by the recorded experience and observation of himself and many other eminent surgeons, as to the splendid success with which surgery is now carried on in the best English hospitals. We cannot resist the temptation to quote the eloquent words of the address.

"Since the prevention of blood-poisoning after wounds and operations has become the great theme of surgery, surgeons almost everywhere have been naturally and very laudably anxious to gain credit for the best results. A keen, active, and noble rivalry has sprung up between surgeons and between institutions. A splendid struggle now goes on throughout England, Europe, and the civilised world to reduce the mortality from this cause after operations to the lowest possible terms. Beyond all doubt, the gain to human life and health from this has already been immense—who shall say how great, or how much greater still, it will be?"

These sentences fitly describe what is the chief glory of English surgery, viz.: the great advance which has been made in the safety of all its processes. By what means has this advance been secured? Mr. Savory replies: by increased care and attention to all the details of the dressing of the wound; the state of the patient's health; the selection of the operative procedure; the surroundings of the patient; in fine, by a comprehensive study of all the essentials of the complicated problem which each surgical case, and particularly a difficult one, presents; and while he allows the ingenuity of Mr. Lister's practice, and admits the great good that has followed on its adoption in hospitals, where (as in some of those on the continent) no thought seems previously to have been bestowed on even the most necessary matters of hygiene, he complains that what is called "antiseptic surgery" fixes the surgeon's attention too exclusively on the dressing of the wound, to the exclusion of other matters of at least equal importance; and he says that, as far as has been shown at present, the best results have not been obtained in the hospitals where this method has been employed. Nor can it be denied that there is something, we will not say suspicious, but at any rate strange, in the persistent avoidance of the challenge so often thrown out to Mr. Lister and his followers to show, by actual comparison, whether, and if so, how far, their results are really superior to those of surgeons who do not admit their theory. If any physical proof of the germ-theory had been given, of course such a test by results would be superfluous; but no such proof has been, or perhaps can be, given. And the difficulty which Mr. Savory notices is one which has pressed very hardly on every surgeon of experience ever since the theory was broached, viz.: if it be true that the atmosphere is loaded with germs so deadly that if one or two of them slip in through a hole in the dressing, or are implanted on the wound by an instrument or finger which has escaped disinfection, it is sufficient to account for an attack of pyæmia, how does it happen that we see wounds healing so very kindly when exposed? We put this again in the words of the address.

"If the germ-theory in its past and present state contained the truth, the whole truth, and nothing but the truth, what possible explanation is to be given of that which is witnessed daily and hourly—the kindly repair of exposed wounds? I will venture to say that any one who had no clinical experience, but who accepted all that he could read on the germ-theory, would inevitably come to the conclusion that to expose any wound unguarded to the atmosphere would be to seal the fate of the patient. But what is the fact? Who requires to be informed? Then is it not clear that the whole truth has not yet been told?"

So long as this insuperable difficulty lies in the way of the theory, does it show any bigotry or stupidity if we say that we require experimental proof of the superiority of the practice, before we can admit the exclusive claims of the antiseptic method? We should be the last to urge any haste in the matter. It is quite reasonable that Mr. Lister or his disciples should have any time that they consider necessary to collect their facts; but surely by this time, when the method has been in full operation more than a dozen years, they might be at any rate on the way to furnish the decisive test, which will show that there is a vast difference between the results of ordinary cases when treated in some such simple way as Mr. Savory sketches and when treated on Lister's method. There is, however, another branch of the subject. Some believe that there are classes of cases which can be treated successfully by Lister's method, and not by the simple treatment; and we confess that, for our own part, it is on this part of the question that we feel more doubt. It seems to us that, if Lister's method had really any great superiority over the common treatment for common cases, such as amputation of a limb or removal of a breast, the fact must long ago have been demonstrated. Mr. Savory touches thus on the second aspect of the question.

"But it is said that, under this plan, we are enabled to perform certain operations with success, to achieve results in surgery which cannot be attempted with any reasonable prospect of success by other methods. I take leave to doubt whether these assertions are borne out by facts. In my humble opinion, operations are sometimes performed, both with this method and otherwise, which in any case had better be left undone; but I believe that patients have escaped with life after operations as full of risk to it, with other methods as with this. But this sort of statement, because it admits of no direct refutation, is never wanting in favour of any novelty. Has any new plan of treatment ever been proposed unsupported by abundant illustrations of its excellence? Are those who can tell of wonderful results from this method in a position to state that none equal to them have been accomplished in other and more simple ways? If it were not for the interests at stake, one might find some amusement in hearing and reading, in the light of experience, of the surprising triumphs of 'antiseptic surgery'. But this is an old story; a tale too often told. With reference to this, Bryant has well said: 'The publication of isolated cases, however good, proves nothing, whereas the withholding of the whole suggests much'."

In this passage, we hardly go along with Mr. Savory. The Listerians have, at any rate, a right to say: "Before the introduction of our system, you knew well enough the horror with which such operations as those involving free incisions into great joints were regarded. We now think nothing of sawing off the internal condyle of the femur through a

free opening into the knee-joint, or cutting down on a fractured patella and wiring the fragments together; and we can show you, by a long series of cases, that, under complete antiseptic precautions, such operations can be safely performed. If you want a statistical comparison with the antiseptic method, it is for you to show that you can perform these same operations with equal safety by your simple treatment."

Whether, as Mr. Savory says, such operations ought not to be performed, *i.e.*, whether they are or are not surgically indicated, has no bearing on this contention. The surgical world will continue to believe that Lister's method has some superiority in point of safety to the ordinary method, so long as they see that a hospital surgeon, if he wish to make a free opening into a great joint, or to perform ovariotomy or gastrotomy, thinks it his duty to his patient to use antiseptic precautions. It does not follow that the superiority need be one of principle. It may be merely of detail; and it may be, as Mr. Savory seems to intimate, that the operations in question could be as safely performed with no antiseptic precautions; but surely, on that point, the *onus probandi* lies not on Lister's disciples, but his antagonists.

On the whole, Mr. Savory's address, while it is most encouraging as showing what great advances towards safe practice we have made in late years, shows also the need there is for more definite information on many of the most essential points of surgical treatment, and in particular for that full and definite comparison between the results of antiseptic and of ordinary surgery, which has been so long asked for by those who are neither enthusiasts nor opponents of the method, but who want to do their duty to their patients.

Whatever any of our readers may think as to the question of antiseptic surgery, every one must be grateful to the author of an address which will render it absolutely necessary that authentic information be furnished by one or both sides, and that thus the materials of a reasonable judgment be in every one's reach. Nor will those who love vigorous writing, and who like the introduction of lighter matter into grave disquisitions, be disappointed with Mr. Savory's address. The sincerest respect for Lister and everything Listerian is not, we hope, inconsistent with a smile at the enthusiastic Tyndall making the scratch on his leg antiseptic by dipping his pocket-handkerchief in the running stream; or the German professor making himself and his assistants antiseptic by the unusual precaution of washing themselves all over. And those who are tempted to give in to the fashionable folly of national self-depreciation, and to believe that every thing of value in science must be imported from somewhere, and by preference from Germany, may be brought to a sounder mind when they see, by this address, how far in advance the English surgeons are of their foreign compeers in that essential of the art: the saving of human life.

SANITATION AND MORTALITY.

AT a time like the present, when the relations of the State to Public Medicine are so eminently unsatisfactory, it is somewhat difficult to be sanguine as to the future of State Medicine in England. The reforms necessary to secure the increased effectiveness of sanitation are now so well understood, at the same time that its State administration is signalised by such apathy and stagnation, that it is also difficult to infuse an address on Public Medicine with much novelty. Dr. Fergus, however, at the annual meeting of the Association, in his historical sketch of the past, present, and future of State Medicine, has been especially successful in his arrangement of the facts and figures which he has used to illustrate his subject. It is not surprising, however, to find that, in dealing with the various aspects of such a large subject, some of them have scarcely received full justice.

In considering the results that have been achieved by sanitary labours, and estimating them by a statistical standard, Dr. Fergus's conclusions are, it appears to us, somewhat too negative in character. The negative result of sanitary expenditure has long been one of the stock arguments of the obstructive party in sanitation. It, therefore, becomes highly important that the progressive sanitary party should, in dealing with this phase of the question, be prepared to meet boldly this mischievous assertion, that mortality statistics afford no evidence of sanitary progress.

It should never be forgotten that in recent years the aggregation to town centres, especially in mining and manufacturing districts, has proceeded at such a rapid rate, in many places without adequate sanitary precautions and organisation, that even a stationary death-rate must be accepted as proof of progress. Careful investigation of local mortality statistics proves that, while rates of mortality in the larger and older towns have shown a well-marked decline in recent years, this sanitary improvement has been counterbalanced by increase of mortality and of zymotic fatality in the newer urban aggregations in the mining and manufacturing districts. Moreover, it must be borne in mind that really organised general sanitary reform in England does not date further back than the Public Health Act of 1872, and that it is early times yet to look for any tangible evidence of increased duration of life as the result of the passing of that Act.

Dr. Fergus makes, without comment, a quotation from the *Journal of the Institute of Actuaries*, in which it is stated that the annual death-rate in England and Wales was identically the same, namely, 22.35 per 1,000 in each of the three decades 1841-50, 1851-60, and 1861-70. This statement is not precisely correct; but it is scarcely worth while to point out the extent of error, as it is substantially true that the national death-rate was almost the same in each of those three decades. Neither Mr. A. H. Bailey, one of the Vice-Presidents of the Institute of Actuaries, nor Dr. Fergus, points out, however, that in the first eight years of the current decade (1871-80), a sensible decline has occurred in the recorded death-rate. The annual death-rate in England and Wales, during the eight years 1871-8, averaged 21.65 per 1,000, against 22.37, the average rate in the preceding thirty years 1841-70. The difference between these rates of mortality, if it occurred in a stationary population, would signify an increase in the average duration of life in England and Wales of one year and four months—not an inconsiderable increase to the aggregate life of a nation. Looked at in another way, this decline in the national death-rate, in the past eight years, signifies that, during the preceding thirty years, one hundred and three persons died to each one hundred that have died since the beginning of the present decade.

We are, as we have before said, far from allowing that this decline in the death-rate in the past eight years by any means fairly represents the result of our recent sanitary progress; still, it cannot be too often or too firmly insisted upon that our death-rate is declining, which signifies that the mean duration of life is increasing.

We shall probably again have reason to refer to the useful statistics in Dr. Fergus's address, especially those which he has extracted from the Registrar-General's Annual Reports, showing the death-rates from certain zymotic diseases during the thirty-five years ending 1876. He properly claims the marked decline in the fatality of fever, especially of typhus fever, as one of the triumphs of improving sanitary organisation. The apparently stationary rate of mortality from some of the other zymotic diseases is very interesting in its bearing upon the evidence of sanitary progress, and is worth discussion. On the present occasion, we must content ourselves with pointing out that the annual mortality statistics of England and Wales afford undoubted evidence of improved public health, in spite of the increasingly rapid aggregation to town centres.

THE library of the Royal Medical and Chirurgical Society will be closed from Monday, August 11th, to Wednesday, September 10th (both days inclusive).

DR. SIEVEKING, Dr. Bucknill, and Dr. Herman Weber have been elected censors of the London College of Physicians.

THE Queen's University in Ireland has announced its intention of bestowing the honorary degree of M.D. on the incoming and outgoing presidents of the British Medical Association.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At the pass examinations for the diploma of membership of the Royal College of Surgeons which have just terminated, the clinical cases on which the candidates were examined were selected from the following recognised metropolitan hospitals only, viz.: St. Bartholomew's, St. George's, St. Thomas's, Guy's, University College, Charing Cross, and the Westminster; from which the following interesting cases were selected, viz.: Hydrocele, with enlarged testicle (a puzzling one to several); necrosis of the external condyle of the humerus, with secondary affection of the elbow-joint; cyst in the lower lip, with inflammation of the conjunctiva; fibrous tumours on various parts of the body; hæmatoma of the cheek; strumous disease of both testicles; specific eruption on the skin; strumous abscess over the external ankle; tumour in the calf with abscess in the groin; enlargement of both testicles; abscess near the lower jaw after extraction of teeth; orchitis; senile gangrene of the fingers; double hydrocele; chronic hypertrophy with induration of the skin of the leg; tumours, probably gummatous, on various parts of the body; lupus of the face; opacity of the cornea with granular lids; syphilitic induration of testicle and cord: nævus of the upper lip (too frequently stated to be cancer); old fracture of the tibia and fibula with dislocation of the foot; undescended testicle with hydrocele on the other side; strumous disease of the knee-joint; ingrowing nail; gummata; alveolar abscess (lucifer match maker); iritis; strumous disease of the lower jaw and elbow; operation for genu valgum; inflammation of the lymphatics of the forearm and arm; enlarged inguinal glands; ankylosis of shoulder; syphilitic ulceration of the tongue; inflammation of wrist; ulcer on the leg; popliteal bursa; enlargement of nævus inside the cheek; interesting case of lymphadenoma; syphilitic necrosis of the skull; varicocele molluscum; tumour in the groin, probably omental; bad case of hæmorrhoids; gumma on the tongue; club-feet; compound dislocation of thumb; compound fracture of the skull; necrosis of superior maxillary bone from phosphorus; syphilitic ulcer of the tongue; etc. Out of the 223 candidates examined in surgery, the total number of rejections amounted to 71, being nearly one-third of the number examined. With this meeting the examinations for the present session were brought to a close. Several metropolitan and a few provincial Fellows were admitted to witness the examinations by direction of the President, Mr. Luther Holden, who most courteously received all. Dr. William Darling, F.R.C.S.Eng., Professor of Anatomy in the University of New York, and Dr. A. B. Palmer, of the University of Michigan, were also present.

SIR WILLIAM JENNER.

Sir William Jenner has been absent from London during the past month. A little before that time, he began to suffer from severe cough, which, to the astonishment of himself and his medical friends, proved to be whooping-cough. He saw no patients after he knew the nature of his illness; and a day or two afterwards, left London in order that he might not spread the disease. He will not, we learn, return to London till the middle of September; by which time, as the fits of coughing are much less severe and less frequent than they were, he will have been well long enough to be free from the risk of communicating the disease. Although the whooping-coughs have been fully developed, there has never been any bronchitis or other chest complication; and were it not for the danger of infecting others, he would now be in London discharging his ordinary professional duties.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The thirty-fourth annual meeting of this Association was held on Wednesday, July 30th, at the Westminster Palace Hotel, Dr. Lush, M.P., presiding. In the morning, considerable time was given to the discussion of a new set of rules for the Association. At the afternoon sitting, Dr. Lush read an address, which was followed by a long discussion upon the subject of licensed houses, and recent criticisms upon their management. A resolution was then passed, petitioning the General Medical Council to have mental diseases made a subject of examination for medical degrees and licences. Considerable discussion arose upon a series of resolutions introduced by Dr. Murray Lindsay in favour of a better system of pensions for asylum officials, and proposing that the regulation of the salaries and pensions of those officials should be transferred to the Imperial Government. With some trifling modifications, the resolutions were agreed to, and directed to be forwarded to the proper quarters. Mr. Mould of Cheadle was elected President for the ensuing year. In the evening, the members of the Association dined together at the Ship Hotel, Greenwich.

THE SUCCESSES OF EPSOM COLLEGE.

We are happy to learn that, at the June matriculation examination at the University of London, seventeen of the Epsom boys passed; five in honours, ten in the first division, and two in the second division. Mr. W. J. Bradford, a foundation scholar, was sixth in the honours list. The continued success of this school, in which the profession are so largely and deeply interested, will be widely and heartily welcomed.

FUNDS OF THE MEDICAL COUNCIL.

The following sentence in the abstract report of evidence before the Select Committee, on page 184 last week, contains a typographical error which is of some importance, as it altogether changes the meaning of the witness. As printed, the sentence ran, "That the Council, being a body which is authorised to pay to its members so much a-day for each of their sittings, they have exhausted the funds available for fees, and declared them on more than one occasion inadequate for the purpose". What was actually said was, "That the available funds, being thus exhausted by fees for sittings, the Council had, on more than one occasion, declared their funds to be inadequate for *other* purposes". It will be seen that the meaning is very different, and much more germane to the argument.

THE HYGIENIC CONDITION OF MALTA.

The Secretary for the Colonies, in reply to a motion of Mr. Plimsoll on the system of taxation in Malta, admitted "that there was much in the sanitary state of Malta that admitted of improvement". This, coming from the lips of a Secretary of State, implies a good deal more than the guarded language used conveys. We are not under the necessity of using conventional language in matters of this kind. It is well known that, in Malta, officers and men suffer from a form of fever to which Professor Maclean lately has applied the provisional term of *typho-malarial:* a fever that seems to have an indefinite duration; that is not much, if at all, under the control of quinine; and that, in a large proportion of cases, passes into a stage in which severe rheumatic and neuralgic symptoms appear, with extreme prostration and great suffering. One of the greatest mistakes made in our time, in matters of military sanitation, was the sending of the 42nd Regiment, which had suffered from malarial fever in Cyprus, to Gibraltar, where a form of fever closely resembling so-called "Malta fever" prevails. The malarial fever of Cyprus was found amenable to treatment; but when on this fever that prevailing in Gibraltar was grafted, the result was a condition involving great distress to the sufferers, and much trouble and anxiety to the medical officers who had to deal with cases thus complicated. All this is matter of notoriety now; our object at present is to invite the attention of the military and medical authorities of the army to the condition of the women and children of soldiers in Malta. They are living under conditions so insanitary as to generate and aggravate disease and to render treatment useless. The women suffer from fever, and the children from diarrhœa, to an extent that can only be caused by want of proper sanitary arrangements. We have reason to believe that this unsatisfactory state of matters has been brought to the notice of the authorities again and again by the responsible medical officers serving in the garrison; nevertheless the facts remain as we have stated them. In our opinion, soldiers under the six years' term of enlistment may fairly be made to come under an arrangement not to marry until they enter the reserve. In this way, a great saving would result to the State, and much misery, disease, and death be prevented among women and their children. But so long as soldiers are permitted to marry,

and to take their families, however limited by regulation in number, to foreign stations, it is clearly the duty of the State to see that they are not exposed to such causes of disease as obtain in Malta. Great political capital is to be made by rendering the due preservation of military discipline at home and abroad as difficult as possible: the prevention of disease is beneath the notice alike of government officials and their critics.

SCOTLAND.

GRADUATION IN MEDICINE IN EDINBURGH UNIVERSITY.

THE annual graduation of the Edinburgh University, which has become inseparably associated with the 1st of August, took place in the Hall of the General Assembly of the Church of Scotland that day. The Hall is quite inadequate for the comfort of those engaged in the ceremonial; and still less for the accommodation of the numerous friends and relations who come to see the completion of the curriculum of their respective students, when, passing each in his turn under the imposing "cap", to which tradition ascribes an interesting fundamental origin, the Chancellor of the University, Lord-President Inglis, bestows on them the degree or degrees. There was a fair muster of the Senatus Academicus; Sir Robert Christison and the Lord Provost were also present. Thirty received the degree of M.D. under the new statutes, and two under the old; of these, four were awarded gold medals for the excellence of their theses. Ninety-six received the degrees of M.B. and C.M.; of these, two graduated with first class, and eleven with second class, honours. One candidate received the degree of M.B., and two the degree of C.M. The Ettles Scholarship, awarded to the student most distinguished during the whole examinations, was gained by Alexander Bruce, M.B., M.A., and C.M. The Blaney Scholarship, for the greatest proficiency in anatomy, surgery, and clinical surgery, was divided between Messrs. Beck and Greves. The Wightman Prize in Clinical Medicine was awarded to J. Leith Waters, M.B. The Cameron Prize, for the best original work done lately in therapeutics, was awarded to Paul Bert, M.D., Professor in the Faculty of Sciences, Paris, for the researches summarised in his work *La Pression Barométrique, Recherches de Physiologie Expérimentale*, published in 1878. Professor Turner read a most interesting statement regarding this prize and its present award. Unfortunately, Dr. Bert was unable to be present to receive the distinction. Professor Grainger Stewart addressed the graduates; and, in his remarks, directed attention to the onerous and honourable position they now occupied as graduates of an University which has reared so many men distinguished in medicine, to some of whom he referred at considerable length. He also gave them such counsel as might be suitable to them in the practice of their profession. The proceedings were opened and closed by prayer.

UNIVERSITY OF EDINBURGH: CAMERON PRIZE.

THE Cameron Prize for Therapeutics was founded in 1878, by the late Dr. Andrew Robertson Cameron of New South Wales, to be given annually at the ceremony of medical graduation to the practitioner or member of the medical profession who shall during the previous year have made the most important addition to practical therapeutics. Dr. Cameron left a sum of £2,000 for this purpose. The prize has been awarded to Paul Bert, Doctor of Medicine and Professor in the Faculty of Science of Paris, for the researches summarised in his work, entitled *La Pression Barométrique, Recherches de Physiologie Expérimentale*, published in 1878. The investigation of the influence exerted by barometric pressure upon vital functions has occupied the attention of Dr. Bert for many years. His researches have been considered of so great value, that he was awarded the prize for Experimental Physiology by the Academy of Sciences in 1865, and the "Grand Prix Biennial" of the French Institute in 1875. Among the practical results gained by his industry are the scientific explanation of the beneficial results of diminished barometric pressure in the treatment of phthisis and anæmia; definite indications to be pursued in the treatment of asphyxia, and of poisoning by carbonic oxide and sewer gas; and the means to be adopted in order to avoid the dangers to which divers, workers in mines, and those who are liable to be brought under the influence of increased atmospheric pressure are subject. They likewise show that the processes of nutrition are to an important extent modified by changes of atmospheric pressure, and suggest a means of favourably influencing the nutrition of the body in disease. Dr. Bert has also studied the influence of atmospheric pressure upon the action of anæsthetics. As a result of his investigations, it has been found that nitrous oxide may be so administered as to maintain anæsthesia for a much more prolonged period than when administered in the usual manner, while at the same time the benefits of rapidity of action, safety, and rapidity of recovery to a conscious state are retained. Dr. Paul Bert has, therefore, succeeded in making several most valuable additions to practical therapeutics, in the wide sense in which the subject is interpreted in the will of Dr. Cameron, for these additions include agency and means "of influencing the human body in the maintenance or improvement of health, avoidance or cure of disease, and alleviation of suffering". We understand that the prize would probably have been awarded to Professor Rutherford for his great research on the Influence of Drugs on the Liver; but, as the Professors of the University of Edinburgh are the trustees of the fund, it is thought advisable to exclude all discoveries made by any of the trustees.

GRADUATION CEREMONY AT THE UNIVERSITY OF GLASGOW.

THE ceremony of capping the graduates in law, medicine, and science took place on Thursday, July 31st, in the Lower Hall of the University, Principal Caird presiding. There was a large attendance of the general public. The medical graduates were presented by Professor Gairdner, the science graduates by Professor Young. Of the Bachelors of Medicine and Masters in Surgery, Mr. William K. Peden, and Mr. Ralph D. Stevenson, were named as entitled to first-class honours. At the close of the proceedings, Professor McKendrick addressed the graduates. Speaking to the graduates in medicine, he adverted to the agitation for medical reform, and in this matter combated the idea that the adoption of the principle of conjoint boards would secure uniformity in examination. He characterised the notion of an uniform examination as a will-o'-the-wisp leading men astray from the real thing to be done, which was to make sure that only properly qualified men entered the profession. He did not think that uniformity of examination work could be obtained by any system, though the difficulty might be met by having more efficient supervision on the part of the Medical Council, or by some mode of State examination.

THE HEALTH OF GLASGOW.

THE health of this city appears to be exceptionally good just now, notwithstanding the unseasonable weather at present prevailing. The death-rate for last week was 16 per 1,000, as against 26 per 1,000 in the corresponding week of last year.

POISONING BY BICHROMATE OF POTASH.

A BOY named William Reid, residing in Burnside Street, Glasgow, was playing along with his sister in a bedroom on Saturday. He got possession of a small bottle, the contents of which he drank, and soon afterwards died. The bottle, it was found, had contained bichromate of potash.

IRELAND.

AT a weekly meeting of the Guardians of the Rathdown Union, a sum of £30 was awarded to the medical officer of the workhouse for his services in reference to the recent epidemic of small-pox.

CRIPPLES' HOME, BRAY.

HER Grace the Duchess of Marlborough paid her annual visit last week to this institution, and was conducted by Mrs. Sullivan (founder of the

Home) through the various wards and dormitories of the hospital, where thirty cripples are at present inmates. A new ward has been added for incurable cases, which Her Grace promised to endow, whilst expressing the pleasure she felt in inspecting an institution so deserving.

QUEEN'S COLLEGE, CORK.

At a meeting, held on July 21st, of the Body Corporate of the Queen's College, Cork, a statement was adopted in reference to the clauses of the University Education (Ireland) Bill, 1879, which affect the Queen's University in Ireland. The authors point out that the Queen's Colleges would, if the Bill became law, cease to act as University Colleges, and be undistinguishable from local schools; that the whole character of the degrees would be altered; and that the standard hitherto maintained in the Queen's University must be necessarily lowered; and it is possible that the study of physical and biological sciences, which require for their illustration, and especially for their practical teaching, expensive apparatus, laboratories, museums, etc., would be discouraged. The dissolution of the Queen's University will also inflict a great injustice on the graduates, whose degrees would lose the *prestige* now attached to them if they were transformed into the degrees of a new University, which would take a considerable time to earn, if ever it would, a position equal to that now enjoyed by the Queen's University; and, in the case of medical graduates, the loss of a degree of recognised value would further involve a pecuniary injury. The statement further adds that the proposed measure will inflict special injustice on the Professors of the Queen's Colleges as regards their status, teaching, and emoluments; for, if attendance on lectures is not in future to be obligatory on students proceeding to a degree, a direct inducement will be offered to them not to take courses of lectures. We think that the Body Corporate of the Queen's College, Cork, have put forward, in the clear and temperate statement which they have issued, conclusive proofs of the injurious effect which the new Bill, if passed, will have on the Queen's Colleges; and we hope, should it become law, that the modifications it may receive will meet the objections made on the part of the Queen's University.

DUNDRUM CRIMINAL LUNATIC ASYLUM.

On the 31st of last December, there were one hundred and seventy-seven inmates in this asylum, twenty-three having been admitted during the year, six having died, while seven were discharged unimproved and sent back to district asylums. Of these one hundred and seventy-seven inmates, one hundred and forty were men and thirty-seven women. The number of patients has been increasing year by year, owing to two causes: first, the mortality has not exceeded 3¼ per cent. in a year, on the average under treatment, as against 8 per cent. elsewhere; and, secondly, when a patient recovers, a discharge does not necessarily ensue, and under no circumstances is an uncured lunatic let out on trial before the termination of his legal imprisonment. In consequence, additional provision may soon be urgently required; and the Inspectors of Lunatic Asylums, in their recent report, suggest either of two alternatives to meet exigencies and obviate an enlargement of the present buildings, viz.: one having regard to the ages of inmates—some being old, decrepit, harmless, and inoffensive—some of whom, if not guilty of grave crimes, might be pardoned, discharged, and disposed of locally—Government paying for their maintenance elsewhere, and thereby saving about £16 a year per head; the other, to allocate, at any existing or future depôt, a small portion of the premises to convict prisoners attacked, while under confinement, with actual or pretended mania; so that, the expense of structural additions at Dundrum, where the amount of land is restricted, would be avoided. The cost per head was £35, on the average number of patients resident in the asylum.

Bequests.—Mrs. Alicia Buckley bequeathed £100 to St. Michael's Hospital, Kingstown; Mr. Henry Barker Brown, £50 to the Hospital for Incurables, Donnybrook.

Dr. Cassells of Glasgow has been unanimously elected by the president and members of the Société Royale des Sciences Médicales et Naturelles de Bruxelles a corresponding member of that society.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS.

A meeting of the Fellows was held on July 31st, when Dr. Bright and Dr. Sparks were admitted to the fellowship. This being the final meeting of this session, the usual reports from the Library Committee and the Curators of the Museum were presented and approved. The grant was continued to the library, and special thanks were voted to Dr. Lionel Beale for his valuable services in the museum. A vote of thanks was also passed to Drs. Shepherd and Farquharson for their active interest in arranging for the *soirée*.

The reports from the Council respecting the subjects of ophthalmology and obstetric medicine were presented, and the opinion was expressed that it is undesirable to enforce special attendance on lectures on the former, or to make it a special subject of examination. With regard to the latter subject, the College advised extended practical teaching, but not an increase in the number of lectures.

ROYAL COLLEGE OF SURGEONS.

An ordinary meeting of the Council was held on Thursday, the 7th instant. Dr. Sieveking resigned his appointment as Examiner in Medicine, and Mr. Erichsen his seat in the Court of Examiners. The resolution of the General Medical Council relating to the licence in dental surgery was partially considered, but the subject was finally deferred till the next meeting.

Royal College of Physicians of London.—The following gentlemen were admitted as Fellows on July 31st, 1879.

Bright, George Charles, M.D.Ox., Cannes, France
Sparks, Edward Isaac, M.B.Ox., Crewkerne

The following gentlemen were admitted as Members on July 31st.

Lush, William George Vawdrey, M.D.Lond., Weymouth
Sharkey, Seymour John, M.B.Ox., St. Thomas's Hospital
Simon, Robert Michael, M.B.Camb., Manchester

Names of candidates for the College Licence, who, having conformed to the by-laws and regulations, and passed the required examinations, were proposed to the College to have Licences to practise physic granted to them on July 31st.

Ashe, William Percy, 20, Linden Gardens, W.
Bullock, Charles, St. Bartholomew's Hospital
Burwash, Henry John, 144, Kennington Road, S.E.
Chamberlain, Edward Twyford, Southsea
Coles, Donald Alexander, St. Bartholomew's Hospital
Dale, Frederick, York
Davies, Hugh Edward, University Hospital
Evans, Arthur Llewellyn, University Hospital
Francis, William, 21, Huntley Street, W.C.
Freeman, William Thomas, Burnham
Gibbes, Heneage, 23, Oberstein Road, S.W.
Goyder, Charles McIvhor, Infirmary, Newcastle-upon-Tyne
Gurd, David Frazer, 78, Lambeth Road, S.E.
Hassan, Syed, 18, Bedford Place, W.C.
Henderson, Cecil, Clifton
Hill, Charles Birnie, University Hospital
Lewis, John George Stephen, 1, Windsor Road, Ealing, W.
Lunn, John Reuben, Children's Hospital, Shadwell
Macdonald, George Alexander, Hull
McMunn, James, 42, Gower Street, W.C.
Nicholson, James Edward, St. Bartholomew's Hospital
Palmer, William Pitt, Ashill, Ilminster
Patterson, George Henry, Brighton
Pierson, Alfred Henry, 21, Blessington Road, Lee, S.E.
Price, Edward Morris, 24, York Road, Leamington Park, W.
Sykes, William Ainley, Golcar, Huddersfield
White, Richard Watts, Guy's Hospital

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on July 25th.

Barling, H. G., Newnham, Gloucestershire (St. Bartholomew's Hospital)
Clowes, H. A., Sydney, New South Wales (Guy's Hospital)
Cottell, A. B., Great Cheyne Road (St. George's Hospital)
Cowan, G. H., M.B.Toronto, Napanee, Canada (St. Thomas's Hospital)
Davies, J. D., Merthyr Tydvil (St. George's Hospital)
Emerson, P. H., Teignmouth (King's College)
Harrison, E. M., L.S.A., Brackley (Charing Cross Hospital)
Hoskyn, D. T., Kilburn (University College)
Lewis, C. J., Birmingham (Birmingham School)
Neale, W. H., Boundary Road, N.W. (University College)
Patterson, G. H., L.S.A., Brighton (St. Bartholomew's Hospital)
Porritt, Norman, Huddersfield (Leeds School)
Schlesinger, R. E., Melbourne, Australia (King's College)
Shapley, Frank, L.S.A., Torquay (London Hospital)
Shaw, W. W., Kirkham (St. Bartholomew's Hospital)
Sherrard, C. D., L.K.Q.C.P.I., Tavistock Crescent (University Colle e)
Walton, R. S., Hebden Bridge (University College)
Wray, G. B., Nottingham (University College)

Six candidates were rejected.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

CARRICK-ON-SUIR UNION—Medical Officer for Piltown Dispensary District, at a salary of £100 per annum, and £20 per annum as Sanitary Officer, together with Registration and Vaccination Fees. Election on the 14th instant.

CITY AND COUNTY LUNATIC ASYLUM, near Bristol. Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before the 20th instant.

*EAST SUFFOLK HOSPITAL—Honorary Physician. Applications to be made on or before August 20th.

LINCOLN COUNTY HOSPITAL—House-Surgeon. Salary, £100 per annum, with board and lodging. Applications to be made on or before August 11th.

*NEWPORT (Monmouthshire) ODD FELLOWS' MEDICAL AID ASSOCIATION—Assistant-Surgeon. Salary to commence at £70 per annum, with board and residence. Applications on or before August 20th.

NORTHAMPTON GENERAL INFIRMARY—Physician. Applications not later than the 26th instant.

PARISH OF ST. JOHN'S, Hampstead—Medical Officer of Health. Salary, £125 per annum. Applications on or before September 1st.

*QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road—Resident Medical Officer. Salary, £60 per annum, with board and residence, Applications on or before September 1st.

*ROYAL FREE HOSPITAL—Junior Resident Medical Officer. Applications on or before August 19th.

SHEFFIELD GENERAL INFIRMARY—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on or before August 16th.

SHILLELAGH UNION—Medical Officer for Hackelstown and Coolkenno Dispensary District. Salary, £100 per annum as Medical Officer; £16 yearly as Sanitary Officer, with Registration and Vaccination Fees. Election on the 14th instant.

SUSSEX COUNTY HOSPITAL—House-Surgeon. Salary, £80 and £10 a year from each Resident Pupil. Applications on or before August 13th.

*WESTMINSTER HOSPITAL—Pathologist and Curator of the Museum. Remuneration, £52 : 10 per annum. Applications on or before September 13th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

JEFFERSON, W. D., L.R.C.P.Ed., appointed Certifying Factory Surgeon for the District of Ripon, *vice* T. T. Frankland, M.R.C.S.Eng., resigned.

*THOMPSON, James, M.D., appointed one of the Medical Officers in Ordinary to the Leamington Provident Dispensary; also, re-appointed Surgeon to the Borough Police Force.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

FAUSSET.—On July 31st, at Tamworth, the wife of Herbert J. Fausset, M.D., of a son.

TOLERTON.—On July 26th, at Sherston Magna, Malmesbury, the wife of William Ratcliffe Tolerton, M.D., of a son.

MARRIAGES.

EVANS—HOWARD.—On the 7th instant, at St. Michael's, Chester Square, by the Rev. Canon Fleming, B.D., Vicar of the Parish, assisted by the Rev. Robert Maguire, D.D., Rector of St. Olave's, Southwark, *Alfred Henry Evans, M.R.C.S., of Sutton Coldfield, Warwickshire, to Helen, eldest daughter of Frederick Howard, The Abbey Close, Bedford.

JEPSON—GILLIAT.—On the 31st ult., at St. George's Church, Leeds, by the Rev. J. C. Hudson, Vicar of Thornton, Lincolnshire, Edward Jessop, M.R.C.S., of Durham, to Jessie Maria, youngest daughter of the late George Gilliat, Esq., of Horncastle.

OGSTON—RHIND.—At Aberdeen, on July 30th, *Francis Ogston, jun., M.D., Aberdeen, to Charlotte Elizabeth Rhind, second daughter of the late Rev. Alexander Rhind, F.C., Minister of Knockando, Banffshire.

DEATH.

WARE, James Richardson, M.R.C.S., aged 79, at Southampton, on July 25th.

THE PUBLIC HEALTH.—The weekly return of the Registrar-General states that 5,622 births and 2,974 deaths were registered in London and in twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 18 deaths annually in every 1,000 persons living. The annual death-rate was 17 per 1,000 in Edinburgh, 16 in Glasgow, and 23 in Dublin; small-pox caused four more deaths in Dublin. The annual rates of mortality per 1,000, last week, in the twenty English towns, ranged in order from Portsmouth, 12, to 21 in Oldham and in Plymouth. In London, 2,396 births and 1,349 deaths were registered. The annual death-rate from all causes, which had been equal to 17.0, 17.2, and 17.4 per 1,000 in the three preceding weeks, further rose last week to 19.4. During the past five weeks of the current quarter, the death-rate in London has averaged but 17.7 per 1,000, against 20.9 and 25.0 in the corresponding five weeks of 1877 and 1878. The deaths referred to diarrhœa, which had been 27 and 25 in the two preceding weeks, rose last week, under the influence of the higher temperature, to 46; but were so many as 311 below the corrected average for the corresponding week of the last ten years.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

MR. WOOD'S ADDRESS ON MEDICAL EDUCATION.

SIR,—Professor Wood, in his admirable observations on the shortcomings of modern students, misquotes (no doubt inadvertently) two classical authors. Shakespere wrote: "*Vaulting* ambition, which o'erleaps itself and falls on the other". (*Macbeth*, act 1, sc. 7.) Horace wrote: "Naturam expellas furcâ, tamen usque recurret." (*Horace, Epist.*, l. i, 10.) The professor's line will not scan; these slight inaccuracies are noticeable from their position in the text of the address.—I am, sir, yours, etc.,

Millbrook, Southampton, August 5th, 1879. HENRY DAYMAN.

SIR,—Are there any private "homes" where epileptics are taken in and cared for? If so, where? I do not find any in the *Medical Directory*.—Yours faithfully,

July 1879. L. B.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE ASSOCIATION AND THE ANNUAL MEETING: TWO SUGGESTIONS.

SIR,—For months I have cherished the hope of being present at the annual meeting: now I find all doomed to disappointment. Circumstances have arisen which will compel me to remain at home. Why should we poor stay-at-homes, who are with you in spirit, be denied all the benefit, as well as the pleasure, of those who are fortunate enough to be with you in the body? I suggest that a special number of the JOURNAL be issued, containing a full report of all the papers read and all the discussions in detail at all the different sections, so that nothing may be lost. It would be a great boon for all those who are compelled to be absent from the meeting, and the best *souvenir* for those who are privileged to attend. I believe, also, that it would answer well from the money point of view. We get extra numbers of the *Graphic*, *Illustrated London News*, etc., whenever any particular event takes place. Why not of the BRITISH MEDICAL JOURNAL, also, after each annual meeting?

The next suggestion I would make is this, not to allow any medical gentleman to join the parent Society without also subscribing to the Branch of the district in which he resides. Time has been when the Society and the JOURNAL itself almost went a-begging; but now, sir, thanks to your ability and indomitable perseverance, all is changed. The JOURNAL has so established itself, and contains such an amount of scientific and practical information, that it is a privilege to belong to the Association that supports it. The Association itself, however, could not exist but for the different Branches; and, of course, the Branches cannot thrive or exist without individual members. Why, therefore, should certain gentlemen be allowed to ignore the local Branches, pay their guinea to the parent Society, receive the JOURNAL, and thus elude the local subscription? It is unfair towards those individuals who avoid not any trouble they may meet, but put their shoulder to the wheel, in order to make the Branch a success. If we fail in making our meetings successful and profitable, then I say we have a right to the maturer experience and sage advice of those who at present will not condescend to enrol themselves with us. For instance, we held our annual meeting this year in a town that can boast of more than half-a-dozen medical gentlemen in full practice: of these, more than one has the JOURNAL, but not even one honoured our meeting with his presence.—Yours, etc., A MEMBER OF THE NORTH WALES BRANCH.

*** To publish a "full report of all the papers read and all the discussions in detail in all the different sections", would require not "an extra number", but a volume of from fifteen hundred to two thousand pages octavo, of which eight thousand copies would cost upwards of £2000, perhaps nearer £3000, and which would occcupy from two to three months, if compiled, printed, and edited with the utmost possible expedition. In lieu of this costly, tedious, and protracted method of publication, we publish at once full reports of all the addresses (general and sectional), and reports of committees; abstracts of all the papers read and reports of the discussions; and we subsequently group for publication the full text of the most noteworthy papers. To publish the volume suggested would require an additional levy of about ten shillings a head from all the members; and the bulky volume, issued some months after the meeting, would, as is the usual fate of such volumes, be little read and rarely opened.

VARIOLA (Plymouth).—Perhaps the following is the first instance on record in which a man's friends have been so proud of his having been a false prophet as to proclaim the fact in enduring stone. An extraordinary epitaph, erected in the church of Rood Lane, City, by the sister of Mr. Birch, one of the surgeons of St. Thomas's Hospital, commemorates that "the practice of cow-poxing, which first became general in his day, undaunted by the overwhelming influence of power and prejudice and the voice of nations, he uniformly and until death (1815) perseveringly opposed".

IDENTIFICATION OF THE PRINCE IMPERIAL.

SIR,—From the article in the BRITISH MEDICAL JOURNAL of last week entitled "Identification of the Prince Imperial", it would appear that the point at issue between us was the truth of the statement published in a preceding number of the JOURNAL, viz., "that the Prince Imperial had had four small cavities filled with gold in the first molar teeth by Dr. Rottenstein of Paris". Had you republished the original sentence of which the above quotation is simply a clause, your readers would have understood better why I called for "immediate rectification". That sentence is as follows: "The late Prince Imperial had been so much disfigured that identification would have been extremely difficult but that the Prince had had four small cavities in the first molar teeth filled with gold by Dr. Rottenstein of Paris, and met with a slight accident in April 1876 from a blow on the front teeth which had made it necessary to file the teeth a little in order to smooth the enamel." Now the only important statement expressed in the words above given is absolutely untrue. Dr. Rottenstein was not present at the identification of the remains of the late Prince Imperial, nor did any operations of his contribute in any way to that identification; but I was present on that occasion, and I then and there recognised my own work, as well as the particularities of the dental conformation. These facts are embodied in the deposition which I was requested to make, and which forms a part of the official *procès verbal*. It is perfectly true that I have said that I, and I only, have had charge of the teeth of the Prince Imperial since his childhood; and if I have said it, it was because I have never seen in the mouth of the Prince the evidence of operations not my own; and also because I have reason for believing the statement on grounds that every family physician will understand and appreciate.—I am your obedient servant, THOMAS W. EVANS.

Paris, August 4th, 1879.

H. H.—There are twenty-four members of the Council of the College of Surgeons. The senior member is now Mr. Busk, who, with Messrs. Wilson, Wells, and Gay, are unconnected with recognised hospitals. Mr. Hancock represents the Charing Cross, *Mr. Curling and Mr. Hutchinson the London Hospital; Sir James Paget, *Mr. Holden (the President), *Mr. Savory, and *Mr. Power, St. Bartholomew's Hospital; Mr. Hewett and *Mr. Holmes, St. George's Hospital; *Mr. Birkett and *Mr. Forster, Guy's Hospital; Mr. Simon, St. Thomas's Hospital; *Mr. Erichsen and *Mr. Marshall, University College; Mr. Walton, St. Mary's Hospital; and *Mr. Wood, King's College. The following represent provincial schools; viz., *Dr. Humphry, Cambridge; Mr. Baker, Birmingham: Mr. Wheelhouse, Leeds; and Mr. Lund, Manchester. Those gentlemen in the above list against whose name an * appears are also members of the Court and Board of Examiners of the College.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JULY 1879.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health.

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.		Hardness. (Clark's Scale.)	
			As Nitrates, &c.	Saline.	Organic	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	21.74	0.139	0.105	0.000	0.011	14.2	3.0
West Middlesex..	21.00	0.135	0.095	0.000	0.011	13.3	3.0
Southwark and Vauxhall	19.80	0.133	0.120	0.000	0.008	14.2	3.8
Chelsea.....	19.00	0.105	0.120	0.000	0.010	14.0	3.0
Lambeth	20.30	0.105	0.094	0.000	0.006	13.2	4.8
Other Companies.							
Kent	27.90	0.001	0.300	0.000	0.001	18.2	5.1
New River	19.80	0.056	0.135	0.000	0.003	14.0	4.0
East London	21.80	0.066	0.105	0.000	0.007	14.0	3.6

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases.

DEATH OF A CENTENARIAN.

SIR,—In reply to J. D., I beg to say that Mrs. Susanna Hartshorne was born on July 12th, 1778, according to an entry in a family recording-book, was baptised at Shrawley, Stoniford, Worcestershire, and died in Worcester on June 21st, 1879. She was buried in a family vault at Stratford-on-Avon. I have to-day received, through the courtesy of Mr. Thoms, his work on longevity.—I am, sir, your obedient servant, W. WOODWARD, M.D.

Worcester, August 6th, 1879.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir Henry Thompson, London; Dr. Andrew Clark, Cork; Dr. Wm. Rutherford, Edinburgh; Dr. G. H. Kidd, Dublin; Dr. W. K. Tanner, Cork; Mr. J. Vose Solomon, Birmingham; Dr. Fergus, Glasgow; Dr. Joseph Rogers, London; Dr. Thin, London; Mr. E. Atkinson, Leeds; Dr. Fairlie Clarke, Southborough; Mr. B. E. Brodhurst, London; Dr. R. Neale, London; Mr. R. W. Jenkins, Fawley; Dr. J. R. Wolfe, Glasgow; Dr. T. F. Pearse, Brainshot; Medicus; Dr. E. W. Paul, Street; Mr. F. Toulmin, Upper Clapton; Dr. J. W. Moore, Dublin; Dr. E. M. Bubb, Eastport, Maine, U.S.A.; Dr. T. W. Grimshaw, Dublin; Dr. N. J. Hobart, Cork; Dr. Lombe Atthill, Dublin; Mr. E. Downes, Srinagar, Cashmir; Dr. Wallace, Liverpool; Our Dublin Correspondent; Dr. Donovan, Whitwick; Mr. Balmanno Squire, London; Mr. T. J. E. Brown, Llanbister; Dr. J. B. Gill, Hastings; Mr. H. Power, Cork; Mr. B. Roth, Brighton; Dr. Muirhead, Edinburgh; Dr. J. A. Eames, Cork; Dr. McKeown, Belfast; Dr. Hugh Miller, Glasgow; Dr. Curtis, Canterbury; Dr. Fox, Ilfracombe; Mr. William Cowan, Glasgow; Mr. H. R. Swanzy, Dublin; Dr. Ringrose Atkins, Waterford; Dr. Macnaughton Jones, Cork: Mr. M. S. Kennedy, Tipperary; Dr. Jagielski, London; Dr. Hayes, London; Our Edinburgh Correspondent; Dr. Thompson, Leamington; Dr. J. P. Cassells, Glasgow; Dr. Aveling, London; Dr. A. Harkin, Belfast; Mr. William Adams, London; Dr. J. G. Garson, London; Dr. John Duncan, Edinburgh; Dr. P. Boulton, London; Dr. G. M. Beard, New York; Dr. Renfrew, Glasgow; Dr. Notter, Netley; Mr. Grobecker, London; Dr. Spender, Bath; Mr. Leslie Thain, Longtown, Abergavenny; Dr. Norman Kerr, London; Dr. James Johnston, Birmingham; Dr. McCall Anderson, Glasgow; Dr. Grigg, London; The Registrars of the Leeds School of Medicine and of the Liverpool School of Medicine; Dr. Seguin, New York; Dr. Rabagliati, Royat; Lieut.-General Bouchier, London; Colonel Nobel; Dr. Woakes, London; M.R.C.S., Derby; Dr. Finney, Dublin; Mr. Lister, Broseley; Mr. Wheeler, Dublin; Professor Hermann Cohn, Breslau; Mr. Rushton Parker, Liverpool; Dr. Bradley, Jarrow-on-Tyne; Dr. George Roper, London; Dr. Henry Bennet, Weybridge; Dr. Lush, Weymouth; Dr. Morell Mackenzie, London; Dr. C. Williams, Isle of Man; Surgeon-Major, India; Mr. W. Milligan, Wirksworth; Dr. Trollope, St. Leonards-on-Sea; Dr. F. M. Peine, Manchester; Dr. Ranking, Tunbridge Wells; Dr. Wilson, Highgate Hill; Mr. W. J. Sweet, Hebburn; Dr. Buckell, Chichester; Mr. Reeves, London; Mr. H. Dayman, Southampton; Dr. Angus Macdonald, Edinburgh; Dr. Saundby, Birmingham; Mr. Arthur Cooper, London; Our Glasgow Correspondent; Dr. G. Bowman, Old Trafford; Dr. Meymott Tidy, London; Dr. J. G. McKendrick, Glasgow; Dr. Turnbull, Philadelphia, U.S.; Mr. A. D. Macdonald, Braco; Dr. Eben Watson, Glasgow; Dr. Rayner, Hanwell; Mr. H. Horton, Devonport; Dr. C. G. Logie, London; Mr. T. W. Evans, Paris; Dr. T. C. Fisher, Lewisham; Dr. R. L Batterbury, Berkhampstead; The Secretary of the Royal College of Surgeons of Edinburgh; Mr. A. Kisch, London; etc.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SUBSECTION OF DERMATOLOGY,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

By T. McCALL ANDERSON, M.D.,
Professor of Clinical Medicine in the University of Glasgow;
President of the Section.

THE PROGRESS OF DERMATOLOGY DURING THE LAST QUARTER CENTURY.

It is with very mingled feelings that I rise to address you on the present occasion; for, though deeply sensible of the honour which has been done me by inviting me to occupy the chair, I cannot forget that I am filling the post destined for one who was far better qualified than I am to preside over your deliberations, who, by mere force of talent, rapidly raised himself to the very front rank among the dermatologists of the day; and whose wonderful energy and perseverance, while they contributed to his success, doubtless tended to accelerate his untimely end. By the death of Tilbury Fox this Section has been deprived of the services of a most able chairman; medical science has suffered an irreparable loss; and we are left to mourn the separation from a valued colleague and a warm-hearted and generous friend. As has been well remarked (*Lancet*, June 14th, 1879): "He was beloved as few men are privileged to be; honourable, upright, and conscientious in the discharge of all his duties, he lived an exemplary life. With his kindness of heart, the geniality of his disposition, and pure but unobtrusive piety, he was never so happy as when seeking out fitting objects for help, succour, and support. He did much good by stealth; and probably not even his intimate friends knew how many poor persons at the hospital, in his private consulting-room, and in the neighbourhood where he lived, partook of his bounty and benefited by his benevolence." Our best and most useful remembrance of him will be to endeavour, in our own lives, to emulate the bright example which he has set us.

If we compare the amount of attention devoted to cutaneous medicine at the present time with that of five-and-twenty years ago, what a contrast do we find! Then, if my memory serve me aright, there were but four men who devoted themselves earnestly to the study of diseases of the skin: Erasmus Wilson, who, happily, is still amongst us, whose eminent services to dermatology are only to be equalled by the geniality of his disposition and his princely hospitality, and who recently still further laid his countrymen under a lasting obligation by the gift of the beautiful monolith which adorns the banks of the Thames; the late Mr. Startin, whose immense experience and fertility of resource earned for him the gratitude of countless multitudes of patients; the late Mr. Hunt, whose unfaltering testimony to the virtues of arsenic in the treatment of almost all diseases of the skin, independent of local causes and of syphilis, is too well known to need further comment; and last, though not least, the late Dr. Neligan of Dublin, who had the materia medica at his finger-ends, and whose reputation as a dermatologist was rapidly extending when death prematurely brought his labours to a close. At that time, cutaneous medicine was at a discount, and the authorities of our general hospitals would have scorned the idea of having special dermatological departments: hence the rise and progress of special institutions for the treatment of diseases of the skin.

But, while special physicians have been appointed to treat and to further the study of diseases of the skin at the London hospitals, in most instances they have been put in a corner; no proper accommodation has been provided for them, as if the aim were rather to strangle existing special institutions than to grapple with the subject in an adequate manner. Will it be believed that, if all the beds specially provided in connection with the cutaneous departments of the London hospitals were divided amongst them, there would hardly be one bed for each hospital? If my information be correct, only two of them provide beds—University College and the Middlesex; while the only one which has erected a special suite of baths is the first of these, for which, I believe, we are mainly indebted to the energy and perseverance of Tilbury Fox. Indeed, the only institution in Britain, as far as I am aware, in which the requirements are fully met is the Western Infirmary of Glasgow. In this hospital, which is in connection with the great Medical School of the University, a special wing has been erected containing twenty beds, being more than those provided by all the London hospitals put together, as well as a most admirably arranged set of baths of every kind; and, by an arrangement with the directors of the Dispensary for Skin Diseases, where out-patients alone are seen, the more serious cases are drafted into the hospital, so that the cases admitted into the wards are, for the most part, selected ones; and thus the value of this special department to the University School is greatly enhanced. It is earnestly to be hoped that the time is not far distant when the authorities of all the great hospitals of the country will be alive to the necessity of providing, on a somewhat similar scale, for the study and treatment of diseases of the skin, as well as of the other leading specialities.

But, while this is my opinion, I desire to guard myself by adding, that I fear the tendency now-a-days is towards the undue development of specialities; and there seem good grounds for depreciating the exclusive devotion to a speciality, such as dermatology, at all events in the case of those who have not previously gained experience of the treatment of disease in all its various forms; for no one can satisfactorily treat diseases of the skin, most of which are more or less connected with constitutional states, who has not a thorough practical acquaintance with the morbid conditions associated with all the organs and tissues of the body.

And here let me remark, in passing, that, for similar reasons, the system of training for consulting practice in Scotland seems superior to that in England. (Whether it is the same in Ireland I cannot well say.) In England, the physician commences his professional career ostensibly as a consultant; he naturally aims at and ultimately succeeds in obtaining a hospital appointment; and in process of time he hopes to become a consultant in reality as well as in name. In Scotland, on the other hand, the physician begins life almost invariably as a family physician, in which capacity he gains experience of a kind such as no hospital appointment is able to afford; but he also secures a hospital appointment, and, as he gets experience in this two-fold capacity, and earns the respect and esteem of his professional brethren, consulting practice gradually flows in upon him; and then, and only then, he gradually recedes from family practice, and becomes a pure consulting physician. On the principle that a consulting physician is a physician who is consulted, this system may perhaps appear to some to be derogatory to the status of a consulting physician; but unquestionably it is calculated to produce consultants more fully equipped, and more ready to grapple with every emergency, than in the case of those whose early experience is drawn exclusively from the wards of a hospital.

That increased attention is being directed to the study of dermatology at the present time, is shown by the large number of works on the subject which have recently emanated from the press; by the journals of dermatology published of late years in Germany, France, and England, as well as in the United States, where much excellent work is being done; and last, though not least, by the establishment of the Subsection over which I have the honour to preside, and by the number of gentlemen who have promised us papers on cutaneous diseases.

And if I were asked to state what, in my opinion, has most materially contributed to this, I would say that it is the custom, prevailing more and more every year, of young medical men, before settling in practice, prosecuting their studies for a time on the continent of Europe. In Paris, they find a large hospital, with a magnificent museum attached to it, devoted mainly to the treatment of diseases of the skin, and presided over by men of the highest eminence and skill. And in Vienna, they find a section of the Allgemeine Krankenhaus set apart for these diseases, and presided over by the celebrated Hebra—a man who excites the admiration and enthusiasm of all who come into contact with him; the practical turn of whose mind has enabled him to clear away many difficulties, to make many rough places smooth, and whose lucid and practical disquisitions are made all the more charming by the dry and sparkling humour with which they abound. If, however, we compare the continental, and especially the German, with the British school of dermatology, we have no reason to be ashamed; indeed, it would be a disgrace if the country of Willan and of Bateman were left behind in the race. In Germany, the tendency is, I think, to trust too exclusively to external measures, some of which appear to be needlessly severe, and are apt to be resented by English people, or to be too stimulating for English skins, although we must never forget that many reputed local applications are absorbed and react beneficially through the system at large; while in England, local is almost always combined with constitutional treatment, as it is recognised that the great majority of cutaneous affections take their origin in some derangement of

system, which must be corrected if satisfactory and permanent results are to be obtained. It is, then, by a careful study of the labours of continental physicians, by borrowing from them all that is excellent in their system, while retaining all that is admirable in our own, that the English school of dermatology has reached its present high position, and that such satisfactory results are now obtained.

But while all this may be true, and while we have in Britain men of the highest eminence as our instructors—such as Erasmus Wilson and Jonathan Hutchinson, and others who are pressing forwards to the front rank, such as our energetic and able secretaries, Mr. Malcolm Morris and Dr. Walter Smith, and many others whom it would be invidious to name—it must be admitted that, even now, there are few branches of medicine which are, on the whole, less understood by the great mass of the profession than diseases of the skin. We look, therefore, to the authorities of our great hospitals to provide the means for the efficient instruction of our students, so that in time this reproach may be removed.

I observe that, at present, there is an attempt being made to have a special examination instituted for students on ophthalmology, distinct from that on surgery; and, on the same principle, it may be argued that there should likewise be a special examination on dermatology, distinct from that on medicine; but I sincerely trust that it will result in failure. By all means let them, within certain reasonable limits, be examined on ophthalmology and on dermatology, but let it be as parts of the examinations on surgery and medicine respectively, from which they should never be dissociated. Having had much experience as an examiner on medicine, I may be allowed to express the opinion that the tendency now seems to be unduly to multiply the subjects of examination; and I am very far mistaken if the time is not at hand when the tide will turn, and when there will be an outcry for the diminution of the subjects, and a corresponding desire that the student should give evidence rather that he is well grounded in the principles of his profession—that he should know well, rather than that he should know much.

Gentlemen,—It would ill become me further to occupy your time, which can be so much more profitably spent in listening to and in discussing the papers enumerated in the billet, and which are of a most interesting and varied character. I trust that in the discussion, which is to be introduced by Mr. Jonathan Hutchinson, it will be made clear whether, in the opinion of the members, lupus vulgaris is a manifestation of the strumous diathesis, and to what extent, if any, it is influenced by antistrumous remedies; what relationship, if any, exists between it and lupus erythematodes; whether the latter is ever curable by internal medicines, and, if so, by which; and whether the more recent methods of local treatment—such as the use of Paquelin's thermo-cautery, Volkmann's scoops, and scarification—are preferable to caustics and other remedies whose utility has been proved by long experience.

It would be interesting and profitable, I think, if time permit, to have discussions on the nature of alopecia areata, and of the impetigo contagiosa of Tilbury Fox; also, of that disease, or group of diseases, generally classed under the name of eczema, and which attacks the hairy portions of the face. Is it always a simple eczema impetiginodes, or can its parentage be sometimes traced to struma, to syphilis, or to some other diathesis, and how should it be treated locally and constitutionally? For it must be admitted that it is often a most troublesome and obstinate affection, and requires all the light which can be thrown upon it by the most experienced practitioners.

Before sitting down, allow me to say how grateful I feel for the honour which has been done me by asking me to preside over your deliberations, and how happy I shall be if I can in any way contribute to the success of this the first Dermatological Subsection of the British Medical Association.

HOLSWORTHY RURAL DISTRICT.—Last year was a decidedly, and it is to be hoped exceptionally, unhealthy one in this district, the death-rate amounting to 21.85 per 1,000, and the number of deaths exceeding that of 1877 by 46. Considering the extensive, sparsely peopled, moorland, and elevated character of the Holsworthy District, this rate is by far too high, and betokens laxity on the part of the sanitary authority. Of the total number of 206 deaths, 34 were from zymotic diseases, the most prevalent disease being whooping-cough (22 deaths). Pulmonary diseases, always a scourge in the district, caused 40 deaths, or a fifth of the total mortality. Seventy were chilldren under five years of age, whilst thirty-seven persons were over seventy-five at the time of their death, and one was registered as being over one hundred. Many sanitary defects are reported as existing in the district. The water-supply especially is very bad, being derived from shallow surface-wells exposed to sewage-pollution. Overcrowding is also a serious evil. Mr. Ash's tabular statements deserve a word of praise.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF OBSTETRIC MEDICINE,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

BY GEORGE H. KIDD, M.D.,
Master of the Coombe Lying-in Hospital, Dublin;
President of the Section.

THE TREATMENT OF UTERINE TUMOURS BY DILATATION AND THE ÉCRASEUR.

MY first and most pleasing duty on taking this chair is to return thanks for the very high honour that has been conferred on me in electing me President of this important Section. On two former occasions, I had the pleasure of acting as Secretary, first in Dublin, when the system of Sections was instituted, and again at Leeds; and at the London meeting I had the honour of being Vice-President, when, owing to the serious, but happily temporary, illness of the distinguished man who had been selected for the Presidentship, Dr. Braxton Hicks, I had to take the chair and open the meeting; but now my honours have culminated in being myself President of the Section, a position no man could hold without a feeling of pride and gratified ambition; but also, I must say, speaking at least for myself, of not a little trepidation as to the mode in which its duties may be fulfilled.

It is usual for the President of the Section to open the proceedings either with a *résumé* of the work that has been recently done, or other subject of general interest, or with a report on some subject at which he has himself been working. On the present occasion, I propose to adopt this latter course, and to invite your attention to the consideration of the surgical treatment of some forms of uterine tumours; but, in doing so, I shall not touch on either the history or literature of the subject, which unfortunately the time at our disposal will not permit, but shall confine myself to some points arising out of my own experience.

It will, perhaps, be in the recollection of some now present, that, so long ago as 1868, at the meeting of the Association in Oxford, I described a peculiar method of dilating the uterus, and related a case in which I had been enabled by this means to remove a large number of intra-uterine polypi. In a paper subsequently published in the *Dublin Quarterly Journal of Medical Science* for February 1869, I gave a diagram illustrating this method of dilatation, and showing the polypi as found in the uterus at the time of the operation. Some copies of this diagram are now on the table. It will be observed that six pieces of sea-tangle, long enough to reach from beyond the os externum to the fundus, but not to touch it, have been introduced side by side, one after another, forming a bundle of parallel pieces; and it will be seen that these, as they absorb moisture and swell, must dilate not only the os externum, but the os internum and the cavity of the uterus itself at the one operation. Thus, if the os be sufficiently large to admit the necessary number of pieces at the first sitting, the whole process may be completed in twenty-four hours. If not sufficiently large, a few pieces must be introduced in the first instance, and removed at the end of twenty-four hours, when a larger number can be used, and dilatation thus effected to any required extent. Generally, even in the nulliparous uterus, the tissues are so relaxed by hæmorrhage that five or six pieces, each as large as a No. 6 catheter, can be introduced at the first sitting, and a dilatation procured sufficient for the introduction of the finger and exploration of the uterus, or the removal of small tumours. For the removal of larger tumours, however, a much greater degree of dilatation is required, and it may be necessary to introduce from twelve to eighteen pieces, which can generally be got in at the second sitting if six have been introduced at the first; but it is to be borne in mind that it is always advisable, when about to remove the tents, either for the introduction of others or for proceeding with the operation, to wash out the vagina with a solution of permanganate of potash, and after their removal to wash out the uterus itself with a similar solution before any further steps be taken; for, though sea-tangle does not give rise to the putrid and offensive discharges found when sponge is used, yet fluids accumulate which are irritating, and may, if not removed, prove injurious both to the operator and to the patient.

We have recently had a new kind of dilating material made known to us under the name of tupelo-tents that may, at the second sitting, be advantageously used instead of sea-tangle. This substance has been brought into notice by Dr. Sussdorff, of New York, in a paper published in the *New York Medical Record* of July 1877. The tents are formed from the root of the *Nyssa aquatica*, which grows in the swamps of the Southern States of America. As imported into this country, they are too short to be of much use for dilating the uterus; but Messrs. Fannin and Co., of Dublin, have procured them for me of the full length required. These tents swell more quickly, and in proportion to their size when dry to a greater degree, than does the sea-tangle; but the tangle can be more easily introduced in the first instance, and, from its slower and more gradual action, will probably be found less painful and safer for the patient than the other. As soon, however, as the process of dilatation has commenced, and the tissues have become softened and relaxed, the tupelo will complete it more quickly and thoroughly than the sea-tangle. If three tupelo-tents can be introduced at the second sitting, and along with them four or five pieces of No. 6 sea-tangle, the uterus will generally be found sufficiently dilated at the end of a further twenty-four hours to permit the removal of a tumour measuring from three to four inches in diameter.

The dilatation of narrow passages dates from the earliest ages of surgery, prepared sponge being the substance generally used for the purpose; but, till suggested by Sir James Simpson about thirty years ago, the exploration of the uterus by its means had not been attempted. Till then, as Sir James has stated, intra-uterine polypi "were generally considered as placed beyond the pale of any certain means of detection, or any possible means of operative removal". But now, following in his footsteps, and using the improved methods at our disposal, large tumours, such as even Sir James Simpson would not have thought of touching, have been made accessible, and brought within the domain of surgery. The dangers and inconveniences, however, attendant on the use of the sponge, have deterred many from attempting to dilate the uterus at all, or have led them to do it timidly and inefficiently; thus Dr. Emmett, in his recently published book, a work which would amply prove him, if we did not already know it, to be not only a bold but a most skilful and successful surgeon, though he describes a modification of the sponge-tent, and a special instrument for dilating the uterus, seems to scarcely use either for purposes of treatment, but for diagnosis only; and, indeed, specially recommends, in speaking of large tumours, that no attempt should be made for their removal till they appear at the os and begin to come down into the vagina. But we all know that, in the majority of cases, a woman's health is shattered and her life often placed in extreme jeopardy long before the tumour makes its appearance at the os, or begins to press on it. As a further example, I may mention that one of the specimens on the table was removed from the uterus of a lady who for some time was under the care of one of the most eminent gynæcologists and successful operators of the age, who, after spending a week in trying to dilate with sponge-tents, gave up the attempt, and recommended that the uterus should be extirpated, or the ovaries removed by Battey's operation; yet, after the use of two series of sea-tangles for forty-eight hours, the tumour, which was imbedded in the posterior wall of the uterus near the fundus, was safely removed by a combined process of enucleation and avulsion: an operation hazardous enough, but certainly much less so than the extirpation of either uterus or ovaries. In another case, which occurred about two years ago, the patient had been assured by one of the leading gynæcologists in the north of England that the tumour, the nature of which he had fully recognised, could not be removed by any possible means, yet, by the means now detailed, it was, in a space of forty-eight hours, brought within reach and removed; and the lady, who had lived several years in sterile marriage, has since given birth to a child. I have not the tumour here to exhibit, for she insisted on taking it home with her to show to her friends that such tumours could be removed.

Having dilated the uterus and made the tumour accessible, the next step is to remove it. In the paper on uterine polypi already alluded to, the mode of removing a polypus with an *écraseur* is described, and illustrated by a diagram; even large tumours, if prominent into the uterine cavity, may be removed in the same way. The uterus is first drawn down to the vulva, having been seized by a strong vulsellum; then the tumour is laid hold of either with a fine vulsellum or tenaculum, or with the "spiral instrument" described and figured in his book by Dr. McClintock, which is, indeed, nothing more nor less than a long corkscrew, and the loop of a wire *écraseur* is passed round its base. In my first paper, I recommended that this should be a soft iron wire; but I now find that, for large tumours, a finely tempered steel wire is the best, such as a piano-string, as it, though it may be compressed in passing through the os, opens again by its own elasticity when it gets into the cavity of the uterus, and is, therefore, more easily passed over the tumour, and it is, besides, firmer and stronger than the iron, and will bear a greater strain. In using an *écraseur*, one of two effects will be produced. If both ends of the wire be attached to the screw, then a purely crushing movement is produced. When the screw is worked, the wire constricts the tissues till it gradually crushes its way through. If one end of the wire be attached to the screw and the other fixed, then a cutting motion is obtained combined with the crushing. This combination of cutting and crushing enables us to divide tumours that would resist and break the strongest crushing instruments; but to obtain the combined action of cutting and crushing, the screw holding the wire must travel double the distance required in the crushing movement. With the ordinary *écraseur*, consequently, it is often necessary to stop in the middle of the operation, and readjust the wire before the operation can be completed. This might, perhaps, be obviated by using Weiss's *écraseur* which has a windlass to wind up the wire, but the instrument is very cumbrous, heavy, and inconvenient, and I believe it has never come into use. A Dublin student, Dr. Denham, son of Mr. Denham, Ex-Master of the Rotunda Hospital, has, however, invented a simple instrument by which either a crushing or a combined crushing and cutting action can be obtained; and by its use, what has hitherto been one of the greatest practical difficulties in cutting through the base of large sessile tumours will probably be quite overcome. The difficulty consisted in this, that, to encircle a tumour of, let us say, from three to four inches in diameter, the loop of wire must be more than from nine to twelve inches in length, and if only one end of it be attached to the screw so as to give the combined cutting and crushing movement, the *écraseur* must be so long as to be unwieldy in its proportions and weakened in its powers. Denham obviates the difficulty by making one end of the wire traverse the whole length of the screw, and enabling us, this being accomplished, to make the other end, by a very simple movement, take up the action and follow the same course. An inspection of the instrument which lies on the table will show at a glance how this is accomplished.

What has been said so far, as to the removal of the tumours after access to them has been obtained by dilating the uterus, refers to intra-uterine tumours—that is, those which have grown into the cavity of the uterus; but interstitial tumours, or those imbedded in the substance of the uterine wall, when they approach closely to the mucous membrane, often give rise to hæmorrhage, as serious and as injurious to life and health as that caused by intra-uterine tumours. The avulsion or enucleation of such tumours has long been practised; but, till Dr. Marion Sims and Dr. Gaillard Thomas described their mode of operating and devised instruments for the purpose, it seemed to me too dangerous to be attempted, except in extreme cases. Such tumours can now, however, be removed almost as safely as those which have grown into the uterine cavity; but, when they lie high up in the cavity of the uterus, full dilatation must first be effected, and for this purpose the method now described appears to me to be the safest and most efficient.

A series of observations on the shape of the uterus, when enlarged by the growth of a tumour in its cavity or in its walls, has induced me to suggest a few simple rules for the diagnosis of the relations and position of the tumour, which seem likely to enable us to know, before proceeding to dilate, the conditions that will probably be met with. The rules may be summed up as follows. When we have evidence of the existence of a tumour, and the cavity of the uterus is enlarged, if the uterus be uniform in shape, without any bulging out or unequal enlargement of any of its walls, the tumour will probably be found to be more or less pedunculated, growing from the fundus of the uterus and hanging down into its cavity. If the uterus be found unequal in its outline, bulged out at one side and straight at the other, and if, on introducing the sound, it pass along the convex or bulged-out side, then the tumour will be found to be growing from the wall opposite to where the bulging-out occurs, and projecting into the cavity. If this bulging-out be sudden and much marked, the tumour will probably be pedunculated; if the bulge be less marked and gradual, the tumour will probably be sessile, and projecting into the cavity from the wall opposite to the bulge, and may be so far interstitial as to have a thin layer of muscular fibre covering it over under the mucous membrane. If the uterus be bulged out in the same manner at one side, and the sound pass along the straight instead of the convex or bulged side, then the tumour will be found to be interstitial, and deeply seated in the uterine wall, closer probably to the peritoneal than the mucous surface. If further experience should confirm these rules, they will, I hope, afford us some aid towards deciding in what cases an operation should be urged, and in what it should be undertaken with more caution.

There are many other points in reference to uterine tumours on which I should be glad to offer some remarks; but time warns me that I should not trespass further on your patience. I have placed on the table a few specimens of tumours removed in the manner described.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PUBLIC MEDICINE,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

By T. W. GRIMSHAW, M.D.,
Physician to and Lecturer on Medicine in Dr. Steevens' Hospital, Dublin;
President of the Section.

THE PUBLIC WORK OF THE BRITISH MEDICAL ASSOCIATION.

Before the Section proceeds to its systematic work, it becomes my duty, following the now established custom, to address a few words to those who purpose devoting their special attention to Public Medicine during the present meeting.

My first and most pleasing duty is to thank the Association for the honour they have done me in selecting me as President of this important Section. The honour of occupying a chair which has been filled by John Simon, William Farr, Henry Rumsey, Alexander Patrick Stewart, Samuel Haughton, Lyon Playfair, by W. H. Michael, Russell of Glasgow, De Chaumont, and Arlidge, is one which may well be coveted by the most ambitious. I cannot claim to be much more than an amateur sanitarian, as the department of the profession which I have selected as my vocation is that of practical medicine. I shall do my best not to dim the lustre which has been shed on the Section of Public Medicine by the roll of illustrious men who have occupied its presidential chair.

Most of my hearers are probably aware that this Section was first instituted at Oxford, in the year 1868, under the presidency of Mr. John Simon. This Oxford meeting followed the first meeting of the Association in Ireland, held at Dublin in the preceding year. At the Dublin meeting of the Association, the subject of Public Medicine assumed a position of greater importance than it had hitherto occupied. This was due in a great measure to the eloquent address on that occasion delivered by Dr. Rumsey, and the important resolutions which followed thereon, the first of which was moved by the author of the address, and seconded by Dr. A. P. Stewart, namely: "That this Association do express its decided approval of the plan proposed by Dr. Farr, namely, the appointment of a registration medical officer in every registration district or group of districts, with medico-legal and sanitary functions, and pledges itself to support that measure, as the initiative step to a national organisation for purposes of State Medicine." It was then moved by Dr. A. P. Stewart, seconded by Dr. Sibson, and unanimously resolved: "That the Committee of Council be instructed to direct their early or special attention to the amendment of the sanitary laws; to invite the co-operation, for this end, of the Council of the National Association for the Promotion of Social Science; and to urge the Branches of this Association to promote the same object by local efforts, by representations to individual members of Parliament, and, if need be, by deputations to Her Majesty's Government." These resolutions marked an important epoch in Public Medicine, and may be considered as the foundation upon which all sanitary legislation has since rested. Thus, at the first Irish meeting of the Association, one of the most important steps was taken to connect the Association with the general public in promoting measures connected with Public Medicine.

At this, the second Irish meeting of this great Association, I think it will be opportune and instructive to review the position which it has occupied with reference to Public Medicine, and to consider *What the British Medical Association has done for Public Medicine, and what still remains for it to do.* Public Medicine must now be taken to include a vast number of subjects; and it is, indeed, remarkable that, considering the intimate connection which medicine has with many of the most important enactments of the legislature, and the large number of medical matters that are daily dealt with by the Executive Government, up to the present there is not any department of the State whose special duty it is to look after the public health. I know there are some who endeavour to persuade us that the duties of a department of public health are discharged by the Local Government Boards of England and Ireland, and the Board of Supervision in Scotland. I deny altogether that these Boards can be looked upon as State Boards of Health, and, moreover, I claim that this Association has a right to be considered the best judge of what a National Board of Health should be. In the absence of such a department of the State, the duty is the more incumbent on this Association and kindred institutions, of which I would especially notice the Irish Medical Association, the English Poor-law Medical Officers' Association, and the Association of Medical Officers of Health, and the National Association for the Promotion of Social Science, to take care of the interests of the public, and continually to press upon the Government and the legislature the necessity for amending the laws and making their administration more efficient.

On looking over the proceedings of this Association (in which I have been ably assisted by Dr. Spencer, the Librarian of the Royal College of Surgeons of Ireland), I find that, either by direct resolutions at its annual meetings, by action of its Council and Committees, or through the agency of its widely circulated and admirably conducted Journal, it has ever since its foundation taken a leading part in the discussion and advancement of all measures which tended to promote the public health.

I cannot hope to review, even in a cursory manner, the work done and to be done by this Association, but to deal briefly with some of them is now my principal object. The "comprehensive plan", to use the words of Dr. Conolly's address at the Birmingham meeting of 1834, "of the founders of this Association has from the first embraced in one design all these great questions".

Registration of Births, Deaths, and Disease.—The first step taken by the Association in reference to public medicine was the passing of a resolution at its first anniversary meeting, held in Bristol, on the 19th of July, 1833, directing the Secretaries to promote measures, then under consideration by a Select Committee of the House of Commons, for the better registration of births and deaths.* The result of the deliberations of this Select Committee, supported by the influence of the profession, was the passing of the Act for the Registration of Births, Deaths, and Marriages in 1836 (6 and 7 William IV, cap. 86). At the meeting of the Association held at Cheltenham on July 19th, 1837, the following resolution was unanimously adopted, calling upon the members to assist in carrying out the newly passed Registration Act: "That this meeting suggests to the members generally the propriety of lending their aid to carry into effect the Act that has recently passed the legislature to procure an improved Registration of Births, Deaths, and Fatal Diseases." The registration was only of "fatal diseases"; and, although the registration thus established in 1836 placed a considerable amount of valuable information at the disposal of sanitarians, yet the Government of the country had not anyone in their employ who could systematically utilise this information with a view of diminishing disease and death.

The Association has been always foremost in promoting measures for the improvement of registration of the causes of death. The mere registration of the causes of death is not, however, sufficient for correct generalisations with respect to the state of the public health; and at the Leamington meeting of the Association in 1865 a Committee was appointed to promote the Registration of Disease (British Medical Journal, vol. ii, 1865, p. 228). This Committee attempted to establish a voluntary registration of sickness in public practice. Although this subject was reported on from year to year at the meetings of the Association, it soon became evident that voluntary efforts could not establish an efficient system of registration of sickness. At the annual meeting in 1871, the Committee on Registration of Disease reported that some of the returns had been discontinued, and admitted the failure of voluntary efforts to carry out such a system (Brit. Med. Journal, vol. ii, 1871, p. 177). This Committee never ceased urging upon the Government the importance of the systematic registration of disease, and suggested it as a fit subject for the consideration of the Royal Sanitary Commissioners. In their report in 1874, they notified to the Association that when the Sanitary Laws Amendment Bill (1874) was before Parliament they had approved of a proposal for compulsory notification of all cases of infectious disorders (*ibid.*, vol. ii, 1874, p. 246). In conjunction with the Poor-law Medical Officers' Association, the Committee on the Registration of Disease waited on Mr. Goschen, the then President of the Poor-law Board, on Monday, October 17th, 1870, and impressed upon him the importance of the question, and the necessity for the appointment of "Registration Medical Officers" (*ibid.*, vol. ii, 1870, p. 449). Mr. Goschen replied: "That he thought it undesirable to go into the question at issue until the Report of the Royal Sanitary Commissioners had been considered by the Government." It is well known

* The resolution was as follows: "That the Secretaries be directed to address the Committee appointed by the House of Commons to inquire into the state of the parochial registers a letter expressing the great satisfaction felt by the Association, that the improvement of this important branch of statistics has been taken into consideration by the Legislature, and respectfully submitting to the Committee that great benefits might be expected to accrue to medical science, and consequently to the country at large, if arrangements were made for recording the causes of deaths in the provincial registers of mortality."—*Transactions of the Provincial Medical and Surgical Association*, vol. ii, p. 29.

that the Report of the Royal Sanitary Commissioners was favourable to such a proposal, but no step has yet been taken to carry it out (*Report of Royal Sanitary Commission*, vol. i, p. 60, 1871).

In 1873, the Association memorialised the Government and petitioned Parliament in favour of a registration of disease (BRITISH MEDICAL JOURNAL, vol. ii, 1873, p. 189, and vol. ii, 1874, p. 246).

In Ireland, the registration of births and deaths was not even commenced until the year 1864, and languished for many years, until Dr. Burke, the present energetic Registrar-General, came into office. It now appears that, until the laws are made more perfect, a complete registration of deaths in Ireland cannot be easily or effectually carried out.* The Irish Medical Association had a Bill introduced into the House of Lords two years ago to remedy the defective state of the registration laws; this Bill passed into the hands of the Government, in whose hands it still remains. Thus, the work of improving registration of births, deaths, and disease, upon which the Association entered forty-six years ago, still remains incomplete, although an essential foundation upon which every system of State Medicine must rest.

MEDICAL ATTENDANCE ON THE SICK POOR.—The next step which the Association took with regard to State Medicine was the relation of the Poor-law to medicine and to the medical profession; and at the third anniversary meeting, held at Oxford on July 22nd, 1835, the report of the Council recommended: "That a Committee should be appointed to inquire into, and report upon the working of the Poor-law Acts with reference to medical attendance", etc. The suggestion was adopted by the meeting, the following resolution being adopted: "That a Committee be appointed to consider the best means of affording medical relief to the sick poor, and more especially with reference to the operation of the new Poor-law Act" (*Transactions of the Provincial Med. and Surg. Assoc.*, vol. iv, p. 27).

In speaking to this question, Mr. Smith of Southam suggested the foundation of provident dispensaries as a means of partially solving the difficulty of providing efficient medical attendance for the working classes. Mr. Smith had himself established such institutions in the year 1830.

The Committee thus appointed reported at the next annual meeting, held at Manchester on July 20th, 1836, and suggested a solution for the difficult question which has not yet been solved, namely, "Who are the poor requiring medical relief?" The suggested answer was, "Those who are paupers, or too poor to join sick clubs". At this meeting, the Committee was reappointed, with extended functions: "To investigate and report upon the various methods of extending medical relief to the sick poor not dependent on parochial relief."

The same volume of the *Transactions* which contains the report of the meeting in 1836, also contains a valuable paper upon this question by W. Rumsey, R. Ceely, and H. W. Rumsey, "On the Present Conditions of the Medical Relief for Sick Paupers, with Recommendations for an altered and improved system".

The Committee on Poor-law Medical Relief reported to the annual meeting at Cheltenham, in July 19th, 1837, and made recommendations for a new enactment for Poor-law medical relief. The recommendations were: 1. A general professional superintendence for the whole body of union medical officers, which might be conducted by a Poor-law medical board, or one or two medical commissioners; 2. That the Poor-law medical board might form a section of a national board of health. (*Transactions of Provincial Med. and Surg. Assoc.*, vol. vi, page 35, *et seq.*) It was also suggested that Poor-law medical officers should be paid for midwifery operations and vaccination by fees, and that they should be remunerated for the rest of their services by salary instead of by tender, as at that time. The meeting adopted a petition to Parliament embodying the recommendation of the Committee, and praying for an inquiry.

The Committee was reappointed; and, at the next annual meeting at Bath, in July 1838, it was able to report that Parliament had complied with the prayer of the petition, and had appointed a Select Committee, before which the Committee had laid evidence on behalf of the Association. The result of this was, that (owing to the influence of the Association) the then existing system of supplying medical relief for sick paupers by tender was utterly condemned by the Select Committee, and in the year 1840 a new Poor-law Bill was brought in. Serjeant Talfourd, acting on behalf of the Association, proposed clauses for the new Bill. These were: 1. To provide medical commissioner. 2. Medical commissioner to settle boundaries of medical districts. 3. Medical commissioner to make orders in conjunction with other commissioners. 4. Guardians to determine amount of remuneration of medical officers, subject to approval of commissioners. 5. Double qualification should be required for all Poor-law medical officers. 6. Expenses should be a parochial charge (*Transactions of the Provincial Med. and Surg. Assoc.*, vol. ix, page 18). Thus the foundation of the Poor-law Medical Service of England, as it at present exists, was laid by the assistance of this Association. The Association continued to watch the working of the new Act through its Poor-law Committee, reports of which proceedings will be found in the *Provincial Medical Journal* in 1840, 1841, 1842, 1843, 1844, 1847, 1848. In 1868, the Association pointed out the insufficient number of medical inspectors employed by the Poor-law Board (BRITISH MEDICAL JOURNAL, vol. ii, 1868, p. 144).

Intimately connected with the question of medical relief under the Poor-law is that of the relief of the sick among the artisan class. It is with a view of providing for the wants of this class that our great charitable hospitals and dispensaries, supported by voluntary contributions, are now maintained. These institutions were no doubt originally founded on the wide basis of providing for the sick poor, especially the very poor. The State, however, has compelled well-to-do ratepayers to compound for their charity, and thus our hospitals have become institutions for the relief of those immediately above the pauper class. The persons to be relieved by voluntary efforts are those who are not entitled to relief under the Poor-law, but are too poor to pay for their own medical attendance, and who, in fact, would become paupers when sick but for our voluntary charities. The best method of protecting our medical charities from being taken advantage of by unfit persons is, no doubt, a very difficult question, and one to which the Association should direct its special attention. The JOURNAL has devoted much space to supporting the movement for reforming the out-patient departments of our hospitals, etc. That medical relief under the Poor-law is much abused there can be no doubt; and in this respect I believe Ireland is much worse off than England. This especially applies to the issuing of dispensary visiting tickets—red tickets as they are termed in Ireland. In many cases, these are habitually issued by dispensary wardens, and even by members of the dispensary committees and Poor-law guardians, to persons well able to pay for medical attendance. This matter has been repeatedly brought under the notice of the authorities by the Irish Medical Association, and recently under the notice of the Poor-law and Lunacy (Ireland) Inquiry Commissioners, who point out the importance of this question, and print the letter of the Irish Medical Association in the appendix to the report. (Poor-law Union and Lunacy Inquiry Commission (Ireland), 1879, page xlvii, and Appendix A, page 173.) In passing, I may remark that this report contains a vast amount of curious and useful information relative to institutions connected with public medical administration in Ireland. The abuse of Poor-law medical relief can only be remedied by special legislation, imposing penalties on those who obtain free medical advice by false pretences. It is only by the establishment of provident dispensaries that provision can be made for the efficient medical attendance on the sick among the well-to-do artisan class. The present system (if system it can be called) of sick clubs cannot be considered as satisfactory, and the wretched position and pay of the medical attendants attached to sick clubs is much calculated to lower the "honour and respectability" of the profession. Although the Association has, by papers read at its meetings, and through the columns of its JOURNAL, given attention to this subject, yet it requires a great deal more consideration than has yet been expended upon it. The Charity Organisation Society of London, and Sir Charles Trevelyan especially, have done a great deal to promote provident medical institutions. (*Metropolitan Medical Relief*, by Sir Charles Trevelyan, etc. London: Longmans, Green and Co., 1877. *Provident Dispensaries: Suggested Rules of Charity Organisation Society*. London: H. K. Lewis, 1871. See also other papers of the Charity Organisation Society.)

Again, connected with this question is the subject of pay-hospitals for the well-to-do, which has been so ably dealt with by Mr. H. C. Burdett and the Home Hospital Association. The present state of our great hospitals as to the return they give to the public in the way of relief of the sick poor, advancement of science, and the training of practical physicians and surgeons, and the providing of trained nurses, and how their usefulness in these departments may be increased, requires great consideration, and should more fully occupy the attention of the Association and its Committees. (The Invalids' Home, or Home Hospital Movement: some account of its Origin and Progress. 1878. First

* An important report on the sanitary condition of Dublin, made in 1874 by Dr. Burke (then Medical Superintendent of Statistics at the General Registry Office, now Registrar-General for Ireland), showed that when the registered deaths were compared with the burials in the principal Dublin cemeteries, there was a deficiency of 9 per cent. at least in the deaths registered. (*Thom's Directory*, 1875, p. 1408 *et seq.*) When the Public Health (Ireland) Act, 1878, was passing through Parliament, a clause (sec. 191) was inserted at the instance of some friends of sanitary progress, which required the registrars of burial grounds to make returns to the local registrars of deaths, with a view of enabling the registrars to discover unregistered deaths. The result of this enactment has been in Dublin to show that even a larger number of deaths escape registration than was formerly supposed to be the case.

Annual Report of the Home and Hospitals Association (for passing patients), 1877-78. London: Harrison and Sons, 1879.)

MEDICAL REFORM.—The subject of medical reform is one which it may seem superfluous to introduce to the notice of this Section, considering that this important subject has been brought under the notice of the Association by the report of the Medical Reform Committee. I consider, however, that as medical reform is an important branch of public medicine, and is a department in which the Association has borne the leading part, its consideration is essential to my present subject. The improvement of the condition of the profession was one of the primary objects of the Association, included as it is in promoting the "honour and respectability of the profession". It was evident that the profession could not be honourable and respectable until its constitution was improved; and accordingly we find that, in the first anniversary address, delivered by Dr. Barlow, at Bristol, on July 19th, 1833, he called special attention to this question, and insisted on the necessity for medical reform.*

At the annual meeting at Birmingham, on July 18th, 1834, referring to the question of medical reform, and the Select Committee of the House of Commons which was then sitting, Dr. Johnstone remarked that "there can be no doubt that qualifications should be nicely ascertained" (*Trans. of the Prov. Med. and Surg. Assoc.*, vol. iii), and he insisted on the importance of a sound preliminary education for medical students. At the annual meeting at Cheltenham, in the year 1837, a Committee was appointed "to watch over the interests of the profession at large, and make suggestions to the Council" (*Trans. of Prov. Med. and Surg. Assoc.*, vol. vi, p. 26). This may be considered the first Medical Reform Committee—indeed, the first General Committee on Public Medicine which the Association appointed, but it was limited to the "interests of the profession".

Dr. Bardesley (*ibid.*, p. 93), in his address at this meeting, called attention to the want of measures of medical reform, and was able to announce that the examinations at the Royal College of Surgeons of England had since improved, by the introduction of questions on practice of medicine and materia medica, but that still physiology was not included in the examination, and that the curriculum did not include attendance on clinical medicine. He, too, insisted on improved preliminary education, suggesting the necessity of a knowledge of classical and modern languages. He also pointed out that there should be no marked difference between the education of the physician and of the surgeon, how the different portions of professional education should be divided, and that it should not extend over a less period than three years. He condemned quackery, and protested against its patronage by Government. He said: "It is a humiliating circumstance that, in this enlightened country, quackery is openly protected by the Government, whilst in almost all the other States in Europe it is prohibited under severe penalties."

At the annual meeting at Bath, in 1838, the report of the Council referring to quackery said: "It is, however, certain that no legislative enactments could be so framed as to prevent those who are ignorant from placing their reliance on quacks." There can be no better proof of this statement than the perseverance with which those not supposed to be "ignorant persons" permit themselves to be deluded by the accomplished quacks who style themselves "homœopathists". The Council hoped the question would be brought before Parliament by Mr. Warburton, when an opportunity would occur to frame such legislative enactments as may be practically beneficial. The Association, in the meantime, should consider the question, and be prepared to render valuable assistance in legislating on the subject. At the Liverpool meeting of 1839, the Committee, appointed in 1838, brought up their report, and pointed out that, although a Select Committee of the House of Commons had been appointed on March 11th, 1834, this Committee had only reported the evidence relating to England, but that relating to Scotland and Ireland had never been reported to the House of Commons; at all events, the subject dropped. As five years had elapsed, and no opportunity had been afforded of bringing the views of the Association before Parliament, the Committee made certain suggestions for medical reform, and recommended the Association to petition Parliament for medical reform.*

At the meeting at Southampton, on July 22nd and 23rd, 1840, the Council announced that the medical reform petition had been presented to Parliament. The result of the petition from the Association, assisted by the efforts of the *Lancet* and its able proprietor, Mr. Wakley, was that the first Medical Reform Bill, namely, that of Messrs. Warburton, Wakley, and Hawes, was introduced into Parliament in 1840, and again in 1841. It would be a tedious and unprofitable task to enumerate the various attempts of the Association to promote medical reform until the passing of the Medical Act of 1858. (For further details, see statement prepared by Dr. Watson for Select Committee now sitting, entitled "Medical Reform—Historical Summary".) It is sufficient to say that, in 1844-5, Sir James Graham failed to carry the Medical Reform Bill brought in by the Government of the day, and that the Act of 1858 was the result of a Bill brought in by Mr. Headlam on June 26th, 1855, on behalf of the Association; the Bill was reintroduced in the following year, with important improvements, and again in 1857. The Bill was modified, and was about to be introduced by Mr. Cowper (now the Hon. W. Cowper-Temple) as a Government Bill, but a change of ministry compelled Mr. Cowper to introduce it the following session as a private member, when it finally, after many modifications, became the Act of 1858. Thus the Act of 1858 was the direct result of the action of this Association, and any benefits it has conferred on the public are due to this Association. That it has not succeeded is not the fault of this Association nor of the profession, but is probably owing to the fact that the views of the Association were not fully carried out by Parliament. It was very soon discovered that the Act of 1858 had been an expensive failure, so far as substantially improving the education and examination of persons seeking entrance to the profession. This became so evident that, in 1867, the Medical Council undertook to promote legislation for the amendment of the Medical Act of 1858. The Association at once came forward to assist them in their endeavours, and the Council of the Association communicated their views to the General Medical Council. At the Dublin meeting in 1867, resolutions in favour of direct representation of the profession in the General Medical Council were passed, and a Committee was appointed to carry out their views. This Committee was at first only charged with the duty of promoting direct representation, but soon it became clear that there were other important questions as closely connected with medical reform as the constitution of the General Medical Council, and accordingly the powers of the Committee were enlarged, and it became the Medical Reform Committee.†

* "The state of the profession ought to be such, that all its branches should be in harmony with each other, cordially co-operating for the advancement of science and the public good,.... but in the present political organisation of the profession, there are many disturbing forces which tend to weaken its energies and to place individual interests, real or supposed, in collision with those duties which science and humanity enjoin....the evils to which a complex and discordant state of the profession give rise....are very generally felt, and must soon engage the attention of the Legislature, which, it is to be hoped, will give them a full and scrutinising investigation. By a forced and unnatural division of offices, the profession has been split into departments, each attempting to pursue a separate course, while the natural unity that characterises the whole has been too much overlooked. Each department has had assigned to it a separate superintendence, the aim of which has been to advance its interests without reference to the other branches, while there existed no institution for regulating and combining the whole, so as to adopt their several energies for their collective well-being and the public good.... What we now need is not a rectification of slight errors, but a general revision of the whole profession, and such an arrangement of it as would render the good of each branch compatible with the whole.... Government of the profession by separate and independent corporations has been fully tried, and has utterly failed. As experience can no longer be pleaded in its favour, it would now be wise to try whether that course which reason and sound policy dictate, might not be beneficially substituted; whether the establishment of one presiding institution in which all minor corporations should be consolidated, might not realise a system of adequate protection and efficient control such as the separate and independent authorities have never yet afforded. By the establishment of such an institution no revolutionary changes need take place; each department continuing, as now, to exercise its functions to whatever extent the public exigencies might demand; but the adequacy of each branch to its allotted duties could be more effectively insured; collisions at once inconsistent and injurious could be prevented; equality of qualifications in each respective branch be promoted, so as to remove all necessity for partial restriction; freedom be thus given to individuals to practise as interest or inclination might incline; and that harmony be established among the several branches, which the public good, the interests of science, the collective welfare of the profession, and the happiness of the individuals composing it, imperatively demand: an arrangement of the profession which should accomplish these valuable purposes may yet be distant." (*Trans. of the Prov. Med. and Surg. Assoc.*, vol. ii, p. 28, *et. seq.*, 1834.)

* The Petition was to the following effect: 1. Showing that the Select Committee of 1834 had not published a Report; 2. Approving of the plans adopted by the University of London; 3. Proposing examining Boards for each division of the United Kingdom; 4. That the proposed Reform would not disturb the existing grades of the profession. The prayer of the petition was: "Finally, your petitioners, confident that the time has arrived when the intervention of Parliament is imperatively called for to give to the medical profession a sound legal constitution, and deeply impressed with the association that an adequate and uniform education, with community of rights and privileges, constitutes the only sure basis on which to found such constitution, humbly beg that necessary legislative enactments may be passed for establishing in each division of the United Kingdom one superintending body, founded on the same principles and governed by similar regulations, through whose examination, and by whose license alone, shall admission to the profession be in future attained."

† The alteration of the title of the Committee was made at the Newcastle Meeting of the Association, in August 1870, and it was thenceforth called the "Medical Reform Committee". In consequence of the views adopted by the majority of those present at this meeting, with reference to the failure of the General Medical Council to administer the Act of 1858, and the necessity for a reform of its constitution, several members of the General Medical Council, who hitherto had been active members of the Association, resigned their membership. At the time of this occurrence, it was declared by admirers of the General Medical Council, as constituted in 1858, that the retirement of these members would prove a great blow to the Association. On the contrary, the Association has grown in prosperity ever since, and the blow fell,

The Medical Council having failed to suggest a satisfactory Medical Act (1858) Amendment Bill, the Marquis of Ripon, then Lord-President of the Council, introduced a Bill which proved alike distasteful to the Association, as it contained no provision for the reform of the Medical Council, and to the medical corporations, because it materially interfered with their privileges and independence, without conferring any substantial benefits on the public. Thus the Association has struggled on for the advancement of medical reform up to the present time; and, without in the least depreciating the efforts of other bodies, I think it may be fairly claimed for the Association that, if the present inquiry result in a satisfactory settlement, that settlement will be chiefly due to the efforts of this Association, acting through the Medical Reform Committee, whose affairs are so ably managed by its learned and indefatigable chairman, Dr. Edward Waters. Among those bodies who in Ireland have ably and energetically co-operated with the Association in their efforts, I may mention the Irish Medical Association, the University of Dublin, and the King and Queen's College of Physicians. It is to be hoped that, in the year 1880, we may see realised the expectations of the Council expressed at the annual meeting at Leeds in 1869.

I hope I may be excused for thus dwelling at length upon the question of medical reform; but this is really the question of the day in public medicine. It is quite clear that the working of the Act of 1858 has not fulfilled the expectation of its promoters, and that a ten years' agitation for amendment has been without result up to the present time. This Association has offered its co-operation to all honest medical reformers, has tendered advice, and spent its time and its money in promoting medical reform, without substantial result. To whom, or to what, is the failure of the Act of 1858 due? Is it to the defective construction of the Act, or is it to its defective administration; and, if to either, upon whom does the blame rest? My answer to this last question I give with great regret. The failure of the Act of 1858 must be attributed to the General Medical Council. If the Act gave insufficient power to the Council, and they found themselves unable to administer the Act, why did they not respond to the request of the Government in 1869, and suggest such amendments as the Government could recommend for the adoption of Parliament? This they did not do. It cannot be argued that the powers of the Council are insufficient, for they have never tried to exercise them against recalcitrant medical authorities. It cannot be argued that the medical authorities have done their duty, or else legislation would be unnecessary. It was the duty of the Medical Council to coerce the authorities into efficiency; this the Council has never tried to do, and, therefore, the Council must bear the blame of the failure of the Act of 1858. To remedy this, it is essential that the Council must, in the first instance, be reconstructed; and, in its reconstruction, it is essential that the authorities to be controlled should not elect the three-fourths of the Council. No one desires to deprive the medical authorities of their independence, or their power of local government. (The Medical Council should control education directly.) Such a proposal would be contrary to the principles of the British Constitution—one of the great principles of which is the granting of powers of local self-government, such as are not permitted under any other political constitution in the world. The only means of providing an element sufficiently powerful to control the selfish influences of the corporations, and to avoid placing the government of the profession solely in the hands of the Imperial Government, is the creation of a Medical Council, with a considerable number of members elected by the direct vote of the profession. The creation of a powerful and efficient Council, having the confidence of the public, the profession, and the Government, might solve the question of medical reform without the enactment of any other details respecting education and examination. (The Council should be really a council of education, and have the control of medical schools and clinical hospitals, as well as of examinations.) It appears to me that the only other alternative is the abolition of the General Medical Council, and the establishment of a State Board to examine all the licentiates and graduates of the medical authorities before registering them as legally qualified medical practitioners. There can be no doubt that the establishment of a strong and liberally constituted Medical Council is, however, the plan most in accordance with the principles of the British Constitution; and for this the Association has striven for nearly half a century. The work before it, so far as medical reform is concerned, is the establishment of such a Council, and this work still remains for it to do.

not on the Association, but on the General Medical Council. Previously to 1870, it was hoped that the Medical Council would listen to the reasonable demands of the profession, but since then all such hope has been abandoned, and the vast majority of the profession look upon the existing Council as the direct obstructives of medical reform.

SANITARY LEGISLATION AND ADMINISTRATION: STATE MEDICINE.—The branches of public medicine to which I have directed attention, were naturally the first which attracted the attention of the Association; but the great subject of preventive medicine (which must always be looked upon as the primary object of this section) did not receive any special attention until the year 1837, when, at the annual meeting at Cheltenham, the following resolution was passed: "That it appears desirable to this meeting that the members of the Association, in their several localities, should urge upon the members of the Legislature the importance of an enlightened consideration of the questions touching the public health pending in Parliament." (*Transactions of the Provincial Medical and Surgical Association*, vol. vi, p. 25.)

This referred to the defective state of the public health, which had been specially brought under public notice by the first returns of the Registrar-General. It must not, however, be thought that the subject of preventive medicine had not previously been brought under the notice of the Association. It was mentioned in Dr. (afterwards Sir Charles) Hastings' address (*ibid.*, vol. i, p. 5) at the foundation of the Association, when he referred to the writings of Hawkins in *Medical Statistics*, Thackrah *On the Effects of Arts and Trades on Health*, Darwall *On Artisans' Diseases*, etc. Dr. Barlow, in his address at Bristol, in 1833, when referring to the cholera epidemic, seemed to despair of preventing epidemics. He said: "To arrest the course of such visitations is as hopeless as the expectation is irrational," and quoted the following in support of his view.

"May one turn again the arrow that is shot by a strong archer! The mighty Lord sendeth the plagues, and who is he that can drive them away? Behold, famine and plague, pestilence and anguish are sent as scourges for amendment" (*ibid.*, vol. ii, p. 25).

Dr. Prichard, in his address at Oxford at 1835, again referred to this subject (*ibid.*, vol. vi, p. 31), and said: He "must offer a few remarks on the additions lately made to a department of knowledge which may be termed medico-political. The prevention of diseases is better than the art of curing them". He referred to the French "Conseil de Salubrité", and said: "The British Government has more than once experienced the want of some arrangement of this kind, a want which has been, if I am not mistaken, but imperfectly supplied by inquiries instituted occasionally." It is humiliating to think that this statement, made forty-four years ago, might be repeated with equal truth at the present day.

In opening the meeting at Manchester on July 20th, 1836 (*ibid.*, vol. v), Dr. Holme invited the attention of the members to the condition of the working classes, and the relations of manufactures and the limiting of the hours of labour to the health of the people of Manchester. The Council at the same meeting recommended the keeping of records of epidemics in each locality, the object being "not to build theories but to record facts". In the year 1839, the Association met at Liverpool, under the presidency of Dr. Jeffreys (*ibid.*, vol. viii). At this meeting, an important event took place, which marked a distinct advance in "political medicine". The Irish Medical Association had been founded but a few weeks before, and one of its first acts was to send a deputation to co-operate with its elder sister in England. The deputation included Mr. Carmichael, Dr. Jacob, Mr. M'Donnell, and Dr. Henry Maunsell. The co-operation thus commenced, though interrupted by Irish disasters at the time of the famine, continues to this day, and the occupation of this chair by me, may, I think, be considered as one of the connecting links. (On January 28th, 1841, the Council of the Irish Medical Association passed a formal resolution offering co-operation with the English Association.—*Ibid.*, 1840-41, p. 335). Dr. Jeffreys remarked, in his presidential address, that, "'Hygeia' was a subject in this country, comparatively speaking, neglected.....and this may be said without detracting from the great merits of those authors who have afforded aid to the student by their writings on this subject, namely, Dr. Southwood Smith, on the 'Philosophy of Health'; Andrew Combe, on the 'Principles of Philosophy'; R. Dunglison, on 'Human Health'; Alexander Kilgour, on 'Hygiene'; Hodgkin's lectures, and Garrett Dillon's letters on 'The Mortality of the Metropolis'; and last, though not least in importance, our talented associate now present, Dr. Maunsell's recent pamphlet on 'Political Medicine'." (*Dublin Medical Press*, February 6th, 1839.) I have given these as early examples of the efforts of the British Medical Association towards the promotion of sanitary reform. These efforts were from time to time renewed, especially at the meeting at Leamington, in 1865, when the following resolution was carried on Dr. Symonds's motion: "That a committee be appointed to take into consideration the present position of medical practitioners in respect of medico-legal investigations, and to confer on the expediency of impressing upon the legislature the appointment of State physicians, whose duties might embrace both medico-legal inquiries and the care of the public health." At the Dublin

meeting, these efforts reached a crisis, when the resolutions I quoted at the beginning of this address were passed. The Committee of Council at once obtained the co-operation of the Council of the National Association for the Promotion of Social Science, and thus came to be founded the now well-known "Joint Committee on State Medicine". This Committee at once set to work, and drafted a memorial to the Government, and Dr. Rumsey prepared a memorandum of the details with regard to medical officers of health, their appointments, duties, qualifications, etc., to accompany the memorial. These were forwarded to the Government; and on May 22nd, 1868, a deputation from the Joint Committee waited on the Duke of Marlborough, Lord President of the Council; the Earl of Devon, President of the Poor Law Board; and the Right Hon. Gathorne Hardy (now Lord Cranbrook), Home Secretary. The result of this interview was the issuing of the Royal Sanitary Commission of 1868, which was somewhat, and I believe injuriously, modified in 1869, by limiting the inquiry of the Commissioners to England and Wales. (At a meeting of the first Committee on October 5th, 1868, a resolution was adopted on the motion of Dr. Gardiner, seconded by Dr. Mapother, opposing this limitation.—BRIT. MED. JOURN., vol. ii, 1869, p. 225.)

The report of this Commission comprised a number of subjects, viz.: 1. A history of the sanitary laws; 2. Observations on the evidence laid before the Commission; 3. A summary of existing laws, together with suggestions for their amendment and consolidation; 4. The leading features of the Commissioners' proposals in the form of a series of resolutions. A careful analysis of the recommendations of the Commissioners will show that they may be comprised under the following heads: 1. A codification, consolidation, and amendment of existing laws; 2. Convenient areas of administration, with easily workable subareas; 3. Uniform local authorities, without clashing of jurisdiction; 4. A complete executive organisation; 5. Constant supervision by the central authority; 6. Security for a certain amount of independence for the local officers from the local authorities.* Except under the first head, it may, I think, be fairly stated that little or nothing has been done to carry out the recommendation of the Royal Commission.

The most serious defect in the sanitary administration of these countries is the want of an efficient central authority for each division of the kingdom, under the direction of a minister of health responsible to Parliament. So long as the care of the public health is dealt with as a small portion of the Poor-law and Local Government Department, so long will it remain neglected. The Royal Sanitary Commissioners pointed out the want of a proper central authority for the control of sanitary matters, in the following words: "The want of central officers, there being no staff for constant, and a very small one for occasional, inspection. The want of constant and official communication between central and head officers throughout the kingdom." This want still exists, and has in no way been diminished during the ten years which have elapsed since it was publicly pointed out. In Ireland, it is not only that there is only "a very small staff for occasional inspection", as in England, but there is absolutely none at all. Two notable examples of the want of a department of health for Ireland, and of the absence of any intelligent medical adviser for the Irish Government, are at present given; firstly, by the inability of the Irish Government to provide, from its ordinary resources, a tribunal to inquire into the causes of the excessive death-rate in Dublin; and secondly, in the ludicrous offer of a salary of £40 a-year for officers to perform the combined duties of medical attendant, health-officer, medical jurist, and compounding chemist to Irish prisons! and the still more ludicrous idea that competent persons can be had for the salary offered. To remedy the before-mentioned defects, and to obtain a fulfilment of the five conditions which I have laid down, is a work which this Association must still follow and pursue until it is accomplished.

STATE MEDICINE QUALIFICATION.—Essentially associated with the foregoing subject, is that of providing suitably qualified medical officers of health to undertake the duties under a soundly constituted sanitary organisation. The Association has earnestly laboured in this direction, and it was at the instance of the Association that Dr. Rumsey brought this question under the notice of the General Medical Council in 1868, which resulted in the valuable report upon the subject of qualifications in State Medicine issued by the Council. (Resolutions of the General Medical Council adopted July 9th and July 12th, 1869, together with the second report and appendix of the Committee on State Medicine, appointed June 27th, 1868.) The immediate result of this report was the establishment of a State Medicine qualification at the University of Dublin in the year 1870, soon to be followed by the University of Cambridge, and now the same qualification is obtainable at other universities. At the London meeting of the Association in 1873, Dr. Rumsey read a paper in the Public Medicine Section on the State Medicine Qualification. (BRIT. MED. JOURN., vol. ii, 1873, p. 247.) After a discussion on this subject, the Section adopted a resolution recommending the Association to appoint a Committee "to consider the best means of providing an adequate qualification in State medicine for all public medical officers". The Association adopted this recommendation, and a Committee was accordingly appointed. I cannot here enter into the details contained in the report of this Committee, but I may mention that it suggested feasible methods by which the qualifications should be obtained, and further enumerated the public offices for the holding of which a State Medicine qualification should be essential (*ibid.*, vol. i, 1874, p. 559). It is to be regretted that none of the medical corporations have yet provided for granting qualifications in State Medicine, and that the Government have not required a special knowledge of State Medicine for those who are candidates for public medical appointments, in which such a knowledge is essential, for example, medical officers of health, medical inspectors of seamen, of factories, or inspectors under the Local Government Board. The First Committee on State Medicine recently memorialised the Duke of Richmond upon this question, insisting upon the desirability of securing a compulsory qualification in State Medicine (*ibid.*, vol. ii, 1878, p. 246). The Association should continue its efforts to carry out the recommendations of its Committee on the State Medicine Qualification.

VACCINATION.—The great prevalence of small-pox, and the want of any provision for public vaccination in the United Kingdom, attracted the attention of the Association in the earliest days of its existence. At the annual meeting at Bath, on July 18th, 1838 (*Trans. of Prov. Med. and Surg. Assoc.*, vol. vii, p. 51), Dr. Dodd addressed the meeting, and pointed out that vaccination was compulsory in all the principal Continental States, but that in England there was no provision for public vaccination other than the supply of lymph, at the expense of the State, through the National Vaccine Institution, founded in 1825. He moved the appointment of a committee to inquire into and report upon the question. This committee proved to be one of the (if not *the*) most important ever appointed by the Association. It undertook the re-investigation of the whole question of vaccination by means of experiments performed by Mr. Ceely of Aylesbury (*ibid.*, vol. viii, p. 287). This report, rich not only in sanitary but also in scientific information, was presented at the Liverpool meeting in 1839; its reading occupied no less than three hours, and was one of the most important events in the history of public medicine in England (*ibid.*, vol. viii, p. 52). At the conclusion of the report, the Association adopted a petition to Parliament, setting forth the result of the labours of the committee, and praying for legislation to promote vaccination. The petition set forth—1. The strength of the Association; 2. That full inquiry had been made into the nature of vaccination by experiments detailed therein; 3. That the result of the inquiries was to confirm the efficiency of vaccination as a protection against small-pox, if the vaccination is efficiently carried out; 4. That imperfect vaccination permits the spread of small-pox; 5. That at present there is no provision for public vaccination. The prayer of the petition was—To prevent inoculation, which was abandoned by educated men, but still carried out by "ignorant and illiterate persons", and to provide public vaccination in connection with the National Vaccine Institution.

At the Southampton meeting, in 1840, it was announced by the retiring President, Dr. Jeffreys, of Liverpool, that the petition on vaccination had been presented to Parliament, and the Council reported as the result of this action the passing of the Vaccination Act of 1840, and the Act to prevent inoculation (*ibid.*, vol. ix, pp. 19 and 27). These Acts may be said to have been suggested by the Association, and thus legislation in favour of vaccination was mainly owing to its action. When further amendments of the vaccination laws were required, the Association was foremost to promote them. At the Dublin meeting, the Parliamentary Bills Committee reported their action in the Vaccination Bill of 1866, which was withdrawn, and was again brought forward and carried in 1867. During the small-pox epidemic of 1871, the Association was very active in recording, through its JOURNAL, the progress of the epidemic, and reiterating its oft-repeated warnings concerning defects in vaccination. On February 13th, 1871 (BRITISH MEDICAL JOURNAL, vol. i, 1871, p. 184), a Select Committee of the House of Commons was appointed to inquire into the working of the Vaccination Act of 1867. On March 4th, the JOURNAL called attention to the appointment of the Committee, and pointed out that vaccination was defective, and that the then epidemic of small-pox was due "not to the defective power of vaccination, but chiefly to the system and way in

* Sanitary Legislation and Organisation—Its present State and future Prospects. By Thomas W. Grimshaw. Read before Section F of the British Association for the Advancement of Science, at the Belfast Meeting, 1874. See *Sanitary Record*, vol. i, p. 189.)

which it was worked, want of organisation, division of authority, and antagonism of interests, are the fruitful causes of failure here as in various departments of life". The article pointed out the advantages of combining in one power the offices of public vaccinator, registrar of births and deaths, and Poor-law medical officer, as in Ireland. On March 4th, 1871, a joint deputation from the Poor-law Committee of the Association and the Council of the Poor-law Medical Officers' Association waited on the Medical Officer of the Privy Council (Mr. Simon), pointed out the defects of the existing system, and suggested improvements, especially insisting on the adoption of the Irish system of combining the appointments of public vaccinator and Poor-law medical officer (BRITISH MEDICAL JOURNAL, vol. i, 1871, p. 264). The Select Committee adopted several of the recommendations of the Association. Lord Redesdale, in the House of Lords, at the suggestion of the Association, moved an amendment to strike out Clause 10, "which made immunity from vaccination purchasable by a fine of twenty shillings" (BRIT. MED. JOURN., vol. ii, 1871, p. 239).

Although these acts did not carry out all that the Association desired, yet there can be no doubt that the present law, if properly administered, would prove effectual for its object in England; in Ireland, I regret to say, it is not so. The benefits conferred on England by the Act of 1867 have not yet been extended to Ireland, and the vaccination laws of Ireland, even if properly administered (which they are not), could not be made efficient for the prevention of small-pox. The Irish Medical Association, fully appreciating these defects, had a Bill drafted to assimilate, with some amendments, the Irish vaccination laws to those of England, and placed the Bill in the hands of the Government. The Government have introduced a "Vaccination Act (Ireland) Amendment Bill", but unfortunately they have omitted some of the most important provisions proposed by the Irish Medical Association—notably, provisions for the supervision of vaccination, and proper payment of the vaccinators for their services. I think the Association should direct their special attention to this subject, and aid the sister Association in its efforts to effectually amend the vaccination laws in Ireland.

RELATION OF THE MEDICAL PROFESSION TO LEGAL PROCEEDINGS.—The position held by the members of our profession with regard to legal proceedings is of a most unsatisfactory nature. The manner in which coroners' inquests are conducted is a scandal to the nation. This may seem rather strong language to use with regard to one of the oldest judicial institutions in England. Without referring more particularly to cases where the cause of justice has been seriously imperilled, instances will occur to every person who takes even the slightest interest in public medicine where the proceedings before coroners have been a mere farce. The recent case of a coroner's jury being to a great extent composed of criminals, should of itself be sufficient to compel a radical change in coroners' law. I noticed within the past few months an account of an inquest on the body of a person found dead in his berth in a Channel steamer. The result was a verdict that the deceased had died of sea-sickness. There was no evidence to prove that such was the case. Bodies found in water are declared to have lost their lives through drowning, without any further evidence. So long as this state of things continues, and coroners advise juries without skilled medical evidence, so long we shall, on reading the report of a coroner's inquest in a morning newspaper, be inclined to repeat the expression of the gravediggers in Hamlet—"Is this law? Ay, marry, is't; crowner's quest-law!" Is the "crowner's quest-law" much better than it was in the days of Shakespeare? I much doubt it.

This Association has from time to time endeavoured to promote amendments in coroners' law, but hitherto with but little success. In 1871, the Association successfully opposed a Coroners' Bill, which would have deprived medical witnesses of their fees (BRIT. MED. JOURN., vol. ii, 1871, pp. 178-179). The Irish Medical Association has had a long battle with, and at last triumphed over, a system which had unfortunately prevailed to a great extent in Ireland, of coroners making use of their position to direct the fees from medical witnesses into the pockets of their own friends, without any regard to the fitness of the witnesses called, and in direct violation of the law which provides that they shall call as a witness "a medical practitioner residing at or near the place". If Dr. Farr's proposal for the appointment of "registration medical officer with medico-legal and sanitary functions" were adopted, there could no longer be any difficulty in obtaining skilled medical evidence in all cases of deaths from doubtful causes. This officer should settle, from a medical point of view, whether an inquest was or was not necessary, and act as medical assessor to the coroner. I should much prefer this system to the appointment of medical men as coroners. I believe that a coroner should be a barrister, like other judges, and should be appointed by the Crown, not elected by the ratepayers, as at present. It is to be hoped that the inquiry which has just concluded before the Select Committee will result in some improvements in coroners' law. It is gratifying to notice that one of the recommendations of the Committee is the appointment by each coroner of one or more competent medical men, to be approved of by the Secretary of State, to act as medical referees at inquests, and that these or other medical men similarly appointed should perform *post mortem* examinations. This is a move in the direction of appointing regular medical experts as assessors to the coroner. It should not, however, supersede the necessity for calling as a medical witness the medical practitioner who had attended on the deceased. This recommendation of the Committee is capable of being developed into an efficient system of medico-legal assessors, as advocated by Dr. Farr, and approved by the Association in their resolution at the Dublin meeting. It is to be regretted that Scotland and Ireland are not included in the recommendation of the Committee (Report of Select Committee on Coroners' Bill, July 10th, 1879, and Coroners' Bill, 1879, as amended by the Select Committee Bill, 243).

The unsatisfactory relation of the medical profession to courts of law is not confined to coroners' courts. The position which members of our profession occupy in courts of law is at present not only discreditable to the administration of justice, but also far from conducing to the honour and dignity of the profession. No doubt this is in a great measure attributable to the ease with which they permit themselves to be called as witnesses in support of particular views. It is quite certain that, until power is given to judges and juries, independent of the wish or desire of litigants, to refer technical questions to experts, who should act as assessors to the court, conflict of medical opinion will continue to disgrace our profession and the administration of justice. Another feature in the administration of justice which urgently demands the attention of the Association is the mediæval barbarism of a jury of matrons, for which should be substituted a consultation of gynæcologists; pregnancy, in no matter how early a period, should be a bar to execution in any civilised country.

CONTAGIOUS DISEASES ACTS.—The passing of the Contagious Diseases Acts of 1864 and 1866, for the prevention of venereal diseases at certain military and naval stations, is, as the Royal Sanitary Commissioners remark in their Report, "a very remarkable instance of legislative interference in the way of sanitary regulations". The question of the extension of these Acts is one of great importance, and one which may well occupy the careful attention of the Association. Whatever doubts may have been entertained as to the results to morality of the working of these Acts, there can now be no doubt, except in the minds of fanatical opponents of the Acts, that their working has been most beneficial from social, moral, and sanitary points of view. I would especially refer to the report of the Rev. E. P. Grant, Vicar of Portsmouth, in support of this view. The inquiry now proceeding before a Select Committee of the House of Commons will, no doubt, throw additional light on the beneficial action of the Contagious Diseases Acts.

DWELLINGS OF THE WORKING CLASSES.—The subject of the dwellings of the working classes is one which has from an early date engaged the attention of the Association (*Trans. of Prov. Med. and Surg. Assoc.*, vol. iii). Dr. Conolly, in his address at Birmingham in 1834, referred to the excessive prevalence of epidemic diseases among the poor living under unhealthy conditions. The principal unhealthy condition at that time was the state of their habitations. There can be little doubt, as Dr. Southwood Smith expresses it, in 1854, that "for many years past there has been in the public mind a growing conviction that the physical condition of the labouring classes is mainly dependent on the state of their dwellings". ("Results of Sanitary Improvement, illustrated by the Operation of the Metropolitan Societies for Improving the Dwellings of the Industrious Classes, the Working of the Common Lodging-house Act, etc." By Southwood Smith, M.D. London: Charles Knight and J. Cassell. 1854.)

Although Public Health Acts had been passed previously to this date, there was not any special law to facilitate the provision of suitable dwellings for the working classes (Artisans' and Labourers' Dwellings Act, 1855). "The growing conviction" mentioned by Dr. Southwood Smith seems to have had its origin in the greater interest in the operative section of society which followed the passing of the Reform Act of 1832, and received its greatest impetus after the accession of Queen Victoria and the subsidence of the Chartist agitation, which, notwithstanding its excesses and evils, forced upon the public and the legislature the many social and sanitary evils from which this portion of the community suffered previous to that time. (See Report to Her Majesty's Principal Secretary of State for the Home Department from the Poor-law Commissioners, on an Inquiry into the Sanitary Condition of the Labouring Classes of Great Britain: with Appendices. Presented to both Houses of Parliament, July 1842. London: Clowes and Sons.

1842.—Report on the State of Large Towns in Lancashire. By Dr. Lyon Playfair, one of Her Majesty's Commissioners for Inquiry into the State of Large Towns and Populous Districts in England and Wales. London: Clowes and Sons. 1845.)

These evils were well and forcibly illustrated by Disraeli in his *Sybil, or the Two Nations*, in 1845; and many had forgotten, when the present Government entered upon office with the motto of "Sanitas sanitatum et omnia sanitas", that the head of the Administration had himself been active in pointing out the wretched sanitary conditions under which these people lived. Have all such defects disappeared, or nearly disappeared? I am afraid we cannot say they have; and the defective state of the dwellings of the industrial classes is probably the most glaring sanitary want of the present day. Although much has been done by public measures to remove these defects in several large towns, notably Glasgow, yet it cannot be said that the provision of suitable dwellings for the working classes has even kept pace with the increase of town-population. Are there not still to be found habitations such as those described in *Sybil* as constituting the "rural town of Marney" in 1837? "Cottages built of rubble, or unhewn stones without cement, and, from age or badness of the material, looking as if they could scarcely hold together. The gaping chinks admitted every blast; the leaning chimneys had lost half their original height; the rotten rafters were evidently misplaced; while in many instances the thatch, yawning in some parts to admit the wind and wet, and in all utterly unfit for its original purpose of giving protection from the weather, looked more like the top of a dunghill than a cottage. Before the doors of these dwellings, and often surrounding them, ran open drains full of animal and vegetable refuse, decomposing into disease, or sometimes in their imperfect course filling foul pits or spreading into stagnant pools; while a concentrated solution of every species of dissolving filth was allowed to soak through and thoroughly impregnate the walls and ground adjoining. These wretched tenements seldom consisted of more than two rooms, in one of which the whole, however numerous, were obliged to sleep, without distinction of age, or sex, or suffering. With the water streaming down the walls, the light distinguished through the roof, with no hearth even in winter, the virtuous mother in the sacred pangs of childbirth gives forth another victim to our thoughtless civilisation, surrounded by three generations whose inevitable presence is more painful than her sufferings in that hour of travail; while the father of her coming child, in another corner of the sordid chamber, lies stricken with that typhus which his contaminating dwelling has breathed into his veins, and for whose secret prey is, perhaps, destined his new-born child. These swarming walls had neither windows nor doors sufficient to keep out the weather, or admit the sun, or supply the means of ventilation; the humid and putrid roof of thatch exhaling malaria like all other decaying vegetable matter. The dwelling-rooms were neither boarded nor paved; and whether it was that some were situate in low and damp places, occasionally flooded by the river, and usually much below the level of the road, or that the springs, as was often the case, burst through the mud floor, the ground was at no time better than so much clay, while sometimes you might see little channels cut from the centre under the doorways to carry off the water, the door itself removed from its hinges, a resting-place for infancy in its deluged home. These hovels were in many instances not provided with the commonest conveniences of the rudest kind. Contiguous to every door might be observed the dung-heap, on which every kind of filth was accumulated, for the purpose of being disposed of as manure; so that, when the poor man opened his narrow habitation in the hope of refreshing it with the breezes of summer, he was met with a mixture of gases from reeking dunghills."

I have visited such habitations in this country; and they still exist, and, *mutatis mutandis*, exist in the city of Dublin itself. The following are typical examples. "The house-accommodation in the county of Galway is generally of a poor description. According to the last census (1871), of 45,955 families residing in the rural districts, 11,046 were housed in 'fourth-class accommodation', which practically means one room with one window; 1,086 of these families lived in mud cabins. The houses in Athenry are not better than those of the surrounding country. They are generally sunk below the level of the streets, with but one room and in some instances no windows, and altogether of a most wretched description. The most remarkable *street* we have ever visited—and we have been in a great many queer places—is River Lane in Athenry. It seems that about twenty years ago the river was directed from its natural course and turned into a mill-course. The bed of the river was seized upon by squatters, who built thereon the most wretched hovels. We visited some of those localities, and had to reach them by walking ankle-deep in filth. There was small-pox in four of them at the time of our visit." (Report of the Commissioners of the Sanitary Board. See *Sanitary Record*, vol. iii, p. 17, July 19th, 1875.) I have ascertained from Dr. Leonard, the Medical Officer of Health of Athenry, that River Lane is "still in existence", and that there was no improvement in the locality on July 21st, 1879.

"19, *Christ Church Place, Dublin.*—These premises consist of a house (No. 19), and a house at the back, which appears much older than the front house, and probably originally occupied the plot of ground on which the premises stand. The front house is entered by a narrow flagged passage, in good repair, but in an extremely filthy condition. A large pool of most filthy solid and liquid matter was standing in the passage near the back door. From this passage, the front house is approached by stairs, which are rotten and filthy. On the first floor were no less than five persons, ill with fever, who had obtained an order for removal to hospital this morning (at one o'clock). These were members of a family of eight who occupied two small rooms on this floor. The upper part of the house seemed even in a worse state than this floor. The back yard was extremely filthy. A choked drain, close to the back door of the front house, was covered with a large pool of filthy fœtid fluid, mixed with cabbage-stalks, etc. A small portion of this yard was cut off for the use of the occupants of the lower part of the front house; and this portion was filthy, and the stench from it horrible. The back house, though older, seemed in better repair and cleaner than the front, the walls having been recently whitewashed. Beneath these houses are large quantities of decomposing rubbish. The yard of the back house was extremely filthy, being altogether occupied by a filthy privy and overflowing ashpit, the contents of which have not been removed for some time." (Report of the Dublin Sanitary Association, June 10th, 1875, pp. 46 and 47.)

There are numbers of such places to be found in the city of Dublin. The above examples, though not so graphically detailed, are quite equal to Disraeli's description of Marney in 1837.

It was hoped that the passing of Torrens' Act in 1868, to which the Association gave its aid (BRITISH MEDICAL JOURNAL, vol. ii, 1868, pp. 144, 145), would have produced a remedy for those evils. Such, however, did not prove to be the case; and it became necessary to pass the Artisans' and Labourers' Dwellings Act of 1875. This Act was really brought forward by the Government at the instance of the Royal College of Physicians of London, who were moved to act in the matter by the late Dr. Anstie. When the Bill was introduced, it did not extend to Ireland; but, at the instance of the King and Queen's College of Physicians and the Dublin Sanitary Association, Mr. Gibson, now the Attorney-General for Ireland, had the Bill so amended that Ireland was included in its provision. When this Bill was before Parliament, the Association prepared various amendments which much improved the measure (*ibid.*, vol. ii, 1875, p. 201). This Act, however, is permissive, and only extends to towns having a population of twenty-five thousand or upwards. Mr. McCullagh Torrens, believing that his Act of 1868 failed from want of sufficient power of compensating owners for property removed under the Act, has introduced a Bill to amend this Act, and thus supplement that of 1875. It cannot, however, be expected that local authorities will avail themselves to any considerable extent of permissive legislation of this kind. Past experience of local sanitary authorities shows that but little was done under the Sanitary Acts, until action was made compulsory by the passing of the Acts of 1872-4. The Association should, I think, use its best endeavours to have these Acts made compulsory, as are the other Sanitary Acts. Up to the present, the efforts to improve the dwellings of labourers and artisans have been to a large extent of a voluntary character; great improvements promoted by constituted authorities have been but few. The first of these voluntary efforts was made by the Society for Improving the condition of the Labouring Classes, which in 1844 commenced their operations under the patronage of the Queen and the late Prince Consort, with Lord Shaftesbury for its president. The efforts of the Prince Consort, Lord Shaftesbury, Miss Octavia Hill, and others, in promoting these objects are beyond all praise; but, until some very wholesale measures are taken to properly house the existing members of the working community, but slight improvement can be expected in the public health.*

* Homes of the London Poor. By Octavia Hill. London: Macmillan and Co., 1875. Report of the Dwellings' Committee of the Charity Organisation Society. London: Longmans, Green, and Co., 1873. On the Artisans' and Labourers' Dwellings Bill. By George Ross, M.D. Sessional Proceedings of the National Association for the Promotion of Social Science. March 10th, 1875. The Physical Condition of the Labouring Classes, resulting from the State of their Dwellings, and the Beneficial Efforts of Sanitary Improvements recently adopted in England. By Henry Roberts, F.S.A. London: Society for Improving the Condition of the Labouring Classes, 1866. In Ireland much less has been done than in England towards improving the dwellings of the labouring classes in large towns. In Cork a very successful effort has been made by the "Cork Improved Dwellings Company". In Dublin, two companies have been formed—one, a few years ago, has not proved successful; another, the Dublin Artisans' Dwellings Company, recently founded by the efforts of the Dublin Sanitary Association, has made a successful start, and is already a financial success. In Belfast, similar efforts have been made; but all these are small compared with the work to be accomplished.

INFANT MORTALITY.—The excessive mortality among young children has at all times attracted the attention of political economists and sanitary reformers. Adam Smith, writing a century ago, states, when referring to this subject, that "this great mortality will everywhere be found, chiefly among the children of the common people, who cannot afford to tend them with the same care as those of better station" (*The Wealth of Nations*, Rogers's Edition, vol. i, p. 83. Oxford Clarendon Press, 1869). It remained for more modern students of sociology to discover that gross neglect, drunkenness, wretched homes (already referred to), and systematic "disposal of" infants, were no less important features in infant mortality than mere poverty. An important discussion on infanticide took place at the Harveian Society of London, in June 1866, when a Committee was appointed to draw up a report on the subject, and to suggest the best means of checking the crime, and to report upon the best means of preventing excessive infant mortality, and suggesting means for the rearing of illegitimate children, other than the present workhouse system. The following formed the Committee: Dr. Tyler Smith, Mr. Curgenven, Dr. Hardwicke, Mr. Ernest Hart, Dr. Sanderson, Mr. Benson Baker, Mr. Sedgwick, and Dr. Lankester" (BRITISH MEDICAL JOURNAL, vol. i, 1866, p. 677). This Committee made a valuable report, which resulted in a deputation to the Home Secretary on the question (*ibid.*, vol. i, 1867, p. 33). See also an important paper by the Rev. Dr. Cumming, read before the Public Health Section of the Social Science Association, 1874 (*ibid.*, vol. ii, 1874, p. 473). The Society for the Preservation of Infant Life was founded in 1870, and held its first meeting on November 1st, a preliminary meeting having been held on October 13th. This meeting drew up a Bill, and sent a deputation to the Home Secretary to represent their views. The Bill of the Association was introduced into Parliament by Mr. Charley.

The Association, chiefly through the agency of its JOURNAL, and the sagacity of its editor and his assistants, has effectually exposed one of the most treacherous and fruitful sources of infant mortality, namely, the system known as "baby farming". When the authorities took no notice of this system of child-murder, the BRITISH MEDICAL JOURNAL took the matter in hand. On a question being put by Lord Shaftesbury in the House of Lords, in July 1868, the Duke of Marlborough replied that inquiries into baby-farming were unnecessary, as it had been "thoroughly inquired into by the BRITISH MEDICAL JOURNAL", and the plan of registration and inspection of baby-farms had been suggested (JOURNAL, vol. ii, 1868). The Lord-President also said: "The Government would turn their attention to the question during the recess, and hoped they would be able to discover means which, embodied in a Bill, would obviate the dangerous abuses to which attention had been called" (*ibid.*, vol. ii, 1868, p. 121). The conviction for murder of Ann Cuming, the baby-farmer, forced the matter again on the attention of the Government (*ibid.*, vol. ii, 1869, p. 276). A Bill was brought before Parliament by Mr. Charley; but it was not until the year 1871 that the matter was dealt with, when a Select Committee of the House of Commons inquired into the question, before which the most important evidence was given on behalf of the Association. The report of this Committee resulted in the passing of the Infant Life Protection Act (35 and 36 Vic., cap. 38). Although this Act has many defects, yet it is a decided advance towards the prevention of the waste of infant life, and its passing was altogether due to the action of the Association. It is quite certain that the Act has failed in many particulars, and is evaded to a large extent. The number of "baby-farmers" reported in the metropolis is very small. In many large towns, none have been registered. Many cases of infanticide have come to light, which might possibly have been prevented if the Act had been more efficient. The defects in the Act are: 1. It is only children under twelve months that come within this Act; 2. It is only nurseries where more than one (twins count as one) are taken to nurse that come within the Act; 3. There is no inspection.

It is the duty of this Association to endeavour to have this Act amended and extended, so as really to fulfil the objects for which it was originally passed, but which were to some extent defeated by amendments carried in the House of Commons. Many instances illustrative of the failures of the Act will be found in the BRITISH MEDICAL JOURNAL for 1875, 1876, 1877, and 1878. The establishment of *crèches*, or "day nurseries" for children whose mothers have to go out daily to earn a living, will tend much to reduce infant mortality.

DISEASES OF ARTISANS; AND FACTORY AND WORKSHOP LEGISLATION.—The conditions under which the artisans and labourers carried on their occupations previously to the passing of the Factory Act of 1833, which was the result of inquiries instituted by Sir Robert Peel (although an Act for the regulation of factories had been passed in 1802), were of such a nature as to endanger the health and lives of those employed in many industries. This Act, however, only touched the surface of the question, and still for many years the greatest barbarities existed as to the employment of labour. (See Darwall, on Diseases of Artisans, *Cyc. Prac. Med.*, vol. i, p. 149. 1833.) Immediately after the enforcing of the first Factory Act, passed in 1833, the Association met at Manchester in 1836. Dr. Holme, in opening the meeting, referred to the recently enforced Act, and invited the members of the Association to spend a few days in Manchester after the meeting, "investigating the state of society in Manchester, particularly among the working-classes; and in observing the influence which the introduction of manufactures, and *the limiting of the hours of labour*, etc., have upon the health and comfort of the poor". He referred to the difference of opinion prevailing, and said he felt sure the "members of an honourable profession would approach the subject with unbiassed minds". (*Trans. of the Prov. Med. and Surg. Assoc.*, vol. v, p. 5. 1836.) The state of the working-classes was at this time deplorable in the extreme; and it was not for many years afterwards that some of the most terrible and glaring evils in the employment of women and children in factories and mines were ameliorated. It cannot be said that these evils have yet ceased, and they are not likely to cease until a State department of health is created, with a sufficient staff of professional inspectors. So long as the care of the health of persons employed in factories is under one department, those in mines under another, those in workshops under another, and the rest of the public health looked after by a subdepartment of the Local Government Board, we may expect to have the law violated with impunity by careless or negligent persons, although we may not now have the barbarities openly practised which are mentioned by Disraeli, Dickens, or Kingsley, in their novels. In 1844, the *Provincial Medical and Surgical Journal* called attention to the Factory Bill then before Parliament, and pointed out the evils of early labour, and insisted on their removal; and the Association has always aided legislation for the purpose of curtailing those evils. There are still many defects to be remedied which require the attention of the Association, especially the condition under which work is carried on in private workshops.

ABUSE OF ALCOHOL AND CONTROL OF HABITUAL DRUNKARDS.—There has not been much room for the action of the Association with reference to the very important question of the abuse of alcohol; but, whenever the opportunity has presented itself, the Association has always used its influence. Thus the control of habitual drunkards has occupied much of the attention of the Association and its Parliamentary Bills Committee. In January 1871, the Committee petitioned in favour of Mr. Dalrymple's Bill for the control of Habitual Drunkards. (BRIT. MED. JOURN., vol. i, 1871, p. 485, and vol. ii, p. 178.) At the annual meeting in 1875, the Section of Public Medicine passed a resolution, recommending the Association to promote legislation for the control of habitual drunkards. The resolution was brought before a general meeting by Sir Robert Christison, and adopted on the motion of Dr. A. P. Stewart, and referred to a Committee. (BRITISH MEDICAL JOURNAL, vol. ii, 1875, p. 214; vol. ii, p. 876; vol. ii, 1877, p. 221; and vol. ii, 1878, p. 220, contain the report of this Committee, stating the progress they had made from time to time.) This question has at length advanced a step towards settlement, through the efforts of my friend Dr. Cameron, the member for Glasgow. (Habitual Drunkards' Act, 1879, 42 & 43 Vic., cap. 19.) The Parliamentary Bills Committee has also used its influence on the many occasions on which Licensing Bills have been before Parliament. The suppression of intemperance is a matter of such importance, that the Association should use its utmost power to support any feasible measures which may be proposed to promote the object. For my own part, I have little faith in legislative measures to prevent the abuse of alcohol; I believe the diminution of drunkenness is more a matter of education than of legislation, and would best be promoted by substituting other and more healthy pleasures than those at present offered by the gin-palace. Our JOURNAL, through its editor (Mr. Hart), has done much to promote this desirable object by supporting the coffee-palace movement, which has already shown itself to be an useful means towards a most important end.

REGULATION OF TRADE IN DRUGS AND COMPOUNDING OF MEDICINES.—The regulation of the trade in drugs and the compounding of medicines naturally attracted the special attention of the profession and of this Association. The connection of members of the medical profession with the direct and indirect sale of drugs has tended much to depreciate the status of its members, and induced many to treat them as small retail traders, instead of members of a learned profession. It must be admitted that the practice of members of the profession selling drugs to their patients, and the fact of two of the medical authorities being engaged in the drug trade, justifies, to some extent, this view; on the other hand, the supply of drugs by many practitioners of medicine and surgery was made necessary by the neglect, on the part of the State,

to make the requisite provision for the regulation of pharmacy. The Apothecaries' Company of London, which, in the natural order of things, should have supplied pharmaceutists to England, were forced from (I regret to say) the want of public spirit of the Royal College of Physicians, to become a corporation for granting licenses to practise medicine. The Irish Apothecaries' Company, which was founded solely for the supply of pharmaceutists, followed, without the same excuse, the example of its elder sister, and became a *quasi* medical authority. The position occupied by these corporations retarded the establishment of a set of properly qualified compounding and dispensing pharmaceutists, and thus drove the general practitioners, especially in the country, to compound and dispense the medicines for their own patients. The passing of the Pharmacy Acts for Great Britain and for Ireland (Pharmacy Act (Ireland), 1875, 38 and 39 Vic., cap. 57) has, to a large extent, removed the necessity for practitioners dispensing medicines; and in a very short time the Act, if properly worked and if fully availed of by the members of our profession, should completely remove the stigma of retail trading from the practitioners of medicine in the United Kingdom. At the same time, it is the duty of the profession, and especially of this Association, to jealously guard against the possibility of the establishment of a new race of quacks in the persons of "counter practitioners". The Association, through its Parliamentary Bills Committee, supported the Pharmacy Bill of 1868, but unfortunately their advice was not sufficiently taken; and an Amending Act had to be passed in the following year, and still the regulation of pharmacy is not in a satisfactory condition. (Pharmacy Acts of 1868 and 1869.)

At the Oxford meeting of the Association in 1868, the Parliamentary Bills Committee reported concerning the Pharmacy Bill, 1868, and stated that they had pressed important amendments: "1. That the schedule of poisons and the examination of chemists and druggists should be placed under the supervision of the General Medical Council rather than of the Privy Council; 2. The following addition to Clause xvi, prohibitory of medical practice by chemists: 'And it shall not be lawful for any person registered under this Act to prescribe for any patient, or undertake the treatment of disease, or in any way assume to act as a medical practitioner; and any chemist or druggist so offending shall, on summary conviction, forfeit or pay a sum not exceeding £5'. Instead of this, the following clause, proposed by the General Medical Council, was adopted: 'Provided always that registration under this Act shall not entitle any person so registered to practise medicine or surgery, or any branch of medicine or surgery'; which legally amounts to no prohibition at all; 3. A clause to stop the sale of patent, quack, or any other secret remedies, viz., 'that no patent, quack, or secret medicine should be sold, under a penalty of £20, unless a sworn certificate of its composition were lodged with the Registrar under this Act'." (BRIT. MED. JOUR., vol. ii, 1868, p. 244, *et seq.*) The various measures which have from time to time been brought before Parliament for the regulation of the sale of poisons and for the prevention of the adulteration of food, drink, and drugs have constantly had the best attention of the Association, its Committee, and its JOURNAL. The Act to control the sale of arsenic, passed in 1851, was owing to a petition presented to Parliament by the Association (*ibid.*, 1857, pp. 456-471).

LUNACY LAWS.—The amendment of the lunacy laws has frequently required the attention of the Association, and probably these laws are now, in spite of their many defects, in a better condition than any others with which the State physician has to deal. In 1842, the Association took part in improving the Bill then before Parliament for the regulating and inspecting lunatic asylums (*Prov. Med. Journ.*, vol. ii, 1842, pp. 31, 32, 75, and 76). The Association supported Sir D. Corrigan's Lunacy Registration (Ireland) Bill, and assisted in its passing in 1871 (BRIT. MED. JOURN., vol. ii, 1871, p. 178).

MEDICAL SERVICES OF NAVY AND ARMY.—The state of administration of the naval and military medical services has elicited many protests and much advice from the Association. "In 1855, the Bath and Bristol Branch presented a petition to Parliament praying for an improvement in the condition of naval assistant surgeons" (*Assoc. Med. Journ.*, 1855, p. 682). "In the same year, the Shropshire Branch passed a resolution thanking the Government for improving the condition of naval assistant surgeons" (*ibid.*, p. 816).

At the annual meeting of the Association, in 1857, the following resolution was passed: "That a Committee be appointed to draw up such a resolution or memorial as they may think proper, to carry out the recommendation of the Council on the subject of army and navy medical reform, and that such Committee consist of Mr. Flint, Mr. Soden, Dr. Budd, Dr. Wynter, Mr. Tidmas, and Mr. Nunneley" (*Assoc. Med. Journ.*, 1857, p. 670). The memorial was drawn up and laid before the meeting. The following resolution was proposed by Mr. Nunneley (Leeds), seconded by Mr. Hatton (Manchester), and adopted: "That the memorial be adopted, and that a copy be sent to Lord Panmure, Sir Charles Wood, and the Royal Commissioners for inquiring into the Medical Department of the Army" (p. 676).

At the annual meeting of the Association on August 11th, 1866, the following paragraph occurred in the report: "Your Council hopes that at length the medical officers of the army and navy have received at the hands of the authorities that measure of justice for which your Association has contended—warrants for increased pay and rank having been signed by Her Majesty the Queen." It is much to be regretted, for the sake of our sick soldiers, the honour of the Government, and the interests of our profession, that the hopes held out by the warrant of 1866 have been disappointed, and its promises over and over again systematically violated.

In 1874, the Parliamentary Bills Committee was engaged in pressing upon the attention of the Government the claims of the medical officers of the army and navy to improved regulations with respect to rank, pay, promotion, and retirement. The Chairman of the Committee, by means of information collected from medical officers of the service, and others, prepared a statement, which was submitted by a deputation to the Secretary of War and First Lord of the Admiralty. These representations, it is to be regretted, have not yet (July 1879) produced any beneficial result.

We have recently had a remarkable example of the increased confidence of a Government department in the medical profession in the consultation which the military authorities have just had with the medical authorities, medical schools, and associations throughout the United Kingdom. If advice of this nature had been more often sought, and acted upon when received, it would have been well indeed for the public health. The details of administration of existing laws have been carefully watched by the Parliamentary Bills Committee, which may be looked upon as a sort of standing Committee of the Public Medicine Section.

I am glad to have the opportunity through this Section of addressing the public, and can assure them, in the name of this great Association, that whenever they desire advice and assistance in the promotion of measures of public utility, they may seek it from us, and will always be most cordially welcome to it. I can assure them the acts of the profession of medicine have never been, and never can be, found at variance with the public weal; we are always prepared to act upon the maxim "Salus populi suprema lex".

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

BY J. A. EAMES, M.D., F.R.C.S.I.,
Resident Medical Superintendent of the Cork District Lunatic Asylum; President of the Section.

THE IMPORTANCE OF THE STUDY OF PSYCHOLOGY.

IN the first place, permit me to express my thanks for the high honour conferred upon me by the General Council in naming me President of this important Section, which I feel is not due to any qualification on my part, but rather as a compliment to the position I hold as Resident Medical Superintendent of the Lunatic Asylum of this county and city, an institution of which we all feel justly proud. And although it falls far short of kindred institutions in England and Scotland as regards what is considered essential in the treatment of the insane—namely, internal furnishing and other accessories affording every means to comfort and solace the afflicted inmates, and to remove their thoughts from self—we are slowly but steadily following in the wake; and every day the necessity is becoming more apparent of extending this so-called moral treatment, as being the best and in the end the most economical means towards promoting the recovery of the insane.

In the second place, I do not intend trespassing much upon your valuable time, especially as there will be several important and valuable papers read and brought forward for discussion.

Instead of giving a *résumé* of our experiences as regards individual cases, I think it a more fitting opportunity for bringing under your notice a subject of general interest to our department, and one of great importance to the profession in general. I refer to the want of legislation on the part of the medical authorities and governing bodies in making

the study of psychology an integral part of medical education. Several attempts have been made from time to time to effect this much desired object, but so far without success. So late as two years ago, the President of the Queen's College, Cork, obtained the sanction of the Senate of the Queen's University to allow a three months' course of lectures and attendance in their asylum to count for three months' hospital attendance; also the authority of the government, and the sanction of the governors of this institution, that such a course should be delivered annually. From some cause or other, however, this arrangement has fallen through, and no steps have since been taken in the matter. The possession of a knowledge of psychology has been long recognised in this country as an important department of medical science, to be included in the curriculum of the medical student's course of study, and to form a necessary part of the final examination. So far back as the year 1845, an Act of Parliament was passed (8 and 9 Victoria, cap. 107, sec. 22) which enacted that "it shall and may be lawful for the Lord-Lieutenant of Ireland, or other chief Governor or Governors of Ireland for the time being, by and with the advice of Her Majesty's Privy Council in Ireland, to make and found such rules and regulations for the holding of lectures by the medical attendant or attendants of the said central asylum or said provincial or district asylums, or any of them, as to the said Lord-Lieutenant or other chief governor or governors may seem fit."

This Act appears to have been a dead letter until the meeting of the Lunatic Asylums (Ireland) Commission, which was held in 1856, when the following statements on this subject were made in their report presented to Parliament.

"We now desire to draw attention to the great benefit which the district asylums of Ireland might be capable of conferring, if made available as educational establishments, for the purpose of extending a knowledge of the nature and treatment of insanity. At present, these institutions may be considered as almost effecting nothing towards so important an object. We feel confident that, if the lunatic asylums of Ireland were made places of instruction, medical science would be improved, and humanity benefited; and that the benefit would not be limited to Ireland, but that the blessings of a humane and enlightened treatment of the insane would be extended to other countries.

"We cannot doubt that, if proper exertion were made, students of medicine, or graduates who had just completed their course, would seek for appointments as residents in asylums, as the knowledge thus acquired, and the certificates they would obtain of such residence, would be esteemed recommendations in many positions in which they might afterwards be placed. We would recommend that, in the first instance, the experiment of appointments should be made in the asylums of Dublin, Swift's and the Richmond, of Cork and Belfast, in which towns there are large medical schools. Such resident pupils might be appointed by the Board of Governors, on the recommendation of the resident physician, and should be subject to his direction. We would propose that the time of residence should be for six months, or perhaps it might be advisable to extend it to a longer period; and that, on the expiration of such residence, a certificate should be given by the resident physician or the Board of Governors of the manner in which the duties of the appointment have been fulfilled."

The latter suggestion has to some extent been carried out by the appointment of assistant medical officers and resident pupils in district lunatic asylums in Ireland. The first recommendation, strange to say, has not as yet been carried into effect. This is to be attributed to the fact that no steps have been taken in the direction indicated by the governing bodies of the various colleges and medical schools.

In the year 1875, a petition was presented to the medical examining boards in England, praying that three months' clinical instruction in a lunatic asylum might be substituted for a like time of study in a general hospital, on the following grounds:

"1. That courses of lectures on mental diseases hitherto delivered were not imperative on students of medicine as a part of their curriculum of professional study.

"2. That, although students have a sufficiently large number of subjects which they have to master during this period of study, the entire absence of any provision for the clinical study of such an important branch of medicine as insanity and its kindred diseases cannot but be prejudicial to the interests of a large majority of students in their future career.

"3. That insanity is not, like other diseases, to be met with in the wards of a general hospital, and that consequently students have no opportunity for observing it without attending at a lunatic asylum.

"4. That the University of London has the following regulation and note thereon. 'Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.' 'The Senate regard it as highly desirable that candidates for the degree of M.B. should practically acquaint themselves with the different forms of insanity by attendance at a lunatic asylum.'

"5. That, if the regulations laid down by the University of London were adopted by all the examining boards, a great boon would be conferred on many students, who might then without sacrifice of time avail themselves of the opportunity for studying a class of diseases with which at present they have little or no practical acquaintance, but which are of all others liable to entail on medical practitioners heavy losses, both of prestige and fortune."

This petition bore the signature of all the most eminent psychological physicians both in England and Scotland, the result of which was the following resolution by the Royal College of Physicians: "That students who wish to qualify for the examination of the membership or the licence of the College may substitute, if they so desire, a three months' course of clinical instruction in the wards of a lunatic asylum for the same period of attendance in the medical wards of a general hospital."

I am aware that at several of the university medical schools in the United Kingdom lectures are delivered, as also at some of the large hospitals and asylums; but, these being only optional, they are not largely availed of, only a comparatively small proportion of students having attended. I read with pleasure an excellent leading article in the BRITISH MEDICAL JOURNAL of 3rd May last on this important subject, showing the defective mode of acquiring a knowledge of psychology as at present afforded, and the necessity that exists for the medical practitioner to possess such knowledge, especially as regards the certificates of insanity and its treatment in the early stages. These duties form a necessary part of the medical practitioner's general practice, and, I should say, constitute one of the most difficult and delicate tasks that he may be called upon to perform. The diagnosis of insanity sometimes is not an easy matter; but to know what to do with the patient in the first stage is still more difficult; to know what case can with safety be treated at home or in private, or as a matter of necessity should be sent to an asylum; I have seen many mistakes made in these points with serious consequences.

That insanity is upon the increase I think there can be little doubt, although by some it is considered as being more apparent than real, on account of the increased facilities afforded for obtaining admission into asylums; whereby cases hitherto not considered suitable are received, including half-witted creatures, who were formerly allowed to wander about the country. Every village had its fool; but surely ten years or less would be sufficient to collect all those waifs and strays. Moreover, they do not form the class of cases admitted into asylums, at least as far as my experience goes, which are for the most part those suffering from the more acute forms of mental disease. Hence the only explanation, in my opinion, for this general and universal overcrowding of our hospitals for the insane is the fact that insanity is steadily increasing. This is no doubt due in a great measure to the high pressure mode of life nowadays, combined with the struggle for existence, as compared with the same in past times; and, lastly, to intemperance, which, as exercising a powerful influence in the production of insanity, stands foremost on the list. As these causes will in all likelihood be augmented and aggravated with the progress of the times, this increase of insanity must be looked upon as one of the penalties we have to pay for our advancing civilisation.

From the foregoing points of view, it must be conceded that it is a matter of the most serious moment that every means should be taken to reduce this social calamity to a minimum; and, as a first step in this direction, I think there is none so important as that the medical practitioner should be acquainted with this class of diseases. It is well known the recognition of insanity in its early stages is of paramount importance; so that cases suitable for asylum treatment may be sent without needless delay, and thus afford the best chance of recovery. By the medical practitioner, the treatment of insanity is looked upon as something out of the way of his regular duties; he has not been accustomed to consider such cases, and, when they are brought before him, he refers them to a special authority as something mysterious that ordinary medicine cannot touch. The approach of an attack is either unobserved or treated simply as low spirits, or the result of indigestion; possibly he has never seen a case of mental disease, and is totally unskilled in the symptoms which to a trained mind would have given forewarning of an impending attack. This has been a serious blot in our medical teaching. Insanity is as much a bodily disease as gout or rheumatism. The insane action or idea as surely springs from a morbid derangement of the brain-structure as a bilious attack springs from a morbid condition of the liver. There is no mystery about it; it is a mental manifestation arising from a physical cause, and should form as necessary a branch of study as lung or heart-disease. This separation of one organ, and that the highest of all—the brain, from general medical study cannot but be a fruitful cause of incipient insanity being suffered to degenerate

into confirmed lunacy. The practising physician should therefore be able to foresee the approach of an attack; but if he have never studied, and have not a knowledge of, psychological medicine, the danger goes on from day to day, the chance of averting the evil is lost, and, when the patient has become an outrageous lunatic, he is taken to a "specialist"—that is, if he can afford it; if not, he is allowed to linger on, making his home wretched, and sinking every day into more incurable disease, when he is finally taken to an asylum, there in too many instances to remain till death releases him from his misery. When the universities and other licensing bodies demand a knowledge of mental diseases from all graduates in medicine, and not until then, insanity will meet with an important check to its future progress. The diffusion of this knowledge can only be effected by a practical study of this class of disease in a hospital set its apart for treatment.

There is no malady with which the practising physician should be more conversant, nor can he avoid coming into contact with it in his practice. He will be called upon to inquire into the mental condition of an individual, and to sign a certificate which is to deprive him of his liberty—one of the most important documents that he will have to deal with in his professional capacity, and in many instances fraught with serious consequences. Dr. D. Hack Tuke, writing on legislation for the insane in the *Contemporary Review* for October last, remarks: "It has been proposed that there should be no certificates signed except by physicians specially conversant with insanity; but how such an idea could be practically carried out in this country, we are at a loss to understand. The only remedy, we believe, lies in making insanity an essential part of every medical student's curriculum, and in doing everything to encourage clinical instruction by the medical superintendents of large asylums." In filling up this certificate, the physician will be required to state, for the information of the medical officers of the asylum under whose care the patient is to be placed, the form of insanity, the probable causes of derangement, the prominent symptoms, bodily and mental. He may also be called upon to give evidence in a court of law upon the soundness or unsoundness of mind of a patient, his responsibility or non-responsibility—possibly involving the issue of life or death. He will be asked if he agrees or disagrees with such a theory concerning moral insanity, emotional insanity, or volitional insanity. He may be told that delusions are essential to constitute a man legally insane; that insane people are responsible if they know right from wrong. And, lastly, he may be required to give evidence as to the testamentary capacity of his late patient. His evidence may decide the validity of wills in a court of law. These duties involve serious responsibilities for him, and perhaps grave issues to those for whom the testator was bound to provide.

Having regard, then, to the efficient fulfilment of these important and responsible duties, how can it be expected that a medical practitioner can do so without a knowledge of the diseases which form the basis of his inquiries? Is such knowledge to be gained by inspiration? or is it considered that these diseases are not sufficiently important to deserve more than a passing notice? I can assure the practitioner that the more he studies mental diseases, the more he will be convinced that they are no mean branch of the healing art, and that none will tax more his skill, patience, and ability as a physician. He will be obliged to bring to his aid not only a knowledge of those functions which are subservient to the animal life of the patient, but also a clear conception of those which collectively constitute mind.

There is one feature in the Cork asylum I would wish to bring under your notice on the present occasion; namely, the general employment of the Turkish bath as a sanitary as well as curative agent. Every patient in the asylum (except those not considered suitable by the medical officers) has a bath once a week (about eight hundred weekly). As a cleansing agent it is much superior to the ordinary warm bath, removing altogether that peculiar odour well known to those acquainted with the treatment of the insane. Its beneficial effects in promotion of the general health are particularly observable amongst the idiotic and epileptic classes, who are necessarily more confined than the other inmates, and therefore less capable of taking exercise. To these, by promoting the action of the skin, it to a great extent supplies the place of exercise in the open air. As a remedial measure in the cure of insanity, I consider it most valuable. In cases of melancholia and other forms of insanity, where the circulation is sluggish, also in scrofula and rheumatic affections, and in cases accompanied with persistent headache, I have seen great benefit derived from its use—with, in the latter cases, the employment in addition of the hot douche. The Turkish bath has also proved of great value in cutaneous affections and other disagreeable affections of the skin, so frequently observed amongst certain classes of the insane.

With these few remarks, I will not trespass further upon your valuable time; but, having done with the business part of my address ("Business first and pleasure afterwards" is an old saying, gentlemen), I would now wish to draw your attention to the various excursions arranged for your selection. This part of Ireland is celebrated for its lovely scenery, and is generally known amongst Irishmen as the Sunny South, and "Cork its fair city". I hope you will all have an opportunity of becoming acquainted, during your stay, with as many of its attractions as the time at your disposal will permit.

In conclusion, gentlemen, let me give you a hearty welcome, in my name and that of my colleagues. You have all heard of our national "Cead mille failthe"—an expression of which every Irishman feels proud. I am sure you will see it written on the faces of all my fellow-countrymen here this day. Our hospitality is celebrated not so much for its extravagance, as for the goodwill and kindly fellow-feeling with which it is offered.

REPORT OF THE MEDICAL REFORM COMMITTEE.

It is with no slight feeling of satisfaction that the Medical Reform Committee have to report to the members that the period seems to be at last approaching, when a satisfactory termination to the long continued and consistent efforts of the Association in regard to medical reform may reasonably be anticipated.

The original programme of medical reform, promulgated by the Association nearly half a century ago, has never been departed from. Some points were realised by the Bill of 1858, and it is remarkable that any further advance in maturing opinion on the subject has invariably consisted in following the lines at first laid down. Reciprocity, registration, and a national *Pharmacopœia* have been secured; but an uniform minimum standard of education and examination as an entrance to the profession, an effective amendment of the defective penal clause of the Act of 1858, and the deferred but never abandoned remodelling of the constitution of the General Medical Council, by the introduction of direct representatives of the profession, still remain unattained.

Various Bills were introduced before 1858, embodying provisions for direct representation and for a conjoint scheme; and, in the year 1856, a Bill was introduced by Mr. Headlam on behalf of the Association, embracing both principles, and the conjoint scheme included in it corresponded in all respects to that of the Government Bill with its latest improvements. That Bill was referred to a Select Committee of the House of Commons which sat in 1856, and which struck out the compulsory affiliation clauses. The English corporations, especially the Royal College of Surgeons, defeated the Bill, and thus proved themselves twenty-three years ago active and powerful opponents to the conjoint scheme. Since that day, the English authorities have become favourable to it, and, in 1877, succeeded in framing the necessary conditions, and last year supported the Government in the attempt to impose a similar one on the other divisions of the kingdom.

The vexed question of direct representation, however, was still unsettled; but, in July of last year, the General Medical Council resolved, *nemine contradicente*, that its constitution needed revision, and promised to report to the Government on the subject after its next meeting. The General Medical Council met in October, but still left the question untouched. Parliament reassembled, and Government were left without any other guidance from the Medical Council than such as might possibly have been afforded by the private representations of individual members.

The Medical Reform Committee, in their report at Bath last year, referred to the important success implied in the resolution of the General Medical Council, and in the fact that several members had admitted that the long expressed wishes of the Association and of the profession in regard to direct representation should be granted. The Committee in consequence not unnaturally hoped that this principle also had received distinct recognition, and that the Medical Council and the profession would thenceforth be brought into harmony.

The default of the Medical Council, in not reporting to the Government on the revision of its constitution in time for legislation, completely dissipated the hopes of co-operation expressed by the Committee in their last report, and left them no other alternative than independent action.

The General Medical Council met in October, when Sir Dominic Corrigan, the Rev. Dr. Haughton, and Mr. Macnamara pressed for revision with a view to reporting before the meeting of Parliament, but in vain. On this, as on all preceding occasions when the distasteful theme had been brought before the Council, the time was considered inopportune.

Under these unexpected circumstances, the Medical Reform Committee, despairing of co-operation with the Medical Council, also held a meeting in London in October. The Committee decided:

1. To ascertain, if possible, from the Government whether the principles which the British Medical Association and the profession advocated would be incorporated in the Government Bill, in order that in such case the Bill might be supported by the Association.

2. That, in the event of the Government not accepting such principles, the Medical Act Amendment Bill (No. 2) of last session should be redrafted and reintroduced with the view of having both Bills referred to a Select Committee.

On December 10th, the Reform Committee again met in London, Parliament having been summoned unusually early; and a Medical Bill having been introduced by Dr. Lush, which provided such wholesale changes in the Medical Council as the Committee were advised it would be impossible to carry. It was then again decided to ask the Government to introduce a Bill in unison with the principles of the Association, and, in case of failure, to take steps to obtain a Select Committee of the House of Commons on the whole question, a course recommended to the Committee by the Right Hon. Mr. Childers before the introduction of the Government Bill of 1878, as recorded in the last report of the Medical Reform Committee.

On the 17th December, Lord George Hamilton, in reply to Mr. A. Mills, stated that Government did not propose to deal with the modification of the constitution of the General Medical Council; and Mr. Mills submitted to the Medical Reform Committee that, as a discussion on Dr. Lush's Bill must take place before any Government Bill could be brought forward in the House of Commons, the best plan would be to move that the whole question of medical reform, including, of course, the reconstitution of the Medical Council, be referred to a Select Committee.

Another meeting of the Medical Reform Committee was held in London on January 8th, when the Chairman was again empowered to communicate with the Government in the interests of the Association, and, if unsuccessful, to request Mr. A. Mills to introduce the Bill of the Association, and ask for a Select Committee.

On January 29th, the fourth meeting of the Committee was held in London, when the Bill of the Association of last session was revised, and Mr. Nelson Hardy was appointed, in conjunction with the Chairman, to confer with Mr. Michael, Q.C., as to the redrafting of the penal clause.

Representations were made to the Government, without eliciting any satisfactory promise of aid in modifying the composition of the Medical Council; and, on February 26th, Mr. A. Mills introduced the Medical Act Amendment (No. 2) Bill on behalf of the Association, embodying all the principles for which the Association has contended, including that of direct representation.

On March 3rd, the Medical Reform Committee again met, and resolved: "That, in case of failure to induce the Government to accept the principle of direct representation, it would be advisable to obtain the appointment of a Select Committee to consider the subject of the constitution of the Medical Council." The limitation of the scope of the Select Committee was suggested in order to lessen the work, and permit a report in time for legislation during the present session.

Shortly after this meeting, the Government intimated its intention to propose a Select Committee to consider the constitution of the General Medical Council.

On the 19th March, the Medical Reform Committee held a meeting in London to confer with Mr. A. Mills, when Mr. W. H. Gladstone, M.P., Mr. Wheelhouse, Q.C., M.P., Mr. B. Williams, Q.C., M.P., also attended; and letters of regret for inability to attend were received from Dr. Lyon Playfair, M.P., Mr. H. C. Raikes, M.P., Lord Richard Grosvenor, M.P., Mr. Errington, M.P., Mr. G. O. Morgan, M.P., Mr. Watkin Williams, M.P., and Mr. J. Jones, M.P.

In consequence of a suggestion made by Mr. Mills and Dr. Wade, it was resolved to prepare a summary of the evidence to be offered before the Select Committee on behalf of the Association. A Subcommittee, consisting of Mr. Michael, Q.C., Dr. Wade, and the Chairman, was named for the purpose, with the addition of one member of the Parliamentary Bills Committee, to be nominated by that Committee. The Chairman of the Parliamentary Bills Committee, Mr. Ernest Hart, was so named.

On May 20th, 1879, the Medical Reform Committee held a meeting in Chester, which was attended, amongst others, by the Rev. Dr. Haughton and Dr. Grimshaw of Dublin. The former, as representative of the University of Dublin in the General Medical Council, has been examined before the Select Committee of the House of Commons, and, as might be expected from his clear incisive intellect, gave most valuable as well as telling evidence. He was distinctly commissioned by his University to support direct representation and the uniform minimum standard of education and examination.

The Government and the Medical Reform Committee desired to limit the inquiry of the Select Committee to the constitution of the Medical Council, so as not to risk the conjoint scheme; but the medical authorities in Scotland, aided by Mr. Errington and others, succeeded in extending the inquiry to all the points involved in the wide subject of medical reform.

The Select Committee have examined many witnesses, but still more have to appear before them. The Committee have consequently risen without concluding their labours. The earnest hope of the Reform Committee is that the Select Committee may be reappointed in the next session of Parliament, and that their report may form the basis of a settlement of the question for many years to come.

The Chairman of the Medical Reform Committee was examined—doubtless out of deference to the Association—immediately after the leading witnesses for the General Medical Council. Mr. Ernest Hart, the editor of the JOURNAL of the Association, has also been examined; and it may be fairly said that the evidence thus given, together with that of Sir Dominic Corrigan, Dr. Andrew Wood, and Dr. Glover of the *Lancet*, has placed before the Committee facts with regard to direct representation which the House of Commons cannot ignore. The case for direct representation has thus been submitted to an impartial tribunal, and the long disputed claim of the profession to some voice in shaping its future destinies can scarcely be resisted; and it may not unreasonably be expected that the long sustained struggle of the Association on behalf of the profession will, at no very distant period, be crowned with success. Certain it is that no measure of medical reform can be final which is opposed to the expressed views of the profession.

The Medical Reform Committee have to thank the Branches of the Association, the provincial medical schools, and the profession generally, for the support afforded them by petitions in favour of the Bill of the Association—petitions which have made their weight felt by the Government. The Association has only to remain true to itself to ensure success.

The report of the Reform Committee is a plain narrative of the salient features of the work of the Committee—passing over the minor details involved in repeated interviews with Government, and with parliamentary advisers, without whose aid the Committee could not have attained the success that has rewarded their labours.

The Committee feel that the special thanks of the Association are due to Mr. Arthur Mills, M.P., for his valuable and continuous efforts on behalf of the medical profession.

Further witnesses may be required on behalf of the Association; and the Medical Reform Committee have, therefore, to recommend their reappointment, with power to add to their number.

EDWARD WATERS, *Chairman and Convener of the Committee.*

REPORT OF THE PARLIAMENTARY BILLS COMMITTEE.

THE attention of the Parliamentary Bills Committee has been directed this year to the position and prospects of the army medical officers, to the amendment of coroners' law proposed by the Coroners' Bill, to the question of the position of medical education at the University of Oxford as regulated by the Universities Commission under the authority of Parliament, to the amendment of the Sale of Food and Drugs Act, to co-operation with a subcommittee of the Medical Reform Committee of the Association, in preparing arguments in support of the Medical Acts Amendment Bill introduced by Mr. Mills with the view to the preparation of evidence before the Select Committee of the House of Commons, and to the consideration of clauses relating to the registration of diseases in private Bills before the House of Commons. The Committee has also given its assistance to the Irish Medical Association with a view to procuring modifications in the present position of infirmary officers, who are also medical officers of gaols, and to an amendment of the vaccination laws of Ireland.

In respect to the Army Medical Department, the Committee have seen with great pleasure that a departmental commission, appointed by the Secretary of State for War to inquire into the causes which tend to prevent sufficient eligible candidates from coming forward for the Army Medical Department, have made recommendations which include a number of ameliorations in the position of the medical officers of the army, which have on previous occasions been pressed upon the consideration of the Government by your Committee.

Thus your Committee see with satisfaction that it is proposed that retirement shall be optional after ten years' service, on pensions according to length of service; that all medical officers of field rank shall be entitled to draw forage for a horse, if they keep one; that medical officers shall be placed on the same footing as combatant officers in regard to leave of absence on account of sickness, in regard to half-pay in case of wounds and ill-health, and in regard to exchanges when the

interests of the public service are not interfered with by them; that honours and good service rewards shall be bestowed on the medical officers on the scale applicable to combatants; that surgeon-majors shall rank with lieutenant-colonels, according to the date of completing twenty years' service; that no rules affecting the interests and welfare of medical officers of any grade shall be applied, without having been previously published for general information; that probationers for the departments shall receive pay at the rate of eight shillings a-day, and that improved rates of pay and retirement of medical officers shall be adopted, as shown in Section 93 of the departmental report referred to. Finally, they feel great satisfaction at the recommendation of the Commission to carry out the suggestions which they have more than once urged upon the Secretary of State for War, abolishing the system of short service, and giving corresponding advantages to medical officers who have already joined the service under the obnoxious ten years' rule. On the other hand, your Committee altogether dissent from the recommendations of that Commission which suggest that commissions in the Army Medical Department should cease to be given after public competition, as they have been during the last twenty years. Your Committee are convinced that no system of admission into the service which excludes fair and open competition will ever be satisfactory to the bulk of the profession or to the public.

Your Committee think also that allowances for messes should be granted at all large stations, so that the medical officers may have the same benefits in this respect as other officers; and they are strongly of opinion that no such reduction in the executive ranks should take place as will be a bar to medical officers getting leave of absence, either on private affairs according to service rules, or for purposes of professional improvement.

A memorial to this effect has accordingly been prepared and presented to Colonel Stanley, Secretary of State for War; and it will be seen, when the promised warrant may be issued, how far those of the recommendations of your Committee which have not already been acceded to will be included in that warrant. It is a source of satisfaction that so many of the suggestions which your Committee have made have been adopted as a basis for the forthcoming warrant. On the other hand, if the entrance examination into the army be abolished, it will be the duty of the Parliamentary Bills Committee to continue to exercise its influence with the view of restoring to the service that most satisfactory test, which is alike a protection to it, to the profession, and to the public.

In respect to the Faculty of Medicine of Oxford, your Committee have had to deplore the present decadence of the Medical Faculty and of medical education at Oxford, and they adopted a memorial to the House of Commons for an instruction to the University Commission to make the necessary provision for increasing the facilities of medical education at that University, and utilising its ancient endowments for that purpose. A suitable memorial was drafted and submitted to the Committee of Council, and, with the assent of the Committee of Council, was circulated in the JOURNAL. Upwards of two thousand members, including a large number of highly influential and well known persons, signed copies of that memorial, and forwarded them to the office. These signatures have been appended to the petition, which has been presented to the House of Commons. A copy of the memorial has also been brought under the notice of the Hebdomadal Committee of the University, and by them referred to a Committee which has been appointed to consider the subject of medical education.

Considerable improvements have been made in the Sale of Food and Drugs Act by an amending Bill, which has received the Royal assent, and has now become law. It will henceforth be impossible to resist convictions for the adulteration of food or drugs upon the plea that articles purchased for analysis by officials were not sold to the prejudice of the officials purchasing; and some of the principal technical difficulties which have been interposed, and which have prevented the purchase for analysis of articles of food sold in public places elsewhere than in shops, have also been removed. On the whole, the Act for the amendment of the Sale of Food and Drugs Acts embodies most of the important amendments which your Committee have supported, with the exception of one which they desire to be introduced for facilitating the analysis of water for health purposes.

The Coroners' Bill, which had been last year the subject of much consideration by your Committee, and on which they had issued a report containing valuable suggestions from the medico-legal authorities in the country, has been referred to a Select Committee. The documents collated by your Committee, together with other suggestions for the amendment of the law, have been brought under the notice of the Select Committee, and have been by them considered. They have, however, declined to call the witness whom your Committee designated, Dr. Alfred Swaine Taylor, on the ground that the information conveyed by the printed documents submitted was already sufficiently ample.

The report of the Select Committee includes some valuable improvements, especially in that it assimilates English to the Scotch method of obtaining information as to the causes of death by the regular investigations of skilled medical experts, and provides also for adequate medical evidence in all cases on the system adopted in Scotland. In other respects, this report cannot be considered satisfactory, and especially in that it proposes that coroners shall in future be selected exclusively from the class of lawyers. The present objection to the mode of election of coroners will also remain unaltered, if this Bill become law in its present form. It will be very desirable that the Association should give further consideration to this measure; and it is obvious that the recommendations of the Select Committee cannot be considered adequate to the due amendment of the law in view. The whole subject is one of considerable difficulty, and your Committee fear that it will require the whole influence of the Association to be exerted throughout the country upon members of Parliament, if any successful effort is to be made to mould the Bill into a satisfactory shape. It would, for all reasons, be desirable that the further progress of this Bill should be opposed during the present session of Parliament.

Your Committee, having had their attention called by the North of Ireland Branch of the Association to the present position of infirmary surgeons who are also medical officers of gaols, have passed a resolution "That, in the opinion of this meeting, the present position of infirmary surgeons in respect to their gaol work is a practical injustice to them, and the suppression of the office of apothecaries would be detrimental to the public service". Copies of this resolution were sent to the Secretary of State for Ireland and to medical members in the House of Commons, with a request that they would favour the Committee by forwarding their views in the House of Commons.

The Chief Secretary for Ireland and the Lords Justices of Ireland have undertaken to give this matter careful consideration, and to make further communication to the Committee on the subject. As, however, the matter is being very efficiently conducted on behalf of the medical officers by the Council of the Irish Medical Association, your Committee have preferred to leave the initiative with them, giving them their most hearty support in such steps as they may consider desirable to procure the necessary reform.

Dr. Cameron has introduced, this session, into the House of Commons, a Bill providing animal vaccination as an alternative to the existing method of vaccination with humanised lymph, for persons having conscientious objections to the use of the latter, on the ground of its possible conveyance of other virus into the system. With the view of studying this subject in a country where vaccination with animal lymph has been carried out on a large scale at official establishments for several years, the Chairman of the Committee has, on two occasions, visited the animal vaccination bureaux in Belgium, and has prepared a report on the subject.

Dr. Cameron's Bill has been withdrawn this year, owing to the pressure of other Parliamentary business; and it will be part of the work of the Committee, before the ensuing session, in conference with Dr. Cameron, to lay before the profession a summary of the existing information on the subject, with the view to elicit an expression of opinion as to the most desirable course to be pursued in reference to Dr. Cameron's Bill. The subject is one of interest not only in the profession, but also in the minds of a large section of the public, and appears to be worthy of more detailed investigation than it has yet received in this country.

ERNEST HART, *Chairman.*

REPORT OF THE HOSPITAL OUT-PATIENT REFORM COMMITTEE.

THE Hospital Out-Patient Reform Committee have the honour of submitting their report of their proceedings during the past year to the Association.

Two subjects were given to them for their consideration when the Committee was formed, viz.: 1. The reform of the out-patient system in the metropolis; and, 2. The working of the provident dispensary system in Manchester. With reference to the reform of the out-patient system in London, the Committee can report a very marked advance towards unanimity in the opinion of all interested in the matter, both lay governors of hospitals and medical men of all classes, that some reform is urgently needed. In proof of this, they may refer to the fact that the treasurers, or other authorities, of all the great hospitals have formed themselves into a Committee to consider the subject of out-

patient reform. In order to see what support may be anticipated from the hospitals themselves towards any practical steps which may be taken for the purpose, the Committee have requested interviews with the governing bodies of four of the chief metropolitan institutions, selected as representing different classes, viz.: the London Hospital, as a great school of medicine situated in the east of London; the Westminster Hospital as a west-end hospital, and one known to be oppressed by an influx of out-patients larger than its resources are adequate to provide for; the Royal Free Hospital, a hospital without a school of medicine (except a small one for female students), but with a large out-patient department; and the Metropolitan Free Hospital, which is hardly more than a dispensary, and which, like the Royal Free Hospital, is founded on the principle of throwing open their doors absolutely to every one who chooses to come in, though no doubt with the condition expressed or implied, that they shall be poor.

From all these institutions they obtained answers, the sincerity of which is not open to question, that the governing bodies see the evils of the present system and would welcome, and to the utmost of their power assist, the formation of provident dispensaries, or any other well considered step which may be taken to mitigate those evils. At the same time, the governors of the Metropolitan and Royal Free Hospitals pointed out to your Committee with perfect frankness the difficulty which is thrown in their way in attempting any limitation of the relief which they give, by the very principle of their constitution, which is, that relief should be free, or, as the term is interpreted, indiscriminate.

From this, it appears that the governing bodies of hospitals are prepared to welcome an attempt to found provident dispensaries on a large scale, and on a satisfactory system, in the metropolis; and without for a moment asserting that such institutions will act as a panacea for all the evils of the present out-patient system, most of the members of the Committee feel confident that they are the most practical reform which has as yet been suggested, and that, in the east end of London especially, and in other parts which are badly supplied with hospital accommodation, they are urgently needed. Your Committee, therefore, contemplated an attempt to elicit the feeling of the medical practitioners, first of this, and then of other parts of the metropolis on the subject; but, as the time at their disposal in the present year has not been sufficient, they have thought it better to leave this task to the new Committee, which they recommend the Association to appoint.

Other reforms which have been suggested, but have not as yet been adopted by the governors of our hospitals, are to convert the out-patient department into one mainly for consultation, to exact payment from the patients, or to restrict out-patient relief to those who have been in-patients. Some of these plans seem deserving of trial, at least experimentally, but they have not as yet been tested by experience in the metropolis.

On the second subject, a Subcommittee, consisting of all the Manchester members of the Committee, had made a report before the last annual meeting, but not in time to be maturely considered by the Committee. Such consideration has now been given to this report, and it has been laid before the Provident Association at Manchester for any remarks they wished to make. The correspondence will be found in the minutes. It has left no doubt on the minds of the Committee of the accuracy of the report of their Subcommittee, which has, therefore, been adopted, and is to be found in the JOURNAL for August 17th, 1878, p. 250. The Committee much regret that the defects pointed out in the report should have marred for the present the complete success of the provident system at Manchester, and alienated the majority of the profession in that city from the system as at present administered. At they same time, they cannot but express their opinion that such errors are only matters of detail, easily avoidable at first, and still quite within the power of the Manchester Provident Association to correct, and they are glad to call attention to the words of their Subcommittee's report, as showing that the same is the opinion even of the Manchester members who complain of the working of the present system there, as the following extract from that report proves: "It must be clearly understood that this unfortunate result is not due to the fault of the principle, but to failure in the management" (page 6 of report).

The minutes of the last meeting of the Committee contain an interesting report from Dr. Nankivell, showing the success which has attended the foundation of provident dispensaries on a sound footing in Leicester and Northampton.

In conclusion, they beg to congratulate the Association on the prospect that some practical action will at length be taken to remedy evils which have been complained of, and more or less widely admitted, ever since the report of Sir W. Fergusson's Committee was published in the year 1870.

T. HOLMES, *Chairman.*

REPORT OF THE SCIENTIFIC GRANTS COMMITTEE.

THE Scientific Grants Committee have held four meetings during the past year. The sum of £300 was voted to the uses of the Committee at the Annual Meeting of last year, and the grants made were as follows.

	£	s.	d.
Dr. J. Cossar Ewart.—On the Life-History and Pathological Relations of the Specific Organisms already known, and for the Discovery of other similar Organisms and the Channels through which they enter the System	15	0	0
Dr. H. Radcliffe Crocker.—On the Physiological Action of Alcohol, with especial Reference to its Mode of Elimination	50	0	0
Dr. C. Roy.—To elucidate more fully than has yet been done the Natural Form of the Arterial Pulse-Wave and the more intimate Nature of the Changes which it undergoes	40	0	0
Dr. Berkart.—Researches into the Nature of Gout	15	0	0
Drs. Braidwood and Vacher.—Life-History of Contagium	37	0	0
Dr. Thin.—The Nature and Development of Conditions of Life of the Vegetable and Animal Parasites that infest the Human Skin	20	0	0
Mr. Chiene.—1. Are there present in Organs of Living Animals Particles which originate the Bacteria met with after Death? 2. Do the Discharges from Wounds which are Antiseptically Treated contain Organisms?	15	0	0
Dr. Burdon Sanderson.—To Illustrate his Paper on Epizootic Pneumonia	40	0	0
Committee on Hydrophobia	50	0	0
Dr. S. Mackenzie.—Research on the Minute Anatomy of Pyæmia	25	0	0
Dr. J. Barlow.—An experimental Investigation into the Changes produced in the Blood-Vessels by Alcohol	10	0	0
Dr. McKendrick.—Committee upon the Investigation of Anæsthetics	34	7	10
	£351	7	10

£174 9s. 10d. of this has been expended, and £177 5s. has been returned to the funds of the Association. The following is a list of the balances returned.

	£	s.	d.
Dr. J. C. Ewart	11	10	0
Dr. Crocker	24	4	0
Dr. Berkart	8	4	0
Drs. Braidwood and Vacher	27	4	0
Dr. Thin	7	9	0
Mr. Chiene	15	4	9
Dr. Burdon Sanderson	25	0	0
Hydrophobia Committee	50	0	0
Dr. Barlow	8	9	3
	£177	5	0

In reference to the Research on the Life-History of Pathological Relations of the Specific Organisms already known, and for the discovery of other similar Organisms and the Channels through which they enter the System, Dr. Ewart reports that, in consequence of his moving from London to Edinburgh and afterwards to Aberdeen, he has unfortunately not been able to complete the investigation, and asks for a continued grant of £10.

In reference to the Research on the Physiological Action of Alcohol, with especial reference to its mode of elimination, Dr. Crocker reports that he is still continuing the experiments, which were commenced in January last, and asks that the balance, £24 4s., be returned to him for continuing the Research.

In reference to the Research to elucidate more fully than has yet been done the Natural Form of the Arterial Pulse-Wave, and the more intimate nature of the changes which it undergoes, Dr. Roy reports that his investigations are being carried on abroad, and hopes shortly to send his report.

In reference to the grant in aid of Researches into the Nature of Gout, Dr. Berkart reports that his researches are not yet so far advanced that he can furnish an account of them, but he proposes to continue the investigations on his own account.

Drs. Braidwood and Vacher report, in reference to their continued Research into the Life-History of Contagium, that they have advanced a stage in their investigations by having made use of an opportunity of studying so-called Pig Typhoid. They have in hand a series of water-colour drawings of the naked-eye appearances of disease effected by this contagium, and also a series of microscopical slides in illustration of its minute anatomy. This will shortly be published, and they ask for a further grant for the continuation of their researches into this subject.

Dr. Thin, in reference to the grant made to him in aid of his Research into the Nature and Development of Conditions of Life of the Vegetable and Animal Parasites that infest the Human Skin, reports that he is not yet able to report much progress, as he had to diverge in a branch research in order to obtain the necessary knowledge for commencing the investigation he proposed.

In reference to the grant made to Mr. Chiene in aid of Researches into the questions—1. Are there present in Organs of Living Animals

particles which originate the Bacteria met with after death? 2. Do the Discharges from Wounds which are Antiseptically treated contain Organisms?—Mr. Chiene reports that some work has been done, but that it has been postponed in consequence of the absence of his assistant. He proposes to continue the investigations, and hopes to send a report next year.

In reference to the grant made to Dr. Burdon Sanderson for the illustration of his report on Pleuropneumonia, this paper has been printed by the Association, and can be obtained at the Office, the price being 6d. a copy for members, and 1s. for non-members. It forms the first of a series of Reports of Scientific Researches which your Committee propose to recommend for publication from time to time.

In reference to the Research on Hydrophobia and Rabies, the Subcommittee report that their best thanks are due to the Surgeon-General of the United States of America, who has courteously and largely aided the Subcommittee in their investigation. Their report approaches completion, the major portion having been laid before the Committee of Council, and they anticipate the conclusion of their work in the course of the present year.

In reference to the Research of Dr. Barlow, the investigation is still continuing.

In reference to the grant made to Dr. Stephen Mackenzie in aid of a Research into the Minute Anatomy of Pyæmia, Dr. Mackenzie states that his report is in active progress, and he hopes soon to lay it before the Committee.

The Subcommittee on Anæsthetics have issued several valuable reports upon the subject, which have appeared in the JOURNAL. They propose to continue the investigation.

The grants now recommended to be made are as follows; and your Committee recommend that a sum, not to exceed £300, be allowed from the funds of the Association for the purpose.

	£	s.	d.
Dr. Ferrier and Dr. Gerald Yeo.—Research to determine the Conditions of Safety in Surgical Operations, and to ascertain the Effects of Lesions of different parts of the Brain on the Bodily and Mental Functions	50	0	0
Dr. Newman.—Research on the Functions of the Kidney, and on the Physical Conditions which regulate the Flow of Urine	10	0	0
Mr. Malcolm Morris.—An Investigation into the Anatomical Characters of certain Diseases of the Skin allied to Tubercular, Scrofulous, Lupoid, and Syphilitic Affections	10	0	0
Dr. McKendrick.—Investigation on Anæsthetics	50	0	0
	£120	0	0

Five further applications, for sums amounting to £190, have been made, and their consideration has been postponed to the next meeting of the Committee.

GEORGE W. CALLENDER, *Chairman.*

REPORT OF THE COMMITTEE FOR PROMOTING LEGISLATIVE RESTRICTIONS FOR HABITUAL DRUNKARDS.

YOUR Committee are able to report that the Bill which Dr. Cameron introduced into the House of Commons last year, and which passed a second reading shortly before the Bath Meeting, was not proceeded with. Dr. Cameron introduced it again early in the present session. It passed through both Houses without a division, and it received the Royal assent 3rd of July, 1879, under the title of "The Habitual Drunkards' Act, 1879".

The Bill was narrowly watched by your Committee. Conferences, in conjunction with the Society for Promoting Legislation for Habitual Drunkards, were held with the Home Secretary, Lord Aberdare, and Lord Shaftesbury, and improvements suggested, some of which have been embodied in the Act. The Committee congratulate the Association upon the result, which, however, they can only consider as the first instalment of a more perfect measure. They are of opinion that a cordial vote of thanks should be accorded to Dr. Cameron for the ability with which he introduced the Bill and the judgment with which he carried it through the House of Commons; also that a vote should be given to Lord Shaftesbury for the care which he bestowed upon the Bill, and advice he tendered to the Committee with regard to its provisions. The Bill was drafted by the Habitual Drunkards Society, without whose aid the measure would not have been obtained.

A strenuous effort should now be made to bring into action some scheme by means of which the Act can be made effective.

The Committee are able to report that private efforts are about to be made for this purpose; but they are of opinion that a strenuous exertion should be made to procure the formation of a Society, who could elect a Committee of Management for the purpose of providing a residence fit for the reception of patients. A retreat should be established; its superintendent should have no pecuniary interest in the detention of patients; he should be a salaried officer, and responsible to the Committee of Management, who should appoint him.

By this means, accommodation could be provided for the poor as well as the rich, which can only be afforded by a properly organised association on the basis indicated by your Committee.

In conclusion, your Committee, encouraged by the success hitherto achieved, are still aware that further efforts in the same direction will be required, they ask therefore for their reappointment as heretofore.

ALFRED CARPENTER, M.D., *Chairman.*
S. S. ALFORD, *Vice-Chairman.*
E. H. VINEN, M.D., *Hon. Sec.*

REPORT OF THE COMMITTEE ON THE REGISTRATION OF DISEASE.

THIS Committee have for fifteen years persistently urged the importance of registering all cases of sickness occurring in public practice; and, since 1874, they have pointed out the great advantages, in a sanitary point of view, of obtaining intelligence of all cases of certain infectious disorders as they arise.

The members of the Association assembled at each annual meeting have approved of the suggestions of this Committee, in almost every instance without a dissentient voice being raised against them; and on several occasions they have authorised memorials and deputations to Secretaries of State, to the Local Government Board, and to the Houses of Parliament, praying for the adoption of a national system of registration of disease.

During the last two or three years, the efforts of the Association, to secure the early notification of the presence of infectious disorders, have been strongly supported by the action of local authorities in different parts of the country; but it is to be regretted that the method adopted in some of these places has not been based upon the lines drawn out by this Committee.

The medical officers of health of these localities have discovered the fact, pointed out long ago by this Committee, that it is almost useless to attempt to check the course of an epidemic, with no earlier intimation of its presence than is afforded by the registrar's returns of mortality. Attempts have accordingly been made to obtain information of the first occurrence of cases of infectious disease from the medical practitioners of the district, and, on the failure of this attempt, the local authorities of several districts have had recourse to some form of compulsion. In most instances, they have applied to Parliament for power to compel medical men to notify the occurrence of cases of infectious disease in their respective districts. Penalties, varying from 40s. to £10, were to be inflicted for the non-performance of this service, and fees of 2s. 6d. or 3s. 6d. were to be paid for each certificate.

It is greatly to be deplored that the suggestion has not been followed that was made in the first instance by this Committee, namely, that the householder, or person in charge of the infectious case, should be the person required to notify the case to the medical officer of health.

The importance of an early notification of the commencement of an epidemic is so great, that the undertaking should never have been imperilled by the enactment of obnoxious and entirely unnecessary penal clauses against medical men; and, in several towns, it has already roused against it the strenuous opposition of members of the profession, by whose willing aid alone it could be carried into effect.

There are several grave objections to the proposal to make the medical attendant primarily responsible to the local authority for the notification of the presence of infectious disease in the households of their patients.

1. Whatever may be said as to the abstract right of the State to require this service, it is most undesirable that the confidential relation of the medical attendant and patient should be disturbed, or that the former should be placed in the position of an "informer" in reference to the affairs of the latter.

2. It is not well that, in addition to the heavy responsibilities and risk to life attaching to attendance upon cases of infectious disease, medical men should be liable to vexatious actions at law, and to heavy penalties for alleged non-performance of a duty that lies outside of their ordinary practice, and that would be more justly and better performed by persons in charge of the cases.

3. Such an enactment would also often tend to defeat its own ends, seeing that it would in many cases prevent resort to medical assistance, or lead to the employment of unqualified practitioners, and to more frequent application to druggists. Patients suffering from these complaints

would thus not only run much greater danger to life, but the community would be more frequently exposed to danger of infection.

4. Any injury to trade, or to the means of gaining a livelihood, in consequence of this notification, would probably be ascribed to the action of the medical attendant, and, in case of a disputed diagnosis, might lead to further evils than mere loss of practice.

5. It is not desirable that the extent of a medical man's practice in these cases should be made known to, and commented upon by, members of the various Local Government Boards. None of those objections apply to the plan proposed by your Committee; and if the returns of disease made by householders were sent direct to the medical officer of health, and were considered by him as confidential, the measures necessary for the protection of the neighbours could be carried out without unnecessary publicity, and much needless alarm on the part of the community would be avoided. It has been suggested that, in poor districts, it might be very difficult to obtain from ignorant and illiterate persons the necessary announcement of the nature of the case; but the authoritative declaration of the nature of the case must necessarily come, in the first instance, from the medical attendant, and, if he were provided with a form that could be countersigned and forwarded by the householder, the responsibility of the latter for the notification of the case would remain with him; the medical man would simply have done his duty towards his patient.

Inasmuch as this service would be rendered also to the local authority, he might reasonably claim to be remunerated by them for the certificate.

In conclusion, your Committee would remind the Association of the great importance of the subject; and, whilst they have pointed out the objections to the course pursued in some places, they would at the same time beg the medical profession to support, by all the means in their power, the establishment of a satisfactory method of notifying the occurrence of the more important forms of infectious disease.

[*Note.*—The places that have adopted the system suggested by the Association are Greenock, and, it is believed, Burton-on-Trent and Brighton. The towns adopting or encouraging compulsion of medical men are Bolton, Jarrow, Leicester, South Shields, and Edinburgh.]

FORTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CORK, August 5th, 6th, 7th, and 8th, 1879.

SECOND GENERAL MEETING, WEDNESDAY, AUGUST 6TH.

THE second general meeting was held in the Examination Hall of Queen's College; Dr. D. C. O'CONNOR, the President, in the Chair.

Committee of Council.—Dr. A. CARPENTER, President of the Council, reported that the following gentlemen had been elected members of the Committee of Council for the ensuing year: T. Clifford Allbutt, M.D., Leeds; J. T. Arlidge, M.D., Newcastle-under-Lyme; L. Borchardt, M.D., Manchester; J. B. Bradbury, M.D., Cambridge; G. W. Callender, Esq., F.R.S., London; B. Foster, M.D., Birmingham; E. Long Fox, M.D., Clifton; Arthur Jackson, Esq., Sheffield; C. E. Lyster, M.D., Liverpool; F. E. Manby, Esq., Wolverhampton; Frederick Mason, Esq., Bath; Edward Morris, M.D., Spalding; R. H. B. Nicholson, Esq., Hull; G. H. Philipson, M.D., Newcastle-on-Tyne; T. L. Rogers, M.D., Rainhill; E. H. Sieveking, M.D., London; Henry Stear, Esq., Saffron Walden; A. P. Stewart, M.D., London; W. F. Wade, F.R.C.P., Birmingham; C. G. Wheelhouse, Esq., Leeds.

Place of Meeting in 1880: *President-elect.*—Dr. CARPENTER (Croydon) proposed—

"That Cambridge be the place of meeting for 1880; and that Professor Humphry be appointed President-elect." [*Cheers.*]

He said that the Council, at their meeting that morning, received a very cordial invitation from Cambridge to make that important city the place of meeting for next year; and it was unanimously determined to accept that invitation, and also to accept the nomination made by the profession at Cambridge that Professor Humphry should be the President-elect. [*Cheers.*] The Council now recommended that the members in general meeting assembled should stamp this action with their approval.

Mr. HUSBAND (York) said he rose with the greatest pleasure to second the resolution proposed by Dr. Carpenter. To no place could the Association go—such was the experience of those who went before—with feelings of greater satisfaction than to the University of Cambridge, which was now endeavouring to promote within herself the teaching of the art and science of medicine. [*Cheers.*] The members of the profession hoped to see the teaching of medicine associated closely with the old universities; and when it was remembered that Professor Humphry had throughout laboured to promote not only the practice, but to elevate to the highest degree the science of the profession of medicine, the members would have at their head one who, they would be proud to know, had achieved not only an English, but an European reputation. [*Cheers.*]

The resolution was carried unanimously.

The Address in Medicine.—Dr. HUDSON, who was warmly cheered on rising, delivered the Address in Medicine. [It was published at page 204 of last week's JOURNAL.]

Dr. ANDREW CLARK, in proposing a vote of thanks to Dr. Hudson, said that, if the members generally had listened to the admirable address with half the pleasure he had derived from it, they would receive with acclamation the resolution which he had the privilege to propose. Whether he looked upon the plan of the address or the manner of its execution; whether he regarded its felicities of language or its fertility of illustration; its philosophic breadth or discriminative minuteness; its ripe knowledge, mature wisdom, or most charming simplicity—he saw equal grounds for congratulating both the speaker and the Association. It was not only what was said on occasions of that kind, but also he who said it, that should be considered; and these considerations gave a double force to the present address. Dr. Hudson was one who occupied, and, as they would all agree, occupied justly, one of the most prominent positions among the physicians, not alone of this country, but of this empire. [*Cheers.*] He was beloved by his profession, because he had always been loyal to his profession, generous to his contemporaries, and more than kind to his youthful brethren. [*Loud cheers.*] He was respected—nay, revered—by the public, because they found in him a man of unsullied honour and of unbending integrity. Whether the members of the Association had considered the address or the man who had delivered it, they had equal cause to rejoice that this meeting of the Association had been so distinguished. For himself, he regarded it as one of the most pleasing incidents of his visit to Ireland, that it had brought him so near a man whom he had always respected and revered. [*Applause.*] He proposed—

"That the best thanks of this Association are due, and are hereby given, to Dr. Hudson for his able and interesting Address in Medicine."

Dr. RINGROSE ATKINS (Waterford) said it was with no small feelings of pride and pleasure he seconded the resolution proposed by Dr. Clark. He regarded Dr. Hudson as a physician of world-wide reputation, and at a meeting of the Association in this country no one could have been selected who would have filled the place he had occupied more worthily than he had done. They had all listened to the address with pleasure, and would, he hoped, profit by it; and it would leave a mark on the meeting which would not rapidly be effaced. [*Applause.*]

The PRESIDENT, in putting the vote of thanks, said that there were some inconveniences attending an advanced life; but there were some moments of enjoyment also, when a man thought he was happy in having lived to feel them. That was one of his moments of enjoyment. [*Cheers.*] For nearly half a century there had been, he was proud to say, a close friendship between Dr. Hudson and himself. He was Dr. Hudson's fellow-student under Stokes; and Dr. Hudson in their student-days was far in advance of him, and was adopted by Stokes when he was merely a stranger in the country, adopted by him as a favourite student, one with whom he could hold converse above any other in his class. If the students of 1833-4 had been called upon to vote, they would have placed Dr. Hudson at the head of the students of his period, as the profession would now place him. It was a pleasing thing for himself, in looking back over the events of a long life, to see how real merit was rewarded by public favour. In this case, they had equally gone hand in hand. [*Applause.*]

The vote of thanks was carried unanimously.

Dr. HUDSON, in returning thanks, said that, like Laennec, he was no histologist, and was not, therefore, able to offer an opinion on the most important question under discussion at present, and that was the nature of tubercle in relation to consumption.

Presentation.—Dr. GALLARD of Paris, speaking in French, presented the Association with copies of his various works for the Association's library. Dr. Henry Bennet acted as interpreter.

Dr. CARPENTER, on behalf of the Executive Council, accepted the present which had been made by Dr. Gallard, but said that the Association, as a travelling Association, had no library, and at present had no intention of forming one. He therefore suggested that the books should be presented to the library of Queen's College, in which they were meeting, as a memento of this visit. [*Cheers.*] If that proposition

should be accepted by the Association, it would be an honour to the gentleman who had addressed the meeting, and moreover, the books could be usefully consulted in the College. [*Cheers.*]

Foreign Visitors.—Dr. CARPENTER said that there were various foreign delegates present, and the Council would be happy to see them on the platform. A letter had been received from Professor Donders as follows.

"Utrecht, May 4th, 1879.

"My dear Sir,—I regret very much that I shall not be able to avail myself of your kind invitation to assist in the meeting of the British Medical Association in August next at Cork; and I regret it especially, as I should have found an extremely good opportunity of urging our British colleagues to come over to Amsterdam from the 6th to the 13th of September next, at the meeting of the Congrès International des Sciences Médicales. Allow me now to ask you to tell the members of the British Medical Association how happy we shall be and how much honoured by a visit of a great many among them. I have the pleasure to send you a certain number of *programmes provisionnaires*, which may be distributed in the different lectures. We shall be much obliged by receiving a reply, or rather the communication of every colleague who intends to assist at the congress, as soon as possible after your meeting, in order that some arrangements may be made for their accommodation. Mr. Guye, in Amsterdam, is the General Secretary.—I am, dear sir, yours very truly, "DONDERS."

The letter was received with cheers, and the second general meeting then closed.

THIRD GENERAL MEETING, THURSDAY, AUGUST 7TH.

The third general meeting was held at 11 A.M., in the Examination Hall of Queen's College. Dr. O'CONNOR, President, occupied the Chair, and there was a large attendance of members.

Report of the Medical Reform Committee.—Dr. EDWARD WATERS (Chester), Chairman of the Committee, read the report. It is published at page 252. Dr. Waters moved—

"That the report of the Medical Reform Committee be received and adopted; and that the Committee be reappointed as follows, with power to add to their number: Dr. E. Waters, Dr. R. W. Falconer, Mr. W. D. Husband, Dr. Alfred Carpenter, Dr. M. M. De Bartolomé, Dr. C. Chadwick, Dr. E. Copeman, Dr. J. G. Davey, Dr. Balthazar Foster, Dr. T. W. Grimshaw, Mr. H. Nelson Hardy, Mr. Ernest Hart, Rev. S. Haughton, Dr. D. J. Leech, Mr. F. E. Manby, Mr. W. H. Michael, Q.C., Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. W. F. Wade, and Mr. C. G. Wheelhouse."

In moving the resolution, Dr. Waters thought he might very fairly refer to the many difficulties which the Committee has had to encounter in moving in this matter,—one so vital to the profession as that of medical reform. A more striking illustration of the difficulties of dealing with the subject could not well be given than by mentioning the fact that three Committees of the House of Commons had already sat upon this subject, without as yet bringing it to anything like a satisfactory termination. The action of the present Medical Reform Committee had now been going on since 1867—during a period of twelve years; for, though it was at first simply a Direct Representation Committee, yet afterwards the Committee was modified after the withdrawal of the Government Bill of 1870, and its name was changed to that of Medical Reform Committee. Though having, from that time, to take up the whole question, the Committee must yet be regarded as one and the same, though its members had been a little changed by the misfortune of death and by certain additions. At the early period, the Committee had the able assistance of Mr. Headlam, who had been really the means of carrying the Bill of 1858. Government after Government, as well as private members, had dealt with the subject before 1858; but one and all found themselves unequal to deal with it successfully. Mr. Headlam again came to the aid of the Association in 1871. When the Medical Reform Committee had Mr. Headlam for their advocate, he was a gentleman thoroughly familiar with the whole question in all its bearings, and who did not require to be educated in it, as other members of the legislature necessarily would require to be, in order to take up the subject with any chance of success. When Mr. Headlam ceased to be a member of parliament and died, the position of the Committee was materially altered, and for some time, while the medical authoritiies in England were trying to agree upon a conjoint scheme, the Committee, in order not to embarrass their proceedings, suspended their labours. But once they had come to anything like an agreement as to the grounds on which the conjoint scheme was to be formed, the Committee resumed action, and, amongst other members of the House of Commons, they were strongly advised to consult Mr. Childers, late First Lord of the Admiralty. Mr. Childers took a great interest in the question, and after his name had been put upon the Bill of the Association, that Bill not having been carried, he advised, after much consideration, that the Committee should not try to carry the Bill—that a Bill might be introduced as a lever upon which to act; but, from his knowledge as having been a Cabinet Minister, he was able to say that no measure dealing with such important interests could possibly be carried unless with the countenance and aid of the Government. He therefore suggested that, instead of pressing forward their Bill, they should move for a Select Committee of the House to go into the whole question. The Reform Committee had decided on acting on this advice at the commencement of the session of 1878, when it transpired that the Government had themselves a Bill ready for introduction last session. It was under these conditions that the Committee suspended its action. They, however, made representations to the Government concerning the wishes of the profession with regard to direct representation; but, as Mr. Childers had informed them would be the case, representations, supported even by powerful deputations and petitions, had little effect upon the Government. But, though the Government did not show any inclination to yield to the prayer of the profession for direct representation, it notwithstanding prepared to submit when it was shown beyond all dispute that the profession really, with an united voice, demanded it. He had it on the authority of Mr. A. Mills, a Conservative gentleman of high standing, who was in constant communication with the Government, that, in some form or another, direct representation must be conceded. [*Cheers.*] Memorials and petitions from all parts of the kingdom were sent forward, and unquestionably this demand for direct representation of the profession was clearly one that must be granted. [*Applause.*] He had now described the position of the Medical Reform Committee at present; and he had only to say that, if the present Parliament lasted for another session, they would have the report of the Select Committee, and he believed a favourable one, on the question of direct representation. He referred to the evidence which had been given before the Select Committee, and added that members of the profession should not forget that it was their duty to press the importance of this question upon the members of Parliament with whom they were brought into contact; and, in case there should be a general election before they met again, it would be right and proper that every member should ascertain from the candidates soliciting his support, whether Conservative or Liberal, if they were sound upon this point, and, if not, to conclude that they were unsound on others, and that they should, therefore, not support them. [*Applause.*]

Mr. A. JACKSON (Sheffield) seconded the resolution, which was carried unanimously.

Dr. FALCONER (Bath) proposed a vote of thanks to Mr. Arthur Mills, M.P., for his efforts on behalf of the medical profession in his action on the medical reform question. The members of the Association must, he said, bear in mind that Mr. Mills approached this question perfectly unacquainted with it, and he had now mastered the subject in a very efficient manner. The labour that he had gone through to make himself master of the question deserved their warmest thanks and appreciation. He had, therefore, great pleasure in proposing—

"That the warmest thanks of the Association, in public meeting assembled, are due, and are hereby offered, to Mr. Arthur Mills, M.P., for his earnest and able advocacy of the principles of medical reform."

Dr. E. WATERS seconded the resolution, thanking Mr. Mills for the great care and unwearied attention he had given to the subject; and he hoped the resolution would be carried with acclamation.

The vote of thanks was carried unanimously.

Report of the Committee on Legislation for Habitual Drunkards.—Dr. CARPENTER, President of the Council, read the report of the Committee appointed at the last annual meeting for promoting legislative restrictions for habitual drunkards. It is published at page 256. He moved that the report be adopted, and the following Committee reappointed: Dr. Alfred Carpenter, Mr. Stephen S. Alford, Dr. G. F. Blandford, Mr. W. Cadge, Dr. J. W. Eastwood, Dr. B. Foster, Mr. W. C. Garman, Mr. John Gay, Mr. Carsten Holthouse, Mr. Charles Macnamara, Dr. H. Monro, Mr. G. W. Mould, Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. Farquharson, Dr. E. H. Vinen, Dr. Norman S. Kerr. He stated that a strong effort would be made within the next few months to provide an institution where all classes and both sexes could be treated, and, he hoped, restored to their friends and society. This was a step in the right direction, and he hoped it would encourage further legislation.

Dr. MALINS (Birmingham) seconded the motion for the adoption of the report, and it was unanimously accepted.

Report of the Scientific Grants Committee.—Dr. WADE read the report of the Scientific Grants Committee. (It is published at p. 255.)

He expressed his regret that Mr. Callender was not able to be present. He drew attention to the valuable reports which had been drawn up and issued as a result of the grants. He moved the adoption of the report, and that the following committee be reappointed: Mr. G. W. Callender, F.R.S., Dr. Falconer, Dr. A. Carpenter, Mr. W. D. Husband, Mr. Alfred Baker, Dr. Lauder Brunton, F.R.S., Dr. C. Chadwick, Mr. T. B. Curling, F.R.S., Dr. Michael Foster, F.R.S., Dr. R. M'Donnell, F.R.S., Dr. W. Rutherford, Dr. Burdon Sanderson, F.R.S., Dr. W. Sharpey, F.R.S., Dr. Edward Sieveking, Dr. A. P. Stewart, Dr. W. F. Wade, Dr. Edward Waters, Mr. C. G. Wheelhouse, Dr. S. Wilks, F.R.S., Mr. Ernest Hart.

The proposition was seconded by Mr. POWER, and was carried.

Dr. A. P. STEWART expressed his regret that no mention had been made in the report of the memoirs published by the Association under the auspices of the Committee.

The Address in Surgery.—Mr. SAVORY delivered the Address in Surgery. It was published at p. 210 of last week's JOURNAL.

Dr. TANNER (Cork) moved—

"That the best thanks of the Association are due and are hereby given to Mr. Savory for his able and interesting address in Surgery".

Mr. REGINALD HARRISON (Liverpool) seconded the motion, and expressed his regret that his language was not equal to the task of adequately representing all his sentiments of pleasure at the eloquent discourse.

The motion was carried by acclamation.

Presentation of the Gold Medal.—Dr. CARPENTER, President of the Council, said he had the honour of reading to the meeting a copy of a resolution passed by the Committee of Council, which was as follows (now handsomely engrossed): "British Medical Association.—At a meeting of the Council of the British Medical Association, held at the offices of the Association, 161A, Strand, London, on Wednesday, July 9th, 1879, Alfred Carpenter, M.D., President of the Council, in the chair, it was moved by Dr. Sieveking, seconded by Surgeon-General Maclean, C.B., V.C., and resolved unanimously—'That, in consideration of the extraordinary professional services rendered by Surgeon-Major Reynolds, M.B., V.C., at Rorke's Drift, Zululand, South Africa, on the 22nd and 23rd January, 1879, by his constant attention to the wounded under fire; in consideration of his eminent bravery in voluntarily carrying ammunition across an open space under heavy cross-fire; in consideration of the remarkable intelligence, coolness, and tact evinced by Surgeon-Major Reynolds under circumstances of great danger, the gold medal of the British Medical Association for distinguished merit be, and is hereby, awarded to him.'" [*Loud Applause.*] Under the ordinary regulations by which that medal was awarded, one of the conditions was that the gentleman to whom it was awarded should appear at the annual meeting to receive it. As they were all aware, that was quite impossible in the present instance; it was Dr. Carpenter's duty to transmit to Surgeon-Major Reynolds's superior officer, Sir William Muir, the Medical Director-General of the Army, the resolution now read, and invite him to be present. As it was impossible for Sir William Muir to be present, in consequence of his official duties, he had directed that Surgeon-General Crawford, the head of the Medical Department in Ireland, should attend and receive the medal on the part of Surgeon-Major Reynolds, and he was therefore present now, and would receive it from the President.

The PRESIDENT, in presenting the medal, said he felt very proud of being in the chair on that occasion of attesting to the merits of Surgeon-Major Reynolds; but many words from him, he thought, would detract from, rather than add to, the distinguished merits of Surgeon-Major Reynolds. Though this act—this glorious act—was the work of a minute, still it testified that Surgeon-Major Reynolds's heart was full and strong, and showed that he was ready, as it was to be hoped every medical man was ready, to face danger, whether on the battle-field, or —where death and destruction were just as imminent—in attendance in hospitals, or otherwise on their fellow-men [*applause*]. It would be gilding refined gold to say more, and he would now present the medal to one who was well worthy to receive it on behalf of Surgeon-Major Reynolds [*applause*].

Surgeon-General CRAWFORD, on receiving the medal, said it was not without great emotion that he addressed a few words on behalf of Surgeon-Major Reynolds for the honour conferred on him. It had been his own fortune, and he considered it as his good fortune, to have served her Majesty for thirty years, and during that time he had many opportunities of judging of the conduct of medical officers under fire, and he could give it as his experience that they always discharged their duties with a coolness, a steadiness, a disinterestedness, and a disregard of self which was certainly due to the patients entrusted to them [*applause*]. It was a matter of no wonder that, surrounded by heroes at Rorke's Drift, Surgeon-Major Reynolds was heroic; but it was something to say that, notwithstanding the excitement and the danger to which he was exposed, he did not lose his self-possession, his coolness, or his judgment, and for such noble conduct he had deservedly won the great number of honours, not the least of which was the one which that Association was now good enough to confer. The first honour conferred on Surgeon-Major Reynolds was by her gracious Majesty the Queen; for the *Gazette*, published just after the news had reached this country, contained an announcement of his promotion. That promotion would have been accompanied by the Victoria Cross, which had been since granted to him, if there had not been accidentally omitted from the despatches the necessary recommendation from the commanding officer, a matter which rendered a reference back to the Cape of Good Hope necessary. It had been alleged that the delay in granting the Victoria Cross was occasioned by the red-tapeism of the Army Medical Department; but that was inaccurate, and, as he had pointed out already, the delay was caused by the reference back to the Cape of Good Hope, which the statutes of the Order rendered necessary. Surgeon-Major Reynolds had also received from the heads of the colleges where he had been taught the profession to which he was such an honour—the Dublin College of Physicians, and the University of Dublin—acknowledgments of the distinguished merit for which that Association now generously awarded a medal. In conclusion, Dr. Crawford thanked the Association for permitting him to receive the medal on behalf of Surgeon-Major Reynolds [*applause*].

The meeting then closed.

FOURTH GENERAL MEETING, FRIDAY, AUGUST 8TH.

The fourth general meeting was held at 10 A.M.; Dr. A. CARPENTER, President of the Council, took the Chair in the absence of the President.

The Address in Public Medicine.—The CHAIRMAN announced that Dr. Andrew Fergus had been telegraphed for in consequence of the illness of one of his children; and, while expressing deep regret at this unforeseen loss, Dr. Carpenter said it would nevertheless be heard with pleasure that the child was out of danger. Dr. McCall Anderson had kindly undertaken to read the paper.

Dr. MCCALL ANDERSON then read the address, and expressed regret that Dr. A. Fergus should have thus been called away at an important juncture. The Address was published at page 217 of last week's JOURNAL.

Dr. A. P. STEWART, in proposing a vote of thanks to Dr. Fergus, remarked upon the great attention which Dr. Fergus had paid to measures for the prevention of disease and for raising the public health. The members of the medical profession too long regarded themselves as merely the curers of disease; but now, he was thankful to say, they were directing their attention to the best means of preventing disease, and had already assisted to arrest some of those diseases which had been the scourges of mankind and had swept from the face of the world to premature graves large numbers of the population. It had been said that doctors lived by the continuance of disease; but he put it another way—that they lived by curing disease, and their profession led them to overcome all the dangers to human life and health. What had been done in regard to lessening the evil effects of zymotic disease was an eloquent testimony to the preventive work of the medical profession, and showed the benefit of the severe measures taken to prevent the increase of these diseases. More could be done by instructing the public mind, and the profession should obtain the aid of others in carrying out the work of prevention. He pointed to what had been done in Edinburgh in lessening mortality by judicious measures being taken, and said that like effects would follow the application of the same principle to other large towns. He concluded, after stating in terms of thankfulness that the illness of Dr. Fergus's child was not of a serious nature, by moving—

"That the best thanks of the Association are due, and are hereby given, to Dr. Andrew Fergus for his able and interesting address in Public Medicine."

Surgeon-General CRAWFORD seconded the motion, and said that the observations of Dr. Fergus were of the utmost practical value. With regard to the earth-closet question, the difficulty with them was that they readily got out of order, and then the admirable principle of "earth to earth" was not carried out with success.

Dr. CARPENTER, in putting the resolution to the vote, said that the meeting would also include in it a vote of thanks to Dr. McCall Anderson for his able reading of the paper.

The motion was adopted unanimously.

Concluding General Meeting.

The concluding general meeting was held at half-past one P.M. on the same day, in the Examination Hall of Queen's College, Dr. D. C. O'Connor presiding.

Report of the Hospital Out-Patient Reform Committee.—Dr. A. P. Stewart, in presenting this report, expressed his regret that their distinguished colleague, Mr. Timothy Holmes, was unable to be present. The report is published at page 254.

Dr. B. Foster (Birmingham) moved—

"That the report of the Hospital Out-Patient Reform Committee be received and adopted, and that the Committee be reappointed as follows, with power to add to their number: Mr. T. Holmes, Mr. J. Wickham Barnes, Dr. L. Borchardt, Dr. J. B. Brierley, Mr. T. Dane, Dr. John Haddon, Mr. H. Nelson Hardy, Dr. Robert J. Lee, Dr. Alfred Meadows, Dr. R. Quain, Dr. Joseph Rogers, Mr. S. Sibley, Dr. A. E. Sansome, Dr. A. P. Stewart, Mr. C. Macnamara."

The mover said that the report dealt with some of the great evils with which the profession had had to contend, and the out-patient system of hospitals had now grown to be an enormous evil. The profession in Ireland were not aware perhaps of the hold the system had taken in England, and he could but describe it as one which had made the hospitals great public dispensaries for classes who were not the proper subjects of hospital relief. It was hoped that the provident dispensaries would take the classes who could pay, and that the Poor-law dispensaries would treat the pauper classes, so as to leave the hospitals to carry out their own distinctive work. He was sorry that hitherto the provident dispensary system had not been thoroughly successful in some places; and the cause of the want of success was, he thought, in the lack of medical management.

Dr. Shinkwin (Cork) thought that every hospital surgeon would rejoice to see the work which this committee had undertaken so well pushed on [*cheers*]. He dwelt upon the abuses of the hospital system, and said it encouraged persons to go to the hospitals who could pay some of the juniors, even if they could not afford to pay the seniors.

Dr. Stewart remarked that, if the Committee had not yet effected tangible results in London, it had, at all events, made decided progress.

The motion was adopted unanimously.

The Metric System.—Mr. Ernest Hart moved—

"That a Committee be appointed to consider and report whether it would be desirable to adopt the metric system in medicine in Great Britain and Ireland; and whether the British Medical Association should by any means, and if so by what, facilitate its introduction: the Committee to consist of Dr. Clifford Allbutt, Dr. Lauder Brunton, F.R.S., Dr. A. Carpenter, Dr. Farquharson, Dr. T. Fraser, F.R.S. (Edinburgh), Dr. Harvey (Aberdeen), Dr. Quain, F.R.S., Dr. Sieveking, and Mr. Ernest Hart, convener, with power to add to their number."

He said the object he had in view was so clearly one which the Association was likely to appreciate, that he would make only a few observations. The motion would not commit the Association to any policy; but it would lead simply to an inquiry and report as to whether the system as applied to medicine should or should not be adopted here as among other English-speaking nations, and throughout the continent. The system had made great progress, and now the profession in Great Britain were to some extent isolated by reason of their having a notation unknown in any other country. This system cut off the foreign profession from studying the results of the work carried out by their British colleagues, as they could not follow the British system of notation, and the British could not follow the system carried out in foreign countries. The English-speaking peoples in other countries had found that they were bound in shackles while keeping to the British system, and the Americans had thrown it off for the metric system. The time had therefore arrived when this matter should be thoroughly considered, and the Committee he begged to nominate would be a perfectly colourless one.

Dr. Fancourt Barnes (London) seconded the motion; and said he thought the adoption of the metric system in England was a necessity and a certainty.

Dr. Seguin laid before the meeting a history of what he termed the brilliant metric campaign in America. He said that the Metric Association of the United States had made this year many converts by distributing the *Metre* in all its tangible and visible forms, and by the publication of tracts, of metric records of cases, of bedside notes, and of slips of equivalent doses, such as those he had printed and offered here. The metric system had been applied to all the branches of the United States Marine Hospital Service, and had worked well from the start a year ago. The officers in charge of the vital statistics of New York, Boston, and other large cities, used the metric system, and complained only of being obliged to convert to metric figures the weights and measures of the documents emanating from the profession. The Medical Society of the State of Pennsylvania, at its session of June 1878, passed resolutions urging the use of the metric system upon its members by the county societies, and that it be taught in the public schools. The Delaware County Medical Society voted the same resolutions, including the very important one relating to the public schools. The Medical Society of the State of Massachusetts had, first of all, he believed, accepted the metric system. The Rhode Island State Medical Society had voted the same, to take effect in January 1880. The Medical Society of the State of New York "requests of those who present papers at its future meetings that the metric system be employed in their communications, and that this system be exclusively used in the public proceedings of this society". The Medical Society of the County of New York resolved (March 24th, 1879) that "the metric system shall henceforth be used in the minutes of this Society, and in all the papers published under its authority". The Medical Society of King's County, after hearing a paper of Dr. Edward Seguin on the use of the metric system in medicine, and the necessity of organising a metric league, "appointed (March 18th, 1879) a Committee to consider these recommendations and report". The Georgia Medical Society of Savannah "takes pleasure in giving their moral support to the adoption of the metric system by the American Medical Association, and will put this system in practice in their city". The State Medical Society of Kansas "approves of the metric system, and is ready to apply it". The State of Michigan and many other counties manifested the same disposition of following the older States in the metric change. In the meanwhile appeared the *National Dispensatory* of Stillé and Maisch, in which the metric measures were given second; whereas Professor Maisch (who is the President of the Pharmacists' Association of the United States) confessed that, "had he not been hindered, he would have given all the weights and measures of this book, either pre-eminently or exclusively, in the metric language". And, finally, at its last meeting, the American Medical Association, after hearing its reporter on the subject, unanimously passed the following resolutions: "1. That the American Medical Association adopts the international metric system, and will use it in its transactions. 2. Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof. 3. Requests the medical boards of the hospitals and dispensaries to adopt the metric system in prescribing and recording cases; and that the faculties of the medical and pharmaceutic schools adopt it in their didactic, clinical, or dispensing departments. 4. Requests the physicians familiar with the metric system to help their *confrères* and the druggists in its application; and the delegates present at this session to work up the acceptance of the metric system by their respective county and State societies. 5. Requests our President to name a Metric Executive Committee, of which he shall be the *ex-officio* chairman, and whose task will be to give unity and rapidity to this metric movement." Such were in brief the tidings he brought of the last metric campaign in America. If time were not raising an absolute impossibility, he would like to read, and they would like to hear, the opinions in favour of Great Britain adopting the metric system sent by the venerable Littré, representing philosophical medicine; Professor Mehu, the celebrated pharmacist; Drs. Auzoux and Lemercier, authors of the classic models of anatomy; Dr. Bertillon, the medical statistician; Marey, the inventor of many medical instruments of graphic observation; Broca, the organiser and secretary, the soul of the Society of Anthropology; L. Ranvier, the Professor of Histology at the Collége de France; Paul Bert, the Professor of Physiology at the Sorbonne; and Professor Charcot, of world-wide fame, the Professor of La Salpêtrière, being present, could tell his disappointments at finding between his inquiring mind and the invaluable English medical literature a mathematical barrier, instead of a common pass-way. Then the young teachers of Great Britain, as Sydney Ringer and Burdon Sanderson, favoured the introduction of the metric system in the school, the practice, the literature, the statistics of the profession; and he would also quote the judicial sentence of Mr. Timothy Holmes: "Dear Sir,—I cannot help thinking that it is high time some uniform system of scientific notation were adopted; and, as the metric system seems firmly established in the scientific world of the continent, I believe that it would tend to the progress of medical science if we also adopt it." If the profession would accept the metric system simply on the face of the services it will render to the medical profession, there would be great rejoicing among their brethren, and their decision would be cheered at the next international congress of Amsterdam. If the profession would, on the contrary, express only the wish that the medical colleges of Great Britain should commence at once to teach the metric system, it would be justice to the students. If they would

constitute a Metric Committee, either of execution or of inquiry, he would tender to this committee the most cordial concourse; first, of the American Metric Association, presided over by F. A. P. Barnard, President of Columbia College, New York; second, of the Metric Committee of the American Medical Association, presided over by Dr. T. Parvin, late President of the Association; third, and of the Committee of Uniformity in Medicine and Pharmacy, constituted by the International Congress of Geneva in 1877, to report to the same congress at Amsterdam the next month. This International Committee, presided over by Professor Pacchiotti of Turin, here present, had counted among its members two deeply regretted, Professor Gubler, of the School of Paris, and the late President of the Association, Dr. Eason Wilkinson.

The motion was adopted.

Report of the Committee on the Registration of Disease.—Dr. PHILIPSON (Newcastle-on-Tyne) presented this report. It is published at p. 256. He moved—

"That the report of the Registration of Disease Committee be received and adopted, and that the Committee be reappointed as follows, with power to add to their number: Dr. A. Ransome, Mr. W. Armistead, Dr. R. C. Brown, Dr. W. M. Burke, Dr. S. Crompton, Dr. W. Farr, F.R.S., Dr. W. T. Gairdner, Dr. G. Harley, F.R.S., Mr. A. Haviland, Dr. Alfred Hill, Dr. Handfield Jones, F.R.S., Dr. E. D. Mapother, Mr. T. Mellor, Dr. J. E. Morgan, Dr. D. Noble, Dr. W. Ogle."

Dr. FELCE (London) seconded the motion.

Dr. JOSEPH ROGERS supported the motion, and condemned the action taken by the Local Government Board in pressing for returns from medical officers under the board, and giving no remuneration for this extra work.

The motion was carried.

Report of the Parliamentary Bills Committee.—Mr. ERNEST HART presented this report. It is published at page 253. He moved—

"That the Report of the Parliamentary Bills Committee be received and adopted, and that the Committee be reappointed as follows, with power to add to their number: Mr. Ernest Hart, Mr. Stephen S. Alford, Dr. Fancourt Barnes, Dr. Robert Barnes, Dr. J. M. Bryan, Dr. J. C. Bucknill, Dr. Andrew Clark, Mr. J. B. Curgenven, Dr. Davey, Dr. W. C. Grigg, Mr. H. Nelson Hardy, Mr. J. D. Harries, Mr. Reginald Harrison, Mr. W. Douglas Hemming, Dr. A. Henry, Dr. C. Holman, Dr. Norman S. Kerr, Mr. G. Lamb, Mr. C. F. J. Lord, Dr. Alfred Meadows, Dr. E. Morris, Mr. A. B. R. Myers, Dr. David Nicolson, Dr. J. H. Paul, Dr. G. H. Philipson, Dr. R. Quain, Mr. W. Rivington, Dr. Joseph Rogers, Mr. C. H. Rogers-Harrison, Dr. J. Seaton, Mr. Septimus W. Sibley, Dr. A. P. Stewart, Mr. L. Tosswill, Dr. E. H. Vinen, Dr. Charles Williams, Dr. M. W. Taylor."

Mr. Hart gave a succinct summary of the report, and dwelt upon the proposals of the War Office Committee in regard to army medical officers, remarking that the Association's Committee were opposed to the somewhat insidious system proposed by the War Office Committee for filling the ranks of the army medical officers; this system being to give to schools the nominations for commissions in place of the test of an entrance examination. Neither in the interest of the public, of the army, nor of the profession should this system be allowed. [*Cheers.*] The reason this was proposed was because the War Office could fill up from the medical schools the vacancies now so numerous; and, as they would not be particular as to the men who were so nominated, the weakness of the position would not be exposed. [*Hear, hear.*] Now, the weakness of the position held by the War Office was exposed by the fact that though the entrance test has been abolished, the service had gone down—it was thoroughly depleted, and at the present moment there were serving in Zululand forty medical men who had not passed any test examination, and had had no training at Netley. [*Hear, hear.*] Mr. Hart then detailed the steps taken by the Committee with regard to the "lost school of medicine at Oxford", the Coroners' Bill, and the Poor-law medical officers.

Mr. CORNWALL (Fairford) seconded the motion.

Surgeon-General CRAWFORD said he did not speak now as one representing the department of the Director-General, but as a member of the British Medical Association. He wished to remark that, as far as he knew, the competitive examinations for the army in London had been the means of reducing the number of first-class medical men who, under the private system, would be ready to present themselves for commissions in the medical service of the army. He did not wish to be understood to convey that the department wished to abolish the system of public competitive examination. He had had ten years' experience in the War Office, and he found under the public competitive examination system that at first they had in the first class a number passing, in the second class a considerable number passing, and they did not dip deep into the third class; but in after years in examinations they had almost no candidates in the first class, a few in the second class, and the rest were in the third class. At the same time, he should deny that at the present moment there were any "third class" medical officers in her Majesty's service; they were of the stamp of Surgeon-Major Reynolds. Under the present system, there was an examination held in London which had to be passed by a candidate. He then got four months' training at Netley, and after that he had to pass another public examination before he could get a commission as a medical officer in the army. It was generally believed that the service was sufficiently guarded against inefficient men by that final examination. [*Applause.*] He only spoke those words in explanation of the conduct of the head of the department to which he had the honour to belong, although he had not his sanction in any way for doing so, so that the British Medical Association might be aware that there were two sides to the question, and that whether rightly or wrongly the Director-General was doing his best to put the service on a proper footing, and would take such steps as might be most expedient to remove all barriers which might exist in excluding efficient men from the Medical Department. That the Director-General would succeed in a short time he (Surgeon-General Crawford) had no doubt, but he would more succeed quickly if he could obtain the support of the British Medical Association, whose members should consider the question from an imperial as well as from a professional point of view.

Mr. ERNEST HART said he would not trespass upon the patience of the meeting beyond a few words to point out that the statement made by Surgeon-General Crawford, had absolutely supported the views of the Committee. The Medical Department, in the opinion of many, was very badly treated by the Government; and, when the 'privileges promised to the Army Medical Officers had been withdrawn and caused the numbers entering to fall off, the fact was attributed to the entrance examination. This was not the fact—the examination did not deter men from entering the Army Medical service, and the Government would have to face the fact that the service itself was unacceptable. [*Cheers.*]

Surgeon-General CRAWFORD remarked that if entrance examinations were so desirable, why were they not applied to all public appointments—to the appointments in hospitals for instance?

Mr. HART rejoined that the question would be an interesting one to discuss; but the fact was that hospitals were not the public service, and the analogy did not exist betweem them and the army, so that the Committee had not had the subject before them. In the army the examinations were at first eminently successful, and the matters which made the service unpopular were beyond these. He believed that the abolition of the examinations would lower the standard of the men who entered; in fact, the Government by abolishing the examinations had smashed the index which showed whether good or inferior men entered the army medical service. [*Cheers.*]

Surgeon-General CRAWFORD said he would withdraw any opposition to the adoption of the report before the meeting, remarking that, as far as he understood, the competitive examination system was not intended to be abolished if a sufficient number of candidates presented themselves for examination to justify the application.

After a few remarks by Dr. A. P. STEWART and Dr. M'CALL ANDERSON, the PRESIDENT, in putting the report to the meeting for adoption, said his knowledge of the students of the Queen's College, Cork, was that for many years the very best and cleverest of them went in for the army under the competitive examination system. But, of course, they were more more or less guided at College by the opinion of their seniors, and if the word were passed that the army was not the thing to go for they would not go into it. In consequence of that word being passed, he knew a great many clever young men who took wretched country dispensaries rather than go for the army. The very best men he knew going out of the College would go in for the army if they were advised that their choice was warranted. [*Cheers.*]

The report was then adopted.

Joint Committee on State Medicine.—Dr. FALCONER proposed the reappointment of the Joint Committee with the Social Science Association on State Medicine.

Dr. GRIMSHAW seconded the motion, which was adopted.

Prevention of Infectious Disease.—On the motion of Dr. GRIMSHAW, seconded by Dr. CARPENTER, the meeting adopted the following resolution, which had been passed in the Section of Public Medicine—

"That this section is of opinion that a committee of the association should be appointed to see how we are to deal by isolation or otherwise with the convalescents from acute infectious disease so as to prevent its spread."

Votes of Thanks.—Dr. FALCONER said the only other business to be transacted was the passing of a series of votes of thanks to the different persons who had been kind enough to acknowledge the presence of the

members of the British Medical Association by their genial hospitality. [*Cheers.*] What he would suggest to the meeting was that all those resolutions should be embodied in one, and if the meeting approved of that idea he would propose it in the shape of one resolution. [*Applause.*]

This proposal having been approved of unanimously, Dr. FALCONER proposed the following resolution :

"That the best thanks of the Association are due and are hereby given to the President and Council of the Queen's College for their generosity in granting the use of the college buildings for the meetings, thus contributing materially to the great success of the meeting." [*Applause.*]

"That the warm thanks of the Association be given and are hereby tendered to P. Kennedy, Esq., Mayor of Cork [*applause*]; R. C. Hall, Esq., High Sheriff of Cork [*applause*]; as also to the citizens of Cork for their hospitable reception on Wednesday evening at the Opera House [*applause*]; to the Literary and Scientific Society and its Honorary Secretaries, Messrs. James Colbeck and F. W. Allman, and the Treasurers, Messrs. Ogilvie and Denny Lane."

"That the cordial thanks of the Association be given to his Grace the Duke of Devonshire for entertaining the members of the Association at Lismore; to Sir George Colthurst for throwing open the grounds of Blarney Castle during the visit and for entertaining the Association at Blarney; to Lord Kenmare for throwing open his grounds for the entertainment of the members of the Association; to Mr. E. Pike, of Besborough, for throwing open his grounds, and to the City and County Clubs for having thrown open their doors to the members of the Association during their visit." [*Applause.*]

"That the hearty thanks of the Association be given to the members of the medical profession and to the South of Ireland Branch, for their warm reception and their great hospitality shown to the members of the Association during its visit." [*Applause.*]

"That the meeting, recognising the presence of so many distinguished visitors, desires to express its thanks for their attendance at the annual meeting in Cork." [*Applause.*]

"That the cordial thanks of the Association be given to the Reception Committee and their secretaries for their successful efforts in organising this forty-seventh annual meeting of the Association." [*Applause.*]

"That the hearty thanks of the Association be given to Professor Macnaughton Jones—[*applause*]—the honorary local secretary, for his arduous labours in carrying out so successfully the arrangements of the meeting."

"That the hearty thanks of the Association be given to the assistant local secretaries, Dr. Ringrose Atkins and Dr. D. C. O'Connor, junior, for their exertions to make the meeting a success; also to the museum secretaries, Drs. C. H. Harvey and T. Gelston Atkins, for ably carrying out the museum arrangements, and Messrs. Arthur Hill and William Shaw for having organised the sanitary museum."

"That the warm thanks of the Association be given to Dr. Denis C. O'Connor for so courteously presiding over this, the forty-seventh annual meeting of the Association." [*Loud applause*].

Dr. CARPENTER, in seconding the motion, remarked that they could not leave the hospitable city of Cork without passing cordial votes of thanks to those by whom they had been entertained. No doubt the votes of thanks were not exactly in form, but it would detain them too long if six-and-thirty speeches were made to those numerous resolutions—[*laughter*]—and he was sure they were all anxious to get out and see the beauties around and enjoy the garden party. [*Hear, hear.*] But the members of the Association spoke from the heart when they gave expression to their gratification and thankfulness to those gentlemen who had so kindly helped to bring this glorious meeting to so satisfactory a conclusion. To the gentlemen who had been named by Dr. Falconer were due their warmest thanks, and especially their best thanks were due to Dr. Macnaughton Jones—[*applause*]—for the way he had carried on his work—a work which had been crowned with complete success. [*Renewed applause.*] Dr. Carpenter felt, as President of the Council, that he would not be doing his part if he did not tender to the President their cordial thanks for the warm support he had given them; and, for the cordial and kindly manner in which the Association had been received, he thought they were indebted in a great measure to the President's personal influence. [*Great applause.*] Dr. Carpenter proceeded to say that the present meeting would be long remembered in the annals of the British Medical Association. [*Great applause.*]

The resolution was passed with acclamation.

Dr. Carpenter then called for three cheers for the President, which were given with a will. He then called for three cheers for Dr. Macnaughton Jones, which were given with equal power.

The proceedings then terminated.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 16TH, 1879.

THE MEETING IN CORK.

LONDON is rapidly emptied during the last week of July, and fashionable people no more think of consulting a doctor in August than of living in their front rooms, if perforce they are condemned to autumn imprisonment in the metropolis; otherwise it would be hard to say how long a search any unfortunate in search of a consultant might have been compelled to make during the last week. To medical men, perhaps more than most others, the proverb comes home that "home-keeping youths have ever homely wits"; and more and more every year the flower and fruit of professional experience are brought to the annual meetings of the Association by those whose stores are full of buds and seeds and well ripened wealth of garnered harvests of knowledge. Medical men seem to be alike full, accurate, and ready in their science and in practice; and they realise every year more and more that, if reading make a full man, and writing an accurate man, conference makes an accurate man. Hence, though for the mass of the profession in Great Britain it is "a far cry" to Cork, and the silver streak which guards the island from foes is distressing enough to many friends who would otherwise willingly pass it, yet the invitation to Cork was sounded in no deaf ears, and between five and six hundred visitors repaired to the southern capital of Ireland. They were met by a welcome which betokens a warm hospitality, a great power of organisation, and the virtue of civic patriotism and liberal public spirit. The citizens of Cork showed themselves sensible as a body of the claims of peripatetic medical science to a generous reception, and made it their duty and pleasure to spare no effort to make the British Medical Association feel itself an honoured guest. A series of entertainments of a refined and cultured character, large and generous private hospitality, and unfailing private kindness, have characterised the proceedings of the week.

The meeting has been a large one—one of the largest ever held, except at great centres, such as London, Edinburgh, or Manchester: the weather, so unfavourable throughout the year, has served the meeting well; indeed, the Cork people say, with kindly zest, that but for the Association they might not have had a fine week all through this year. The *locale* of the Queen's College was perfect for the purpose; and the arrangements of the meeting have been conducted by Dr. Macnaughton Jones, who had ably planned and presided over them with unflagging energy and invariable success.

The principal scientific events were the address of Mr. Savory, which charmed the ears even of those whose reason it did not convince; the singularly interesting and novel demonstrations by Dr. Norris of his hitherto unseen colourless corpuscle that he believes to be the fibrin-factor of the blood, which demonstrations, made by the aid of the lime light in a dark room, from a great collection of photographs, drew daily large audiences; and the discussion on alcohol in the Section of Medicine. All the sections were extremely well filled; the new ophthalmic and aural subsections were so successful, that the members who took part in them have urged their continuance in very warm terms, and there is little doubt that they will be repeated next year at Cambridge, where they may fairly be expected to be at least as successful.

The high-toned address in which Dr. O'Connor opened the proceed-

ings gave the keynote which was maintained throughout: his invariable courtesy, excellent conduct of business, and the admirable efficiency of the President of Council (Dr. Carpenter) facilitated all the proceedings, which passed off without the slightest *contretemps* from first to last. Cork, in taking off its social armour, after the week of mingled science and festivity, may fairly say that the meeting of the British Medical Association in 1879 was an unalloyed success.

DR. ANDREW FERGUS ON STATE MEDICINE.

THE theme which Dr. Fergus selected for his Address on Public Medicine at the Cork meeting—"State Medicine: past, present, and future"—was certainly sufficiently comprehensive to satisfy the expectations of the most capacious of his listeners. He commenced by drawing attention to the erroneous impression which has prevailed up to a comparatively recent date, both in the public and in the professional mind, that the whole function of medical men begins and ends with the treatment, and if possible the cure, of the sick. The conviction, he rightly said, is now dawning on the age, that medical men might do something more than strive merely to cure disease; that they should seek to prevent it. Hence we have a new department of medical science, namely, "Preventative or State Medicine". Now, without wishing to be thought hypercritical, we would venture to suggest that the terms "preventative"—or, as we prefer to call it, preventive—and "State", as here used, are not by any means synonymous alternatives. Preventive medicine, or rather the art of the prevention of disease, has as distinct an existence apart from the State as therapeutics has; whilst, on the other hand, State medicine might, and in the opinion of some should, include a wider recognition of the healing art itself, in many of its relations, than it actually does at the present time. The fact is, that the phrase State medicine is a somewhat comprehensive—and, indeed, also a somewhat vague—one, embracing a good deal which has very little to do with the prevention of disease, as may be easily recognised by any one who will take the trouble to look through the various Acts of Parliament which deal with the protection of the public health, and which are administered by the Local Government Board, the Privy Council, or the Home Secretary, as well as by various local authorities, and which overlap in no small degree other administrative functions connected with general and local government. To what extent it may be desirable and possible to consolidate the incoherent machinery by which the State is at present brought into relations with the maintenance of the public health, is a very important problem; but its solution is not likely to be facilitated by assuming that the prevention of disease is the only aspect which this problem presents. We are not concerned, however, to insist further here upon the distinction between State and preventive medicine. What is much more to the point is to learn what Dr. Fergus has to tell us on the past history and future prospects of this assumed new department of medical science. So far as the past is concerned, Dr. Fergus is content to take us back to the provisions made by the Mosaic institutions for dealing with leprosy, as presenting not only the most ancient, but also the most effective, illustration of the way in which to deal with infectious disease which the world has ever seen, or is indeed likely to see. There, as he well puts it, we find the appointment of a medical officer of health endowed with absolute authority to separate the sick from the healthy, and also to isolate infected persons so completely as to prevent disease from spreading further. As befits one whose duty it is to magnify the office of the sanitary art, Dr. Fergus is sanguine enough to express the hope that the time is not far distant when every medical officer shall be endowed with the same stringent powers as were possessed by the Levite in the time of Moses. We are as hopeful as Dr. Fergus is, that much larger measures for effectively preventing the spread of infectious disease may ere long be enforced upon local authorities than they either can or, in most cases, will at present exercise; but we can scarcely hope, or indeed wish, that any medical officer of health will be invested with the very autocratic powers with which the Levitical expert was endowed. For it must not be forgotten, in the first place—as, indeed, Dr. Fergus himself reminds us—that the medical officer of health in this case assumed "to act under direct Divine authority and guidance, as well as being learned in all the learning of the Egyptians", whatever that may have been; and, secondly, that leprosy is a disease concerning whose diagnosis, character, and results, there was likely to be much less difference of opinion than there certainly is now about the forms of infectious disease with which the guardians of the public health have to deal.

The address gives a good deal of interesting detail on the subject of leprosy, especially on the attempts which were made to stamp it out in the middle ages and in Scotland. It is somewhat curious, as illustrating either the intuition or the special intelligence, whichever we may like to call it, of our forefathers on this matter, that, apart from the introduction in recent times of specific forms of disinfectant which have been suggested more especially by the advance of our knowledge in chemistry, we can still do little more in the way of disinfection than was ordered to be done by the Scotch Parliament in the fourteenth century. Nor is it less interesting to inquire, with Dr. Fergus, why such an effective system for the repression of infectious disease should have been allowed so entirely to lapse into desuetude, that, with all the efforts which have been made in this direction during the last quarter of a century, we have not yet succeeded in recovering anything that can be looked upon as nearly its equivalent. Some persons have been disposed to attribute this result to the influence of the Reformation; but, as Dr. Fergus aptly points out, this cannot be the case, since the kirk sessions took up and for some time carried on the legislation which had been enacted by their Catholic predecessors. The explanation is, we suspect, to be sought for in two other causes, to which allusion is made in the Address; namely, the progress of civil liberty, which, whilst abrogating the semi-theurgic authority with which both Church and State, either separately or conjointly, undertook in past times to deal with these matters, has rendered the public intolerant of the interference with the liberty of the subject which these bodies were then wont to practise; and the fact that the infectious diseases with which we have now to deal are for the most part much less repulsive in their character and pernicious in their obvious effects than leprosy was.

From the State medicine of the past, as illustrated by the treatment of the leper, Dr. Fergus passes to State medicine in the present, as represented by the death-rate of the last forty years. In a table which he gives, he summarises the facts presented by the reports of the Registrar-General during that period in regard to zymotic disease, and comments upon the inferences to be drawn from them. We have no space to devote to the conclusions at which Dr. Fergus arrives in the case of the more prominent members of the group; it will be sufficient to say that he endorses the view which has been stated with some force by competent statisticians who have investigated the subject, that, so far as the *primâ facie* aspect of the question is concerned, there is no evidence to be found in the rolls of mortality themselves of any increase in the lease of human life having been effected by the efforts of the sanitarian; and that the rate of mortality continues, with trifling occasional disturbances, to be now what it was about forty years ago. It might perhaps be urged, on the strength of this statement, by those who are not unmindful of the fact that sanitary improvements, as a rule, cost money, that if this be all the result that the sanitarian can show of the large amount of activity which has exhibited itself in the way of sanitary legislation during this period, it is doubtful whether the game is worth the candle. Of course, such people forget that the aggregation of population which is produced by the mere increase of the human race and by the natural tendency of mankind to collect around centres has a tendency to intensify in a variety of ways the force of all diseases, and especially of those of a zymotic nature. That the sanitarian has not succeeded in diminishing the general ratio of mortality is no proof, therefore, that his labours have been without effect, even if it could not be shown, as can be done in the case of continued fever, that a positive diminution of mortality has been effected in certain specific diseases. This is one of the cases in which as we pointed out last week, in a few remarks on this part of Dr. Fergus's Address, not to re-

cede is really to advance. The picture which it is desirable to present to the mind's eye as a foil to that which the economist, falsely so called, is ready to exhibit as a justification of his opposition to sanitary measures, is that of the high death-rate which our bills of mortality would certainly show if it were not for the mitigating influence of preventive medicine.

From the past and its lessons Dr. Fergus turns to the future and its prospects, with anticipations which, we fear, will be looked on by some people as the outcome of a very sanguine optimism. That it may be desirable to take the mortality of the healthiest rural districts as the ideal standard to which it should be our aim to approximate in towns, is perhaps justifiable in an abstract point of view; but he must be a very enthusiastic sanitarian who can entertain any practical expectation of embodying such a hope in, let us say, the reduction of the death-rate of Manchester to that of Glendale. It would almost appear, from the sequence of subjects in his discourse, that Dr. Fergus looks to the abolition of water-carriage in the treatment of sewage as the key to the solution of all our sanitary difficulties. He tells us that, when he first turned his attention to public health, he had the most perfect faith in this mode of dealing with our waste products; but that investigation, experiment, and experience have obliged him to change his opinion. From subsequent remarks, it turns out that what Dr. Fergus really objects to is not water-carriage, but river-carriage; *i.e.*, turning crude sewage into water-highways, which is a very different matter. We can scarcely suppose that so accomplished and practical a sanitarian as Dr. Fergus can think that the sewage of large towns can be removed from their immediate neighbourhood in any other way than by the aid of water. Where the water is to carry it is a totally different question, though it is one upon which there is far less room for difference of opinion than is often apt to be assumed. Those who flaunt the "sewage problem" before the eyes of perplexed local authorities as if it were a vexed question upon which we possess no more light than did the General Board of Health a quarter of a century ago, seem either to forget or to be ignorant of the large amount of evidence which has been accumulated during the last ten years on the subject of sewage-farming, and by which that subject has been brought as much within the limits of exact knowledge as is the work of the ordinary farmer.

In conclusion, Dr. Fergus gives a summary of the desiderata of the sanitary reformer. These are: the appointment of a minister of health; the registration of disease, especially of all contagious diseases; the "separation of the sick from the well", by which, we presume, is meant only the "infected sick"; and, lastly, a point which he is "inclined to consider as of almost equal importance with the two foregoing", that the medical officers of health should devote the whole of their time to the duties of their office and have no entanglement of private practice. After these, come a number of "minor provisions", but the general outcome of all is that "our whole population should have restored to them the birth-right of our common humanity, viz., pure air, pure water, and sunlight free from smoke and noxious vapours". We must confess that in this vision of the future we look on the realisation of the smokeless sunlight, though appearing at the tail of the catalogue, as a much more practicable achievement than the establishment of a minister of health. The fact that the head of the board which presides over the whole department of local government, of which it must be admitted that the maintenance of the public health is only an administrative detail, is not thought worthy of a seat in the Cabinet, is not encouraging to reformers who are ambitious enough to claim a whole ministry for the department of health. However, as Talleyrand observed, *Toujours de l'audace* is the motto for all reformers; and if we do not obtain a minister of health, we may perhaps realise the more subordinate conquest of fixity of tenure for medical officers of health: a modest desideratum which Dr. Fergus seems to have overlooked when drawing up his comprehensive scheme for the hygeia of the future.

DR. C. HILTON FAGGE has been appointed Examiner in Medicine in the University of London, in the place of the late Dr. Murchison.

CHOLERA still prevails amongst the British troops and natives at Candahar. It is reported that, up to the 6th instant, the total number of cases amongst the Europeans was seventy-five, of which sixty had ended fatally.

FROM Memphis, it is reported that the fatal cases of yellow fever are on the increase. There were thirty-five cases on Friday, the 8th instant, and eight deaths; on Monday, the 11th, there were thirty-four cases and six deaths. There has been one case at St. Louis, and one at Louisville. With these exceptions, there is no yellow fever in the United States, excepting in the quarantines on the Atlantic coast. Memphis is entirely isolated, nobody not having had the fever being allowed to enter. Ninety-three fatal cases occurred in Havannah last week; and intelligence from Tampico, Mexico, states that an excessively fatal epidemic prevails at that place.

THE deaths from diarrhœa in the twenty largest English towns were 141 last week, against 712, 362, and 947 in the corresponding weeks of the three years 1876-7-8; Sunderland and Salford showed the largest fatality from diarrhœa last week.

THE deaths in London last week were 1,223, or 422 below the average; and the death-rate was only 17.6. During the past six weeks of the current quarter, the death-rate in London has averaged but 17.7 per 1,000, against 20.6 and 24.9 in the corresponding six weeks of 1877 and 1878. This low death-rate was chiefly due to the small fatality of diarrhœal diseases which is still noticeable. These deaths, which had been 25 and 46 in the two preceding weeks, further rose to 90 last week, but were so many as 235 below the average; in the corresponding week of the last three years, the fatal cases of diarrhœa were 294, 166, and 339 respectively. The 90 last week included 74 of infants under one year of age, and 8 of children aged between one and five years.

BROMPTON HOSPITAL FOR CONSUMPTION.

IT is stated that there is a probability of the post of Resident Medical Officer at this Hospital becoming vacant in the course of the coming autumn.

ARMY MEDICAL SCHOOL AT NETLEY.

THE thirty-eighth session of the Army Medical School was brought to a conclusion on the 4th instant. The announcement of the places gained at the final examination by the candidates for commissions, the position having an important influence on the future prospects of each of them in the public service, and the declaration of the names of the successful competitors for the prizes at the disposal of the school, are matters which always excite a good deal of interest among the candidates and their friends, and on the present occasion led to a large gathering at Netley. Besides the military and medical officers on the staff of the Royal Victoria Hospital, and the professors of the school, Inspector-General W. T. Domville, C.B., Director of the Royal Hospital at Haslar; Surgeon-General T. Best, principal medical officer at Portsmouth; with other officers and visitors, were present at the meeting. The session had been attended by fourteen candidates for commissions in Her Majesty's Indian army, among whom were several natives of India, and nine candidates for the Royal Navy. Several commissioned officers of the Indian service had also voluntarily gone through the summer course of work. There had been no candidates for general service in the army, a subject on which no further remark need now be made, as it has been frequently referred to of late in our columns. Colonel Allen Johnson, the Military Secretary at the India Office, came from London to deliver the prizes to the successful competitors. Several distinguished members of the Indian Medical Service accompanied him, including Sir Joseph Fayrer, K.C.S.I., President of the Medical Board of the Indian Council; Surgeon-Major Hopkins, also a member of the board; and Dr. Norman Chevers, the eminent author on Indian medical jurisprudence, and the late principal of the Medical College at Calcutta; with other gentlemen interested in

Indian affairs. The business of the meeting commenced by Professor Maclean, C.B., reading the names of the gentlemen of the two services in the order of the places taken by them at the closing examination, and afterwards the official letters announcing the name of the winner of the Herbert Prize, and of the Martin and Parkes Medals. On the present occasion, these three distinctions were all carried off by one gentleman, Mr. F. F. Perry, who stands first on the list of the Indian service. Mr. Perry was educated at University College, where he acted for a time as House-Surgeon and also as House-Physician. He was subsequently Demonstrator of Anatomy at the Westminster Hospital. After the preliminary business, Colonel Johnson delivered a long address to the candidates, which was listened to with much attention; and then, on Mr. Perry being called to the front, handed to him the prizes which he had won, remarking, as he did so, that he had gained a fourth prize of great value—viz., a general acknowledgment of his eminent merits, testified to no less by the hearty applause with which the announcement of his success had been greeted by his fellow-workers and competitors, than by the official decision of the school authorities. Dr. Norman Chevers, on the invitation of the principal medical officer, Surgeor-General Massy, C.B., also gave an address to the candidates, congratulating especially those who were about to enter that branch of the service with which his thirty years' experience in India made him more intimately acquainted, on the prospects of usefulness and distinction before them. After the addresses were completed, the visitors, on the invitation of Surgeon-General Massy and the officers of the army medical staff at Netley, adjourned to the mess-room in the officers' quarters, where a handsome luncheon was provided. We publish the names of the successful candidates, with the numbers of marks gained by them, on another page.

THE BENGAL MEDICAL SERVICE.

NOT long ago, we had occasion to call attention to the high-handed manner in which the Deputy Governor of Bengal has recently dealt with the administration of the civil hospitals within his province. It is now a matter of notoriety in Calcutta that Dr. Beatson, the Surgeon-General and Chief of the Medical Department of the Bengal army, was obliged to protest to the Government of India against the interference of Sir Ashley Eden with his duties. "If", Dr. Beatson is reported in effect to have said, "I possess the confidence of the Viceroy in Council, I have a right to expect the support of Government in the discharge of my duties. If I have unfortunately lost his confidence, I now place my resignation at the disposal of the Viceroy in Council." The outcome of this has been, so far as Bengal proper is concerned, the long talked-of separation between the military and the civil branches of medical administration. Surgeon-General Beatson remains at the head of the former, and the Deputy-Governor of Bengal has been empowered to appoint a Surgeon-General, whose duty it will be to administer all matters of civil medical administration within the limits of the Deputy-Governor's authority. So far, we think this is a move in the right direction; and it is probable it will ere long be still further extended, until the separation is complete over all India. The manner in which Sir Ashley Eden intends to carry out the measure is another matter, and we have reason to know has given rise to grave discontent throughout the service; for it establishes a precedent that cannot fail to be prejudicial to its best interests. Promotion to administrative rank in the Bengal Medical Service is, and properly so, by selection. The rule is that, when an officer is selected for promotion, it is optional with him to accept it, or to remain in the discharge of executive duties. Many officers hold executive appointments, the emoluments of which exceed those in the administrative rank. If, however, promotion be once declined, the offer is never made a second time; the person so declining remains doing executive duties until he retires. This is a just and wholesome rule, and it has hitherto worked to the satisfaction alike of Government and of the service. The Deputy-Governor has, in his usual high-handed manner, broken through this rule. He has nominated Surgeon-Major Payne to the new appointment, with the rank, title, and emoluments of Surgeon-General. Now, in some important particulars, this is an excellent appointment. Dr. Payne is a medical officer of great attainments, his professional reputation is deservedly high, and he has shown that he possesses, what does not always go with such attainments, administrative capacity. Still, his appointment is a flagrant job. Dr. Payne, according to the long-established rule above adverted to, was not eligible for administrative duties at all, because he had refused promotion when it was offered. In the next place, his advancement to the rank and emoluments of Surgeon-General, without having acted as Deputy, is without precedent in any department of the public service, and is contrary to rule and custom; and lastly, Dr. Payne is to be allowed to retain, after promotion, a part at least of his executive duties, with the emoluments thereunto belonging, an unheard-of indulgence, contrary to the letter and spirit of the regulations of the service. We say this is an abuse of power and patronage such as in this country would be gravely noticed in Parliament, if any minister could be found bold enough to indulge in it. Sir Ashley Eden may say he does not care for the opinion of the press in India or at home on his administrative acts; very likely he does not; men of his stamp seldom do. Still, even so great a person as the Deputy-Governor of Bengal should remember that this exposure of this ill-advised bit of administration will be read by hundreds of young men in our universities and medical schools, who are thinking seriously of their future. The public medical services of the State, for reasons which are well known, are not at present very attractive. Is it wise, in an administrator of Sir Ashley Eden's rank and ability, to do his best still further to lessen their attractions to the class of men whom, it is presumed, he would like to see in so important a branch of the public service as the medical department of the army of India?

METROPOLITAN COWSHEDS.

THE Metropolitan Board of Works, in their Regulations for Cowsheds, fixed an "air-space" of eight hundred cubic feet per cow, no height of the shed above sixteen feet to be reckoned. At a large meeting of the Dairymen's Association, held on Friday, the 1st instant, a memorial was agreed to requesting the Board to reduce the requirement to six hundred feet. This reduction is much to be deprecated; and it is to be hoped that the Board, when the matter comes before them, will stand firm to their regulations, which certainly are not over liberal in the allowance of air-space to the confined animals.

THE TEACHING OF PSYCHOLOGICAL MEDICINE.

AT the annual meeting of the Medico-Psychological Association, which was held, under the presidency of Dr. Lush, at the Westminster Palace Hotel on the 30th ult., Dr. Clouston moved and Dr. Bucknill seconded the following resolution, which was carried unanimously: "That this Association petition the General Medical Council to have mental diseases made a subject of examination for all degrees and licences in medicine in the United Kingdom." Dr. Clouston said that it was notorious that, though lectures on mental diseases are provided for students, a very small percentage avail themselves of their opportunities. The present time is very favourable to bring the subject forward. The whole question of medical education is attracting much attention, and is certain before long to undergo considerable modification. Now, therefore, would be the time to petition the General Medical Council, many of the members of which body had already turned their attention in that direction. Dr. Clouston concluded by adducing various arguments, analogous for the most part to those put forward in the article on this subject published in the JOURNAL for May 3rd, in favour of making a knowledge of mental diseases compulsory upon all medical students. Dr. Bucknill, in seconding the resolution, stated that he was commissioned by Dr. John Gray of New York to express his regret that he was unable to be present at the meeting, which he had hoped to attend with a view to supporting this resolution. Dr. Gray was one of the most successful teachers of mental diseases, his class at the Bellevue Hospital being composed of as many as five hundred pupils. Dr. Lush stated that, from the evidence given before the Select Committee appointed to examine into the question of medical reform, that body had

concluded to suggest a reconsideration of this subject by the General Medical Council. We have so recently expressed our views on this important question that it is needless for us to add anything more to what we then wrote. We have, therefore, only to express our satisfaction that the matter has been taken up by the Medico-Psychological Association, and that it has attracted the notice of the Select Committee of the House of Commons, and is likely to be carried speedily to a satisfactory conclusion.

THE WATER-SUPPLY OF LONDON.

THE agitation which this question has recently aroused in London will, it is to be hoped, eventuate in a fuller supply of better water to the metropolis than that of which Londoners can now boast. A public meeting of enthusiastic working men, held in Exeter Hall; a lengthened discussion of the question in the House of Commons in the precious last hours of an expiring session; and an exhibition, which is to be opened to-day at the Alexandra Palace by the Lord Mayor, of all the apparatus that has to do with the collection, storage, and distribution of drinking-water—all these are amongst the signs which betoken the interest that this subject is now creating. The promise of the Home Secretary that the matter shall be examined in all its bearings before next session, in order that the supply of water may be improved, is full of encouragement for the future.

THE AFGHAN WAR.

IT is most gratifying to notice that the labours of some of the medical officers of the British and Indian medical services during the late Afghan campaign have not been disregarded by commanding officers. In the farewell order of Lieutenant-General Sir Samuel Browne, K.C.S.I., C.B., V.C., commanding the First Division Peshawur Valley Field Force, he tenders to the following medical officers, in common with the Divisional staff, Deputy Surgeon-General J. Gibbons, Principal Medical Officer, and Surgeons-Major G. Davie and J. H. Porter, his acknowledgments for the able and efficient manner in which they performed their respective duties, and the support and assistance they have invariably rendered him. Brigadier-General Tytler, C.B., V.C., commanding the Second Brigade, First Division, in his farewell order, makes the following remarks: "The regimental medical arrangements in the Brigade have throughout the campaign been most satisfactory, and the Brigadier-General desires to express his thanks to Surgeons-Major Ramsbotham and McWaters, A.M.D.; Surgeon-Major Galloway, 45th Sikhs; and Surgeon-Major Mallins, 27th P.N.I.; for their great care of the sick and wounded, which has so materially added to the comfort of officers and men." From the Quetta column, Major-General Biddulph, C.B., in his farewell orders, expresses his thanks to Surgeon-Major Manley, V.C., in charge of the field hospital, for his services. We hope, as the different orders appear, to be able to record the names of many other medical officers who have served their country so honourably under the most trying circumstances. From Peshawur, we learn that all the European troops from the front have reached their respective stations, but not without considerable loss from cholera and sunstroke. The Base hospital, and officers' hospital in connection with it, which afforded such relief and comfort to very bad cases passing through Peshawur, are being broken up, there being no further use for either; and the medical arrangements are now, as of old, on the regimental system.

THE TEMPERATURE OF THE STOMACH.

FOR several years, Dr. Winternitz of Vienna has held the opinion that the temperature of the stomach may be ascertained by means of a short maximum-thermometer introduced through a tube. The idea has been carried out, under his direction, by Herr Grenier, an optical instrument maker in Munich. He has made a maximum-thermometer six *centimètres* (about 2.4 inches) long, slightly curved in the lower third in order to pass easily over the root of the tongue and the larynx. The scale of the instrument extends from 35° to 42° Celsius (95° to 107.6° Fahr.), and is graduated in tenths of a degree. At its upper end is a small glass ring, through which is passed a strong thread, the ends of which are brought out through a stomach-tube. The upper end of the thermometer is also fastened to the tube by means of a solution of gutta-percha. The tube, with the thermometer, is then introduced into the stomach in the same way as the stomach-pump. It has been found by experiment that the thermometer can be introduced into the stomach in from five to ten seconds, and that from fifteen to twenty seconds elapse before the mercury rises. The maximum temperature is reached in four or at most five minutes. If resistance to the passage of the tube be produced by the irritability of the larynx or œsophagus, the thermometer may be cooled by means of ice, which retards the rising of the mercury for a minute and a half or two minutes. Dr. Winternitz has also endeavoured to ascertain the effect of cold injections into the rectum on the temperature of the stomach; and has found that irrigation with 1000 cubic *centimètres* of water at 52° Fahr. (11° Cent.) for twenty minutes caused a fall of nine-tenths of a degree (Centigrade); the temperature of the stomach falling below that of the axilla. This confirms the already existing belief, that the body-temperature can be lowered by the injection of cold water into the rectum. Dr. Winternitz says that he has found cool enemata and rectal irrigations to exert a powerful influence on the temperature in cases of hyperæmic and inflammatory affections of the stomach, liver, spleen, and neighbouring organs.

CHANGES IN VOLUME OF THE SPLEEN.

THE functions of the spleen are still so little known, that considerable interest attaches to all researches relating to the subject. A note lately addressed to the Académie des Sciences by M. Picard describes some recent investigations which he has made on this point. The nerve-fibres, he says, which are distributed to the spleen are known in respect of several of their physiological properties. It is known that this organ receives motor nerves; since, when the splenic nerves are cut and irritated on the peripheral side, they produce contraction of the spleen. It is known also that it receives, in respect of nervous centres, irritation of the central ends of the same nerves producing pain. We know, moreover, at least partially, the course followed by the motor filaments, since the irritation of the peripheral ends of the splanchnic nerves produces the same effect as that of the peripheral ends of the splenic nerves themselves. But if these facts are well established, it is none the less true that they do not suffice to enable us to understand the changes in volume which are produced in the physiological state of the spleen; they do not indicate to us in any way the process which leads to the dilatation, and are equally incapable of explaining to us how the contraction is produced. "I have", says M. Picard, "very carefully endeavoured to elucidate these important points, and if I have failed to arrive at any result as to the nervous mechanism which determines their dilatation, I have at least succeeded in determining a contraction by reflex action, as the following experiment will show. In a dog in the act of digestion, the spleen was drawn outward from an opening in the left hypochondrium. A short time was allowed to elapse, until the phenomena of excitation by the air and cold had disappeared and the organ appeared in partial paralysis. This state was recognised by various characteristics. The surface becomes smooth, the colour more or less violet bluish, and the consistence soft. At this moment, the left pneumogastric nerve was laid bare and divided, and its central end irritated with an induced current. Under the influence of this centripetal action, phenomena were observed in respect to the spleen identical with those which the excitation of the peripheral ends of the splenic nerves would produce; the general volume of the organ was diminished by the loosening of its length, of its breadth, and of its thickness. Its colour became a pale red, its consistence became firmer, and its surface unequal and rough. In a word, by this action the contraction of the spleen had been determined. This result clearly ascertained, things were allowed to return to their former state, and then the right pneumogastric nerve was cut, and its central end was acted on by the induced current. This action produced exactly the same phenomena which had been observed while acting on the left nerve, and also determined in a similar manner contraction." From this experiment and the facts related above,

it may be concluded that the contraction of the spleen in normal life results from a sensitive action which reaches centres following the trunks of the two pneumogastric nerves, whilst the centrifugal action which follows it passes along the spinal cord and the splanchnic nerves. If it be easily ascertained by experience how to excite contraction of the spleen, whether direct or reflex, it is, on the contrary, not possible to obtain the inverse effect—dilatation. M. Picard was unable to obtain this by nervous centripetal excitation or by centrifugal excitation. In the presence of these negative results, he is led to think that this state may well result simply from the modifications which the circulation of the vena portæ undergoes in normal life. When the circulation of the vena portæ is very active, that organ gradually dilates, as occurs when the course of the blood is disturbed even slightly in the splenic vein; in other words, the dilatation of the spleen would result from nervous dilating influences exercised by the digestive organs, whilst this contraction would result from a special well determined nervous action.

CARBOLIC ACID A REMEDY AGAINST BEE-STINGS.

DR. KLAMANN publishes, in the *Allgemeine Medicin. Central-Zeitung*, a case of bee-sting, followed by acute symptoms of poisoning, which was relieved within a very short time by a subcutaneous injection of carbolic acid. The patient—a robust, strongly built young woman—was stung in the lower lip by a bee. Soon afterwards, she vomited; her face became flushed; the right half of the face began to swell, and the swelling soon spread over the whole face. The woman fainted, and was laid on her bed. When Dr. Klamann saw her soon afterwards, he found her unconscious; the face was dark-red, and much swollen; the sclerotics were injected, the lips cyanotic, the lids œdematous, the fingers and toes pale and cold. The patient did not answer when spoken to; the pulse was 72, hardly perceptible; respirations 24. Nothing abnormal could be detected in the heart, but the impulse was weak. The extremities were immovable. Cold compresses were immediately applied to her head, and five *milligrammes* of carbolic acid in solution were injected under the skin, near the spot where she had been stung. At the same time, sal volatile was held to her nose. In about a quarter of an hour, the swelling at the lips and eyelids began to abate visibly; consciousness returned gradually; and the mouth could be opened. The tongue was somewhat swollen, but the patient could swallow without much difficulty. In the course of three-quarters of an hour, the patient had three attacks of convulsive trembling of the whole body, together with violent twitchings of the muscles of the face. During each of these attacks, the patient was very restless; her face became flushed, and she threw her head about. After each attack, her face became suddenly pale, the skin of her whole body grew cool, and the pulse could hardly be felt. Gradually, however, the symptoms of poisoning disappeared, the patient could open her mouth and swallow a few drops of spirit of sal volatile in water. She passed a good night, and the next day went about her work as usual. The lower lip remained slightly swollen during the next few days. A fortnight before the accident, she had been stung by a bee in the left forearm; after which the whole limb became swollen, and urticaria broke out over the whole body. The arm was still swollen when she was stung in the lip; and the injection of carbolic acid appeared to exercise a favourable influence on the arm, which, on the next day, had recovered its natural size.

SCOTLAND.

GRADUATION IN MEDICINE IN ABERDEEN.

THE graduation in medicine in Aberdeen University took place on Saturday last in the Hall of Marischal College. Most of the Senatus were present; Principal Pirie presided. Thirty candidates received the degree of M.D.; fifty-seven the degree of M.B.; and fifty-five the degree of C.M. Of these graduates, Messrs. Joseph Needham, David Skinner, and James Hutchison Walker received their degrees in medicine and surgery with highest academical honours. Messrs. George Coutts, Morgan Davies, Donald M. Frazer, Arthur Purkiss, Charles Carter Shepherd, and Frederick H. Spooner received their degrees with honourable distinction. The John Murray Scholarship and Medal was divided equally between David Skinner and James H. Walker. The thesis by Joseph Needham received high commendation; while the theses of D. M. Frazer, David Skinner, and J. H. Walker were considered deserving of commendation.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH.

DURING the recent examinations for the double qualification of the Colleges, held last month, thirty-seven candidates passed the first professional examination, and fifty-five passed the final examination and received the L.R.C.P. & S.Ed. diplomas.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

AT the examinations for the diplomas of this College, two candidates passed the first professional examination, five passed the second and received their diplomas; while two candidates appeared for examination in dental surgery, passed the examination, and received their qualification to practise.

SUICIDE BY PAREGORIC IN EDINBURGH.

LAST week, a woman called Mrs. Rourke attempted to commit suicide by swallowing three ounces of paregoric. She was seen to do so, and was at once removed to the Royal Infirmary, where prompt measures were taken to relieve her. These were successful; but the active exercise necessary to counteract the sedative was persisted in for several hours.

POISONING BY LAUDANUM.

LAST Friday, a druggist of New Machar, aged 25, was found in the morning in a dying condition in his lodgings. He was removed to the infirmary, and restorative measures were taken, but without effect, as he soon afterwards died. The day previous, he had purchased two ounces of laudanum, stating it was for a horse. The empty bottle was found under his bed.

DRAINAGE AND WATER-SUPPLY.

THE drainage-works for Hawick are approaching completion. At the last meeting of the Council, it was reported that the drainage-works had already cost £22,000, and that nearly £3,000 more would be required to complete them. The water-supply of Musselburgh will be secured by the end of the present year; all the preliminaries have been arranged, and the engineer expects work to begin at once. The Edinburgh Water Trust has guaranteed a supply of 150,000 gallons a day, at threepence per 1,000 gallons, which will allow fully fifteen gallons a day per head of the population.

WALKER'S HOSPITAL, FRASERBURGH.

THE managers of Thomas Walker's Hospital have resolved to allow all the medical men of the burgh of Fraserburgh and in the four contributing parishes to recommend patients for admission to the hospital, and to attend them while there, if desired. It is to be understood that the patients, when able, will remunerate the doctors. This promises to be an excellent arrangement.

HEALTH OF GLASGOW AND LEITH.

THE mortality in Glasgow last week was 16 per 1,000, the same as the preceding week, but comparing very favourably with the same week last year, when it was 22. In Leith, the mortality was 18 per 1,000 last week.

THE MURCHISON MEMORIAL.

AT a meeting of the Lecturers in the Edinburgh School of Medicine, held on July 29th, *inter alia*, the subject of the Murchison Memorial was brought before them; and there were then discussed the terms of competition for the proposed Memorial Scholarship, when competed for in Edinburgh, as explained in the circular issued by the Memorial Committee, viz., that "in Edinburgh the Scholarship will be administered by the Medical Faculty of the University, and be open to all its medical undergraduates". It was resolved: 1. To protest against the unfair

and invidious exclusion of the students in this school (Royal College of Surgeons of Edinburgh) from participation in the competition for the proposed Murchison Memorial Scholarship, while the students of all the London medical schools are to be permitted to take part in it. 2. To endeavour to get the promoters of the scheme to remove this restriction, and to make and publish the necessary alterations, both as regards the competitors and the judges of the award in Edinburgh. 3. To withhold all countenance and material support from the scheme, until such amendments have been made and duly notified. 4. That a copy of these resolutions be sent to the Secretaries to the Memorial, both in London and Edinburgh, with a request that they be immediately submitted to their respective Committees, for consideration and adjudication thereon. 5. That a copy of these resolutions be sent to the editors of the various medical journals for publication.

IRELAND.

AT a recent meeting of the Kanturk Board of Guardians, Dr. O'Shaughnessy was elected by a majority of votes visiting medical officer to the Workhouse, at a salary of £100 *per annum*.

DEATH OF THE REGISTRAR-GENERAL FOR IRELAND.

WE regret to announce the death, on Wednesday last, of Dr. William Malachy Burke, the Registrar-General for Ireland. This sad event occurred most unexpectedly. He was apparently in his usual good health last week, and, when seen by his friends Drs. Banks and Mc Dowell on Tuesday, his state did not indicate that his illness—a low form of pneumonia—would terminate fatally or in so sudden a manner. Dr. Burke was for many years physician to Dr. Steevens's Hospital, and held the honorary post of visiting physician to that institution at the time of his death, as well as that of consulting physician to the National Eye and Ear Infirmary. He was a Fellow of the King and Queen's College of Physicians, and, previously to his appointment as Registrar-General, was Medical Superintendent of the General Registry Office for Ireland. In his important official position, Dr. Burke gained the respect of all who were brought into contact with him; and, by his powers of organisation, developed the working of his department in a manner productive of the greatest benefit to the State and to the profession of which he was so worthy and genial a member.

HEALTH OF CORK.

FROM the report of the Superintendent Medical Officer of Health, for the four weeks ending July 19th, it appears that the annual death-rate, per 1,000 inhabitants, gave a ratio of 19.67 from general diseases; 1.65 from infectious; 2.46 infant mortality; and a birth-rate of 26.94. The report refers to the comparative immunity from febrile and other infectious diseases in a city so densely populated as Cork; and attributes it, in a great extent, to the vigilance displayed by the dispensary physicians in the early detection of such cases, together with the promptitude shown by the local sanitary staff, in their endeavours to arrest the spread of contagion, by having the apartments occupied by the patients so affected, as also the bedding, clothing, etc., therein contained, chemically disinfected. These last-mentioned articles are removed without delay to a disinfecting chamber specially erected for that purpose, and, when practicable, the healthy members of the sick person's family are temporarily lodged in a house provided for that purpose, while their own abodes, being empty, are thoroughly purified.

SMALL-POX EPIDEMIC IN IRELAND, 1878.

THIS disease prevailed amongst all classes of society in Dublin; proving fatal in a large number of instances, the cases preponderating in the south part of the city. It also appeared in many other parts of Ireland, its appearance being in almost all cases attributed to infection brought from Dublin—either by means of infected clothing bought out of a pawn-office, discharge from hospital during the convalescent stage, or by persons who travelled down to the country by train or canal after the disease had been contracted. The outbreak last year, although by no means so severe as that of 1872, yet assumed nearly the same proportions as in the years 1864 and 1865. As regards the mortality, 856 deaths were recorded as having occurred in all Ireland; of which number, 254 took place in workhouses in the year ended 25th of last January. The returns of the medical officers of dispensary districts show that 1,669 persons were attended during 1878; but this number does not include cases treated in private practice, which were considerable. The Dublin, Belfast, Galway, Athy, and Tullamore Unions were the most severely visited; in Dublin the disease still exists, but it ceased in Belfast in the December quarter of last year; and it has also disappeared from Galway, Athy, and Tullamore Unions. One hundred and fifty-five cases occurred in Belfast; and the limited spread of the disease has been attributed to the speedy removal, in almost every instance, of those attacked by it to the hospital provided by the Board of Guardians, and to the efforts used by the medical officers in persuading the friends of the patients to have them so removed, as well as to the energetic steps taken for the disinfection of the premises occupied by the persons attacked, and the destruction of infected bedding and clothing. As additional proof, if that were necessary, that vaccination modifies the disease to such an extent as to reduce the mortality below that of ordinary diseases, we may mention that of the 155 cases treated in Belfast, of 121 vaccinated, the disease proved fatal in 12 instances; whilst of 34 persons unvaccinated, no fewer than 19 died.

LUNATICS IN WORKHOUSES.

WE learn from the recent report of the Inspectors of Lunatic Asylums in Ireland that the total number of the mentally affected in workhouses on the 31st of December, 1878, was 3,335, being 37 fewer than in 1877; of these, 1,241 were represented as lunatics, 1,394 idiots, and 702 epileptics. The Inspectors believe that a material benefit would result were paid attendants employed; but they consider that probably the best arrangement would be to allocate wholly or partially one or more workhouses in each district, according to its size, to the reception of harmless idiots, epileptics, and the utterly demented or fatuous, who are now diffused through no fewer than one hundred and sixty-three unions in most unequal proportions. Many years since, the erection of four provincial hospitals for idiots, imbeciles, and a certain class of incurables was referred to in a parliamentary report; but the Inspectors are of opinion that provincial depôts would not prove to be so successful, as the number of counties attached to them would cause inconvenience, and the trouble and expense consequent upon the removal of patients from remote localities would constitute very serious objections. In regard to sex, two-thirds of the combined classes are females aged and debilitated, and, as a rule, neither they nor the males give much trouble; should, however, individuals become irritable or refractory, they are at once transferred as dangerous lunatics, too often under frivolous pretexts, to district asylums, where their advanced age and bodily infirmities exclude the hope of recovery, and institutions erected for other objects become overcrowded, to the exclusion of curable cases and of cases which, however unpromising, need special supervision.

HEALTH OF IRELAND: QUARTERLY REPORT.

DURING the quarter ended June 30th, the births registered in Ireland amounted to 36,601, being equal to an annual ratio of 1 in every 36.6, or 27.3 per 1,000 of the population; the birth-rate being under the average for the corresponding quarter of the past five years. The deaths numbered 28,115, affording an annual ratio of 1 in every 47.7, or 21.0 per 1,000, against an average rate of 19.1 per 1,000 for the June quarter of the years 1874-78. The comparatively heavy mortality was due to a great extent to the cold, wet, and variable weather which distinguished the past quarter, the greater portion of the increased death-rate being among the aged. Phthisis, bronchitis, and pneumonia were very fatal; but the mortality from zymotic diseases was below the average, being 667 under the deaths from this class of diseases in the corresponding quarter of 1878. Small-pox caused 153 deaths, being a decrease of 181 from those in the previous quarter, the chief mortality having been in the

North and South Dublin Unions, where 126 of the number took place. The mortality from measles was below the average, the deaths numbering 183; and scarlet fever was much less fatal than usual, the deaths from this disease being 307—a number which compares very favourably with the average death-rate from this cause for the June quarter of the past ten years. To diphtheria, 74 deaths were attributed; to fever, 774; to diarrhœa, 435; and to simple cholera, 7. Whooping-cough caused 416 deaths, of which nearly one-half (190) occurred in Ulster, the chief mortality in that province having been in the Belfast Union, where 92 of the deaths were registered. There were 633 inquests during the quarter, a number equal to 1 in every 42 of the total deaths registered.

LOCAL GOVERNMENT BOARD FOR IRELAND: ANNUAL REPORT.

THE seventh annual report of the Local Government Board, which has been lately issued, shows that the average daily number of persons receiving in-door relief during the year 1878-79 amounted to 47,994, being 3,318 more than in the preceding year; and, the out-door lists, an increase of 2,727 in comparison with the corresponding return of last year. This excess of the number of recipients of relief being due to the exceptional severity of the past winter, it is satisfactory to note that the increased cost of out-door relief, viz., £8,188, has been expended exclusively on persons permanently disabled by reason of old age, infirmity, bodily or mental defect; on widows having two or more legitimate children depending upon them; and on persons disabled from labour by reason of severe sickness or serious accident. During the year ending January 25th last, the total number of deaths in the various workhouses was 12,789, showing an increase of 1,599 deaths as compared with the number last year. Of these, 2,876 were due to age, 2,274 to lung-affections, 943 to consumption, 645 to fever, and 254 to small-pox. There were, for the twelve months ending September 29th, 54,041 admitted into workhouses for sickness, being an increase of 4,921 over the preceding year; also, an increase of 43,389 in the number admitted who were not sick; an increase of 1,170 in the number suffering from fever and other dangerous contagious diseases; and an increase of 49,271 in the total number relieved. In the seven hundred and twenty dispensary districts, the medical officers during the year attended 483,446 cases at the dispensaries, and 192,868 patients at their own homes, or a total of 676,314, vaccinated 133,045 persons, and gave certificates in the case of 1,160 dangerous lunatics. There was an increase in the total number of cases vaccinated and revaccinated, amounting to 15,366. Small-pox caused during the past year 856 deaths, of which 254 occurred in workhouses, its appearance being in almost all cases attributed to infection brought from Dublin. As regards fever, it is satisfactory to find that there has been a steady and progressive decrease during the past five years in the number of cases reported by the medical officers of dispensary districts; a result due probably to the action of more stringent sanitary laws, as well as the material improvement which has taken place in the food, clothing, and habitations of the poorer classes. The medical charities expenditure amounted to £144,912; under this heading is included the cost of medicines and medical appliances, salaries of medical officers and apothecaries, vaccination fees, and other expenses, showing an increase of £3,836 upon the expenditure of the preceding year.

THE APOTHECARIES' HALL OF IRELAND.

AT the annual meeting of the General Council of the Apothecaries' Hall of Ireland, convened by authority of the Act of Incorporation on August 1st, 1879, the following members were elected as office-bearers for the ensuing year: *Governor*, John Evans, Esq.; *Deputy-Governor*, Edward H. Bolland, Esq.; *Court of Directors and Examiners*, Thomas Collins, Arthur Harvey, Charles Holmes, Charles H. Leet, Charles F. Moore, Robert Montgomery, Henry P. Nolan, Jerome O'Flaherty, Edward J. O'Neill, Sir G. B. Owens, John Ryan, James Shaw, George Wyse; *Examiners in Arts*, Edward W. Collins, M.D., Arthur Wilson, B.A.; *Representative on the General Medical Council*, Dr. C. H. Leet.

THE SELECT COMMITTEE ON THE CONTAGIOUS DISEASES ACTS.

MONDAY, JULY 28th.—Members present: The Right. Hon. W. N. Massey in the chair, Colonel Alexander, Mr. Cavendish Bentinck, Viscount Crichton, Sir Henry Holland, Sir Harcourt Johnstone, Mr. Kavanagh, Mr. Shaw Lefevre, Mr. Ernest Noel, Mr. O'Shaughnessy, General Shute, Mr. Stansfeld, and Mr. Tremayne.

The examination of Surgeon-Major Frederick Robinson, M.D., Scots Guards, was proceeded with.

By the CHAIRMAN: He had held the position of medical officer in the Scots Fusilier Guards for about twenty-seven years. In 1857, when stationed at Windsor, the extent and severity of venereal diseases in the battalion induced Dr. Robinson to write a letter to the general officer, in which letter he stated that three-fourths of the sick of his battalion consisted of venereal cases, and that, with a nominal strength of 659 non-commissioned officers and men, thirty, or about 4½ per cent., were in hospital with that disease, many suffering from a form of it so severe as to render them inefficient for a considerable time. No action was taken upon that letter. Between 1860 and 1867, there was no diminution in the number of cases of venereal disease in the regiment at Windsor. In 1867, the regimental authorities at Windsor placed a guard over a certain brothel, from the inmates of which the soldiers were found chiefly to have contracted syphilis. In 1868, when the Acts came into force at Windsor, an immediate amelioration took place; but the benefit derived by the troops at Windsor was lost when they came to town, by reason of the virulence of the disease in London. Dr. Robinson formerly thought that voluntary Lock Hospitals for prostitutes might be effective; but his views had since been modified, and he was now of opinion that coercive measures were also necessary. In the Scots Fusilier Guards, it had always been the practice to examine the men until late years, when periodical inspection fell into disuse, but was revived when the Acts came into operation, and was still continued. Regular examination of soldiers would contribute very much to the efficiency of the Acts.

By Mr. KAVANAGH: He considered the Acts absolutely necessary for the health of the Army. During the last few months, Lord Cardwell's order directing stoppage of pay from the men sent to hospital with primary syphilis or gonorrhœa, had been suspended in the Scots Guards, except in the case of men who had avowedly concealed their disease. He had noted the number of admissions and the nature of the cases since then, and had not observed any difference between the number of admissions for syphilis and the number of cases of concealment, before and subsequent to that period.

By Mr. TREMAYNE: Soldiers in the Scots Guards used to be examined once a fortnight, but, owing to the extent of syphilis and to witness's representations, the examination was now made, as nearly as duties would permit, once a week.

By Mr. STANSFELD: The acts were first applied at Windsor on April 1st, 1868. Dr. Robinson had not himself served there since 1868. There were generally at Windsor one battalion of the Guards and a cavalry regiment, in all about 1,000 men. The returns of venereal diseases for London and Windsor were combined in the Army Medical Reports up to 1867. Since 1867, the figures had been separated. The witness could not explain the reason of this; it rested with the Army Medical Department. Dr. Robinson's experience of venereal diseases was not confined to his own battalion; he had a knowledge also of the great extent of syphilis at Windsor in the Foot Guards generally. His experience was, that the extent of syphilis in London now was much on a par with the state of disease which existed at Windsor about the period when he wrote the letter mentioned above. Taking the case of Windsor, and the average from 1867 to 1878, he could not say in what instances Windsor would compare favourably with unsubjected stations as regarded the number of admissions to hospital; he had had no experience in other places. Captain Harris's report, as far as it affected Windsor, was next referred to by Mr. Stansfeld, and some questions were asked about it; but as a summary of the report has been lately published in this JOURNAL, we need not now notice it further. For some years past, all venereal sores had been returned under the head of "primary syphilis". The previous classification of sores was "non-infecting" and "infecting". Dr. Robinson did not think it advisable that primary sores should be divided into those two classes, because his experience had led him to believe that constitutional syphilis might arise from both hard and soft sores—to a greater extent from the hard sore, but also, in a certain number of cases, from the soft sore. He was in favour of extension of the Acts to all military stations, because of the great loss to the service resulting from the direct and indirect consequences of syphilis. He had also spoken in his annual reports of the

great benefit it would be to the service if the Acts were extended to London, not only in promoting the efficiency of the army, but also in diminishing constitutional disease both in parents and their offspring.

By Colonel ALEXANDER: Since 1873 (the date of Lord Cardwell's order), the returns were unreliable only in the sense that they did not do full justice to the Acts. A considerable number of venereal cases which appeared in the returns for Windsor originated in London, and ought, therefore, to be deducted from those originating in the protected district. The reduction in primary syphilis at Windsor in 1867 was more apparent than real, because, during nine months of that year, a battalion of the regiment which was not periodically examined was stationed there, and thus many cases of venereal disease remained undiscovered. In the last tour of duty of the first battalion of the regiment at Windsor, from April to June 1878, there were only admitted two cases of primary syphilis and twelve of gonorrhœa. The two cases of syphilis and ten of the cases of gonorrhœa were contracted out of the district. A very large proportion of the invalids annually discharged from the Scots Guards were men whose disease was distinctly traceable to syphilis.

Dr. Robinson was next questioned at some length by Sir Harcourt Johnstone and Mr. Shaw Lefevre as to the comparison of Windsor with stations not under the Acts, of which stations the witness had no experience; also as to voluntary hospitals, on which he had already expressed an opinion; and on the proportion of venereal disease in Windsor and London. A few questions by the Chairman concluded Dr. Robinson's examination.

The Committee adjourned until Wednesday, July 30th.

The concluding meeting for the present session was held on Wednesday, July 30th, when the following members of the Committee were present: The Right Hon. W. N. Massey in the chair, Colonel Alexander, Mr. Cavendish Bentinck, Mr. Burt, Viscount Crichton, Sir Harcourt Johnstone, Mr. Kavanagh, Mr. Shaw Lefevre, General Shute, Mr. Stansfeld, and Mr. John Tremayne.

Mr. Arthur B. R. Myers, surgeon, Coldstream Guards, was called in and examined.

By the CHAIRMAN: For the last twenty years he had been attached to the Coldstream Guards. Previously, he was house-surgeon to the London Lock Hospital for one year. The strength of the force in 1859 was about 850 men. At that time, it was always calculated that from one-third to one-half of the men in hospital were suffering from venereal disease. Mr. Myers then handed in a return of the number of admissions for primary sores in the first and second battalions of the Coldstream Guards, stationed at Windsor, from 1865 to 1878 inclusive. The figures given related to periods of about six months each. From this return it appeared that, in twenty weeks of the year 1865, when the average strength was 707, there were 49 admissions to hospital. In 1868, for twenty-five weeks, March to August, with a force of 608 men, there were 64 cases. From September 1868 to February 1869, a period of twenty-five weeks, the average strength of the force being 700, the number was 57. The Acts came into force at Windsor on April 1st, 1868. From September 1870 to March 1871, with a similar force of 700 men, the admissions for primary sores were 33. Between September 1871 and April 1872, the number was 29, but the ratio was much lower, being 75.07, against 94.28 in the previous year. Mr. Myers attributed this diminution to the Acts having come into full practical operation by 1871, and to the police having become more fully acquainted with the working of the Acts. In 1874, from May to September, when the force was 656, the number of admissions for primary sores was only 15, and 12 of these 15 men had contracted their disease out of the district. In the same year, for seven weeks, there was no case of primary syphilis in the hospital at Windsor. These good results were undoubtedly due to the Acts. Lord Cardwell's order of 1873, stopping the pay of men while in hospital for primary disease, did not have much effect upon this diminution, because of the regular examination of soldiers in the Guards. These inspections of the men were carried out, as a rule, fortnightly; but sometimes, when disease was very prevalent, weekly. From September 1876 to March 1877, the number of admissions had dwindled down to 11. At the beginning of the period, the battalion came from Aldershot, a protected district. From July to September 1878, the force being 864, the admissions for primary sores were 25. On this occasion, the battalion came from the unprotected district of London, and 15 out of the 25 cases had been contracted out of the district; therefore, only 10 referred to Windsor itself. The witness considered the examination of soldiers as well as of women necessary in order to render the Acts efficient. The combined examination of soldiers and prostitutes in Windsor had resulted in these small numbers of admissions for primary disease. The battalion now at Windsor only admitted 4 cases in three weeks, and 3 of the four were contracted out of the district, leaving only 1 case, in a battalion of 800 men, contracted in the district. Mr. Myers believed that, in London, the disease was increasing, and, as some of the causes of that increase, mentioned the fact of the soldier having more money, more license, and greater freedom; also, in consequence of the short service system, a far greater number of young men, who were more likely to catch the disease, came into the service. When soldiers consorted with women, they were not at all particular as to the kind of prostitute; a dissolute soldier would go with the first woman he met, not caring in the least whether she were diseased or not. Questioned as to the practicability of extending the Acts to London, Mr. Myers replied that, by taking a very small radius round the barracks, he felt certain the amount of disease among the soldiers could be diminished by one-half, in round numbers. To establish such a cordon as would exclude the general prostitution which surrounded the districts where soldiers are quartered, would be quite practicable, and would be beneficial to the soldiers; but in witness's opinion, the time had hardly come for such a step. He was quite sure that, if the Acts were allowed sufficient time in districts such as Windsor, the evidence would eventually become so conclusive as to the benefit of the Acts that the public would accept their extension.

By Mr. STANSFELD: The real explanation of the diminution of disease in the army before the Acts came into force had been given very clearly by the late Dr. Parkes, who pointed out that, from 1860 to 1866, the annual strength of the troops was reduced from 83,386 in 1860, to 59,758 in 1866. The reduction was obtained in two ways, first, by stopping recruiting, and secondly, by getting rid of men by discharge; the men discharged were generally those of bad character, and who furnished a large proportion of venereal cases; thus the great reduction of disease at that time was owing to the clearing out of bad characters and the absence of recruits. The low rate of disease recorded at Windsor during 1867 was explained by the fact that in that year a battalion of the Scots Guards was at Windsor for nine months, and was not examined for venereal disease, consequently many cases escaped notice; and also by the fact that a guard was put over a brothel where most of the disease was contracted. The great proportion of recruits in the Guards entered at from seventeen to twenty years of age, and might enlist for twelve years. In the British Army, only 4 per cent. of the soldiers were allowed to marry; it used to be 7 per cent. before the system of short service was introduced. Asked as to the unity or duality of the syphilitic poison, Mr. Myers expressed his belief in its unity. In the witness's opinion, there was only one poison, which might take on two kinds of action, one suppurative, and the other the adhesive kind of inflammation. If it took on the first, it tended to throw itself off; if the second, it tended to affect the constitution; but in either case, the constitution might become affected thereby. It was impossible to separate the two kinds of sore, and as evidence of this, Mr. Myers produced a return issued by the Army Medical Department in 1869, the object of which was to divide venereal sores into two varieties; these returns, when sent in, differed so much from each other, that no satisfactory deductions could be drawn from them, and they were therefore discontinued.

By COLONEL ALEXANDER: Self-indulgence on the part of the soldiers had been reduced by the Acts to a great extent, because there was less solicitation on the part of the women, and, therefore, less opportunity for sexual intercourse with them. Non-commissioned officers above the rank of corporal were not periodically examined, nor were the married men when they left the district. From half to three-quarters of an hour would suffice for the examination of 400 soldiers. As showing the difference in the number of venereal cases in two battalions of the Guards, the one arriving at Aldershot from London (not under the Acts), and the other from Shorncliffe (under the Acts), Mr. Myers stated that his own battalion went to Aldershot at the beginning of July, and, although he had detected ten cases of disease in London prior to its departure, yet, within ten days after its arrival at Aldershot, seven cases of primary syphilis and four cases of gonorrhœa were admitted into hospital. On the other hand, from a battalion of Grenadiers who came to Aldershot from Shorncliffe on the same day, no case was admitted during those ten days. Asked as the opinion expressed by Mr. Skey, when president of the Medical Committee of 1864, to the effect that the severity of syphilis had been exaggerated, the witness replied that Mr. Skey had, in 1871, signed a letter addressed to the Home Secretary (Mr. Bruce) by many eminent physicians and surgeons, in favour of the Acts.

In reply to Sir Harcourt Johnstone, Mr. Myers said that primary syphilis had not diminished in London; he had had great experience in the Guards, and certainly the disease had not diminished.

By Mr. SHAW LEFEVRE: It was impossible to find out how many men in the Guards married without leave. Witness could not give the

least idea of the proportion, but there were not so many as in the cavalry. Very few married men came into hospital with venereal disease.

By Mr. CAVENDISH BENTINCK: The necessity for prostitution was, unfortunately, practically inseparable from a camp or barracks; even if the prostitutes were to be removed by force and wholesale imprisonment, they, or others of a like class, would certainly find their way back. Where there was a demand, there would be a supply. In a letter lately published by Dr. Bell Taylor, there was a return, for a certain number of years, with regard to cases of constitutional syphilis; that return included the whole army, in protected as well as in unprotected districts without distinction, and was therefore unreliable as a test of the effects of the Acts.

Mr. Thomas Bond, Surgeon to the A. Division of Police and Assistant-Surgeon to the Westminster Hospital, was next examined.

By the CHAIRMAN: He gave evidence before the Royal Commission in 1871, and made various statements with regard to the prostitutes who frequented the haunts of soldiers; he still adhered to the evidence which he then gave. Syphilis, in Mr. Bond's opinion, had not changed in character during the last twenty years. Treatment had improved, but the severity of the disease had not lessened.

In reply to other members of the Committee, Mr. Bond stated that he had been surgeon to the Petty France Pauper Voluntary Lock Hospital. Under the provisions of the Local Government Board, no one suffering from a contagious disease was allowed to leave a workhouse or infirmary until cured. They came in voluntarily, but were detained compulsorily. Under those circumstances, Mr. Bond had cured many. He thought the power of detention should be unlimited as to time. About one-third of the sores he saw at the Westminster Hospital were syphilitic. He was of opinion that the Acts should be extended to all professional prostitutes throughout the country. He saw no insuperable difficulty as regarded the London district. Voluntary admission to hospital, and compulsory detention there until cured, would probably prevent many prostitutes from applying for relief. There was a clause in the Metropolitan Police Orders to the effect, that policemen, incapacitated from venereal disease, should be immediately suspended.

HEALTH OF WATERING PLACES AND SUMMER RESORTS.

IN the recently issued Quarterly Return of the Registrar-General are published the rates of mortality, for the quarter ending June 1879, in 46 English and Welsh watering-places and health-resorts; and for the sake of comparison are also given rates of mortality for the year 1878, and for the ten years 1861-70. The mortality is for the district in which the watering-place is situated, which in some instances differs from the mortality of the watering place itself. The rate in the larger district is generally lower than that in the watering-place, but in Llandudno the reverse is the case; for the mortality in Llandudno itself last quarter was equal to 8 per 1000 annually, whereas the mortality of Creuddyn subdistrict, in which it is situated, was so high as 23 per 1000.

The mean annual mortality in these watering-places was 17.8 per 1000, which was not only lower than the mortality of the country generally, but lower than that in the rural districts. There were considerable differences; thus the following places experienced an exceptionally low mortality:—Littlehampton 10.6, Lyme Regis 11.4, Worthing 12.6, Bognor 12.6, Clifton 12.9, Buxton 13.3, Tunbridge Wells 13.5, Malvern 13.6, Weston-super-Mare 14.0, Torquay 14.5, Herne Bay 14.8, Yarmouth 15.1, Isle of Wight 15.2, Weymouth 15.4, Dover 15.9, Margate 15.9, New Brighton 16.3, Deal and Walmer 16.3, Penzance 16.4, Dartmouth 16.5, Eastbourne (notwithstanding the fatality of scarlet-fever) 17.3, Scarborough 17.5, and Lowestoft 17.7. On the other hand, the following places experienced a mortality above the average:—Brighton 18.0, Ramsgate and Broadstairs 18.2, Cheltenham 18.3, Matlock 19.2, Whitby 19.5, Bath 19.7, Bangor 19.8, Aberystwith 19.8, Southport 19.9, Southend 19.9, Dawlish and Teignmouth 20.1, Hastings and St. Leonards 21.2, Ilfracombe 21.5, Sidmouth 22.3, Rhyl 22.4, Exmouth 22.5, Tenby 22.7, Llandudno (Creuddyn subdistrict) 23.0, Folkestone 23.5, Leamington 24.0, Blackpool and Fleetwood 24.7, Beaumaris 24.7, and Harrogate 26.3.

The Local Sanitary Authority and the Medical Officer of Health for Llandudno report to the Registrar-General that the death-rate in their urban sanitary district last quarter did not exceed 8.4 per 1000, and that no zymotic death was recorded therein. Their statement is confirmed by the Registrar. In the remaining and more strictly rural part of the subdistrict of Creuddyn, over which the town authorities exercise no control, the annual death-rate last quarter must therefore have been equal to 38.6, and the zymotic rate to 4.3 per 1000. The town, by spending upwards of £30,000 on a new system of sewerage, and a still larger sum on new waterworks, has shown great enterprise and public spirit, and is thus entitled to reap, as it does, the credit and benefit it has so well earned.

ASSOCIATION INTELLIGENCE.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held at the Belfast Royal Hospital, on Friday, September 5th, 1879, at 12 o'clock noon.

Members intending to read papers or to bring any subject before the meeting, will please communicate with

JOHN MOORE, M.D., *Honorary Secretary*.

2, Carlisle Terrace, Belfast, August 11th, 1879.

MEDICO-PARLIAMENTARY.

HOUSE OF COMMONS.—Tuesday, August 12th.

Local Government Board (*Visitations*).—On the motion of Mr. LOWE, a tabular return was ordered, in order of years, of all local visitations which have been made by medical inspectors under the direction of the Local Government Board, from the date of the establishment of the Board to the 31st day of March 1879, with regard to the prevalence of disease in particular places, and to questions therewith connected of defects in the sanitary administration, and stating in successive columns, in regard of each visitation, as follows: 1. Names and populations of the places or sanitary districts inspected; 2. Date of the visitation [or, where several visitations have been made, of the first of them] and name of the inspector; 3. On what ground of complaint, or otherwise, the visitation was ordered; 4. *Précis* of facts reported by the inspector with regard to the prevalence of disease, and to the existing defects of the sanitary administration; 5. Re-inspections (if any) which have since been made in the same areas with reference to the defects of sanitary administration, with date of each re-inspection and name of inspector; 6. *Précis* of the latest information had by the Local Government Board as to the sanitary state of the places, and when given and how authenticated.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

ELECTION OF MEDICAL OFFICERS BY BOARDS OF GUARDIANS.

SIR,—May I ask you kindly to give your opinion on the following in Saturday's JOURNAL?

A Board of Guardians advertises for a medical officer, and names a day for the election. On the appointed day, a candidate presents himself—in all points duly qualified. He is proposed and seconded; yet subsequently, without any alleged reason (but presumably in the interests of another candidate, who was then unable to appear), the election is postponed for a month. Is this an equitable, or even a legal, proceeding? Can a Board of Guardians, on their own authority, without notice, and under the circumstances stated, rescind a resolution passed at a previous meeting, namely, on a certain day to proceed to the election of a medical officer?—Your obedient servant,

MEMBER.

July 22nd, 1879.

*** Although we are of opinion that our correspondent has been most ungenerously treated, and is therefore entitled to our sympathy, still we must state that the Board of Guardians have not exceeded their powers in determining to adjourn for a month the election of a medical officer; such determination is not rescinding their resolution, but merely postponing its further consideration, for a certain definite period.

THE WORKING OF THE PUBLIC HEALTH ACT.

SIR,—I am delighted to see it stated on page 145 of the JOURNAL of July 26th that, at the request of Mr. Ernest Hart, Dr. Lush, M.P., has moved for an important return, which, in the words of the JOURNAL, "will afford most important information as to the working of the Public Health Act, etc.", because from practical experience I am convinced that the time has arrived for such information to be forthcoming. I observe that under (*c*) the headings of the return it is to be stated "at what dates the medical officer of each district reports on the health of the district to the local authority, and whether such reports are in manuscript or printed". Will you permit me to suggest that some curious, if not instructive, information would be gained if the following addition were made to the foregoing? "and whether such reports are read, or even take notice of, at the meetings of the authority, special regard being had to rural sanitary districts". This query should apply both to combined and to separate districts. If truthful answers to it could be

secured, I doubt not that the central authority, the profession, and the public, would be enlightened and possibly surprised or amused.—I have the honour to be, sir, your obedient servant,

ALFRED ASHBY, Medical Officer of Health, Grantham, Newark, and Sleaford Combined Urban and Rural Sanitary District.

Grantham, July 28th, 1879.

THE DEATH-RATE OF BRIDGNORTH.

SIR,—You do not mention the name of the sanitary journal from which you make an extract referring to me: I am therefore unable to communicate with the editor of that paper, so reply to it through you. He refers to the death-rate of Bridgnorth for the first three months of this year (which he allows are probably the heaviest of the year) as equal to an annual rate of 32.2 per 1000. I am glad to state he is wrong either in his figures or his information. I have in front of me the monthly returns for January, February, and March, and I have divided the causes of death into the several heads given below. The total is 45. The population of the sub-district is above 6000: thus the average will be 30 per 1000 (about)—a high mortality, I allow, but not from any deficiency in sanitary arrangements. Out of the 45, there are eight between 70 and 80 years of age, and nine between 80 and 90; and one found drowned in the river floated from miles above. Under the head "zymotic", you will find only: whooping-cough, 4: diarrhœa, 2; scarlatina, 1.

Extract of deaths for sub-district Bridgnorth borough for January, February, and March. 1879:—Encephalitis, 1; old age, 11; bronchitis, 8; convulsions, 1; cancer, 1; whooping-cough, 4; laryngitis, 1; disease of heart, 3; diarrhœa, 2; scarlatina, 1; epilepsy, 1; bladder-disease, 2; atrophy, 2; drowned, 1; liver-disease, 1; softening of brain, 1; gangrene, 1: apoplexy, 3; total, 45.

With regard to his statement of the mortality during 1878, he is likewise wrong. Instead of the average being as he states (24.9), it was 22.5. Under the head "zymotic" there were the following: Diarrhœa, one case in each month, all arising from improper diet in infants, and one an adult. Whooping-cough, 1; enteric fever, 1; rheumatism, 1; drunkenness, 2. The following is the list of mortality as to age: Under one year, 25; from one to five, 13; from five to sixty-five, 48; from sixty-five to seventy-five, 19; from seventy-five to eighty-five, 25; above eighty-five, 5.

In conclusion, I beg to inform him that the sanitary state of the borough is not superficially supervised, and the salary paid is adequate for the work done, or necessary to be done. In case of more being required, Mr. Mathias and the Board have that good understanding with each other, that he is not afraid of their not carrying out their promise of an increase.—I am, sir, yours truly,

ALFRED MATHIAS.

Bridgnorth, June 12th, 1879.

*** This question is not one of degree, as Mr. Mathias appears to think, but one of fact. According to the figures on which he relies, the death-toll for last quarter was at the annual rate of over 30 per 1000; and yet, in the face of this, he writes to his authority that "he has no report to make, and no sanitary defects to bring under their notice". Apparently, Mr. Mathias has yet to learn that a high death-rate such as this is inconsistent with wholesome sanitary conditions, and that the healthiness of a place is not only to be measured at a given time by the deaths from zymotic diseases. Unwholesome surroundings induce a generally lowered state of vitality amongst the persons exposed to them; and many diseases that would not otherwise kill, become fatal in dirty localities. We need not go at length into the discrepancies in the figures of Mr. Mathias and those of our contemporary (the *Sanitary Record*), since any calculation based on so unscientific an estimate of the population as Mr. Mathias has adopted must needs be fallacious. The fact remains that, at the most favourable estimate, the death-rate of Bridgnorth last quarter was enormously high, and that for 1878 it exceeded the rate of many of our largely and most densely populated cities. How far Mr. Mathias is, under these circumstances, justified in saying that this high mortality has nothing to do with deficient sanitary arrangements, we must leave to his own further consideration to decide for himself: others will also form their judgment.

MILITARY AND NAVAL MEDICAL SERVICES.

THE ARMY MEDICAL DEPARTMENT.

SIR,—Your able leader in the JOURNAL of June 28th calls attention to the deplorable condition of the medical department. Is it really much worse than the state of the army generally? Army reform and reorganisation are again under consideration, and a committee is nominated to inquire into and submit their remedy. There will never, in my opinion, be thorough organisation until a much more comprehensive scheme be adopted. Not a year passes without one branch or other of the service, one department or other, exhibiting defects calling for change; and when combination is required, what is the result? The state of affairs at the Cape at the present moment is the answer: "Glaring inefficiency and disaster." This must be the case, and the larger the war the more conspicuous will be the defects of our army system—better described, perhaps, as an absence of all system. I am no republican, but I would like to see a much more representative army than we have at present. Whether cause and effect I will not assert, but a result of the volunteer movement is that the "first line" has almost ceased to exist. In your article you admit that this has been the case in the medical department. Officially it is recognised by the head of the medical branch of the army, presiding and acting as prime mover of the great voluntary agitation in the metropolis; and the names of conspicuous members of the department will be found associated with the order of St. John and the Stafford House Committee—societies most praiseworthy and philanthropic, but surely never intended to displace or damage a most essential integral of a well ordered army. Can one expect a well organised army so long as affairs are conducted in the hazardous and spasmodic way which for long time past has characterised army reform? A war council is wanted, in which the civil element and its interests should be thoroughly and inseparably blended with what is designated military. Such terms as "combatant" and "non-combatant" should cease to exist. All officers should be placed upon an universal footing. If an officer, no matter what his calling, have attained the position of a field-officer, let him have all and everything appertaining to the rank. These are not nineteenth century vagaries, but the demands of the country's intelligence. Despotism has yielded, and cliquism must become a thing of the past. The success of a general depends as much upon his transport, his food, his sanitary arrangements, as upon his destructive machinery; and without co-operation there cannot be harmony. Unification throughout the army is practicable and called for; but it is clearly impracticable for any one department to act in antagonism to the theory and practice of the army as a whole.—I am, sir, your obedient servant,

"L'UNION FAIT LA FORCE."

July 3rd, 1879.

SIR,—Once more an appeal is made to young medical men to join the Army Medical Department, and a *quasi* promise of a new warrant has been made by way of attraction. When it suits the authorities, this, no doubt, will be rendered null and void with regard to any advantages it may possess, by meeting with the same fate other warrants have received at the hands of the powers that be. I sincerely trust that young men will not be induced to enter a service where so much injustice and ill treatment are to be met with, of which I have been a victim, a detailed account of which was so ably written in your JOURNAL of December 4th, 1875. I would refer all those who may think of entering the service to that article, the perusal of which and the statement of my wrongs has heretofore, I am glad to say, successfully dissuaded many from taking a step which they would have regretted all their lives long.—I am, sir, yours faithfully,

CHAS. SPURWAY, formerly Surgeon A.M.D.

Bellagio, Lago di Como, July 1879.

INDIAN MEDICAL SERVICE.—The following candidates for commissions as Surgeons in Her Majesty's Indian Medical Service were successful at both the London and Netley examinations, on August 4th.

	Marks.		Marks.
1. F. F. Perry	5535	8. W. F. Thomas	4398
2. P. W. Dalzell	4934	9. J. C. Smith	4388
3. S. Little	4930	10. H. G. L. Wortabet	4275
4. G. H. D. Gimlette	4910	11. E. P. Frenchman	4071
5. C. B. Hunter	4837	12. R. James	3949
6. M. Gaisford	4835	13. S. C. Sarkies	3846
7. C. H. Murray	4580	14. D. S. E. Bain	3622

Mr. F. F. Perry gained the Herbert Prize, the Martin Memorial Medal, and the Parkes Memorial Bronze Medal.

NAVAL MEDICAL SERVICE.—The following candidates for commissions as Surgeons in the Medical Service of the Royal Navy were successful at both the London and Netley examinations, August 1879.

	Marks.		Marks.
1. A. G. P. Gipps	4642	6. J. B. Clibborn	3366
2. J. Hunter	4407	7. W. G. Jack	2990
3. R. A. Simpson	3895	8. A. Emson	2713
4. J. F. Donovan	3494	9. R. E. Biddulph	2377
5. R. McIvor	3438		

OBITUARY.

SIR THOMAS MACLEAR, F.R.S.

BY the last mail from the Cape of Good Hope, the death of this gentleman, long known as the Astronomer Royal, is announced. His age is not stated; but, seeing he was admitted a member of the Royal College of Surgeons of England so long ago as 1815, when he must have been at least twenty-two, he had, consequently, reached the great age of eighty-six at the time of his death. He commenced the practice of his profession in Bedfordshire; but, being very much attached to the science of astronomy, he made the acquaintance of the late Admiral Smyth, well known also as an astronomer. By him he was induced to give up the practice of his profession, and proceed to the Cape of Good Hope to make some important investigations, which soon obtained for him the appointment of Astronomer Royal and the Fellowship of the Royal and other learned societies. The deceased gentleman was knighted by patent; and, in June 1863, a pension of £100 *per annum* was granted him. Lady Maclear died in 1861.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following candidates have passed the recent Preliminary Scientific (M.B.) Examination. Pass List.

First Division.

Bennett, Frederick William, Owens College
Bindley, Robert Alfred, Guy's Hospital
Black, William Jones, Owens College
Botham, Richard Henry, King's College
*Caiger, Frederick Foord, St. Thomas's Hospital
Cheves, James Trelawney, King's College
Clarkson, Edward, University College
Cockey, Edmund Percival, Epsom College
Cooper, Henry Charles Evans, Guy's Hospital
Corbin, Eustace Rhodes St. Clair, University College
Dacre, John, Yorkshire College, Leeds
Dent, Harry Lord Richards, King's College
Duncan, Horace, University College
*Dutt, Upendra Krishna, University College

Elgood, Charles Reginald, University College
*Elliott, John, Owens College
Ensor, Henry Collen, Guy's Hospital
Floyer, William Wadham, Guy's Hospital
Fox, Robert Fortescue, Private study and London Hospital
*Gostling, William Ayton, University College
Green, Albert, Guy's Hospital
*Halford, Bernhard Frederick, University College
Harvey, James, University College
Hayman, William Speed, King's College
Heatherley, Francis, University College
Hind, Wheelton, Guy's Hospital
Hinds, Frank, University College
Hooper, Henry Walpole, St. Bartholomew's Hospital
Hughes, Richard Benjamin, University College
Joberns, William, Queen's College, Birmingham
Lankester, Alfred Owen, St. Bartholomew's Hospital
*Lawrence, Laurie Asher, St. Bartholomew's Hospital
*Luff, Arthur Pearson, St. Mary's Hospital
Marriner, William Herbert Lister, St. Thomas's Hospital
Martin, Albert, Wellington College, New Zealand, and Guy's Hospital
*Merrifield, Sydney Sargent, King's College
Morgan, Thomas Whitworth Sewell, King's College
Newland, Edward Oriel, Guy's Hospital
Nunn, John Robert, University College
Paley, Frederick John, St. Bartholomew's Hospital
Penfold, Frederick William Henry, Guy's Hospital and Epsom College
Pettifer, Edmund Cleaver, St. Bartholomew's Hospital
Powell, John Joseph, University College
Prideaux, Frances Helen, London School of Medicine for Women
Relton, Bernard, St. Thomas's Hospital
Reynolds, Ernest Septimus, Owens College
Roberts, John Saunders Hughes, University College
Roughton, Edmund Wilkinson, St. Bartholomew's Hospital
Rouse, Rolla Edward, St. Thomas's Hospital
Scharlieb, Mary Ann Dacomb, University College and private study
*Settle, Henry, St. Bartholomew's Hospital
*Shore, Thomas William, Hartley Institution and Royal School of Mines
Shove, Edith, London School of Medicine for Women
Short, Thomas Sydney, King's College
Slater, Druce John, St. Bartholomew's Hospital
*Slater, William Arnison, Guy's Hospital
*Spencer, Herbert Ritchie, University College
*Spong, Charles Stuart, Guy's Hospital
*Stevenson, John, Owens College
Strugnell, Walter Thomas, St. Bartholomew's Hospital
Targett, James Henry, Guy's Hospital
Taylor, Alfred Ernest, University College
*Thorburn, William, Owens College
*Tomlinson, Emily, Girton College, Cambridge
Turner, Alfred Jefferis, University College
Vann, Alfred Mason, King's College
Vernon, John James Dean, Owens College
Vinrace, Edward Dennis, St. Bartholomew's Hospital and University College
Walker, Ernest George Agars, St. Bartholomew's Hospital
Whitcombe, Philip Percival, Epsom College and St. Mary's Hospital
Wilson, Thomas, University College
Winter, Thomas Bassell, Guy's Hospital
Winterburn, Joseph Williamson, Owens College
*Womack, Frederick, St. Bartholomew's Hospital
Wynter, Walter Essex, St. Bartholomew's and Middlesex Hospitals

Second Division.

Birch, Henry Priestley, University College
Brown, William Henry, University College
Dudley, William, Queen's, Birmingham, University, and private study
Evans, William Arnold, Owens College
Finney, Robert Charles, Private study
Graham, William Perceval, University College
Green, Charles David, St. Thomas's Hospital
Hodgson, Gerald George, King's College
Hull, Walter, St. Thomas's Hospital
Jones, John Hervey, Owens College
Lucas, Charles Arthur, St. Thomas's Hospital
Lynam, Robert Garner, King's College
Maude, Arthur, St. Bartholomew's Hospital
Ozzard, Albert Tronson, Private study and tuition
Pilgrim, Herbert Wilson, Harrison's College, Barbadoes
*Player, Charles Ernest, Private study and Guy's Hospital
Pointon, James, Private study
Smallpeice, William Donald, Guy's Hospital
Stewart, Arthur Hastings Lanfear, St. Bartholomew's Hospital
Thomson, Theodore, Owens College
Voisey, Clement Bernard, Owens and Stonyhurst Colleges
Walker, Alfred William Hinsley, Owens College
Walters-Hope, Edward Alfred, St. Bartholomew's Hospital
Ward, Anthony Arthur, Yorkshire College, Leeds
Williamson, Herbert Holdrich, Epsom and University Colleges

First M.B. Examination. Pass List. Entire Examination.

First Division.

Adeney, Edwin Leonard, Guy's Hospital
Barron, Alexander, Owens College and Liverpool Royal Infirmary
Batterham, John Williams, Westminster Hospital
Bull, George Coulson Robins, St. Mary's Hospital
Buxton, Dudley Wilmot, University College
Clarke, Ernest, St. Bartholomew's Hospital and Downing College, Cambridge
Corbould, Henry Francis, Charing Cross Hospital
Crookshank, Edgar March, King's College
Cuffe, Robert Ernest Gillhurst, St. Mary's Hospital
Dakin, William Radford, Owens College
Fenwick, Edwin Hurry, London Hospital
Fielden, William Eckett, Guy's Hospital
Harris, Thomas, Manchester School of Medicine
Jefferson, Arthur John, St. Thomas's Hospital
Lane, William, Guy's Hospital
Laurent, Eugene Arthur, University College
Lukis, Charles Pardey, St. Bartholomew's Hospital
Mortimer, John Desmond Ernest, Westminster Hospital
Pearce, Walter, B.Sc., St. Mary's Hospital
Priestley, John, Owens College
Rhodes, James Havelock Alexander, Liverpool Royal Infirmary
Rice, Bernard, St. Bartholomew's Hospital
Rogerson, John Thomas, Owens College
Savill, Thomas Dixon, St. Thomas's Hospital
Stoddart, Frederick Wallis, St. Thomas's Hospital
Stonham, Thomas George, London Hospital
Wells, Alfred Ernest, St. Thomas's Hospital

Second Division.

Andersen, Daniel Elie, B.A., B.Sc., University College
Atkinson, John Mitford, London Hospital
Bayes, Frederick Thomas, Guy's Hospital
Blore, Isaac, Owens College
Boswell, John Irvine, Guy's Hospital
Brown, James Grierson, Liverpool Royal Infirmary
Clarke, Walter James, Queen's College, Birmingham, and St. Bartholomew's Hospital
Currie, Oswald James, Guy's Hospital
Daniell, Alfred, Edinburgh and Paris
Dawson, Arthur George, Owens College
Dobson, Joseph, Leeds School of Medicine
Griffiths, Philip Rhys, University College
Hall, Ben, St. Bartholomew's Hospital
Harper, James, St. Bartholomew's Hospital
Hopkins, John, University College
Larmuth, Leopold, Owens College
Maddison, William Thomas, King's College
Maitland, Alfred Derwent, University College
Meeson, Alfred, Liverpool Royal Infirmary
Northcott, Arthur, University College
Prothero, Richard, Liverpool School of Medicine and Guy's Hospital
Robinson, Frederick, Leeds School of Medicine
Rogers, James Macdonald, Middlesex Hospital
Salmon, Arthur Guy, St. Bartholomew's Hospital
Sanders, Charles, St. Bartholomew's Hospital
Scarth, Isaac, Owens College
Shaw, Lauriston Elgie, Guy's Hospital
Sisley, Richard, St. George's Hospital
Sutton, Samuel Walter, St. Thomas's Hospital
Udale, Joseph James, Guy's Hospital
Webb, Malcolm, Owens College

Excluding Physiology.

First Division.

Milligan, Robert Arthur, Guy's Hospital

Second Division.

Dingley, Arthur William, University College

Physiology only.

First Division.

Barnes, George Frederic, St. Bartholomew's Hospital
Whiting, John, St. Bartholomew's Hospital

Second Division.

Herschell, George Arieh, St. Thomas's Hospital
Sellers, William, University of Edinburgh
Smith, John, Guy's Hospital

* These candidates have also passed in the Mathematics of the First B.Sc. Examination, and are now admissible to the Second B.Sc. Examination.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners, on July 28th.

Adams, A. P., Kingston (St. Bartholomew's Hospital)
Ashe, W. P., L.R.C.P.Lond., Lindon Gardens, W. (St. Thomas's Hospital)
Bond, C. J., Lutterworth (University College)
Colborne, W. W., Camden Town (University College)
Crook, J. S., Northfleet, Kent (Guy's Hospital)
Faulkner, Joseph, Ipswich (St. Bartholomew's Hospital)
Ford, R. W., Portsmouth (St. George's Hospital)
Haig, Alexander, B.A.Oxon., Torquay (St. Bartholomew's Hospital)
Morse, R. E. R., Cheltenham (Guy's Hospital)
Nadin, Joseph, Sheffield (St. Bartholomew's Hospital)
Newsholme, Arthur, L.S.A., Bradford, Yorkshire (St. Thomas's Hospital)
Parker, H. S., Putney (King's College)
Phillips, John, B.A.Cantab., Brighton (King's College)
Pope, F. M., B.A.Cantab., Brighton (St. Bartholomew's Hospital)
Saunders, F. H., Haverfordwest (University College)
Thompson, E. C., Hull (Hull School)
Vivian, R. T., Camborne, Cornwall (St. Mary's Hospital)

Eight candidates were rejected.

The following gentlemen passed on July 29th.

Baker, W. J., Millbrook, Southampton (St. Bartholomew's Hospital)
Bowlby, A. A., L.S.A., Warrington Crescent, W. (St. Bartholomew's Hospital)
Cuthbert, C. M., L.S.A., Mendlesham, Suffolk (St. Bartholomew's Hospital)
Easmon, J. F., Sierra Leone, Africa (University College)

Grisnoldby, G. H., Tetney, Grimsby (St. Bartholomew's Hospital)
Harwood, J. G., Boston (St. Bartholomew's Hospital)
Hubbard, H. W., Plymouth (St. George's Hospital)
Pope, H. F. M, L.R.C.P.&S.Ed., West Malling, Kent (St. Bartholomew's Hospital)
Smith, John, L.S.A., Plumpstead Road (Westminster Hospital)
Spackman, H. R., Wolverhampton (St. Bartholomew's Hospital)

Twelve candidates were rejected.

The following gentlemen passed on July 30th.

Banks, William, Falmouth (University College)
Butler, H. P., Gipsey Hill (St. Thomas's Hospital)
Clark, W. T. M., Twickenham (St. Bartholomew's Hospital)
Cronk, H. G., Sevenoaks (St. Bartholomew's Hospital)
Graves, T. W., L.S.A., Leominster (King's College)
Hardy, H. L. P., Castle Street, W.C. (London Hospital)
Howard, Henry, B.A.Cantab., Cambridge (St. Bartholomew's Hospital)
Lawton, J. W., Torquay (London Hospital)
Lindeman, S. H., L.S.A., Hammersmith (St. Bartholomew's Hospital)
Read, Mabyn, B.A.Cantab., Falmouth
Ross, Donald, Peshawur, Punjaub (St. Bartholomew's Hospital)
Walker, H. E., L.S.A., Corwen, North Wales (Guy's Hospital)
Williams, P. St. G., Compton Road, N. (Guy's Hospital)
Williams, W. R., Ruthin, North Wales (St. George's Hospital)
Wright, H. E., Edwardstone, Suffolk (Guy's Hospital)
Yate, H. W., Godalming (St. Mary's Hospital)

Four candidates were rejected.

The following gentlemen passed on July 31st.

Adam, C. D., St. Peter's Park, W. (St. Mary's Hospital)
Alden, E. W., L.S.A., Oxford (Middlesex Hospital)
Allnutt, John, Dartmouth (Manchester School)
Bentham, E. C., Barbadoes (University College)
Elliot, F. J., Paignton, Devon (Guy's Hospital)
Fischer, Charles, M.D.Würzburg, Bloomsbury Square (Berlin and Würzburg)
Gimlette, T. D., Southsea (St. Thomas's Hospital)
Hall, Samuel, B.A.Cantab, Whaley Bridge (St. Bartholomew's Hospital)
Havell, C. G., Reading (St. Mary's Hospital)
Higson, James, L.S.A., Blackburn (St. Bartholomew's Hospital)
Jago, E. O., Plympton, Devon (Guy's Hospital)
Lillies, Herbert, Chudleigh, Devon (St. Bartholomew's Hospital)
Mark, L. P., Queen Anne Street, W. (St. Bartholomew's Hospital)
Norman, W. A., Dulwich (St. Bartholomew's Hospital)
Scott, Alfred, Brighton (Guy's Hospital)
Sweeting, R. D. R., Clapham Park (London Hospital)
Tait, E. S., Highbury Park (St. Bartholomew's Hospital)
Watts, E. C., Bernard Street, W.C. (King's College)
Webb, W. S., St. George's Road, S.W. (St. George's Hospital)
Wyatt, W. T., B.A.Oxon, Regent's Park Road (St. Bartholomew's Hospital)

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, July 31st, 1879.

Bowe, Francis, 29, Great Percy Street, W.C.
Dartnell, William Abraham, Sutton Coldfield
Hitch, Frederick, Bromley by Bow
Jones, Thomas, Penddem, Cardiganshire
Price, Edward Morris, York Road, Warrington Park, Acton
Rudd, Charles Frederick, Petherton Road, Highbury
Smith, Ernest Barratt, St. John's Street, Berkeley Square
Smith, Henry, Plumstead, Kent
Walker, John Sydenham, 3, Adelphi Terrace, W.C.

The following gentlemen also on the same day passed their primary professional examination.

Cooper, Walter, St. Bartholomew's Hospital
Grigg, William Henry, London Hospital
Jay, Melville Richard Hindmarsh, St. Thomas's Hospital
Tripp, Charles Llewellyn, St. Bartholomew's Hospital
Vachell, Edward Shearman, London Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 7th, 1879.

Betts, Edward George, Freegrove Road, Holloway
Bothamley, William Parkinson, Donington, Spalding
Heaven, John Cookesley, Queen Square, Bristol
King, William Henry Tindal, Plymouth
Nourse, William John Chichele, Clarendon Street, Paddington
Whitehead, Thomas Kay, Hollymount, Rawtenstall

The following gentlemen also on the same day passed their primary professional examination.

Bennett, Frederick Thomas, St. Bartholomew's Hospital
Humphreys, William Carr, Queen's, Birmingham
Robinson, Alfred, St. Bartholomew's Hospital
Stephen, John Alexander Lewis, St. George's Hospital
Willis, Arthur, St. Bartholomew's Hospital

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

CARRICK-ON-SUIR UNION—Medical Officer for Piltown Dispensary District, at a salary of £120 per annum, with Registration and Vaccination Fees. Election adjourned to the 20th instant.

CITY AND COUNTY LUNATIC ASYLUM, near Bristol. Assistant Medical Officer. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before the 20th instant.

*EAST LONDON HOSPITAL—Resident Clinical Assistant. Applications on or before September 8th.

*EAST SUFFOLK HOSPITAL—Honorary Physician. Applications to be made on or before August 20th.

*LONDON FEVER HOSPITAL—Resident Medical Officer. Salary, £200 per annum, with residence, coals, gas, and attendance. Applications on or before September 6th.

*LOYAL UNITED BRETHREN SOCIETY, Oporto Stores, Bloomsbury—Surgeon and Apothecary. Salary, £40 per annum. Applications on or before August 25th.

*NEWPORT (Monmouthshire) ODD FELLOWS' MEDICAL AID ASSOCIATION—Assistant-Surgeon. Salary to commence at £70 per annum, with board and residence. Applications on or before August 20th.

NORTHAMPTON GENERAL INFIRMARY—Physician. Applications not later than the 26th instant.

*NOTTINGHAM GENERAL HOSPITAL—Assistant House-Surgeon. Salary, £80 per annum, with board and residence. Applications on or before August 23rd.

PARISH OF ST. JOHN'S, Hampstead—Medical Officer of Health. Salary, £125 per annum. Applications on or before September 1st.

*QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road—Resident Medical Officer. Salary, £60 per annum, with board and residence. Applications on or before September 1st.

ROYAL UNITED HOSPITAL, Bath—House-Surgeon. Salary, £60 per annum, with board and residence. Applications on or before September 6th.

*ROYAL FREE HOSPITAL—Junior Resident Medical Officer. Applications on or before August 19th.

SHEFFIELD GENERAL INFIRMARY—House-Surgeon. Salary, £120 per annum, with board, lodging, and washing.—Assistant House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on or before August 16th.

*TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay—House-Surgeon and Dispenser. Salary, £100 per annum, with board, lodging, and attendance. Applications not later than September 9th.

*WESTMINSTER HOSPITAL—Pathologist and Curator of the Museum. Remuneration, £52:10 per annum. Applications on or before September 13th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BEATTIE-SMITH, W., F.R.C.S., appointed Honorary Surgeon to the Stockton-on-Tees Hospital, *vice* Joseph Laidler, M.R.C.S.Eng., deceased.

*BLENKARNE, W. L'Heureux, M.R.C.S., appointed Vaccination Officer for the Leckhamstead District of the Buckingham Union, *vice* Robert De'Ath, M.R.C.S., resigned.

VIVIAN, Richard T., M.R.C.S.E., appointed House-Surgeon to the Male Lock Hospital, Dean Street, W., *vice* C. B. Lockwood, M.R.C.S.E., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

BLENKARNE—HARRISON.—On July 24th, at the Parish Church of Buckingham, by the Rev. T. Whaddon Martyn, *W. L'Heureux Blenkarne, M.R.C.S., of Buckingham, to Annie, elder daughter of James Harrison, Esq., J.P., of Buckingham.

WEBB—BOYCOTT.—On August 7th, at Holy Trinity Church, Coalbrookdale, by the Rev. Horace S. Wood, Thomas Law Webb, L.R.C.P.London, etc., of Ironbridge, to Florence Elizabeth, eldest daughter of H. Boycott, Esq., The Firs, Ironbridge. —No cards.

DEATHS.

BLACK.—At Mauldslie Cottage, Eskbank, on August 13th, Jane, relict of the late James Black, M.D., F.R.S.E., of 2, George Square, Edinburgh, aged 88. Friends will please accept this intimation.

MANNING, Herbert Stanley, L.F.P.S.Glasgow, aged 27, at Derby, on July 23rd.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 17 in every 1,000 persons living; it was 15 in Edinburgh, 16 in Glasgow, 18 in London, and 24 in Dublin. In the twenty English towns, the rate, ranged from Portsmouth 10, and Wolverhampton 10, to Liverpool 20, Salford 20, Oldham 20, Newcastle-upon-Tyne 21, and the highest rate 27, Sunderland. Measles showed the largest proportional fatality in London and Bradford; scarlet fever in Sunderland, Bradford, Oldham, and Leicester; and whooping-cough in Bristol and Birmingham. In London, 1,223 deaths were registered, being 422 below the average. These 1,223 deaths included 5 from small-pox, 54 from measles, 43 from scarlet fever, 9 from diphtheria, 34 from whooping-cough, 14 from different forms of fever, and 90 from diarrhœa; being 249 deaths altogether, or 256 below the average number from these diseases, and equal to an annual zymotic death-rate of 3.6 per 1,000. Different forms of violence caused 72 deaths; and twelve cases of suicide were registered, more than double the corrected average number. At Greenwich, the mean temperature of the air during the week was 59.5°, being 3.2° below the average. The general direction of the wind was south-west. Rain fell on six days of the week to the aggregate amount of 0.51 of an inch. The duration of bright sunshine in the week was equal to 22 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin; M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu , 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30 Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Ordinary Meeting.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SCIENCE OF ALCOHOL.—In answer to J. G. A., I think the best and most reliable articles he can find on the different actions of alcohol are those in the *British Medical Temperance Journal*, the organ of the British Medical Temperance Association.—DECCAM.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE REVEREND NEWMAN HALL'S CASE.

SIR,—It is perhaps not too much to say, in the words of Lord Westbury, that by the issues of this long and painful case, "a new terror has been added to matrimony". The feebleness of the respondent's defence, the exhaustive address of the petitioner's counsel, and the so-called summing-up of the judge, who, as the *Times* newspaper says, "indicated very plainly his own views in his charge to the jury, and who concluded his remarks to them in a strain of animated rhetoric", all seem to show that the plaintiff proved too much and the defendant too little. Was there not, however, a physical side to the case that might have had important light thrown upon it by the lamp of medical opinion? The direct evidence adduced in support of the accusation that the defendant had committed criminal acts was certainly meagre. Now, we need not consult the French novelist to furnish us with an example of the prurient heroine or the ignorant and undisciplined young wife. The note-book of many a practising physician contains an outline of the sad histories of such people—histories that can never see the light. Here is a sketch of one among a thousand. A young woman, with no dominant feeling towards the other sex, with no developed erotic tendencies, is trained by her parents to accomplish one object in life, namely, to marry. The consummation of matrimony disappoints her, and the necessary conditions under which she lives are repugnant to her temperament. Her life becomes a serious trial to her; and an element of disgust, not to say hatred, penetrates deeply into her feelings towards the person on whom she looks as the author of her misery. If she have children, she will probably enter into a compromise with her fate, and console herself with her natural love for them, burying her sorrow in her parental affection. If no children are born, she will translate herself, according to her taste and propensities, into some special action of modern life. She has no *besoin d'âme*, and therefore to her "the female garden of the soul" is a wilderness. Under such circumstances, a sickly sentimentalism may follow and take possession of her, and then eventually comes the Divorce Court. Has medicine nothing to say to all this? Is there no unrecognised pathology at the bottom of such disastrous cases? My firm belief is, that no ordinary judge, who has been merely trained in the narrow precepts of English law, is competent to understand and deal with the abstruse equity of questions that affect the mysterious interests of the sexes. The President of the Divorce Court is a sound and conscientious lawyer, skilled in all the technicalities and ambiguous details of his profession; and, as in this case, most careful to exclude any "evidence that was legally inadmissible". He considered it his "duty to see that the rules of evidence are adhered to, though in some cases they may have a hard bearing". This axiom is in perfect keeping with the strict precepts of English common law, though it cannot be said to embrace those broad principles laid down by Lord Mansfield, who thought that in all unsettled cases the laws of evidence should be so enlarged as to offer no obstruction to the equitable administration of justice. John Stuart Mill says: "In organised beings there are abundance of propositions ascertained to be universally true of superior genera, to many of which the discovery hereafter of any exceptions must be regarded as supremely improbable. But these are, we have every reason to believe, truths dependent upon causation." Who, we may ask, is to do anything towards unraveling the complex phenomena of empirical laws, as they appear in the human subject, so that they may ultimately be resolved into more simple laws, except the medical expert? Who else, in a court of justice, can give an account of the subtle and delicate working of such laws in a woman's peculiar organisation? I do not mean to assert that Mrs. Hall's was an unmistakable case of "an observed uniformity"; at the same time, I cannot but think that, from a medical point of view, it was not dealt with on its merits.—I am, sir, yours, etc., MEDICUS.

August 11th, 1879.

CAN you or any of your readers give me the name of a series of French scientific diagrams lately referred to favourably in the JOURNAL? I am unable to find the reference. Any particulars as to where they may be got, and price, will be acceptable.—DECCAM.

FEES TO CONSULTANTS.

SIR,—Can you or any of your readers inform me what the usual fees are paid to consulting surgeons and physicians in the Midland counties?—I am, sir, yours obediently, A MEMBER.

August 6th, 1879.

CINCHONA RUBRA AS A REMEDY FOR DRUNKENNESS.

SIR,—I observe Mr. Barnardo is advertising bottles of cinchona rubra, at 8s. 6d. each, as a cure for drunkenness. As this gentleman takes credit for being a great philanthropist, as well as a doctor, I should be glad to know the real value, pecuniary as well as medical, of this drug.—Faithfully yours, ALSAGER HAY HILL.

August 9th, 1879.

PILL EXCIPIENT.—A formula for what can be called an universal excipient is given in the *Philadelphia Chemist*. Experience for many years with this preparation has shown that it is superior to any and all other articles whatsoever for this purpose, whether simple or compound, and that nothing else is needed. It remains of a firm but soft consistence, is exceedingly adhesive, and converts the most intractable substance for pill purposes, such as sulphate of iron, resin, guaiac, iodide of potassium, etc., into elegant pliant masses, and with a very small quantity of the excipient; of course, the pills so made will be always soft, and readily dissolve or disintegrate, according to their composition. It is important, when making pills, that the dry ingredients should be in a very fine powder. The following is the formula:—Dextrine, 30 grains; powdered tragacanth, 30 grains; glycerine, 1 drachm; and water, 2 drachms.

AN ADVERTISEMENT.

"*Medical Institution for the Poor*, 90, High Street, Aston-New-Town.—Midwifery, 10s. 6d.; vaccination, 1s. Hours: Morning, 9 till 11; evening, 6 till 9; Sundays, 6 till 8. Charges: Medicine and advice, 1s. for three times; if visited, etc., 3s. Messages taken any time. Mr. Hopkins, Surgeon, attends daily."

*** Comment on the foregoing is needless. We believe the handbill refers to Mr. F. W. Hopkins, who is a Licentiate of the Society of Apothecaries alone. Why, on the strength of this licence, does he style himself surgeon?

H. L. (Guy's Hospital).—The portrait of the late Mr. Hilton, recently presented to the College of Surgeons by his widow, may be seen in the council-chamber of that institution on applying to the Secretary.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

MEDICAL QUALIFICATIONS.

SIR,—My attention has been drawn to a letter in your impression of July 26th, signed J. A. Hedges, etc., of this town, in which he has put forward certain allegations against "a medical practitioner". It is patent to all that I am "the junior" referred to, as the description entirely coincides with myself, except his statement with regard to the absence of qualifications. These statements are and have been seriously prejudicial to my reputation and practice. In May 1878, I obtained the double qualification of the Royal College of Physicians and Surgeons of Edinburgh. It is a matter of regret that Mr. Hedges did not ascertain the truth of his assertions before putting them in print. I am now taking legal proceedings against him. I trust to your sense of fairness to insert this letter in your first issue.—I am, sir, yours faithfully, FORSTER JOHN PILGRIM, L.R.C.S., L.R.C.P.Edinburgh.
Leighton Buzzard, August 13th, 1879.

DISGRACEFUL CONDUCT.—A report has reached us that a large gold pencil-case, presented by the late Sir William Fergusson, Bart., which had been passed *per anum*, has been abstracted from the bottle in which it was exposed in the Museum of the Royal College of Surgeons.

VOMITING IN PREGNANCY.

SIR,—As the profession is still seeking after a remedy for this most distressing complaint, which shall be at once certain and efficacious, that the dreadful alternative of the induction of premature labour may be avoided, and as the latest method of treatment—viz., dilatation of the os uteri, no matter how thorough its efficiency—is seriously opposed by feelings of delicacy both on the part of patient and practitioner, I beg to call the attention of the profession to a remedy which, in my experience, has never failed, not only of giving relief, but of completely putting an end to the sickness. The remedy to which I allude is the bromide of potassium. I have been surprised, when reading of the different remedies for this complaint, to find no mention of this substance, although it ranks high as a general nervine sedative, as a sexual sedative, as an anæsthetic to the mucous membranes, as an antispasmodic, specially as a sedative in uterine neuralgia and in neuralgic menorrhagia. Whether or not it has been tried and found wanting I cannot say, but, so far as I have an opportunity of referring to works bearing upon the subject, or of consulting my brother practitioners, I can find no evidence that it has ever been so used at all: nevertheless, I will not be astonished to learn that it has been and is being used, because there are *à priori* reasons which point to its use and to its probable benefit. When the action of the drug upon the uterus is considered, and also the reflex nature of the ailment, it is impossible almost to deny the probability of usefulness then indicated. My experience corroborates the induction: but as I may not have had cases of such severity as we read of occurring, I place the argument before the experience, that thereby others may be induced to give it trial and witness for themselves its effects. I have not yet seen the case wherein complete success did not follow its administration. I have never given more than twenty grains for a dose. I have always combined it with other agents applicable to the local gastric irritation which may have ensued from the time the sickness began. I hope that the experience of those who try it may confirm its efficacy.
July 1879. A HELPER OF NATURE.

A CENTENARIAN.

SIR,—On the 16th ultimo, I saw at Penrheol, near Talgarth, Breconshire, an old man over one hundred and five years old. His son showed me a copy of the baptismal entry in Glasbury church books, copied therefrom on October 16th, 1878, by the Reverend James Newman, Vicar of Glasbury. It was to the following effect: "1774. William, son of Thomas Bevan and Mary, his wife, was baptized March 27th." The old man gets up every day, and dresses himself; his appetite is good; but he is nearly blind. He is very fond of smoking. His wife died six years ago, when she was ninety-three years of age. He has lived at Penrheol over fifty years. He and his son are farmers.—I am, sir, yours respectfully, T. JONES.
Brecon, August 13th, 1879.

SUBSCRIBER.—Drs. Dickinson and Hilton Fagge in Medicine; Messrs. Cooper Forster and Callender in Surgery.

THE SPREAD OF SMALL-POX.

SIR,—Over the heading "How Small-Pox is Spread", your Dublin correspondent gives a description of a "wake", for which a fine of £5 was inflicted. Permit me to add a few facts which are fully equal to "wakes" in disseminating contagious disease. I visited a court off a street in this city four weeks since, to see a "curious case", as stated to me by a clergyman. The court is entered by a narrow doorway: it consists of four fairly built houses. On entering the house, I found two children lying in bed in the vesicular stage of small-pox. On ascending a ladder, I arrived in a small badly ventilated room, in a corner of which was lying a boy sixteen years of age. He was on his left side, in a state of opisthotonos. The eyes protruded from their sockets, with rupture of the small arteries, and saliva was flowing from the mouth. There were large ecchymosed patches over the body. The temperature was below normal, and he had passed urine and fæces involuntarily—probably during a convulsion. He was twenty-five hours ill, having only complained of occipital headache for three days before. Death occurred half-an-hour after I saw him. This was a case of cerebro-spinal meningitis from malignant variola. His death was returned to the Registrar as paralysis of the head; the friends fearing that the sanitary authorities might learn the true facts, and compel the children to be sent to hospital. I learned that two other members of the family had just recovered, and that the disease was in the house for six weeks. Two of the children, I since discovered, lay immediately before in scarlatina. There was small-pox up to this period in the court without the sanitary authorities being aware of it for three months. The house was not disinfected for ten days after the events narrated above, owing to a deficiency in the sanitary laws. The authorities could not compel those people to disinfect even on a physician's certificate, unless he were prepared to back it up by appearing in court and waiting for his turn to enter the witness-box.

Another fertile means of the spread of small-pox is due to the custom of giving the drivers of "sick cabs" so much to have a drink when they are sent to the hospital authorities for a case. These men carry the patient out, and, having placed him in a cab, adjourn to the public house. It is something awful to think of the frightful source of disseminating the disease this custom engenders. I could instance many other facts to you besides "wakes", that would to a large extent explain why it is we have small-pox in Dublin running an uninterrupted course for two years.—I remain, dear sir, faithfully yours,
Dublin, July 21st, 1879. J. J. MURPHY, Physician and Surgeon.

HOMES FOR EPILEPTICS.

SIR,—I am open to correspondence with L. B. on the matter about which he applies through the BRITISH MEDICAL JOURNAL. I have one case, and aim at increasing the number.—I am, yours truly, WM. YOUNG, M.D.
Castlegate House, Malton, August 9th, 1879.

IF L. B. will write to me, I may be able to answer his query respecting epileptics.
Street, Somerset, August 11th, 1879. E. W. PAUL.

TOPOGRAPHICAL DICTIONARIES AND MAPS.

SIR,—I shall feel obliged if any of our readers will kindly inform me what is the best and most recent English topographical dictionary, with maps of the various counties. —I am, sir, your obedient servant, VIATOR.

INSTRUCTION FOR MIDWIVES.

SIR,—Can you or any of your numerous readers inform me whether any of the lying-in hospitals in London or the provinces provide instruction to poor women, so as to enable them to undertake any ordinary case of midwifery amongst their poorer neighbours, who cannot afford to pay a medical man's fees and are not entitled to the Poor-law medical officer's services.—I am, sir, yours faithfully,
Aspley Guise, Woburn, Beds, August 13th, 1879. G. A. D. MAHON.

HÆMOSTATICS.

SIR,—Having tried the various remedies for hæmorrhage, "matico" included, I beg to differ from "M. B. C. S., Dental Surgeon", as to the efficacy of matico and the unpleasantness of liquor ferri perchloridi fortior. In the first place, I had not a common case of hæmorrhage to deal with, but one from a vessel of some size—viz., the coronary artery. And again, perchloride of iron acts as a deodoriser and purifier, and at the same time is one of the most powerful hæmostatics known next to the actual cautery. I agree with "Dental Surgeon" that matico is very well in dental surgery, but not in actual surgical practice, where vessels are cut across: and again, perchloride of iron is always at the disposal of the surgeon, while very few surgeons keep matico.—Yours truly, J. BRINDLEY JAMES, M.R.C.S.
47, Jamaica Road, S.E., July 1879.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—
Dr. Andrew Clark, London; Dr. T. McCall Anderson, Glasgow; Dr. Tanner, Cork; Dr. Kidd, Dublin; Dr. Rutherford, Edinburgh; Mr. Brodhurst, London; Dr. Lombe Atthill, Dublin; Dr. Fergus, Glasgow; Mr. Balmanno Squire, London; Mr. J. V. Solomon, Birmingham; Dr. Grimshaw, Dublin: Dr. Norman Kerr, London; Dr. Spender, Bath; Dr. Bucknill, London; Dr. Trollope, St. Leonards-on-Sea; Dr. Meymott Tidy, London; Dr. D. Powell, London; Dr. Bond, Gloucester: X. Q. Z., Taunton; The Secretary of the Hospital for Consumption, Brompton; The Registrar of the University of London; Our Afghan Correspondent; Dr. Brakenridge, Edinburgh; The Secretary of the University of Durham; Mr. R. Wood, Bromsgrove; Dr. W. R. S. Jefferiss, Isle Ornsay, Skye; Mr. G. W. Homan, Lichfield; Dr. J. A. Eames, Cork; Mr. Henry Power, London; Dr. Murrell, London; Dr. Orme Dudfield, Kensington; Mr. E. Cureton, Shrewsbury; Mr. Alsager Hay Hill, London; Mr. G. O. McKane, Spennymoor; Dr. Waters, Chester; Mr. Arthur Cooper, London; Mr. H. Dayman, Milbrook; Messrs. Salt and Son, Birmingham; Dr. J. B. Pitt, Norwich; Mr. W. Beattie-Smith, Stockton-on-Tees; Mr. W. L. Blenkarne, Buckingham; Dr. E. W. Paul, Street; Mr. R. J. Vivian, London; Mr. J. E. Ingpen, London; A Member, Birmingham; The Secretary of Apothecaries' Hall; Mr. G. Eastes, London; An Associate; Dr. F. Barnes, London; Our Dublin Correspondent; Dr. O'Sullivan, Cork; Dr. A. Bernard, Liverpool; Mr. H. Bower, London; The Registrar-General of England; Dr. W. Carr, Glasgow; Dr. John Martin, Belfast; Dr. E. M. Cosgrave, Colchester; Dr. D. J. Lyner, Castletown, Cork; Our Edinburgh Correspondent; The Registrar-General of Ireland; Subscriber, Manchester; Mr. G. A. D. Mahon, Woburn; Dr. Bond, Gloucester; Mr. F. J. Pilgrim, Leighton Buzzard; Dr. Atkinson, Kingston-on-Thames; Dr. Young, Malton; Mr. Oakley Coles, London; Dr. Garson; Mr. J. A. F. Stuart, Dunse; etc.

BOOKS, ETC., RECEIVED.

A Systematic Course of Practical Qualitative Analysis. By Thomas Eltoft, F.C.S., F.I.C. London: Simpkin, Marshall, and Co. 1879.

A Few Remarks on Proposed Lunacy Legislation. London; Simpkin, Marshall, and Co. 1879.

Transactions of the American Gynæcological Society. Vol. iii, for the year 1878. London: Trübner and Co. 1879.

Association for the Oral Instruction of the Deaf and Dumb; Report for 1878. London: Wertheimer, Lea, and Co. 1879.

Other Symptoms of Nervous Exhaustion (Neurasthenia). By George M. Beard, A.M., M.D. Chicago: J. J. Spalding and Co. 1879.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P., M.R.C.S. Part vi. London: Smith, Elder, and Co. 1879.

Bibliotheca Therapeutica; or, Bibliography of Therapeutics, chiefly in reference to Articles of the Materia Medica; with numerous Critical, Historical, and Therapeutical Annotations; and an Appendix, containing the Bibliography of British Mineral Waters. By Edward John Waring, M.D. Vols. i and ii. London: The New Sydenham Society. 1879.

Annual Report of the Royal Edinburgh Asylum for the Insane, for the year 1878. Morningside: 1879.

AN ADDRESS

DELIVERED AT THE OPENING OF

THE SECTION OF PHYSIOLOGY,

At the Annual Meeting of the British Medical Association, in Cork, August 1879.

BY HENRY POWER, F.R.C.S.,
Senior Ophthalmic Surgeon to St. Bartholomew's Hospital;
President of the Section.

RECENT PROGRESS IN PHYSIOLOGY.

IT is, I think, part of the duty of the President on these occasions to place before the members of the Section a brief recapitulation of the advances that have been made in their subject during the year that has elapsed since they last met, and which are either of importance in a scientific point of view, or which have a direct bearing upon practice.

All branches of knowledge have a tendency to become broken up, by a process of subdivision of labour, into a number of subsidiary subjects, each of which is pursued by a band of active workers, who, by the adoption of special methods of research, and still more by the coinage of new terms, become isolated, and, after a time, new and independent centres of inquiry. Physiology is no exception. It is quite within the memory of many of those now present, that anatomy and physiology were studied (with great advantage in many points of view) together; but the development that both have undergone from the researches made during the last few years have led to their almost total separation; and the recent action of the University of Oxford in establishing a Professorship of Physiology, and that of the Council of the College of Surgeons of England, a very conservative body, in determining that the anatomical and physiological examiners shall henceforth be distinct, together constitute sufficient evidence of the general feeling entertained that these subjects are becoming too wide to permit any one person to be thoroughly familiar with the details of both.

The signs of the disintegration to which I am referring are visible on every side. The development of Physiological Chemistry is attested by the excellent laboratories devoted to this subject and attended by numerous students, that are now attached to almost all the universities, both in Great Britain and on the Continent, and is further demonstrated by the establishment of a new journal, the *Zeitschrift für Physiologische Chemie*, conducted by Professor Hoppe-Seyler, whose labours in this department of science are well known, and whose valuable text-book on physiological chemistry is now in course of publication. This work, as well as the similar volumes of Hofmann and of the late Gorup-Besanez, shows to the thoughtful reader that many phenomena, to which the term vital was formerly applied, are simply the result of chemical actions exerted under special conditions.

The improvements in the construction of microscopes, and the comparative cheapness of these instruments, have gradually led to the development of another branch of physiology—Histology; a subject that fully merits the attention that has been bestowed upon it, from the light that it throws upon pathological processes, but which, from the very rapidity of the advances it has made of late years, shows how much still remains to be done in it. It is scarcely more than a few years ago that the section of soft tissues appeared to present insuperable obstacles to the microscopist; but the introduction of chromic acid and bichromate of potash, by effecting a hardening of the tissues, opened up a new and wide field of research; and more recently, the employment of glycerine and of solutions of nitrate of silver, of iodised serum, of indigo-carmine, picrocarminate of ammonia, gold chloride, osmic acid, hæmatoxylin, the anilin dyes, and other substances, each having special staining properties of which advantage is taken by a skilful operator, has afforded much aid in perfecting our knowledge of the structure of the several textures of which the body is composed. The purely mechanical process of cutting the sections to be stained has also been materially aided by the application of freezing mixtures, and by the processes of imbedding in paraffin and in wax, in pith, in carrot, and other materials. Nor are these the only resources at the disposal of the histologist; but he may materially facilitate his work by practising one or other of the several methods of injection.

By the use of these various means, an immense amount of information has been acquired bearing upon the structure and development of the tissues; and I may remark in passing that the most recent outcome of their scientific employment is to be found in the *Atlas of Histology*, now being brought out by Dr. Klein and Mr. Noble, to the former of whom most of the histologists in England have reason to be grateful for instruction and kindly aid in the best methods of histological research. By far the most important applications of these methods are seen in the subjects of embryology and of pathological anatomy, both of which require, in order that they should be successfully prosecuted, much skill and experience.

There still remains one other department of physiology—Experimental Physiology—which at one time promised to become a noble tree, and to bear good fruit; but this, like Milton, has fallen in evil days on evil tongues, and physiologists have, like him, to mourn that, by the restrictions of humane but shortsighted persons, wisdom is at one entrance quite shut out.

No doubt can be entertained that a better and more thorough knowledge of physiology should be possessed by the younger members of the profession than at present prevails. In my opinion, and I have had large opportunities of observation, I think that, considering the time at the disposal of the student, too many anatomical details are required in most examinations, whilst physiological knowledge is held in too light esteem. It has been argued that the study of anatomy is not only essential for the due and safe practice of the profession, but that it is a very important means of education; that it is the one thing which is properly taught; the one thing that is well known in the preparation for the medical profession. Whilst admitting its value in this respect, and acknowledging the difficulty of drawing any hard and fast line defining what should and should not be known, I cannot but think that the candidates for most of our examinations are asked points in anatomy which, when known, are utterly valueless; whilst, if the same time and labour had been bestowed upon physiology, valuable information of a practical nature would have been acquired. Many candidates for our ordinary examinations are able to describe the course and relations of minute branches of nerves and arteries, a knowledge of which they will most probably never have any occasion to apply, or if they have, they will have forgotten them; whilst, in regard to such important practical points as the nature and digestibility of different kinds of food, or the more important phenomena of the functions of circulation and respiration, they can give no intelligible account. It is, indeed, often objected that the whole subject of physiology is in such a state of fusion and transformation, that what is regarded as established on sure and irrefutable grounds one day is overthrown the next, to be replaced by some equally transitory theory; and the inference drawn is, that it is of little use to learn any physiology at all. The frequent repetition of this by those who should know better has led to disastrous consequences: and I am convinced that a considerable number of men present themselves for examination who have paid little or no attention either to the lectures or to the demonstrations which are now excellently given at most of the schools, and have done little more than commit to memory the composition of such of the fluids and solids of the body as they think are likely to be asked, and which they, as a result, confuse in a very remarkable manner. At a recent examination at which I was present, three vessels were exhibited to the candidates, of which one contained blood, the second milk, and the third urine. One candidate insisted that the blood was urine, another declared that it was milk. Is this to be attributed to nervousness, to crass ignorance, or to some dim idea that the examiner is trying to deceive? Whatever explanation may be given, it is obvious that the knowledge of the student should be rendered, by improvement either in the teaching or in the stringency of the examination, more sound and practical.

I shall not attempt to arrange my notices of the principal researches of the past year under the headings above given, but I desire rather to present to you an outline of the more important papers that have appeared in relation to the vascular, digestive, circulatory, nervo-muscular, and generative systems. There are, however, some observations that cannot rightly be placed under either of these heads, and they may perhaps be summarily dismissed. I refer in particular to the views of Dr. Klein (*Quarterly Journal of Microscopical Science*, 1878, p. 315; April 1879) on the structure of cells. Employing special precautions in the preparation of the object, and drawing his conclusions from the effects of various reagents, he finds that cells are composed of a delicate plexus of fibres, the meshes of which contain a juice or plasma. The nucleus possesses a definite membrane, and is again composed essentially of an intranuclear network of fibres and a nuclear juice. The nucleoli he regards as only a condensation of the fibrous plexus. These statements are in the main supported by Frédérique (*Centralblatt für Medicin. Wissensch.*, 1879, p. 164) and by Flemming (*Ibid.*, 1879, p. 401), though both observers are inclined to believe that the nucleoli are separate and distinct bodies. The fibres of the intranuclear plexus seem to penetrate the wall of the nucleus, and to be continuous with those of the intracellular plexus. If Frédérique's observations be cor-

rect, the plexus plays an important part by its contractions in the process of cell-division.

In regard to the extensive subject of digestion, at the close of last year and at the commencement of the present, several papers have appeared dealing with the chemical aspect of the different forms of albumen, and the changes they undergo in the digestive process; and the general result which has been arrived at is that the peptones formed from the proteinous compounds by the gastric and pancreatic fluids are essentially similar, if not absolutely identical, in composition, and are due to the action of a special ferment. The peptones are partly absorbed in the upper part of the intestinal tract, but in part undergo further changes under the influence of a putrefactive ferment, leading to the formation of indol, phenol, and skatol, the appearance of which is associated with the development of bacteria and other low organisms, probably resulting from germs ingested with the food. To the formation of these substances the odour of the fæces is due. The starches have also been submitted to careful examination; and it now appears from the researches of Musculus and Gruby that, under the influence of diastatic ferments, they undergo a series of changes which may be described as successive hydrations and decompositions. At each disintegration, maltose and a new dextrine one formed; the maltose then taking up water, yields grape-sugar. Seegen, however, contends that the final result of such ferments is not grape but "ferment" sugar, characterised by its feebler rotatory and reducing power.

There seems some reason for believing that the salivary glands are more complex in their structure than has hitherto been supposed. In a paper read before the Würzburg Physiological Medical Society, June 15th, 1878, and in some beautiful preparations that were exhibited at the College of Surgeons, Mr. Bermann showed that, by particular staining processes, appearances were presented indicating the existence of three separate glands in the submaxillary gland of the mouse, bat, dog, and cat—namely, a pure acinous gland, a compound tubular gland, and a peculiarly constructed tubular gland. This is interesting, as it will be remembered that, in the non-venomous snakes, two forms of glands are found in the salivary region, one of which developes into the venom-gland of the poisonous snakes.

The long disputed question of the nature of the acid in the gastric juice seems, from the experiments of Richet, as well as those of Heidenhain (Pflüger's *Archiv*, Band xix, 1879, p. 148), to be settled finally in favour of the view originally advanced by Dr. Prout of its being hydrochloric acid. If butyric acid be present, as it sometimes is, it is due to the decomposition of the constituents of the food. The intestinal fluid, or "succus entericus", is found by Demant, in opposition to many former inquirers, to contain only an amylotic ferment, and hence has not any action on albumins or fats, unless the latter contain some free acid.

The most interesting observations that have been made upon the blood are those which bear upon its globular richness, a subject which has important practical bearings; for there can be no doubt that the most essential properties of the blood in respiration and in nutrition depend on the number and quality of its morphological elements. The chief results that have been obtained are that the number of the red corpuscles is from four to five millions in a cubic *millimètre*, with about six thousand white corpuscles, the proportion between the two being seven hundred red to one white (Dubrisay, *Gaz. Méd.*, 1878, No. 15). The absolute number of red corpuscles is greater in men than in women, and greater in adult life than in infancy or in old age. It increases after food (Cutler and Bradford, Foster's *Journal of Physiology*, vol. i, p. 428). The proportion increases relatively to the mass of the blood in all conditions that lead to escape of the watery parts, as after diarrhœa, during fasting in cholera, etc., and in the cutaneous veins as opposed to the arteries. The number of red corpuscles diminishes remarkably during hybernation. Their mode of origin is still a subject of discussion; and the spleen and ductless glands, the liver, the muscles, and the cancellous tissue of bones, have all been called upon to furnish their contingent. Quite recently, Hayem (*Centralblatt für die Med. Wiss.*, 1879, p. 366), has described small peculiar corpuscles, which he names hæmatoblasts, that are, he believes, always formed in the blood, and become converted into red corpuscles. It seems to be fairly deducible from the experiments of Hufner, that the amount of oxygen theoretically taken up by one *gramme* of hæmoglobin is so actually; and that at 0° and one inch pressure, 1.27 cubic *centimètres* of oxygen are absorbed by one *gramme* of hæmoglobin.

It is unnecessary that I should do more than just refer to the very remarkable observations of Dr. R. Norris, that the blood contains a hitherto unrecognised corpuscular element, as you will shortly have an opportunity of hearing the statements and seeing the preparations and photographs made by Dr. Norris himself.

Nor can I do more than allude to the elaborate experiments of Marey, Bowditch, Hildebrand, and Heidenhain, on the electrical excitability of the heart, which, however, collectively demonstrate that, during the systole of the ventricle, a refractory period exists when the heart will not respond to such a stimulus.

Much interest attaches to the observations of Stricker and Wagner, showing that nerve-fibres accelerating the action of the heart are contained in the cervical region of the spinal cord, and pass into the sympathetic cord, being more numerous and effective on the right side. The researches of Ludwig show that the ganglion-cells of the heart are paralysed on exposure to a high temperature, but again become active when the temperature is reduced. The inhibitory fibres and ganglia resist a high temperature better than the motor ganglia.

An important addition to our knowledge of the dynamics of the circulation is gained as a result of the remarkable experiments of F. Goltz and J. Gaule (Pflüger's *Archiv*, Band xvii, p. 100, and *Centralblatt für Chir.*, 1879, p. 102), who have shown that a very strong suction-power is exerted by the left ventricle, the right ventricle, and right auricle, quite apart from and independently of the respiratory acts, since it was observed after the chest had been opened. It is proportionate to some extent to the thickness of the walls of these cavities, and probably constitutes an important factor in the movement of the blood in the veins.

Ranvier and Peremeschko (*Centralblatt für die Med. Wiss.*, 1879, p. 126) find that the smaller arteries, veins, and capillaries of muscular and other contracted tissues present varicose dilatations, which is in interesting relation with the observations of Gaskell (*Journal of Physiology*, i) on the increased flow of blood through muscles during contraction; though Gaskell explains this increased flow by supposing that the motor nerve of a muscle contains not only fibres that cause the muscle to contract, but vaso-dilator fibres, which, by enlarging the calibre of the vessels, permit a freer passage of blood.

In regard to respiration, Dr. Martin, who has left Cambridge to commence what all who know him hope will prove a prosperous career as the Professor of Biology in the Johns Hopkins University, Baltimore, U.S., has, in conjunction with Dr. Booker, made an extensive series of experiments to determine the position of the respiratory centres in the mammal. These experimenters sum up (Foster's *Journal of Physiology*, vol. i, 1878-79, p. 373) the results of these observations in the following statement. "There lies deep in the mid-brain of the rabbit, beneath the posterior corpora quadrigemina and close to the iter, a respiration-regulating centre, similar to that in the corpora bigemina of the frog; electrical stimulation of this centre causes accelerated inspiration, finally passing into tetanic fixation of the chest in an inspiratory condition, and correspondingly diminishes or altogether inhibits expiration."

The question whether the respiratory movements are excited in consequence of the stimulus of an excess of carbonic acid in the blood, or in the air contained in the pulmonary cells (Traube, Thiry Dohmen), or whether they are due to a deficiency of oxygen, as maintained by Rosenthal, has not been satisfactorily settled. It is certain that an excess of carbonic acid gas in the air breathed causes the absorption of less oxygen (C. Bernard, *Leçons sur les Effets des Subst. Toxiques*). Hermann is inclined to think that the presence of carbonic acid causes the medulla to liberate respiratory movements, whilst deficiency of oxygen causes an increase in the excitability of the nervous system, which hence responds to the presence of smaller quantities of carbonic acid gas. The recent experiments of Friedländer and Herter (*Zeits. für Phys. Chem.*, Band iii, 1879, p. 19) seem to show that both deficiency of oxygen and excess of carbonic acid gas cause dyspnœa, increase of blood-pressure, and diminution in the amount of oxygen absorbed. Carbonic acid poisoning is, however, characterised by a diminution in the amount of carbonic acid eliminated from the system, and by the rapid paralysis of the motor and sensory nerve-centres; whilst, on the other hand, a deficiency of oxygen is peculiar in causing violent convulsions shortly before death.

Voit, whose observations on respiration are quoted in every physiological work, has continued his researches on this subject (*Zeits. fur Biologie*, B. xiv, p. 59); and, amongst other conclusions, has been led to throw some doubt on the statement formerly made by Pettenkofer and himself in regard to the storing up of oxygen during sleep; for, on revising the details of the experiments, he finds that sufficient care was not taken to determine the quantity of watery vapour contained in the bedclothes covering the sleeper. A repetition, with improved apparatus, of his former experiments on the effects of variation in the number of respiratory acts on the composition of the respired air, substantiated the fact that, with more frequently performed respiratory acts, the excretion of carbonic acid diminishes. He also finds that, in hybernating animals, the gas exchange is extraordinarily small, only forty-four per cent. of the oxygen absorbed reappearing in the form of carbonic acid gas. Nevertheless, though no food was consumed, there was an increase in the body-weight. It is interesting to Englishmen, who live in

all parts of the world, and is certainly in accordance with their experience, to know that the influence of climate on the general metabolism of the body is comparatively small.

There are many minor papers on the action of the nerves in respiration. One of the most valuable is that of Langendorff (*Centralblatt für die Med. Wiss.*, 1879, p. 377) who finds that mechanical stimulation of the proximal extremity of the divided vagus is followed by an extraordinary prolongation of the pause; electrical stimulation caused arrest of the respiratory acts as often in expiration as in inspiration. The results of stimulation with chemical agents have led him to admit expiratory or inhibitory, and inspiratory or accelerating fibres in the vagus.

The structure of the nerves has been investigated by Boll, and described in a paper, an abstract of which has been made by Dr. Klein. His main results is that the axis-cylinder is liquid, or at least semi-liquid, and is certainly destitute of any fibrillar structure. It is contained in a special sheath. The medullary sheath is interrupted at each Ranvier's node, and is homogeneous. The sheath of Schwann is a closed tube without solution of continuity, but it is thickened at the nodes of Ranvier.

An important observation, if corroborated by subsequent inquirers, has been made by Ludwig Löwe, showing that, on staining the embryos of rabbits with carmine in the ordinary way, the nerves destined to perform motor functions are more deeply stained than those which are endowed with sensory properties; and he is thus enabled to determine the position of the fasciculi of these fibres in any nerve. He finds that, after the junction of the anterior and posterior roots just beyond the ganglion, a marked difference exists between the primary dorsal and ventral branches. In the dorsal branch, the sensory fibres are collected into a fasciculus lying throughout its whole course on the inner side of the motor fibres, whilst in the ventral branches the position of the two is reversed, and the sensory fibres are on the outside. The branch which connects the ganglia of the sympathetic nerve with the anterior division of the spinal nerves is exclusively sensory.

In regard to the physiology of the central nervous system, Meynert (*Rundschau*, April 1879, p. 288, and *Centralblatt*, 6, 1878) has advanced some interesting speculations upon the relative functional importance of the cells of the brain and the intercellular substance, or neuroglia. The grey substance is granular and contains, in addition to the nerve-cells two elements, the glia-cells or brush-cells, and the glia nuclei; but none of these are directly connected with the granular grey substance, which he thinks has for its function merely the separation and isolation of the cells and the fibres proceeding from them, before these last have acquired their medullary sheath. He points out that the nerve-cells are primarily and independently developed, whilst the neuroglia proceeds from confluent connective tissue-cells of the embryo. The nerve-fibres in part proceed from protoplasmic processes of the cell-substance, and in part from fusiform cells developed in the medullary substance with which they join.

The electrical relations of nerve and muscle have been a fruitful source of discussion amongst physiologists, but Hermann's investigations, which have been excellently summed up by himself in a lecture translated in *Nature* for April 17th, 1879, and also by Dr. Burdon Sanderson in Foster's *Journal of Physiology*, have swept away a large amount of hypothesis, and have shown that the electrical currents observed in muscle are essentially due to the arrest of oxidising processes in dead or exposed muscle, and to the continuance of oxidising processes in living muscle.

Grützrer (Pflüger's *Archiv*, 1878, p. 250) has suggested an important modification of the view generally accepted since the time of Dubois Reymond, that stimuli, especially electrical currents of uniform intensity, do not act as stimuli to nerves; for he finds that heat and the constant current, apart from the shock caused by making and breaking contact, excite centripetal and those centrifugal nerves which effect dilatation of the blood-vessels, but fail to act upon motor and upon secreto-motor fibres. In connection with this, the observations of Kronecker and Stirling on the genesis of tetanus may be referred to. These observers find that the white and red muscles of rabbits (*Centralblatt*, 1879, p. 70) respond differently to electrical excitation; the red muscles being rendered incompletely tetanic with four shocks per second, and completely tetanic with ten shocks; while the white muscles require thirty shocks per second to throw them into tetanus.

In regard to the localisation of the functions of the brain, a question which has attracted much attention of late years owing to the suggestive experiments of Hitzig, Ferrier, and others, a valuable paper has been contributed to a late number of Pflüger's *Archiv* by Professor Goltz, in which he defends the method of investigation he has pursued; that, namely, of cutting away large portions of the periphery of the brain, and by careful subsequent attention to the well-being of the animal effecting recovery: a method that has been treated somewhat lightly by Hitzig. In several cases Goltz cut away as much as a drachm from the brains of dogs, and found that the animals retained all their faculties, though in a more or less dulled and blunted condition. Their intelligence, he thinks, is weakened, not lost; their vision and hearing are enfeebled; their tactile sense impaired; their muscular sense rendered imperfect. Still, however, they retain a large amount of intellectual power. They can move about, perceive the contact of external objects, and masticate their food. Hence Goltz arrives at the conclusion, that all parts of the cortex of the brain are of nearly equivalent value, though he admits that removal of the frontal lobes induces greater and more persistent impairment of sensation than removal of the cortex of the posterior lobes, whilst ablation of a drachm of the posterior lobes occasions more persistent impairment of vision. Practically, he thinks that the brain is an integral part of the body and works as a whole; each part of the cortex of the cerebrum participating in all the functions that are included under the terms will, sensation, ideation, and thought. Each segment, moreover, independently of the rest, is connected with every voluntary muscle, and is also connected with all the sensory nerves of the body. This view, of course, stands in direct opposition to that advocated by Hitzig and Ferrier, who maintain that each faculty resides in a definite portion of the brain.

Other observers, as Marchand (Pflüger's *Archiv*, 1878, p. 511), and Luciani and Tamburini (*Centralblatt für die Med. Wiss.*, 1879, p. 171) have worked at the same subject; and Gower has published an interesting case of congenital absence of one hand, in which he found that the brain presented a remarkable difference in the development of the two posterior central convolutions of the opposite side, though its microscopic characters were normal.

Had a little more time been at my disposal, I should have liked to refer at some length to the various observations of Dastre and Morat on the influence of section and stimulation of vaso-motor nerves, which have led to rather unexpected results; but I must pass on to the consideration of that branch of physiology to which the attention of many excellent observers is now turned, and which is consequently making rapid progress, viz., embryology, and none surely requires more patience in its pursuit or greater skill. The material is difficult to obtain in a fresh condition; the processes of hardening require to be conducted with extreme delicacy; and a sharp knife, a steady hand, and much practice are required to obtain good sections. The most important work done lately in this direction is the monograph by Mr. Balfour on the elasmobranch fishes, which are interesting in every point of view, but chiefly as supporting the views of Haeckel and the advanced transcendentalists, and showing that the process of development presents comparatively slight modifications throughout the whole of the vertebrata.

I must not, even in this brief *résumé*, omit to mention the numerous memoirs and papers of Mr. Parker, which, though somewhat outside of ordinary medical knowledge, yet possess singular interest on their own account; for they show that, in regard to the osseous system of the vertebrata, to which his attention has been especially directed, a common type is traceable throughout; and that, although particular parts may, like the Gin of the *Arabian Nights*, enlarge to a portentous size or contract to microscopic dimensions, the same parts are always present, ready to undergo and take their share in the modifications of other organs required for the well-being of the animal.

Whitman's careful researches (*Quarterly Journal of Microscopical Science*, 1878, pp. 245, 283, 109) on the embryology of Clepsine, an animal closely allied to the leech, deserve notice for the light they throw upon the history of the germinal vesicle, clearly demonstrating that this body does not, as was formerly imagined and is still maintained by some, entirely disappear before cleavage begins, but that it, or rather a part of it, remains as a nuclear element, probably playing an important part in the development of the ovum.

Dr. Milnes Marshall, in an excellent paper read before the Royal Society, has traced the development of the olfactory nerve and organ in Vertebrata, and finds that the olfactory nerve appears as a solid mass of cells at a very early period of development, projecting from the upper part of the forebrain before any traces of the hemisphere can be discovered. The olfactory lobe is formed at a later period, as a depression of the inner wall of the vesicle of the forebrain, and the nerve then shifts to a lower position.

And now I cannot but feel that, in the observations I have here had the opportunity of making, I have only alluded to a few of the principal papers in each great department of physiology; but anyone who will take the trouble to look at the appendix to the first volume of Foster's *Journal of Physiology* will see that it would be impossible in the short time at my disposal to name even the papers and memoirs that have been published during the last year, since the headings alone take up sixty pages.

I have, however, I trust, said enough to show that physiology is not dead but living, and that, as a science, it is making rapid progress.

It is satisfactory to everyone who has the interests of physiology at heart, to feel that, in the establishment of such a centre as this, the ancient reputation of Ireland for learning is well sustained, and that it is under the direction of a man so able, cultivated, and energetic as Professor Charles. He has, with rare judgment and tact, acquired an excellent collection of instruments, the use of some of which he is about to demonstrate to the members of the Association. The results of the work he will accomplish with them will, I hope, appear in papers read at future meetings of this Association.

I must now conclude by thanking you for the patience with which you have listened to what, I fear, is a somewhat disconnected account of the advances that have been made during the past year in physiology. The list of papers to be read and demonstrations to be given, relate to very interesting subjects, and we will now, if you please, lose no time in commencing their consideration.

FORTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CORK, August 5th, 6th, 7th, and 8th, 1879.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of the papers presented to the several Sections at the annual meeting, and of the discussions thereon.

SECTION A.—MEDICINE.

Wednesday, August 6th.

The Chair was taken by the President of the Section, ANDREW CLARK, M.D., F.R.C.C.P., Senior Physician to the London Hospital, who delivered an address, which was published at page 222 of the JOURNAL of August 9th.

MOUNTAIN AIR IN THE TREATMENT OF PHTHISIS.

This was the first of the subjects announced for special discussion in the Section. The following paper on it was read.

On the Influence of Mountain Air in the Treatment of Phthisis. By HENRY BENNET, M.D.—In bringing this important subject before the Association, Dr. Henry Bennet's wish was not so much to enumerate personal opinions, as to bring forward facts hitherto unknown or overlooked, and to elicit discussion. The advocacy of mountain air in high altitudes, both in summer and in winter, for the treatment of phthisis is principally founded on: 1. The presumed immunity from phthisis of the inhabitants of great altitudes, as deduced from the sanitary state of the inhabitants of the high plains of Central America, and also asserted as regards the inhabitants of the higher Alpine levels; 2. The presumed immunity from phthisis of the inhabitants of very cold countries. Recent investigations prove that both these assertions are contrary to facts. 1. Dr. Emil Müller, a Swiss physician, published at Winterthur in 1876 a work entitled *Die Verbreitung der Lungenschwindsucht in der Schweiz*, in which he gives a series of tables of the mortality from phthisis at different altitudes in Switzerland, separating that which occurs in those who are engaged in sedentary manufacture (watches, etc.) from that which occurs in those engaged in out-door agricultural occupations. In the lower levels (200 to 1,600 feet), the mortality is 10.2 per cent. in the former, 6 in the latter. In the higher (4,400 to 5,000 feet), it is still 9.8 against 5. Above 5,000 feet, in a strictly agricultural population, it is still 4 per cent. In the high mountain plains of Central America, Mexico, Anahuac, Quito, which are many thousand feet below the snow line, a comparative immunity from phthisis undoubtedly exists, but probably does not depend so much on mere altitude as on a mild equable climate, winter and summer, which braces the constitution and allows life to be spent, as it were, out of doors, with windows and doors constantly open. Dr. Domeric of Lille, who had recently spent four years at Quito in Ecuador, a town of 70,000 inhabitants, nearly 10,000 feet high, and with whom Dr. Bennet was in correspondence, recognised the immunity from phthisis, and thus explained it. The mean for the year he found to be 60° Fahr., deduced from observations made during four years. The temperature varied between 57° and 66° only in a large room with doors and windows open day and night. 2. Dr. Lombard of Geneva, who was the first to draw attention to the influence of mountain air in the treatment of disease, in his recently published elaborate work, entitled *Traité de Climatologie*, vol. ii, p. 110, gives the result of important researches into the mortality from phthisis in the coldest regions of Northern Europe. The mortality in the north of Sweden is 14.7 per cent., in the centre 12.5, in the south 13.1; in London, it was 12.1; in Glasgow, 15.8. In Russia, the general mortality from phthisis, from 1857 to 1859, was 16.4 per cent. In the most northern province, it was 19; in the adjoining one of Wologda, still higher, 20.4. So the extreme polar dry cold, the bright sunlit sky, does not prevent in the north of Europe phthisical mortality from being nearly double that in London. Recent experience at St. Moritz and Davos, as also at St. Paul's, Minnesota, United States, where hundreds of consumptives are now sent yearly, proves that phthisical sufferers may be exposed to intense cold in the coldest regions of the earth, and yet do well, probably because they give up living in confinement in breath-poisoned rooms, and spend many hours daily out of doors. But it does not prove that these cold regions are the best for them. One fatal objection to mountain regions in winter in Europe for any invalids is, that from eighteen to twenty hours in the twenty-four must be spent in stove-heated rooms, and in bad weather the entire twenty-four. On the north shores of the Mediterranean, as on the plains of Central America, the phthisical patient may live in an atmosphere of pure air, with windows more or less open all the winter, day and night. The thermometrical conditions in-doors in thoroughly ventilated rooms with open windows are about the same as those given for Quito, that is, they only vary between 56° and 66°.

Dr. CLIFFORD ALLBUTT (Leeds) said that the profession owed Dr. Bennet a great debt of gratitude for having effected a revolution in the treatment of phthisis. They could remember when phthisis was treated in a very different way, and they could not adequately express their gratitude to members of the profession who, like Dr. Bennet, had made familiar a new system, which he might call the tonic system. It was carrying out this tonic system which had led him (Dr. Allbutt) to go further in his inquiries as to the treatment of the pulmonary diathesis. He had for some time been making observations concerning the treatment of phthisis in the high Alps; and, since the more modern treatment had come in, it had become his own habit to tell his poor phthisical patients to change in-door work for open air occupations. He believed that pure air was distinctly antiseptic. He would confine his remarks to common ulcerative phthisis; and his opinion was that these cases were cases of internal ulcer, which could be treated easily enough if they could only get at them; but, as they could not get at them, the ulcers went on, constantly being the seat of foul secretions of some kind or other, and produced chronic pyæmia. His belief was that the treatment for this condition must be not only tonic, but also it must be antiseptic. Dr. Bennet, he thought, had spoken of climate as being purely negative in its effects. He (Dr. Allbutt) believed that it was necessary that the patient should seek certain particular climates. Dr. Bennet's view seemed to be that, if a person kept his window open in London, he would not recover. It was because the atmosphere in London was not antiseptic, and in it infusions of animal matter rapidly underwent change. In the atmosphere of the high Alps, he had found that these infusions, when exposed to the air, did not undergo such change, the air being markedly aseptic. Following out his inquiries, he had found that, if they exposed infusions of rapidly changing animal matters in the air in the higher parts of the Cape, in South Africa, these did not undergo putrefactive changes; they gradually dried up innocuously. The same was true at high Alpine stations. The cause of that could not be said to be the dryness of the climate; the air was antiseptic. In the cavity of the thorax, there was decomposing animal matter which ordinarily did not dry up, but went on changing and decomposing; and if the patient were put into a climate where these offensive matters in the lungs dried up and ceased to be offensive, he believed they would have the ulcers tending to recovery. He therefore would join issue with Dr. Bennet in saying that phthisis was due to defective vitality. It was a peculiarity of some persons, even of the most excellent vitality, that they could not bear the introduction of putrefactive matters into the blood. He did not think it was simply a matter of defective vitality; some extremely delicate persons never became phthisical; and, on the other hand, persons apparently strong and robust did so. There was, in some persons, a peculiar susceptibility to septic influences in the lung. Therefore it was a positive advantage to get these persons into some climate which was positively antiseptic. He did not believe much in the cold theory, and believed it would be found that the American elevations mentioned by Dr. Bennet were antiseptic. He thought the Riviera had a want of antiseptic air. He believed that, in the elevations of Yorkshire, they might have antiseptic air; but they would have there an extremely boisterous air. With regard to Davos, its air was remarkably still, and it was not in the cyclonic districts, as the Mediterranean was; and he believed that, with pulmonary invalids, this still-

ness of the atmosphere was a very great matter. He would prefer a climate where it was honestly cold at night and warm in the day, and where he knew what to expect, to a capricious climate. In the first case, he knew that, at sundown, he would have a certain change, and he was prepared for it. If any climate could be found which was at once antiseptic and, at the same time, not arctic, it would be a great benefit to the world. It might be found in Quito, but of that he did not know. The fact of the many cures at Davos could not be got over. It was all very well to say that people recovered of phthisis everywhere. Of course they did; and that was the very admissible foundation on which Dr. Bennet and those who followed him were able to put their new treatment. But the question was, How many? Referring to the recent paper of Dr. Hassall, he contended that, on this subject, there was no mere oscillation of treatment, but that they had been steadily advancing from close and humid atmospheres to the bracing and antiseptic. Secondly, he ventured to say that they did discover phthisis in very early stages indeed; and any argument based on the fact that they did not was not worth very much. He thought, also, that the supposed existence of a tendency to hæmoptysis was nonsense. The tendency to hæmoptysis was, if anything, just the reverse to what was contended in that paper.

Dr. JAGIELSKI (London) said that a belief in the specific value of mountain air in phthisis threatened to become universal, and might probably lead to very one-sided views or other therapeutic evils. The Russian physicians were in the habit of sending phthisical patients to the Steppes of Tartary—a practice which was in opposition to the view of altitudes. The Tartar Steppes were sometimes not above, but below the level of the sea. Iceland had the same immunity from phthisis. It was said that this was because the inhabitants made use of a certain beverage, which consisted of a whey-like fluid, which they used to bottle up and bring to a fermentation; and it was said that no phthisis existed in Iceland up to the time of the introduction of tea and coffee. Something similar had been told of the Shetland Isles; so that, in fact, it was not altitude which was the particular influence.

Dr. BORCHARDT (Manchester) pointed out that, if they were to ascribe, as some of the advocates of the Alpine climate had done, the effect of Davos to the high altitude, to the rarefied air, and to the diminution of barometrical pressure, they should have difficulties suggested by the fact that the same good effects took place on the plains of Tartary; but if they ascribed the good results at Davos to the existence of an antiseptic atmosphere, there was no reason why that antiseptic air should not be found in some other parts of the world. The only difficulty was that they had no such confirmed evidence as to the existence of antiseptic air in Tartary and Iceland as they had in the case of Davos. He had thought it right to throw out that remark, as a possible confirmation of the view of Dr. Clifford Allbutt as to the excellent effects which he had seen in a long practice to result at Davos. In different cases, he had seen the tendency in hæmorrhagic patients cease in Davos, and return when they came to other climates—such as those of Zürich, Munich, and Vienna.

Dr. ALLBUTT, in reply to a question by Dr. Lush, said he had used antiseptic inhalations, but had found great difficulty in getting them to work, and did not think they were very practicable.

Dr. JAMES LITTLE (Dublin) had practised in Calcutta, and he had never seen phthisis progress with anything like the rapidity here that it did in the warm climate of the East. Dr. Bennet had hardly put the point as to Davos fairly. The physicians there made it a point that the patients should not live for seventeen or eighteen hours in close rooms; they made it a *sine quâ non* that the patients must sleep with their windows open. He did not think, also, that the Davos physicians usually advocated a summer residence there, but sent their patients elsewhere for the summer. About the mortality statistics adduced by Dr. Bennet, it was difficult in a conflict of testimony to say which was correct; but Dr. Roubaix had assured him he had only seen two cases in ten years. But even supposing they were as common as was here stated, any person who knew the exceedingly unhealthy life of a native of Switzerland, living in a close *chalet*, would easily understand how he would become phthisical. There were only two or three times in the year that they could get animal food, and they lived on coffee and other things not likely to make them healthy. That was, therefore, no argument against patients going thither who could live in a good hotel. Phthisis was exceedingly common in Ceylon, which had a singularly equable climate. There were many points in favour of Dr. Allbutt's view as to the antiseptic influence of certain climates. In Canada, patients did very well till once the snows began to melt. During the winter time, the dung of animals, etc., was completely closed up by the snow; and, so soon as spring began, the air became loaded with materials which would favour septic changes. There was another point which he thought was very much in favour of Dr. Allbutt's doctrine, and that was the certain good effect of a residence in Upper Egypt in phthisical cases; and, if there were suitable means for people living there, Upper Egypt would be one of the best places for this disease, owing to the extreme dryness and purity of the atmosphere. He compared this resort to elevated positions, with two other courses open to the physician: one of these being to keep the patient at home, if in good circumstances, and having a large house in which to move about in bad weather; and the other being a sea-voyage. He had seen a patient do well in the first course, and make a good recovery, living in Belfast. In regard to the sea-voyage, it seemed to be beneficial in causing a lull in phthisis, and could be adopted even in periods of exacerbation of the disease—a course which could not be followed if it were wished to send a patient to Davos. The evidence they had went to prove the truth of Dr. Allbutt's statement, that hæmorrhage did not occur very frequently at Davos. There was another class of cases in which the upper part of the lungs became the seat of ulceration, and the lower part the seat of emphysematous changes; and he had been rather curious to know whether these cases got on well at Davos, and he had been assured that they did. Ordinary cases of emphysema should never be sent there.

Dr. BENNET, in reply to Dr. Clifford Allbutt, said he did not wish it to be supposed for a moment that he meant to imply that the phthisical patient had as good a chance to get better in London as in more favoured climates. That the chances of recovery were very much increased by the patient getting out of the large towns and going to the country anywhere, and more especially to more favourable climates, he had given the very best proof when he had exiled himself for twenty years to the shores of the Mediterranean. With reference to the remarks of Dr. Jagielski, he had purposely avoided alluding to the places mentioned by him. He did not understand the immunity of Iceland from phthisis. The comparative immunity of the Shetland Isles and the west coast of Scotland might be explained by the out-door habits of life of the people. There were difficulties about this question to which he had refrained from alluding. He was pleased to know that his paper had rather limited this question, because it would now appear as if the question in regard to Davos were limited to this antiseptic question. They had given up diminution of barometric pressure, and cold. On his part, he would write at once to Quito, where he had some medical acquaintances, and would set them to work to see what was going on in that part of the world.

The PRESIDENT did not think the character of the discussion would justify any judicial decision in the present state of the inquiry. The subject was full of difficulties, and two or three things had been contributed to the advancement of our knowledge of it. The first was this, that the alleged cures of phthisis were not owing to elevated height, or diminished barometric pressure, or to great cold, or to any of the alleged conditions to which they had been told they were due a little while ago, but, according to Dr. Henry Bennet, to certain hygienic precautions followed by the patients within certain limits of temperature. Dr. Allbutt gave a theory of the reason of the selection of these climates. He said that recovery in them was due to the antiseptic character of the atmosphere of these localities. That was an assertion which yet remained to be proved. It might be a coincidence merely, or it might have some causal connection with the result. But, with all due respect to Dr. Clifford Allbutt, he doubted if that theory covered the whole facts of the case. If the speakers in the discussion had not, however, settled the question, they had contributed to that result, and the meeting was obliged to them for having made the observations which they had communicated.

The following papers were also read.

Inebriety and allied Nervous Diseases in America. By GEORGE M. BEARD, M.D. (New York).—Dr. Beard stated that his interest in the subject was purely scientific; that he had been led to study the subject simply because it belonged to neurology—a department of science to which his life was devoted. Inebriety he defined as a functional disease of the nervous system; the chief, though not the only, feature of which is an irresistible desire for stimulants and narcotics, such as alcoholic liquors, opium, chloral, etc. Other accompanying and preceding symptoms are mental depression, mental irritability, insomnia, tremors, hallucinations, delusions, severe neurasthenia (nervous exhaustion), and, in some cases, alcoholic trance. The disease inebriety is distinguished from the vice of drunkenness in four ways: first, by its irresistibleness; secondly, by its periodicity or intermittent character; thirdly, by its transmissiveness; and, fourthly, by the above nervous symptoms associated with it. The vice of drunkenness is objective; the disease inebriety is subjective. The disease inebriety has much the same relation to the habit of drunkenness that some forms of insanity have to eccentricity. The chief predisposing cause of inebriety is civilisation. Savages, semi-savages, and barbarians drink far more than enlightened nations; and the disease

inebriety is always less frequent where the habit of drinking is most common. The chief exciting causes of inebriety are alcoholic liquors, opium, chloral, etc. Another exciting cause is neurasthenia, or nervous exhaustion, particularly the form cerebrasthenia, or exhaustion of the brain. Brain-exhaustion, which follows loss of property, bereavement, or sunstroke, may excite inebriety in one who is predisposed to that disease. In America, sunstroke is quite a frequent exciting cause. Injuries to the brain, as railway accidents and the like, may excite the disease; so also may salt air; some inebriates cannot go to sea, nor near the sea-coast, without suffering an attack with accompanying symptoms, such as headache, neuralgia, nervousness, etc. Inebriety is more common in America than in any other country, mainly from climatic reasons; dryness of the air, and extremes of heat and cold. For the same reason, other functional nervous diseases of the family to which inebriety belongs, such as neurasthenia, general neuralgia, and hay-fever, are more common in the northern and eastern parts of America than in the southern. Like every nervous disease of the family to which it belongs, it pretty steadily diminishes as we go south—go to the Gulf States; yet there is more total abstinence in the north than in the south. There is no country in the world where there is so much total abstinence from drinking, and, at the same time, so much inebriety, as among the people of the northern and eastern parts of the United States. The habit of drinking has been diminishing for the last half quarter of a century among the better classes, but the disease inebriety has been increasing at the same time among the same classes. Inebriety is, to-day, treated on the same principle as other nervous diseases of the same family to which it belongs; that is, first, by keeping the patient away from the exciting causes, and, secondly, by fortifying the system with sedatives and tonics. For very many cases, asylums are indispensable, and legislation is needed, and, in America, is exercised to give power of holding such cases. The best law, on the whole, is the law of the State of Connecticut, which is very similar to the "Habitual Drunkards' Act", which has just been passed by the English Parliament. The best remedies for fortifying the system, and breaking up the habit of drinking, are bromides in very large doses (ʒi to ʒii), especially bromide of sodium; electricity in general, and central applications (general faradisation and central galvanisation), strychnine, quinine and cinchona, iron, cod-liver oil in emulsion, the preparations of zinc (oxide, bromide, and valerianate) with warm baths. This system of treatment for opium inebriety, combined with the gradual withdrawing of the drug, has been wonderfully successful in America. The American Association for the Cure of Inebriates was organised in 1870. There are, in the United States, twenty-six asylums in practical operation, and charters for fourteen more that are yet to be built. The movement has been carried on against the opposition of all forms of ignorance and non-expertness, but is every year making progress. The *Quarterly Journal* has been in existence three years. Of those who are committed to asylums, about one-third are cured; and probably in the next century, when there shall have been greater progress made in the treatment, and patients shall come to the asylums earlier in the disease, and there shall be greater knowledge and experience in the management of asylums, the results will be better. In regard to the criticisms of Dr. Bucknill, it would seem that some of his strictures are just; but they are only one side of a complex story. Asylums are not all alike, and all are imperfect; but every year they must be making progress in their management and in their theory and treatment of the disease. It was clear that Dr. Bucknill did not have any just notion of what inebriety was, nor of the distinctions between that disease and the habit of drunkenness. His ideas, also, of what asylums ought to accomplish were too high. Inebriate asylums are not specifics for inebriety, any more than insane asylums are specifics for insanity; but when they are empowered with legal authority, and wisely managed, they are the best means known for the treatment of this terrible and increasing disease. Both in asylums and out of asylums, more attention should be given to the sedative and tonic treatment above described than it has yet received. Too exclusive dependence is placed in America and Europe on the mere removal from the one exciting cause by confinement. In this respect, there is room for progress, and for careful experiments, which will soon be made.

Dr. CARPENTER (Croydon) was glad to find in Dr. Beard's paper a confirmation of certain statements he had himself made at Sheffield two years ago, and which had then been denied. They were indebted to Dr. Beard for making the statement he had done; and it would be some satisfaction to him to know that the Imperial Parliament had recently passed an Act called the Habitual Drunkards' Act, which would enable a person to place himself under control, and would give physicians in this country the power of treating this disease in the way that had been followed out successfully in America. The Bill was a permissive one only; but it would, he thought, be sufficient to enable us in this country to show that this diseased condition could be cured, and that it could be cured only in the way that had been pointed out by Dr. Beard. The Act was one which was very simple, but it contained two or three provisions which were extremely important; and he hoped there would soon be institutions established this year in different parts of the United Kingdom and in London, such as already existed in America.

Dr. NORMAN KERR (London) corroborated what Dr. Carpenter had stated, and said they were not going to rest contented with this Act. Their business now was to show, through means of this experimental Act, that they could do what the Americans had done. If this Act remained a dead letter, it would be the fault of the profession. It was their duty to show by a few cases what could be done, and they should then get increased powers of detention, and the extension of the period of the Act from ten years to an indefinite period. His observation in America showed him that, where institutions of this kind were properly managed, they were successful.

The PRESIDENT pointed out that Dr. Beard's paper was valuable in other respects besides that just referred to, and conveyed to Dr. Beard the thanks of the Section and its sympathy with him in the work in which he was engaged.

The Influence of Treatment on the Course of Rheumatic Fever before and since the Employment of Salicylic Acid. By WILLIAM SQUIRE, M.D., F.R.C.P. (London).—A concurrence of three conditions is found in all cases of acute rheumatism: 1. Increased waste; 2. Checked elimination; 3. Ready febrile reaction. Of these, the last is the most important; even a certain specificity in this reaction is requisite to determine that the resulting disease shall be rheumatic fever and not tuberculosis, erysipelas, or pneumonia. To these three conditions treatment has always been directed. Complete rest is the first necessity. Rest diminishes waste, prevents pain, induces sleep, and so directly tends to lower fever; the balance of elimination, aided by diluents, is restored; and the patient placed in a fair way of recovery. It has been said that, where early treatment with every comfort can be secured, much of the danger of heart-mischief is avoided; but the tendency to heart-complication during attacks at the same ages is much the same for rich and for poor; what care and comfort can do, is to guard against the incidence of attacks during early childhood, when danger to the heart is most to be dreaded. No method of treatment has any specific power in preventing disturbance of the heart during the illness, or in precluding the relapses in which such disturbance may again arise. Whatever lowers the fever and shortens its duration, tends to avert heart-disease. While Dr. Squire was studying the progress of acute rheumatism in the clinique of La Charité in Paris, some cases were being treated with full doses of quinine, and others with repeated small bleedings. In these, relief was felt after the abstraction of a *demi-pallette*, and, among other signs, the moist skin seemed to show in these patients that the fever was reduced; in those under quinine, from the headache and dry skin, the fever was said to remain unabated. The clinical thermometer completely reversed this impression; it showed the fever to be uninfluenced by the bleeding, and that a considerable reduction of temperature had been effected by the quinine. In many of these latter cases, convalescence was early; it was tedious and interrupted in the others. Quinine, in checking waste, unexpectedly lowered fever. Bleeding, expected to reduce fever by increasing elimination, failed in this object; as all evacuants fail—whether purgation, diuresis, or diaphoresis—when carried beyond the restoration or re-establishment of normal secretions to the elimination of morbid products or a supposed morbid poison. Another object aimed at by this treatment was, to counteract one of the primary products of the disease—an increase of fibrin in the blood, to which some of the evil consequences may be attributable. No doubt, potash and the nitrate of potash may be directed to this end with greater safety than bleeding or calomel can be; but the alkaline treatment, as well as the bleeding, tends to increase the subsequent anæmia which so much retards convalescence. Moreover, the increase of fibrin, the state of hyperinosis, is a direct consequence of the febrile state. This is diminished by whatever controls fever, while it is actually increased by some of the eliminative means employed, as by sweating under blankets; it is relieved by tepid sponging. All soothing means are antipyretic—ease of joints, sleep at night—whatever relieves pain reduces fever. Colchicum relieves the local pain of gout, and the fever falls. The general anæsthesia induced by salicylate of soda has much to do with the antipyretic influence it exerts in rheumatic fever. This sedative effect, with lowered vaso-motor reaction, permits a readier return to the normal excretion of urea, thus promoting and hastening the natural crisis, or rather lysis, in which the disease should end. With the increase in the amount of urea and uric acid excreted, the joints become less painful, and this in many cases somewhat

precedes the fall in temperature; hence the fever has been regarded as dependent on the articular mischief, and treatment by blisters has been directed specially to the affected joints, not without some degree of success. As much may be said for the eliminative treatment intended to promote the removal of the products of tissue-waste; neither plan will lower the first fever or lessen the danger of heart-disease, nor diminish the anæmia of convalescence with its tendency to relapse. Before the use of salicylic acid, we had no means of controlling the fever of rheumatism on which these evils depend. The power of quinine had found a limit; purgatives and salines proved useless. Aconite, digitalis, and veratrum had failed. Cold was reduced by Wilson Fox to its true service against hyperpyrexia, and bleeding proved to be as injurious in this complication as it is in the ordinary course of the disease. The iron-treatment introduced by Dr. Russell Reynolds checked in some degree the febrile reaction, prevented subsequent impoverishment of the blood, and some of the worst consequences of endocardial exudation. Its use in erysipelas, and in rheumatism following some specific fevers and the puerperal state, is well attested. With children, cases may arise where a choice has to be made between iron and salicylic acid; one or the other must be adopted; they cannot both be employed at once. Dr. Squire's experience of iron was a favourable one. Twice in children where the first signs of rheumatism were in the heart this means, with chloral at night, gave good results. In one case of a boy five years old, treated early with salicylate of soda, no heart-affection occurred. In a girl three years old with an endocardial murmur, and no joint affected when first seen, good progress followed the salicylate, but a soft systolic or presystolic *bruit* remained. The only evidence of the earliest attack of acute rheumatism in young children is often in the heart. Second attacks of acute rheumatism in adolescents have been treated very advantageously by either means. The change from profuse perspiration and great restlessness to comparative comfort by the use of dialysed iron in a young man with high fever, on the fourth day of other treatment, was very marked: good convalescence began in a fortnight. In a similar case treated on the third day with salicylate of soda, in twenty-four hours, before two drachms had been taken, all fever was subdued, and the convalescence began in a week. In second attacks, much prolonged, occurring to men at the age of fifty, one had pneumonia, one a systolic and cardiac murmur and diffused pulmonary *râles;* rapid improvement followed the use of salicylate of soda. Cardiac irritation is always soothed under its influence; with a steadier circulation the *râles* in this case disappeared, diarrhœa, meteorismus, and perspiration ceased, and the urine, pale and of low specific gravity, as it often is in these prolonged cases, was soon restored to its normal quality. What none of the eliminative means used had been able to effect now occurred. An increase in the elimination of urea, noticed in favourable cases, is aided by the salicylate of soda; it acts as a sedative without checking any of the secretions. The relief of pain is partly from its action on the central nervous system, more directly from the dilatation of the peripheral blood-vessels which it produces; at the same time excitability of the heart is lowered, hence its utility when the heart is already involved, while by its power to arrest the special febrile action, at whatever period of the disease it is given, no remedy can be so likely to prevent that complication. The earlier it is given and the sooner its effects are produced, the less likely is the heart to suffer, for the shorter the duration of the fever the less is the possibility of heart-disease. As salicylic acid is rapidly eliminated by the kidneys, the doses of it, or of salicylate of soda, must be frequently repeated. Salicine is but slowly and partially converted into salicylic acid. The acid is less easily and less safely administered than salicylate of soda, and is in no way more efficacious where no germicide influence is required. The acid so readily and cheaply obtained from carbolic acid, since Kolbe's great discovery, has exactly the therapeutic properties of that prepared by Cahors from the winter green *(Pyrola)* as determined in 1855 by Bertagnini. Salicine, as first separated by Leroux from willow-bark, has been found by Senator and others to have no other action. The salicylate of soda is the readiest way of giving the remedy where its effects should be produced rapidly, a point of great importance in the young, and is exactly suited to what is required in the treatment of acute rheumatism.

The PRESIDENT advised Dr. Squire to add to the value of his paper by tabulating the results of his cases. Giving his own impression of the results of treatment in the London Hospital, where the experience was very large, with between five hundred and six hundred cases, that impression was that the use of the salicylate of soda in the first place diminished rapidly the fever within a period of about forty-eight hours; then, in nearly a like period, it lessened the pain; and then, in a little longer, it relieved the patient of the other sufferings incidental both to the fever and to the pain. Now, if it were true that the perils of rheumatism were in some relation to fever, and in some distant relation also to pain, then it was clear that there was an addition to our therapeutic resources of enormous value. At the same time, he was not prepared to say that the duration of the time in which actual precautions were necessary was reduced. He also took occasion to say that, while there was no great danger in its use, the dangers of the use of salicylic acid and its compounds were, in his opinion, greatly underrated.

Dr. SINCLAIR (Dundee) thought that the President had made a valuable observation in the last of his remarks. He also thought that the virtues of salicin had been in some respects very considerably overestimated, and he submitted to the Section a set of tabulated results of his experience in the use of the agent in the Dundee Hospital. The results showed that for the most part the results were favourable in the matter of duration, but that the tendency to complications was not so materially reduced by the use of salicylic acid as one might be led to expect. On the whole, he thought they should not lose sight of the results obtained by other modes of treatment.

Thursday, August 7th.

The Chair was taken by the President, ANDREW CLARK, M.D., F.R.C.P.

The Treatment of Rheumatic Fever.—The discussion of Dr. Squire's paper on this subject was resumed.—Dr. SOUTHEY (London) said he had tabulated the results of fifty cases of the treatment by salicylate of soda. While the number of cases was as yet insufficient to enable one to form a judgment on the matter, the inferences he had so far formed entirely agreed with those which had been already expressed by the President. There were two forms of rheumatism—the continued and the relapsing form; the latter of which singularly uninfluenced as yet by any treatment. The results of his cases were not at all indicative of the salicylate of soda having any influence on the course of the disease. But it appeared to act as a palliative; it relieved pain, cleaned the tongue, and diminished the pulse-rate somewhat. At the same time, he had three or four cases in which symptoms of extreme collapse and of violent delirium were apparently caused by this re-agent.

The PRESIDENT summed up the results of the discussion as follows. First, they had as yet no stable criterion whereby to determine the therapeutic effects of any drug upon rheumatic fever; they did not yet completely know the history of this fever. Secondly, therapeutic conclusions were apt to be vitiated by failing to distinguish between the two forms of the disease to which Dr. Southey and Dr. Sinclair had referred. Third, while the influence of salicylic acid and its compounds somewhat speedily relieved the *malaise* of which the rheumatic sufferer complained, it was extremely doubtful whether they in any degree diminished the peril of secondary cardiac or other inflammatory complications. Lastly, it was left uncertain whether they succeeded in removing that actual pathological state of which, in a sense, these other things might be said to be the expression. In short, there was almost a greater tendency to relapse with the salicylates than otherwise. Although this did not seem to be a very great gain, yet it was enough to help them in future inquiries.

Dr. SOUTHEY pointed out that salicylic acid might be agreeably administered in the form of an emulsion with milk.

The PRESIDENT, in reference to this suggestion, called attention to the fact that a proportion of rheumatic patients could not take milk.

ALCOHOL IN FEVER.

In the discussion on this subject the following papers were read.

The Value of Alcohol in Sustaining the Powers of Life in Acute and Chronic Disease. By JAMES LITTLE, M.D. (Dublin).—Dr. Little said that there were three objects with which wine and brandy were prescribed in medicine: 1. As cordials, to enable patients to take a larger quantity of food and to digest it more perfectly; 2. On account of their soothing effect on the nervous system; 3. Because they are supposed in some way "to keep up the vital powers"; this last being the great reason for their use in severe illnesses. He thought that no better service was ever done to practical medicine than that rendered by Dr. Stokes and Sir D. Corrigan, when they pointed out that the indications for the use of wine and brandy in fevers lay in weakness of the pulse, in feebleness of the impulse and first sound of the heart, in coldness of the ears and extremities, and in pulmonary stagnation. His reasons for desiring to raise the discussion were: first, his conviction of the great power of alcohol as a drug, both for good and for harm, and his conviction that many who gave it were in danger of losing sight of its injurious influence in one direction while they sought its good effect in another; and, secondly, his impression that, on the whole, the consensus of medical opinion regarding alcohol was much too favourable. In giving alcohol in some severe cases of typhus and typhoid fever, he came to the conclusion that, while it kept up the circulation, it exer-

cised an injurious influence on the nervous system, manifested sometimes in restlessness, but more frequently in an increase of muscular weakness. He had observed the same thing in India; and hence he objected to the application of the term "stimulants" to alcoholic liquors. He believed that possibly in many of the cases which would be regarded as suitable for the use of wine and brandy, the patients would do as well, or perhaps better, without them. Four cases were related in support of this view. He was of opinion also, that in many cases of fever, alcohol was injurious. Murchison and Hudson had pointed out that the use of wine in enteric fever needed special caution; and the frequent presence of cerebro-spinal symptoms in this disease rendered care in the use of alcohol specially necessary. The diseases in which he believed alcohol to be specially useful were catarrhal typhus and pneumonia. In the former, he thought there was no combination of such value as the turpentine punch, long a favourite prescription in Ireland; and in asthenic pneumonia, he did not think it was possible to do without brandy.

Alcohol in Fever. By H. MACNAUGHTON JONES, M.D. (Cork).—Dr. Jones said that he meant his remarks to be essentially practical, giving rather the results of his individual bedside experience than broaching any views or theories. Independently of private cases, he had treated in the Cork Fever Hospital, from January 1873 to June 30th, 1879, 899 cases of typhus, typhoid, and simple continued fever. It was in 1873 that he first determined to watch carefully the effects of digitalis in fever, and learned to abandon the too generous use of alcohol; nay more, to administer it only in a certain percentage of cases in which the indications for its employment were clear, and when the responsibility of withholding stimulants would be infinitely greater than that of administering them. He had since been most careful in ordering brandy or wine of any kind in fever. In 1875, he published, in the *Dublin Monthly Journal of Medical Science*, a table of 310 cases of fever; of these, 220 got no stimulants, 58 had claret alone, 33 had brandy. Of this number, 110 were typhus patients, of whom 26 had stimulants. The mortality in the typhus cases was 8 per cent.; in all other cases 3½ per cent. The brandy in all the fatal cases was commenced from the first to the fifth day. In that period he had two deaths from typhoid fever; both patients had stimulants from an early date in the attack. He had divided the patients treated since the publication of this table under two heads: Total patients treated, with percentage of deaths; and total patients treated since January 1877. He had not an accurate record of the patients who had stimulants from February 1875 to January 1877, as the hospital wine-book was unfortunately mislaid. But the average number of patients who received stimulants was about the same as that from January 1873 to February 1875, during which time 30 per cent. of the cases had stimulants at some period of the fever. From January 1877 to June 30th, 1879, 123 out of 340, or 36.17 per cent., had stimulants. In typhus fever, stimulants were given during the first period to 23.6 per cent. of the cases, and in the latter to 41.37 per cent. In typhoid fever, of 107 cases, 22 had brandy and wine, 27 claret alone. The total percentage taking brandy was 20.56; the total percentage taking claret, 25.23; the deaths of the former were 36.36 per cent.; of the latter, 7.40 per cent. Of 117 cases of simple continued fever, 5.12 per cent. were given brandy and 5.12 per cent. claret. There were no deaths. In these cases, temperature-charts of the disease were kept. Sphygmographic tracings were taken of several during the illness. In summing up his conviction, from bedside experience, of the value of alcohol in fever, Dr. Jones said that it is a most valuable therapeutic agent in both typhus and typhoid fever. A large percentage of cases not only do not require it, but its administration is apt to lead to complications. It is impossible to lay down rules as to the stage of the fever in which it may be indicated, as this indication depends rather on the type of the fever than on its stage. But the time to watch for its administration in ordinary cases is from the eighth to the twelfth day. Early administration of stimulants in fever is injudicious. He had little faith in their early employment *preventing* an adynamic condition, and he had rarely seen them have a good effect in the early stages of the fever of habitual drinkers. He was inclined to think that it is a dangerous fallacy to regard them as essential in such cases. Of the two, he had more often seen hard-drinkers recover without stimulants than with them. Alcohol, in his experience, had little effect on the temperature of fever. He generally took, as his tests, the age of patients, the condition of the heart, the pulse, tongue, and the head symptoms. Young patients, as a rule, do well without stimulants. A feeble, irregularly acting heart, with weakened first sound; a compressible and rapid pulse; a tongue keeping fairly moist; the absence of violent head-symptoms; encouraged him in their continuance and use. He believed that we possess in alcohol a supporting food in those typhoid states when assimilation is difficult, and he had many times seen lives saved in fever, sustained for days by brandy and milk alone, when everything else had been rejected. The practices he conceived most to be deplored in the administration of alcohol were: *(a)* the indiscriminate employment in the earlier stages of fever; *(b)* the rash continuance and the increase of the quantity used, when the symptoms show that it is acting injuriously and is of no service.

Alcohol in Pyrexia. By EDWARD T. TIBBITS, M.D. (Bradford).—In this paper, alcohol, judiciously administered, was considered one of the most useful and powerful of remedies in certain pyrexial conditions. Firstly, judging from its chemical composition, reactions, etc., alcohol must be regarded as a "fat". Secondly, from its behaviour in the body, both in health and in acute disease—and, indeed, from some remarkable cases on record, where no other aliment was taken—it cannot be denied that at any rate, under certain circumstances, it is consumed within the body: hence it is a "fat food". The principal reasons for the use of alcohol in certain pyrexial conditions may be thus stated. 1. There is undoubtedly in disease, accompanied with continuous elevation of temperature, a rapid consumption *primarily* of the natural reservoirs of fat, and *secondarily* of the nutritious fat of the muscles. 2. Alcohol is a "fat food", and as such affords supply of fuel which might otherwise be taken from the muscles, thus producing irreparable damage. 3. There can be no doubt that it is a cardiac stimulant, and therefore useful in fevers. 4. It appears to have a most beneficial effect on the nervous system, *e.g.*, in reducing delirium, diminishing irritability, and removing tremors and mental depression. 5. It is said to act as an antizymotic; whether by diminishing the rapid multiplication of bacteria (if they be present) or otherwise, is mere speculation. 6. No other stimulants can be substituted for alcohol so easy of assimilation in fevers. In mild cases of fever, alcohol is unnecessary; in severe cases, even in the congestive stages, the cautious use of alcohol was advocated. When there is a tendency to stagnation in the capillaries, venesection, in conjunction with a liberal allowance of alcohol, was suggested as a mode of treatment likely to prove successful. In the spanæmic stages, alcohol is not, as a rule, considered necessary or advisable. During convalescence, the relish for food and drink of a stimulating character is so intense that it is better to discontinue the use of alcohol as soon as possible after the danger has passed away. In this manner, the patient is less likely, especially if there be any vicious predisposition, to give way to that greatest of all curses—systematic drinking. Dr. Tibbits said that he would think alcohol was indicated by a very high temperature, and also by tremors. It was, he thought, contraindicated by the unfavourable character of the symptoms generally, and he would discontinue its use when there was a very dry tongue. He had an idea that, where there was a kind of stagnation in the circulation, bleeding to some extent might do good.

Alcohol in Fever. By NORMAN KERR, M.D., F.L.S. (London).—The author said that the majority of cases, especially in the young, did well without any stimulant. In the comparatively few cases where stimulants were called for, the indications were—1, in rapid tissue-change, to diminish excess of waste; 2, to repair the lesion of the circulation. He confessed that alcohol could lessen the waste and reduce the temperature when these were accompanied by low muttering delirium and intermittent pulse; but the improvement was temporary, and was very apt to be followed by formidable reactionary fever, which must always be closely watched. Quinine, the wet sheet, cold affusion, and the cold bath, checked the excessive waste, lowered the temperature, strengthened and improved the action of the heart; and these remedies were preferable to alcohol, as they did not, like it, load the blood with fatty globules, check the secretions, and paralyse the nervous system. Alcohol could also, to some extent, stimulate the cardiac and capillary circulation; but here the danger of overstimulation was very great. As prompt and efficient a circulatory stimulant as alcohol, without the risk of its perilous reactionary disturbance, was a desideratum. This he had found in the injection of hot water, the repeated injection of ether, flying sinapisms and blisters, and digitalis. Where he prescribed alcohol, he prescribed it as "alcohol", in accurately defined doses. He had frequently seen this remedy prove worse than the disease, from the alcoholic interference with the digestion and the disturbance of the nerve-centres. When such symptoms appeared, the supply of alcohol must be at once cut off. Where he had seen alcohol do good, it had acted as a sedative to the excited nervous system. As efficient and less dangerous a sedative was the ice-cap, cold affusion, or camphor. To sustain the vital forces while the fever ran its course, milk, *extractum carnis*, beef-tea, rice-gruel, and Wright's unfermented wine had, in Dr. Kerr's hands, proved more effectual than alcohol. He occasionally ordered small doses of brandy to patients who seemed unable to take anything else; but, with these rare exceptions, his experience went to show, as that of Gairdner, Bishop, Henderson, Mudge, and Nichols had previously done, that all forms of fever could be successfully treated with little or no alcohol.

Dr. WADE (Birmingham) had been taught by Dr. Stokes practically the doctrine which he at present held—namely, that there were certain pyrexial diseases in which the use of alcohol might become necessary; and that, when the conditions arose which indicated its use, there was no other drug which would supply its place. But he had been taught, also, that there was no single form or type of fever in which alcohol was necessarily required. The conditions in which he believed it to be necessary were the increasing rapidity of the pulse and of the respiration, a dry tongue, failing muscular power, increasing delirium, and indications of congestion. But his experience was that, even in cases in which these symptoms were present in a marked degree, alcohol would fail to do the good which it was expected to do. He believed that alcohol in all these cases should be used empirically. He did not consider that high temperature was a necessary indication for the use of alcohol. He found that its effects more nearly resembled those of a soporific and a sedative, rather than of a stimulant. He thought the most certain indication of alcohol being beneficial was reduction of the pulse-rate. If this effect did not occur, the probability, although not the certainty, was that it would not be beneficial. With a sufficient dose, the effects would very probably be produced in from a half to two or three minutes, and they had thus a means of judging of the probable effect of alcohol at a first visit. If the symptoms were by its use aggravated or became worse, he should consider that the patient was either taking too much alcohol or getting too little; and, to ascertain this, he should use the same steps as in the first instance.

Dr. FOSTER (Birmingham) concurred generally in the opinion and practice of Dr. Wade, but he differed from him as to the use of alcohol in high temperatures. In fevers beginning with high temperature, and indicating from their commencement a high state of combustion, the use of alcohol, he thought, was indicated. That, he knew, was only his view of the use of alcohol; but it was strengthened by the recent experiments of Dr. Anstie and Dr. Flint. Dr. Flint had shown that, with persons undergoing great muscular effort, and in others undergoing starvation, whose secretions were analysed, the ordinary oxidation of carbon and nitrogen was insufficient to account for the amount of force used up, or the amount of heat evolved. He had accordingly been forced to the conclusion that there was the oxidation of another element besides taking place in the body in order to keep up the animal temperature, and that was hydrogen. Alcohol was a sparer of the oxidation of the tissues. There was recovery, in cases treated with alcohol, with less loss of power and waste of tissues than in cases treated without alcohol; and he was inclined to think that the explanation of this difference was to be found in the figures which Dr. Flint had given. He knew of no remedy to replace alcohol in fever-cases; and, in desperate cases, he knew none to which he could look except alcohol.

Dr. HAYDEN (Dublin) said he had been in the habit of using alcohol with great caution and reserve. In cases of typhoid fever, he never administered it, save in circumstances of great necessity—this being a fall in temperature. On this fact, it appeared to him that several of the speakers took a narrow view. A high temperature had been taken as the indication for its administration; but, while he admitted that in a measure, he would say that a very low temperature was a very decided indication for it; and he had found alcohol in these cases of the greatest value in the treatment of typhus. He usually gave it in the form of brandy or whiskey, in a dilute form. He also considered alcohol in certain cases a most valuable hypnotic. He was further of opinion that, in treating a person who had been in the habit of taking alcohol very frequently, and whose tissues, therefore, might be supposed to be supersaturated with alcohol, it would be in the highest degree injurious, if not dangerous, to suddenly withdraw this form of food, to which he had been accustomed.

Dr. SQUIRE (London) suggested that another indication for the administration of stimulants was a marked lowering of the surface-temperature, compared with that in the interior of the body.

Dr. SPEDDING (Belfast) said he had considerable experience in the administration of stimulants to children in a variety of diseases, chiefly high pyrexiæ and fevers. Only one speaker had alluded to giving stimulants to children, and he seemed to be rather averse to it. He had cases in which, for several days, children had not allowed one particle of nutritive food to enter their stomachs, and had lived on nothing but water and punch, made very sweet, and taken cold. It had been his practice for the last eight years, in the Belfast Dispensary, to withhold alcohol till pulmonary complications appeared about the second or third week. He thought that was the time when the use of stimulants was indicated; and then he measured the amount of his stimulants by the amount of the pulmonary complications. It seemed to act remarkably well on the heart, and also acted as an expectorant, and was a decided support to keeping up the circulation in the lungs.

Dr. SMITH (Dumfries) said that, in Scotland, they recognised fever as a disease that ran a certain course. They found that the best method of preventing death was to support the system from the commencement of the fever; and they did not give stimulants when they found that nervous symptoms were produced.

Dr. SINCLAIR (Dundee) was of opinion that the other ingredients of most alcoholic fluids were not by any means to be underestimated or ignored, as they too often were. Whiskey contained none of those volatile ethers which were developed by keeping in the rich wines of France and Spain; and, for this reason, he objected to the administration of whiskey.

Dr. LITTLE (Dublin) wished it not to be supposed that he thought alcohol was not one of the most valuable agents they had. He had, however, thought it was potent for evil as well as for good; and that they must be exceedingly cautious in its use. He entirely agreed in the views of Professor Jones and other speakers. He thought, however, that Dr. Wade had meant to say that alcohol should be used tentatively, and not empirically. He had himself been in the habit of prescribing a cup of tea in the morning, beaten up with the yolk of an egg, as a substitute for stimulants.

The PRESIDENT said this had been the most satisfactory discussion on a question of treatment that he had ever heard. They had gentlemen there with extreme views on both sides; and there had arisen from those gentlemen not only a convergence, but an actual conjunction of opinion as to the point of the value of alcohol in the treatment of fever. In the first place, it was apparently agreed that the patient in fever was like a ship in the storm. They could not do very much for the storm; but they could do a great deal in steering the ship in the storm. The main object was to support the life of the patient in passing through the storm of fever. In the next place, when the patient began to fail, and death was threatened, perhaps the best remedy was alcohol. It was also agreed that circumstances arose in the course of the fever, and pointing to failure, perhaps not only was alcohol a successful, but it was the only successful means which they could employ; and that, when they gave alcohol, they must give it with a sparing or with a tentative hand; and so long as certain evidences of disagreement did not arise; so long as the tongue was not dry, as the pulse was not increased; so long as no suppression of urine, and as no increase of delirium occurred; and so long as the patient felt comforted and quiet, they might go on with the idea that they were assisting the patient in arriving at a happy termination of the disease.

Laryngeal Phthisis: Its Origin, Course, and Termination. By MORELL MACKENZIE, M.D. (London).—1. Laryngeal phthisis is due to the presence and subsequent breaking down of tubercles in the mucous and submucous membranes. The tubercles, some very small and some as large as a millet-seed, are found embedded in a reticular structure filled with small round lymphoid cells. This tubercular matter is sometimes deposited uniformly through the thickness of the mucous membrane, but much more commonly it is found in the most superficial layer of the mucous membrane immediately beneath the epithelium. In the deep layers of the mucous membrane, both the tubercles and the round cells are less abundant. Heinze has pointed out that there is sometimes a space between the epithelium and the subjacent tubercular deposit, containing a few round cells and many capillary vessels, but no tubercles. 2. Laryngeal phthisis is essentially a secondary phenomenon, occurring as a sequel to pulmonary phthisis. There is no evidence that any case of *primary* laryngeal phthisis has ever existed. 3. The disease is not due to the corrosive action of the sputa. This is shown by the following facts. *a*. In many cases of laryngeal phthisis there is little or no expectoration; *b*. The sputa in gangrene of the lung, which is probably much more corrosive, does not produce laryngeal ulceration; *c*. Lymphoid cells are sometimes found between the epithelium above and tubercle below. 4. The disease is much more common amongst males than females. Out of 500 cases examined by the author during life, 365 were males and 135 females. In a hundred necropsies, there were 73 males and 23 females. 5. The most frequently present symptom of laryngeal phthisis is impairment of the vocal function. In 500 cases, the voice was impaired 460 times. Cough was a marked symptom in 427 patients. Dysphagia occurred 151 times. 6. The naked-eye appearances of laryngeal phthisis, either during life or after death, cannot be absolutely relied upon, but pale pyriform swellings of the aryepiglottic folds and a pale turban-like thickening of the epiglottis are seldom met with except in laryngeal phthisis. More or less uniform thickening, with marked pallor, of the mucous membrane and small scattered ulcers are the characteristic features of the disease. 7. The prognosis is always unfavourable. The ordinary duration of life after the throat-symptoms have become troublesome being from twelve to eighteen

months. 8. The only treatment which is of any use consists in the employment of palliative remedies. Where there is pain in swallowing, insufflation of morphia gives the greatest amount of relief.

The PRESIDENT thought that Dr. Mackenzie would do well to revise his definition of tubercle. When people said there were no ulcerations, he suspected that was because they had not looked for ulcerations; and that in almost all bronchial affections, if prolonged, not only erosions, but ulcerations, would be found if looked for. With reference to the discovery in the sputa of elastic tissue, and the inference drawn from that circumstance, that there were cavities in the lungs, he wished to point out that a mistake might easily be made unless they found real elastic tissue in the sputa. In bronchitis, they would find simple bands or long bands; and if they concluded that there were, therefore, cavities in the lungs, the chances were a hundred to one that they would make a mistake.

Mr. LENNOX BROWNE (London) thought that Dr. Mackenzie's paper was a valuable one, as much of it was the result of his own observations.

Dr. FOSTER (Birmingham) said there seemed to him to be some truth in the remark that, after the development of the laryngeal symptoms, there seemed to be a *quasi* slackening of the progress, and, after death, it was found that the pulmonary lesions were not so advanced as they should expect to find. In many cases of dysphasia, however, depending on this or other laryngeal conditions, the abstention from passing food by the mouth, and the use for a period of days of enemata, were of great benefit; and, at the end of that time, the power of swallowing by the ordinary channel returned with comparative comfort.

The PRESIDENT said it was certainly his experience that, in cases of laryngeal phthisis, there was a slackening of the diseased processes in the lungs, but the patients in that case died all the sooner.

Dr. LITTLE (Dublin) thought that the existence of the erosions might cause a difficulty in detecting the auscultatory sounds in phthisis, the patient not being able to cough as freely as usual. He had found himself that relief followed from using a rather strong solution of morphia in syrup.

Friday, August 8th.

The Chair was taken by ANDREW CLARK, M.D., F.R.C.P., President of the Section.

TRACHEOTOMY IN CROUP.

In opening the discussion on this subject, papers were read by Dr. A. H. Corley, Dr. W. Squire, Mr. R. W. Parker, and Mr. W. Thomson.

Tracheotomy in Croup in Ireland. By A. H. CORLEY, M.D. (Dublin).—Dr. Corley said that, while tracheotomy in croup appeared to have passed out of the region of vexed questions in England, Scotland, and the Continent, it was still a matter of contention in Ireland, and many of the older practitioners in that country either ignored or condemned it. Some years ago, he brought before the Surgical Society of Ireland a case in which he performed tracheotomy on a child with croup, the disease being unchecked, and death occurring. Not one member—except the physician whose case was operated on—approved of the proceeding. Since that time, the subject had been brought forward by Dr. Thomson and Dr. Quill; and there were indications of a change of opinion. He attributed the disfavour into which tracheotomy in croup had fallen to the influence of the writings of the late Professor Porter and Dr. Cheyne; and also to the tardiness with which, in isolated cases, it was performed. There was thus a vicious circle of: 1, weight of authority against the operation; 2, tardy and isolated operations; 3, unsuccessful results; 4, increased weight of adverse authority. The hasty conclusions of Porter from three unsuccessful cases were contrasted with the more logical line of action of M. Guersant, who, after operating twenty-three times unsuccessfully, still persevered, and at last reached the average of success. The influence of Trousseau, Bretonneau, Spence, and Buchanan was also referred to. Dr. Corley then proceeded to consider: 1, the object of the operation; 2, the cases to which it is applicable, as well as those that may be treated without it; 3, the dangers naturally belonging to the operation, and the counteracting advantages. The primary object of the operation was described as being to prevent death from obstruction at the entrance of the air-passages; it had nothing to do with the progress of the disease. The cases in which it should be performed were those, whether croup or diphtheria (between which Dr. Corley did not recognise any difference), in which the rima glottidis became obstructed. Regarding simple and pseudo-membranous laryngitis, he knew no sign—except the coughing up of shreds of false membrane—that could be relied on as diagnostic; and the treatment of such cases must be doubtful until amendment took place or tracheotomy was urgently required. The operation itself he regarded as one of the most serious—he did not say the most dangerous—in surgery. Of the dangers, shock was a necessary concomitant; congestion of the lungs or bronchitis from contact of the cold air with the pulmonary mucous membrane, if it existed, was quite avoidable. The immediate and complete oxygenation of the blood which followed a free opening in the trachea, the consequent resumption of the vital functions, and the cessation of the exhausting and ineffectual struggles for air, justified any risks incurred in performing the operation. As to the proper time for operating, much stress was laid, in the hospital with which he was connected, on substernal sinking in respiration, which showed that the lungs were not descending while the diaphragm was contracting.

Tracheotomy in Croup. By WILLIAM SQUIRE, M.D., F.R.C.P. (London).—The urgency for this operation is greater in the croupal complications of diphtheria than in simple inflammatory croup. The more closely cases of membranous laryngitis resemble diphtheria, the earlier will tracheotomy be required. Where the symptoms have come on insidiously, with altered voice and muffled husky cough, even though no signs of pharyngeal diphtheria be present, this operation will, in all probability, be requisite, and should not be delayed. Where the ingress is sudden, with clanging cough, relief may be hoped for without tracheotomy. The exudation in these cases, often formed only of shreds of membranous lymph, becomes looser by the second or third day, and is more likely to be detached in fragments that can be expelled by coughing. In the other class of cases, nothing is gained by waiting; the exudation will extend, and the obstruction become more complete. It is true that recovery may happen in diphtheria when tracheotomy has been delayed till the patient is *in extremis*. This may justify an operation, however slight the hope of success; but it is no reason for deferring the operation till such extreme danger appears. The greater success of tracheotomy in Paris than in London is chiefly due to the earlier stage of the disease at which the operation is performed. The great danger from extension of tracheal diphtheria into the bronchi is not increased by tracheotomy; its frequent occurrence is a known condition of the disease. It is not diminished by keeping a patient in an atmosphere of steam, whether with or without an opening into the trachea. The irritation of the tracheal tube, by weakening the vagus, may cause sympathetic changes in the lung, as shown by Billroth, and more recently by Michaelson. In some cases, it may be possible to avoid the use of any tube, as in the cases collected in Dr. Squire's article on Croup in Reynolds's *System of Medicine*. This is specially desirable in very young children. Dr. H. A. Martin of Boston, U.S.A., last year published nine cases successfully conducted in this way; and the India-rubber tube of Mr. Morrant Baker has advantages from this point of view, as well as for that of avoiding ulceration. In the later stages of simple croup, or of that secondary to measles, when no question of diphtheria exists, laryngotomy, or a temporary opening of the trachea, has enabled the accumulated secretion to be expelled with good results. In these cases, emetics and saline expectorants are of decided service; but they require very cautious use in diphtheria. Steaming may be of some use for the relief of the earlier symptoms of croup; it certainly increases the dyspnœa when any obstruction already exists. The placing a patient under steam in a small closed tented space after tracheotomy, from whatever cause, should be avoided.

Tracheotomy in Croup. By ROBERT WILLIAM PARKER, M.R.C.S. (London).—The author began by defining what he meant by the word "croup". For, he said, it would be impossible to rightly estimate the *rôle* of the operation without having something like definite notions on the pathology, as well as the etiology, of the disease. He should, therefore, for the purposes of this debate, consider the word "croup" to signify *membranous laryngitis*. He further stated that, in his opinion, all forms of membranous laryngitis had a common etiological signification. Any apparent differences in the symptoms of individual cases depended, not so much on a difference of disease as on a variety of function of the parts primarily or chiefly affected. Thus, the disease might be sthenic in its character or asthenic; it might be severe or mild; just in the same way as scarlet fever or typhoid fever might be severe or mild. Again: the disease might commence in the pharynx, and gradually spread to the larynx; or it might suddenly and primarily attack the glottis. In the latter case, the first symptoms would be those of suffocation rather than of laryngitis, and they would, by their extreme urgency, outweigh all others. As regards the operation, Mr. Parker thought that its dangers had all along been greatly exaggerated. It was true that a great number of patients died after it; but a careful examination of the published statistics showed that few died in consequence of the operation. The reasons for this great mortality were chiefly three: 1. A routine and too long continued use of antimony in the preliminary treatment; 2. Delaying the operation until, in consequence of lung-complications, it was almost impossible for the patient

to recover; 3. The withholding of a rational treatment after the operation. As regards antimony, he said that he had several times seen a state of depression brought on by its use, from which it was almost impossible to rouse patients. For his part, he believed that any favourable action which emetics might exercise was due to their mechanical action; hey caused retching and vomiting, and so detached the membrane, which was then coughed up, and thus the glottis was relieved. It was highly important to select one which did not depress the patients; he thought sulphate of copper would be found the best. As a rule, if the laryngeal obstruction were not quickly removed after free vomiting, it was useless and unwise to continue the administration of emetics. It was constantly to be borne in mind that tracheotomy was not a curative proceeding as regards the "croup". All it could do was to arrest death from suffocation. Thus it was important to resort to it early; for, if laryngeal obstruction were allowed to exist for any length of time, even though it might not kill, there was danger of collapse of portions of lung —a condition which could never be recovered from. Meanwhile, the primary disease is all the time spreading nearer and nearer to the lungs, where it was impossible to get at it. The importance of continuing treatment after tracheotomy had been performed was self-obvious. At present, however, this practice seemed to be the exception rather than the rule; for many practitioners regarded the operation in the light of a last effort, and, having done it, awaited the result with their hands folded. Mr. Parker next referred to the plan of after-treatment which he had been led to adopt, and which had been very fairly successful in his hands. He strongly advocated careful local treatment of the larynx and trachea during, as well as after the operation. Membranous exudation in these cases was the cause of the symptoms which called for tracheotomy; he felt, therefore, that a patient ought never to be allowed to die with any accumulation of this membrane within the larynx and trachea after tracheotomy. One of the most efficient means at our disposal for facilitating the removal of exudations was steam. But steam, to be of service, ought to be used with caution and consideration. The practice in use at some hospitals of drawing the bed close up to the fire-place, surrounding it with ward-screens, and then turning in steam from a large kettle boiling on the fire, was not a scientific mode of applying steam. For such an arrangement, among other disadvantages, shut out fresh air and light, both of which were necessary to the patient's recovery. Some remarks were also made on the ill-adaption of the quarter-circle tubes, at present in use, for purposes of tracheotomy. Mr. Parker advocated a new tube, the curve of which corresponded with the direction, downwards and backwards, taken by the trachea.

Tracheotomy in Croup. By W. THOMSON, M.D. (Dublin).—Dr. W. Thomson read a paper, in which he gave a short account of six cases in which he had operated, with two successful results. He discussed the subject under two heads: 1. Under what circumstances ought the operation to be performed? 2. What conditions will tend to insure its success? He expressed his belief in medication in the early stages; but, when a membrane was present, he believed that the treatment should be by emetics; and, failing success, that tracheotomy ought to be performed, provided that urgent symptoms were present—such as the sinking in of the substernal tissues and of the parts at the root of the neck. He regarded the operation as simply relieving an urgent mechanical obstruction, thus preventing the poisoning of the patient by carbonised blood, and giving time for the use of other remedies, if necessary. He advocated the suprathyroid operation, as being quite as efficient as the infrathyroid, while it was less difficult. Steam-spray, a full-sized tube, careful nursing, and the spraying of the trachea occasionally with lactic acid solution or lime-water, were regarded as important helps to success.

Dr. SYDNEY COUPLAND (London) observed that this subject possessed both the disadvantages and advantages of being common to both physicians and surgeons. Thus, if viewed from a solely surgical point of view, their views of it would come to be too narrow and too limited, and so of course on the other side. He thought Mr. Parker had taken a purely local view of the disease, which he himself thought to be a membranous laryngitis. Mr. Parker, too, was not quite consistent with himself, as he seemed to say that all that was necessary was to remove the membranous obstruction in the air-passages, and did not seem to him (Dr. Coupland) to carry out what he had said at the commencement of his paper ought to be done, viz., that they should treat the disease, and not its local manifestation only. In a large number of cases, it seemed to him that the operation was delayed too long. In several of these cases, membrane was found to extend downwards into the trachea. The difficulty, of course, was to know when to recommend the operation, and to call in the aid of the surgeon to the physician. He thought the time to do this was when they had evidence of continued obstruction, not the effect of a mere temporary spasm, to the entrance of air into the lungs, shown by the retraction of the soft parts of the chest-wall, of the infraclavicular spaces, and of the epigastrium. He thought the operation should be advised, even if there were no membranous obstruction of the larnyx, and if the obstruction were solely due to inflammable swelling or œdema, for they were now told that it was not a dangerous operation *per se*, and that, when carefully performed, accidents seldom followed its employment. If that were so, surely they were not entitled to let the patient suffer the distressing accompaniments of the condition. He had notes of a case in which this course had been taken, where there was no exudation on the fauces, and where they could not make out whether or not there was any in the larynx. Recovery followed in ten days. It might be, that cases of common membranous laryngitis might be operated on.

Mr. JOHN GLAISTER (Glasgow) said it seemed to him that the subject directly in hand had been lost sight of in the discussion. The speakers had got into the general treatment of croup; and another thing that had confused him was, that this discussion was limited to croup, and he did not understand that every one there had a distinct idea as to the identity of croup and diphtheria. On the question as to the necessity for operation, he pointed out that one particular difficulty experienced in private practice was to overcome the objection of the patient's friends. It was, he thought, the surgeon's duty to urge the operation before alarming symptoms had come on: before symptoms of carbonic acid poisoning of the blood and of difficult breathing had presented themselves. Experience, however, showed that, when performed on children under two years old, the operation was almost always unsuccessful; and, that being so, it was a question whether or not children under that age should be operated on for croup and diphtheria at all. Above that age, the chances of success were very much greater. As to the operation itself, he had experienced no difficulty further than the introduction of the tracheotomy-tube into the wound. With regard to the after-treatment, certainly steam should be employed. Chloroform should be used in the operation, unless the child had gone too far in the disease.

Dr. SQUIRE (London) wished to point out, with reference to the question of age, that the operation had been performed on a child of nine or ten months, and that the child lived after it.

Mr. PARKER (London) said that a German physician had successfully operated on his own child of eight weeks.

Dr. CORLEY (Dublin) said that two tones had been maintained in the discussion. The one was a tone justifying any operation at all, and that he had taken in deference to the professional feeling with regard to it in Ireland. The other tone was one taking that as beyond question, and dealing only with the particular conditions which called for the operation. He was glad that the discussion had taken place, as he was sure that any of his countrymen there would see at once that the feeling was that the operation should be performed. In answer to Mr. Glaister's difficulty, he wished to say that, for the purposes of that discussion, they took croup to mean false membrane in the laryngeal passage, whether they considered it to be a constitutional or a local disease, and that tracheotomy had only a local bearing on it. He thought the danger in operating too early was that the child might otherwise recover, and that thus the operation would be superfluous. Cases had occurred in which he had recommended the operation, and the parents had refused to allow it, and in which the child recovered. It was but fair to make that confession. He could not agree with the gentleman who said that there was no danger in the operation itself. On the contrary, it was a serious operation, and might be fatal in itself.

Certain Varieties of Cardiac Neurosis. By THOMAS HAYDEN, F.K.Q.C.P. (Dublin).—After enumerating the various causes of neural derangement of the heart, and insisting upon the necessity for accurate diagnosis, Dr. Hayden directed special attention to the affection as produced by "hard study and anxiety", "worry of business and loss of sleep", "mental shock", "sexual abuse", "excessive use of strong tea", "abuse of tobacco", "habitual use of opium", "hypochondriasis", and by two or more of these causes combined. Notes of twenty-eight cases were furnished, and the symptoms and signs of special significance by which simple neurosis is characterised and by which it may be distinguished from organic disease of the heart were described in detail. The complications which may be presented in connection with simple neurosis of the heart, by anæmia, hysteria, dyspepsia, and gout, were mentioned, and the organic changes in the heart itself which may result from long-continued neurotic excitement—viz., hypertrophy and dilatation of the left ventricle, with their pathognomonic signs, reduplication of the sounds and systolic bellows-murmur of adynamic origin—were described. Finally, the differential diagnosis from organic disease of the heart was fully discussed, and a brief outline of the most suitable treatment was given.

The following papers, for which there was not time, were taken as read.

The Modern Theory of the Action of Digitalis. By E. T. TIBBITS, M.D. (Bradford).—Referring at the outset to the old theory of the action of digitalis, the author believed that to be, with slight modifications, the correct interpretation of its action at the present time. He did not believe in its action as a cardiac stimulant; and, although it produced diuresis, he did not think it was due to increased arterial tension. The experiments made upon animals he regarded as misleading and unsatisfactory, the doses given and the effects observed being very different in different cases. Supposing the abovementioned experiments to be satisfactory, it did not follow that digitalis would have the same action on the human body. Amongst the various papers on its action as observed at the bedside, many passages, even by the same writers, appeared to be in direct opposition to one another. Hence the author believed that digitalis was strictly a cardiac sedative and a general depressant, and that it did not, as a rule, increase arterial tension. Apart from the experiments and clinical observations previously alluded to, he arrived at the following results. 1. Small doses, *e.g.*, one to two drachms of infusion three times daily, are quite sufficient to produce nausea and even vomiting. 2. One-sixtieth of a grain of digitaline dropped into the eye produces dilatation of the pupil. 3. Its action in many ways is identical with that of tobacco, aconite, lobelia, etc. 4. No example is recorded of its ever having produced a hard powerful pulse and general vascular excitement. 5. Its diuretic action is probably due to dilatation and not to contraction of the small vessels. The present modern theory the author believed to be dangerous. The sphygmographic observations made with regard to arterial tension he considered open to many fallacies. As one result of these observations, digitalis had been recommended in fatty degeneration of the heart, which the author regarded as injudicious as the administration of opium to a patient suffering from uræmic drowsiness.

Some Rare and Inexplicable Nervous Affections. By R. ELLIOT, M.D. (Carlisle).

On the Bismuth Test for Sugar in the Urine. By WALTER G. SMITH, M.D. (Dublin).—Dr. Walter Smith invited attention to a bismuth solution, which had been proposed by Julius Löwe, in 1871, as a qualitative test for sugar. (Fresenius, *Zeitschr. fiir Anal. Chem.*, Band x, 1871, page 452.) Löwe's formula is: Subnitrate of bismuth, 15 *grammes;* dissolve in glycerin, 30 *grammes;* and solution of sodium hydrate (specific gravity 1.34), 60 to 70 *centimètres;* and dilute with 150 to 160 cubic *centimètres* of water. Heat to 100° Cent. (212° Fahr.); let stand, and decant. The test is employed by adding a little of it to the urine, and then boiling. If sugar be present, reduction occurs, and a black precipitate is formed after a few seconds. But no positive conclusion as to the presence of sugar should be drawn from the production of a grey or light-coloured precipitate. It is advisable, before adding the bismuth solution, to filter the urine (in order to get rid of mucus, lithates, etc.), and to remove albumen. The special advantage of Löwe's solution is its stability. The solution with which the experiments were made remained, after nearly two years, clear and bright and ready for use. It had been kept in a white glass bottle, and freely exposed to diffused daylight.

A Case of Embolism into the Right Axillary, Left Brachial, and Right Middle Cerebral Arteries: Recovery. By W. VAWDREY LUSH, M.D. (Weymouth).—A gentleman aged 46, convalescent from inflammation of the saphena veins of both legs, was being carried to his bed, when he felt slight vertigo and cardiac palpitation, and thought he had lost the use of his arms. When seen, he was found to have no pulse in either wrist, none in either brachial, nor in the right axillary artery, though pulsation was felt on the left armpit, just below the right clavicle, and in both carotids. There was no loss of consciousness, no dyspnœa, no loss of motor power. Fourteen hours afterwards, a slight convulsive movement of the face was noticed; the voice became altered; a comatose state at once ensued, followed by left hemiplegia. In two days, pulsation returned in the left radial artery, and, in six days, in the right. The patient gradually recovered the use of the leg, and to a less extent that of the arm. He is now (five years after the attack) living, able to walk, and attend to duties. The supposed cause was a gouty state of, or increase of fibrin in, the blood, causing a clot on the left side of the heart, which was carried into the aorta, and there dividing, passed into the right and left subclavians. The symptoms were contrasted with those of a lady, who, being in an anæmic state from menorrhagia, suffered from phlegmasia dolens, and sustained three several attacks of embolism of the pulmonary artery, causing intense dyspnœa, rapid pulse, and lividity; death appearing imminent, but not taking place. Encouragement was afforded by the recovery from cases of such gravity.

The Effects of Koumiss on the Urine in Health and in Disease. By V. JAGIELSKI, M.D. (London).—The author first gave a description of koumiss, its character and composition; its constantly changing nature, with the different varieties thus created; and their several denominations, according to consistency and age. He then enumerated the various solid constituents of koumiss—as casein, fat, albumen, lacto-protein—and considered separately the products of fermentation, as—first, carbonic acid; secondly, lactic acid; and thirdly, alcohol; and commented upon the physiological effects of each, particularly upon the brain, heart, and kidneys; showing the changes which occur in the urine of a healthy subject during a course of koumiss, in regard to quantity, colour, and specific gravity, whereby a tolerably close estimate may be made of the percentage of solids and normal constituents contained in the secretions of a healthy kidney—when the conditions of pressure under which they are developed are at the same time adequately considered. The author stated that with those who drink koumiss freely, the diuresis is augmented (on an average 1800 c.c. of urine voided in twenty-four hours; in some cases, about 1500 only), the desire to micturate becomes more frequent, and there exists a certain sensation of weight and pressure in the region of the bladder; but these symptoms disappear after a lapse of two or three days, leaving the urine clear and its reaction sour. The density or specific gravity of the urine increases, too, on the average to from 1019 to 1022 c.c., notwithstanding the increase in quantity voided. The urates, phosphates, and sulphates show an increase under koumiss; whilst the proportion of uric acid to urea diminishes. Dr. Biele estimated the elimination of uric acid, in a case where koumiss was beneficially taken for fifty days, as proportionate to each ten *kilogrammes* of bodily weight; and, according to Palubienski, about fifty-seven *grammes* of solids were obtained from the urine of one patient within twenty-four hours. The chloride of sodium varied greatly, individual idiosyncrasies determining the individual urinary capacity. The diseases in which koumiss is generally useful, and in which the urine is found to be of low specific gravity, are not necessarily those of the kidneys, but may also arise from the condition of the blood and the state of general nutrition, or of the nervous system. Dr. Jagielski classified—1. Diseases with increased secretion of urine of *low* specific gravity; 2. Diseases with increased secretion of urine of *high* specific gravity; 3. Normal secretion and sediment in urine; 4. Diminished secretion; 5. Complete suppression of urine. The *quality* of the blood influences the *quantity* of the urine secreted; but it is advisable to ascertain the individual standard in each case before treatment by koumiss, so that subsequent changes may be clearly evidenced. In cases of anæmia, where the specific gravity of the urine was 1008 to 1012 before taking koumiss, it rose after fourteen days to 1018-1019. In chlorosis, all the symptoms improve with the appearance of a higher specific gravity, consequent upon three or four weeks' use of koumiss; the amount of urine and its colour becoming normal. The low specific gravity of chronic albuminuria advances under koumiss from 1010 or 1012 to 1018-1020. Dr. Jagielski believed the nervous influence to perform an important part, especially in cases of great weakness, in which fear or alarm may stimulate the flow of urine. This nervousness, however, with its effect upon the urine, is readily amenable to the action of koumiss, and disappears with the increase of the bodily weight. As the solid constituents of the urine march *pari passu* with the gain of flesh, their specific gravity becomes of the highest diagnostic importance. Dr. Jagielski illustrated these views by several cases in his own practice, and by others published in the medical journals. The low specific gravity indicates relative decrease of the normal solid constituents, especially urea, uric acid, and extractive matters. The amount of albumen may vary considerably at first; but, with the exclusive use of koumiss for a day or two, both the volume of the urine and its solids augment with the increase of bodily weight as the albumen disappears. In œdema and anasarca, koumiss often assists in diminishing or removing dropsical accumulations, increases the heart's action, and promotes the general return of strength. Amongst the diseases with increase of urine and of its specific gravity, Dr. Jagielski mentioned several cases of diabetes mellitus in which both quantity and specific gravity diminished, whilst bodily weight increased and strength returned—notably, in those instances in which gastric derangements prevailed to the extent of vomiting any other food. In diseases of the kidneys, such as hyperæmia, hæmaturia, acute nephritis, etc., the use of koumiss had, even in very desperate cases, been effectual in saving life; in all of these, the secretion was either considerably diminished or for hours altogether suppressed, headache and stupor were manifested, and the urine loaded with blood and albumen to complete coagulation on boiling in a test-tube. Where milk and all other food was rejected by the stomach, koumiss was retained, and from the first afforded hopes of recovery which could not previously be entertained. In smallpox and scarlet and typhoid fevers, where similar conditions exist, equally beneficial results had been obtained. The great diuretic power of koumiss, together with its easy digestibility and nourishing properties, render it

available and useful even in those cases which otherwise may fairly be pronounced hopeless.

Chlorate of Potass in the Hæmorrhagic Diathesis. By A. HARKIN, M.D. (Belfast).—Chlorate of potass, which is prescribed by the profession for a variety of diseases—such as scarlatina, throat-affections, low fevers, blood-poisoning, etc.—has qualities deserving a much wider application; and will yet, in the opinion of the writer, founded on extensive experience, be recognised as a potent remedy in the treatment of maladies depending on suboxidation, on defective nutrition, secretion, excretion, aeration, and molecular metamorphosis. Being mainly composed of oxygen and potassium, each of which is essential to the genesis of healthy blood, its chemical properties commend it to our consideration. In the hæmorrhagic diathesis, which is characterised by a diminished proportion of fibrin, a soft clot, an absence of the buffy coat, accompanied with a delicacy of structure in the capillaries and minute vessels, a remedy is required that shall increase the fibrin, add to the plasticity and chemico-vital elements of the blood and restore its coagulating power, as well as the contractile action of the capillaries; and thus destroy the dyscrasies, in which a slight wound may lead to excessive hæmorrhage, a trifling contusion to extensive extravasation. That this salt, whether given alone or in combination with iron, possesses the very desirable property of controlling the various developments of the hæmorrhagic diathesis, and that its persevering administration will neutralise the constitutional taint on which these ailments depend, Dr. Harkin hoped to establish by the relation of satisfactory cases, selected from an experience of its value extending over more than twenty years' observation. He generally ordered the medicine in the form one ounce of a saturated solution three times daily — one ounce of the salt to a pint of water; and, if iron be required, an addition of one drachm of the muriatic tincture to the solution completes the mixture. Administered in this proportion, Dr. Harkin had had the greatest satisfaction in the treatment of epistaxis; in hæmophilia; in hæmorrhage from the bowels, from the kidneys, from the lungs, from the stomach; in menorrhagia; in scurvy; and in purpura hæmorrhagica.

Simple Dilatation of the Stomach and its Treatment. By T. CLIFFORD ALLBUTT, M.D., and E. H. JACOB, M.B. (Leeds).—Dr. Clifford Allbutt urged that simple dilatation of the stomach apart from pyloric obstruction is not rare, and yet is not generally recognised by the profession in England. His attention was drawn first to the subject by Kussmaul, in a paper published in 1869, and since that time he had had frequent opportunities of verifying the truth of Kussmaul's statements. Niemeyer, Leube, and others had published similar statements at subsequent dates. Among its chief causes, he referred to gluttonous eating, or the use of much slop or of aerated drinks acting upon the healthy stomach, and to the effects of ordinary ingesta upon the stomach weakened by anæmia or such debilitating diseases as phthisis, acute rheumatism, and the like. Deficiency of peptic secretion in the stomach, if neglected, may lead to the same result. Cases of ulcer or catarrh of the stomach do not readily lead to dilatation, owing to the intolerance of accumulating contents and to the early and frequent vomiting thus induced. The symptoms and physical signs of dilatation of the stomach were detailed somewhat fully. The absence of pyloric obstruction in many cases must be taken upon an inference drawn from all the circumstances, an inference not always a very certain one. Prognosis depends greatly upon such an inference, but treatment is not much affected by it. Treatment by regimen and certain drugs was touched upon; but the author said that, as in dilatation of the bladder, the direct method was to be found in systematic catheterism. This method he had found difficult in private practice, but more easy in the hospital, and in this part of his subject he was greatly indebted to Dr. Jacob's aid. Dr. Jacob had treated several cases for him and his colleagues by means of the stomach-syphon, and these cases were reported and commented upon by Dr. Jacob. The instrument used, and the mode of its application, were described.

Chorea, a Functional Disorder. By OCTAVIUS STURGES, M.D. (London).—The paper was designed to show, from an examination of the ordinary phenomena of chorea, that the affection in its simple and uncomplicated form is not due to any lesion which is demonstrable anatomically; and that its symptoms are not otherwise to be explained than by reference to the general character of disturbed muscular movement, when the source of such disturbance is, directly or indirectly, a mental impression. This position it was sought to maintain by reference to (1) the age and sex of the patients; (2) the actual character and common associations of the affection; and (3) the modifications it undergoes at the various periods of life. The period of greatest motor activity is also the period when chorea is most frequent; the affection occurs to girls much more often than to boys; and as a general disturbance in young children, but as a local disturbance in those that are older. The limbs which chorea chiefly affects are the same which are chiefly concerned in intellectual uses, and which are on that account the most likely to suffer disturbance under mental excitement or over-strain. The frequent concern of the hands in the chorea of school-children, and the almost invariable participation of the face in the elder and self-conscious patients, were quoted among the facts admitting no other explanation. A similar transmutation of mental into motor disorder is to be met with, for example, in the hysteric fit, from emotion being exchanged at the height of the fit for pure spasm; also in children, who, in the most active bodily exercise, are the nearest to emotion, and whose emotion is readily dispelled by bodily movement. In chorea, there is in fact a most intimate alliance of mental and bodily disorder, and this alliance becomes more and more conspicuous as life goes on—the chorea of childhood gradually blending with emotion as womanhood is approached. Chorea, unlike the over-movement of emotion, does not disappear when its cause is removed. This was explained by considering that the purposive movements are as yet defective and half learnt, and in need of care and direct attention. A disturbance of the kind supposed throws the child back to its early and untrained condition, and especially as regards the higher movements. At the same time, the efforts of the child to maintain stillness, and the extra observation it receives, contribute still further to the choreic restlessness. The common course and progress of chorea at various ages were next discussed; its tediousness, but almost certain recovery, in childhood; its severity at the time of puberty; and the fact that, when seen in its then modified form, in adult life, it is commonly an incurable affection, were referred to as indicating the analogy between chorea and all other motor disorders of a functional kind; the child finding the cure for its over-movement in the gradual strengthening of a control which comes with its development; the growing girl, at the time of puberty, having her disorder for the while increased by the mental exaltation of the time; while the adult, in the rare event of his reaching maturity without finding alleviation, has no reserve of hope in the future, like the others, but keeps his disorder for life. An apparent exception to this rule was quoted as being, in fact, an illustration of it. The adults who recover from chorea are pregnant women, and these becoming liable to the affection, owing to the nervous instability of the gestation period, retain it only so long as this condition lasts. Other points were enumerated, exhibiting chorea in the light of a functional disorder: such as the occasionally contagious character of the affection; the connection between the particular cause of the chorea and the limb which is made choreic; the changeful character of the disorder, whenever the patient is openly observed, or bidden to increase or to control particular movements; the fact that the choreic body will sometimes, though rarely, suddenly right itself, and the affection all at once disappear; the frequent recurrence of chorea to the same child in the same form, with no permanent damage, no actual illness; the almost certainty of ultimate recovery; and, from first to last, not one of the symptoms which we are in the habit of calling cerebral. In conclusion, the common objections to the functional view of chorea were alluded to. The author denied the asserted intimacy of connection between chorea and rheumatism. He admitted, however, that a severe form of clonic spasm (originally described by Addison), at first resembling chorea, but accompanied by delirium and pyrexia, and often rapidly fatal, has its direct origin in acute rheumatism. The connection is here (presumably in some cases and demonstrably in others) by way of embolism. This affection, however, is extremely rare; it occurs to young persons rather than to little children, and only at the beginning does it resemble chorea. A further objection to the functional view is that founded upon the evidence of those comparatively rare cases where chorea occurs along with other affections plainly indicative of cerebral lesion. The *post mortem* appearances found in such cases are, however, not to be attributed to the chorea so much as to the whole group of clinical phenomena taken together. Chorea is most often seen by itself, and, so occurring, no anatomical lesion can be ascribed to it. At the same time, pathological accidents, such as embolism or thrombosis, may, in predisposed persons, cause the early appearance of choreic movement. The author alluded to other exceptional cases; those, for example, when chorea spreads from the arm to the corresponding leg; or where one-sided chorea becomes one-sided spasm or hemiplegia; or where a lingering chorea, gradually increasing in violence as the child's health fails, contrary to the rule, is at last fatal from exhaustion. Such cases, he believed, compel the admission that the purely functional disorders may, in rare instances, eventually give rise to a central change, by reason of which not only does the disorder spread to other muscles dependent on the same centre, but what was at first mere muscular restlessness (or chorea) becomes converted into a real and abiding convulsion. With the presumed structural change, the symptoms here come to resemble those which depend upon various "irritative lesions" of the brain. Speaking, lastly, of the association between fatal chorea and recent endocarditis, as offering another difficulty in the way of accepting the

purely functional theory, the author admitted that this concurrence is a well-established fact of pathology. It was argued, however, that the endocarditis (whose common mode of recurrence is described) is the consequence, and not the cause, of chorea; that heart-disturbance is often absent from first to last; and that the frequency of endocarditis in fatal cases does not represent its frequency upon the whole. Chorea must be accounted for independently of endocarditis, which latter, however occasioned, is not at any period of life one of its essential factors.

An Inquiry into Certain Points connected with Albuminuria. By ROBERT SAUNDBY, M.D. (Birmingham).—Recent observations on the frequency with which albuminuria is found in the urine of persons who otherwise present no symptoms of renal disease, and who are free from those general or local conditions with which its presence has been long recognised, make it necessary to reconsider the diagnostic value of this appearance as an indication of kidney-disease. The first question which naturally arises in connection with these observations is, whether there is not some fallacy—whether the substance is always the same identical serum-albumen. The author had endeavoured to answer this question in a paper already published in the *Birmingham Medical Review* (July 1879), in which he tried to show that, *à priori*, it was possible that paraglobulin might be present and give similar reactions to albumen, as paraglobulin diffuses very readily, is soluble in a solution of sodium-chloride such as urine, and coagulates at about 70° Cent. (158° Fahr.). In order to settle this point, he proceeded to precipitate the paraglobulin in all cases of albuminous urine, and then repeated the test for albumen. At first, he used sodium-chloride and carbon-dioxide as precipitants; but afterwards, on the advice of Professor Hoppe-Seyler, he used magnesium-sulphate. The result of forty-two observations were that, in one case of dyspepsia, the entire albuminous body was on one occasion removed by magnesium-sulphate; but a subsequent experiment with the urine of the same case did not have a similar result. In one other case, of phthisis, magnesium-sulphate altogether or almost removed the albuminous substance. The second subject discussed was, whether this albuminuria may be accounted for by differences in the diffusibility of certain kinds of albumen. The urine of twenty-one cases of albuminuria occurring under different clinical conditions was submitted to diffusion through vegetable parchment for forty-eight hours in each case. The result showed only slight differences, such as were accounted for by the varying acidity of the urines. The author next pointed out that the albuminuria of young persons is not always completely removed by rest in bed and milk-diet. The last part of the paper related to the doctrine of food-albuminuria. The author contended that the quality of the food does not produce a constant and uniform effect on the quantity of albumen excreted, as it would if Parkes and Pavy were right in thinking the increase after food to be due to the passage into the urine of a highly diffusible modification of the albumen of the food. Moreover, the albumen excreted after food does not diffuse more readily than that excreted before food, any occasional differences being explained by the increased acidity of the urine after food.

Syphilitic Albuminuria. By CHARLES R. DRYSDALE, M.D. (London).—Dr. Drysdale alleged that, after the brain and the liver, he was inclined to believe that the kidneys were perhaps most frequently of all the internal organs affected with syphilitic inflammation or neoplasms. M. Rayer and M. Ricord had, in 1840 and 1851, given distinct evidence that syphilis attacks the kidneys; and, although it was somewhat rare to find this admitted by professed writers on albuminuria, he (Dr. Drysdale) was convinced, from personal observation, that a large number of cases of that disease among adults were due to this often unsuspected cause. No matter what treatment had been made use of, he had found that, in certain cases of syphilis, a fatal termination occurred by the insidious commencement of nephritis, usually far on in the disease, but occasionally arising precociously, or within a year after infection. The latter was, however, very rare indeed. The morbid anatomy of syphilitic albuminuria may consist of diffuse inflammation of the cellular elements of the kidney, which, as in the case of syphilitic cirrhosis of the liver, spinal cord, etc., leads to the destruction of the secreting cells, and ultimately to fatty degeneration of the organ. In some cases, circumscribed gummy inflammation forms small tumours in the substance of the kidney. The disease usually commences silently, is accompanied by anasarca, and may end in death from asthenia or in coma. The diagnosis is made out by the history of the case, and is often quite clear; but even when the history is indistinct, assistance may be gained by noticing whether there are any scars on the liver after death. Dr. Drysdale gave the clinical history of an acute case of syphilitic nephritis occurring in a young man aged 28, with large rupial sores recently cicatrised, and with a short history of infection ten months before. He rapidly sank and died. He referred to several other cases which he had had to treat in adults, some more chronic in character, and others acute, mostly occurring in the tertiary epoch and associated with gummy tumours of the soft parts or with bone-disease. His experience was that the iodide of potassium sometimes, though rarely, was useful in such cases; and that the prognosis was usually very bad.

On Some Cases of Abnormally High Temperature. By HORATIO DONKIN, M.B. (London).—In this paper, attention was called to the probable occurrence of cases of high temperature of obscure origin, often unattended by dangerous or other remarkable symptoms, and ending in recovery. The cases quoted would seem to contradict the hitherto recognised belief of the dangerous and fatal nature of temperature rising to 107° and upwards; evidencing, as they did, the existence of temperature over 110° (often several degrees higher), with, in some instances, very slight constitutional disturbance and no discoverable organic disease. They appeared also to point to the fact that the high temperatures last but for a very short time; a second registration, taken immediately after the occurrence of a high temperature, showing a fall of several degrees. It was remarked that every precaution should be taken to exclude imposture before believing in the occurrence of these alleged facts; not only because they were in themselves unlikely, especially the rapid cooling which takes place in at least some cases; but because most of the cases were those of the females, generally hysterical. Cases had already been known, moreover, of imposture in this matter by manipulation of the thermometer. In some of the cases quoted, it was believed that sufficient proof existed of their genuineness; others, less completely observed, would serve to illustrate those which could be regarded as well established. Eight cases were quoted of patients, seven of whom were women, where the temperature had been frequently taken and found to be 108° and over; in some cases as high as 111°, 115°, and 117°. The reader laid particular stress on Case No. 1, as having been carefully and jealously observed by himself and others, with the result of establishing the conviction that there were several temperatures over 108°, and some of 111°, which lasted but for a very short time, and were unaccompanied by any very remarkable symptoms. Though in most of the other cases there were no observations made expressly to test the duration of the high temperature, there seemed to be reason to believe that in most they were evanescent. Pain, moreover, it was remarked, appeared to be a very constant concomitant of high temperatures, and pointed possibly to some nervous origin. The object, however, of this paper was to bring a few collected and fairly observed cases of these abnormal phenomena before the profession, and so to induce further observation in the matter rather than prematurely to theorise on an insufficient number of facts, which appear to many to be open to question on the score of genuineness. The question was necessarily interesting to the clinical physician as affecting the diagnostic and prognostic value of temperature in certain cases; and of importance to the physiologist as bearing on the subject of the evolution and disengagement of heat. In some cases, it should be remarked, considerable sweating had been observed; in some, continued shortness and rapidity of breathing. In one case, viz., Case 1, reported by the reader, an examination of the urine passed at frequent intervals during twenty-four hours of fluctuating temperatures showed no relation between the quantity of urea and the height of temperature.

On the Genesis and Prevention of Tubercle and Tubercle-engendered Disease. By HENRY MAC CORMAC, M.D. (Belfast).—The laws of nature are certain and irreversible. It is undoubted that a ceaseless tissue-change ensues in man and animals; that old materials are given off and replaced by new; that nitrogenous waste is got rid of by the kidneys mainly, carbonaceous waste by the lungs mainly. A process of slow combustion takes place incessantly throughout the organism. The carbonaceous waste unites with the oxygen of the incoming breath, and is discharged ceaselessly, as carbonic acid, with the outgoing breath. So long as this process is performed efficiently and without interference, tubercular deposits are impossible. But when the same air, in whole or in part, is breathed again habitually, the effete carbon is not sufficiently oxidised, and of necessity accumulates in the organism. Tubercle, he submitted, is no other than the retained, because unoxidised, carbonaceous waste. Carbonaceous waste is never retained, tubercle never forms, unless when air already breathed proves more or less the unwholesome pabulum of respiratory life. These positions he assumed to have abundantly demonstrated in his treatises on consumption. If the members of the profession were but universally aware that air only once respired will not sustain combustion, they would not, he thought, gainsay his position that prerespired air will not sustain life; and that consumption and scrofula, when fatal, are but forms of slow death, coupled with the corollary that, by making people breathe day and night air not rebreathed, consumption and scrofula, with all their hateful train, might be interdicted and set aside for ever.

The Difficulties of Perignosis in Out-patient Hospital Practice, and the Means of Overcoming them. By T. CHURTON, M.D. (Leeds).

Dr. Churton said that the word "perignosis" meant knowing about the patient, his circumstances and surroundings, and especially the disordering influences to which he had been exposed both recently and during his former life. The importance of this knowledge in practice, and the difficulty of obtaining it, were alluded to. The mode of examination was described, and appended to the paper were printed forms used in the Leeds Dispensary.

A Hitherto Undescribed Laryngeal Affection. By PROSSER JAMES, M.D. (London). The condition described by Dr. James was a sudden hesitation or temporary arrest of the laryngeal movements in speaking. He proposed to call it "stammering of the vocal cords, or vocal stammering".

SUBSECTION OF DERMATOLOGY.

Wednesday, August 6th.

THE Chair was taken at 3 P.M. by MCCALL ANDERSON, M.D., Professor of Clinical Medicine in the University of Glasgow, who delivered an address, which was published at page 239 of the JOURNAL for August 16th.

Cellular Growths in the Skin which produce Ulceration. By GEORGE THIN, M.D. (London).—Under this head, the author reviewed some of the recent contributions to the literature of morbid growths in the skin. Passing over lupus, as a subject which had already been discussed in the Section, he called attention to the disease in children which had been first described by the late Dr. Tilbury Fox and Mr. Baker in the *Transactions of the Clinical Society*, and of which other instances had been observed by Dr. Barlow, Dr. Sangster, and latterly by Dr. Marrow in New York. The author showed microscopical preparations from the only case which had proved fatal. The morbid changes had been described by him in the *Transactions of the Clinical Society*, but were now again insisted on, as the tendency in the latest observers was to look on the disease as a kind of urticaria—the latest name given to it being *urticaria pigmentosa*. The author pointed out how inappropriate this name was, as it confounded a chronic, and, so far as we yet knew, apparently incurable granulation cell-growth with a transient serous exudation involving no structural change. In the case he examined, at the time of death, ulceration was only prevented by a thin covering of epidermis over some of the patches, the subjacent *pars papillaris corii* being destroyed by this growth, and in other cases scars had actually occurred. The author suggested whether those cases were not really instances of scrofuloderma. He next pointed out the differences between the cancerous epithelial growths in epithelioma and rodent ulcer, illustrating them by preparations. Although the grouping and mode of breaking down in the cell-masses, and the condition of the surrounding connective tissue afforded usually distinctive points, yet those features were not absolutely reliable. The essential difference was in the individual epithelial cell. In rodent ulcer, the cell was characterised by a small round nucleus, single-contoured, and without an apparent nucleolus after ordinary treatment by hardening and staining agents, the cell-protoplasm being soft, yielding, and not abundant, its contours being usually lost after hardening; in the cells of epithelioma, there was a large double-contoured nucleus with prominent nucleolus and a well-defined ring of cell-substance, with a tendency to horny change, the cells being unequal in size, and even in cases in which they were small, some of them being always larger than the cells of rodent ulcer. The distinction by the presence or absence of "cell-nests" was not in all cases so reliable, although its presence in characteristic development indicated epithelioma. It was possible in hardening and mounting microscopical preparations so to dissolve and obliterate by transparency the cells of the growth, that a diagnosis became very difficult.

Dr. Thin showed preparations from nine cases of rodent ulcer: four of which were prepared by himself, and five by Dr. Sangster, who entrusted them to him for demonstration.

Purpura Hæmorrhagica. By J. MAGEE FINNY, M.D. (Dublin).—Dr. Finny related three illustrative cases of purpura. The first was one of *peliosis rheumatica* in an elderly female, in which the cutaneous hæmorrhage was most profuse, though limited to the legs. It was complicated by effusion into the right knee-joint and periosteal thickening of the left tibia. Recovery took place in a fortnight. The second was a case of *purpura hæmorrhagica* in an old man. The purpura was limited to a dozen spots, but was accompanied by bleeding from the bowels. The patient recovered. The last case was one of *purpura hæmorrhagica* in a young adult, a medical student. He had swelling œdema of legs and hands. The purpura affected the legs and wrists in uniform large patches. There were also petechiæ over the thighs. He had frequent epistaxis. He recovered. Dr. Finny said that purpura was not due to diet, climate, or situation. The first cause was not in the blood nor in the vaso-motor system. The disease was a neurosis. There was no real difference, except in degree, between all varieties of purpura. The best treatment was at first ergot and belladonna, and afterwards bark and ammonia, or mineral acids.

Hydroa after Iodide of Potassium. By J. M. FINNY, M.D. (Dublin).—Dr. Finny described a case in which there was a vesiculo-pustular eruption with erythematous blush on the right half of the trunk, from the fourth rib to the ilium. There was also a similar eruption on the left side, but in small patches, one extending into the left groin and thigh. The face and back of the hands were not affected. The vesicles varied in size from a small shot to a large pea. The eruption was extremely like small-pox and herpes in appearance, but rapidly disappeared on cessation of iodide of potassium. The iodide had been taken in gradually increasing doses for some weeks before the rash appeared. The vesicles dried up and desquamated in six days, leaving no stain or cicatrix. Dr. Finny referred this strange eruption to the class hydroa, and the cause to iodide of potassium. In confirmation of this view, reference was made to Mr. Jonathan Hutchinson's report in the BRITISH MEDICAL JOURNAL for 1870, and to his report in the *Transactions of the Clinical Society of London*, vol. viii.

On so-called Hydroa. By ALFRED SANGSTER, M.B. (London).—After alluding to the causes of the confusion still attaching to the term hydroa, the author quoted a short extract from Bazin's *Leçons sur les Affections Cutanées*, describing the disease *hydroa vesiculeux*. A drawing copied from a model in the Museum of the College of Surgeons of England, representing the disease known at the St. Louis Hospital as hydroa, was shown. Afterwards, cases were referred to bearing some similarity to Bazin's hydroa, as far as the peculiar nature of the lesion present. A case reported by Dr. Marshall Hall in the *Edinburgh Medical Journal* for 1820 was quoted from; and a portrait of a similar case, placed at the author's disposal by Mr. Malcolm Morris, was shown; next, Willan's description of herpes iris was noticed, and a copy of the plate accompanying it shown. A case reported by Dr. Handfield Jones as one of hydroa was alluded to, with the latter gentleman's remarks on the development and course of the eruption present. The author reported two cases bearing upon the subject which had come under his own observation. A report of one of the cases was handed round. Finally, the report on hydroa in the BRITISH MEDICAL JOURNAL was referred to at some length. The conclusion drawn from the above collected cases, and from those reported in the BRITISH MEDICAL JOURNAL, was that the whole formed a series in which the chief symptom present was an erythematous eruption tending to vesicate. The latter preferred certain regions—first in order of frequency, the back of the hands and forearms. There was a tendency for the eruption to be symmetrical, although this was not constant. The character of the eruption varied according to certain unknown disturbing influences, either spreading slowly and centrifugally from primary centres and giving an appearance of discrete spots, or advancing rapidly, and causing the well-known gyrate and marginate pattern by confluence. The process appeared to vary in intensity periodically; and associated with this remittent tendency occurred vesication, either taking the form of a central vesicle or bulla, or that of a collection of closely set vesicles on the advancing erythematous margin. Although the extremes of the series differed vastly in appearance, the whole of the cases were almost clinically identical. It was contended that Bazin's hydroa had no real existence as a separate disease, any more than the similar, if not identical condition, herpes iris; that they were both accidental developments of erythema multiforma; and that the continued use, in the substantive form, of the term hydroa was not only misleading, but illogical.

Mr. MALCOLM MORRIS (London) objected to the application of the term hydroa to the forms of eruption produced by iodide of potassium, and considered that it was not necessary to give special names to fugitive manifestations of vesicular skin-disease. He agreed with Dr. Sangster that hydroa was only a form of vesicating erythema.

Dr. L. P. YANDELL (Louisville) would not confine the term hydroa to an eruption due to a special cause, but would retain it, and make it include a group of eruptions produced by a variety of causes.

Dr. WALTER SMITH (Dublin) agreed that it was difficult to understand what was usually called hydroa, and that it was undesirable to multiply special names in dermatology.

Dr. STOWERS (London) said that the eruption from iodide of potassium lasted as long as the medicine was taken. Bromide-eruption disappeared earlier, and was not affected by increase of the dose.

Dr. FINNY said he was unable to give up the term hydroa. Though rare—only twenty cases being on record—it was a distinct disease.

A Rare Nodose Condition of the Hair. By WALTER G. SMITH, M.D. (Dublin).—Dr. Smith exhibited and described specimens of a remarkable affection of the hair which had lately come under his notice. A healthy girl, aged 19, applied for advice concerning partial loss of hair, which began to fall out about four years ago without any apparent

cause. Previously to that time, she had always possessed a good head of hair, reaching down to her shoulders. The hair was uniformly thinned over the whole scalp, and the longest hairs measured about five inches. Upon close inspection, a singular appearance was noted. Nearly all the shorter hairs presented a regular succession of swellings along the shaft, one nodosity corresponding, on an average, to one *millimètre* of length of hair. The eyebrows were thin; but no beaded hairs could be detected either among them or in the eyelashes. The axillary hair was scanty, but normal; and on the pubes one hair was found with three of the characteristic fusiform swellings. The microscopical characters of the affected hairs were very remarkable, and were illustrated by drawings and specimens. There was scarcely a trace of scale-imbrication on the nodules; but it was tolerably well marked in the contracted portions. Brown pigment was deposited outside the axis in streaks, much more abundantly in the nodes; and thus each hair, viewed by the naked eye, presented the appearance of being checked alternately brown and white. There was no trace of cells in the axis of the nodules. No account of this curious condition had hitherto been published; but Dr. R. Liveing had a similar case under his charge some years, the details of which were given in the paper. Dr. Walter Smith took occasion to point out that these nodose hairs exhibited no evidence of any fungoid elements, and that they could not be confounded either with piedra or with the tricosyphilis of Wilson. From trichorexis nodosa, with which it might be supposed they had affinity, they differed in several particulars. 1. There was little tendency to partial fracture of the cuticle, or brush-like splitting of the cortex. 2. The nodose hairs occurred in multitudes on the scalp. 3. When a hair was broken, the fracture was usually clean, not fibrous, and occurred through a constriction, never through a node. 4. The nodes were opaque, and constituted the darkest parts of the hair. 5. The nodules were very numerous, and succeeded each other in regular order like beads on a necklace.

Dr. McCall Anderson (Glasgow) had examined the hairs, and found they were not parasitic. Though trichorexis nodosa was rare on the head, yet he was familiar with it in that situation. He thought that this condition was closely allied to trichorexis nodosa, though not exactly the same.

Dr. Finny (Dublin) asked if the nodose alterations were observed at the distal ends of the hair, in reference to the point whether the cause was interfollicular or not.

Mr. Malcolm Morris (London) said that trichorexis nodosa, in his experience, was very rare on the head; and suggested that the nodose appearance in the hairs might be due to atrophic change at periodic intervals; the swollen parts of the hair representing the normal diameter of the shaft, and the constrictions the atrophied portions.

Thursday, August 7th.

The Chair was taken by McCall Anderson, M.D.

Notes on the Treatment of Ringworm. By Wyndham Cottle, M.A., M.B.Oxon. (London).—Having noticed the ready curability of ringworm in infants, and when situated on parts not clothed by a vigorous hair-growth, Mr. Cottle was led to believe that the difficulty experienced in eradicating the disease depended on the *materies morbi* having found shelter in the deep hair-follicles, etc. He had observed that ringworm rarely survived suppuration in its site, as when a pustular rash supervened; the products of inflammation partially reacting and destroying the disease in its deep follicular seats. He endeavoured to imitate artificially this curative action of nature by applying substances inimical to fungoid growth, and also capable of exercising the requisite action on the skin. His earlier attempts were made with the sulphocarbolate of barium and zinc, and with some success. They were, however, often slow in causing suppuration, and sometimes failed to do so. More satisfactory results were obtained by painting the affected parts with croton-oil liniment, and subsequently applying, two or three times daily, an ointment of ten to forty grains of salicylic acid to an ounce of lard. Suppuration was readily produced, and the amount of irritative action could be regulated by the strength and vigour of the applications. Other drugs, as antimony chloride, salts of mercury, zinc, etc., can often be combined with the salicylic acid with benefit. The advantages of this method of treatment are: 1. It gives rise to no pain and but little inconvenience; 2. No permanent loss of hair results; 3. It is easy to carry out; 4. Many intractable cases rapidly mend when so dealt with; 5. The agents are not poisonous. Such active measures are not required in recent cases of ringworm in healthy individuals, and are unsuitable where scalp irritation exists. The requisite constitutional treatment should also be employed. The following points seem worthy of consideration in dealing with ringworm: 1. The risk of the extension of the disease should be avoided; 2. Suitable constitutional treatment should be adopted; 3. Almost any of the usual remedies suffice to end the recent disease in healthy individuals; 4. In chronic and obstinate cases, the use of croton-oil liniment, followed by the application of salicylic acid either alone or in combination (or of any other agents whose action is similar), offers a not unpromising means of eradicating the disease.

Mr. Malcolm Morris (London) distrusted the constitutional theory of ringworm, and placed his reliance on careful and persistent local treatment.

Dr. Thin (London) remarked that all the best means of curing ringworm acted on the common principle of exciting inflammation, and that constitutional causes operated by influencing the mode in which the caustic or other irritant acted.

Dr. Stowers (London) thought that Coster's paste was the best local application.

Mr. Filson (Portaferry) suggested that the fact of cases of ringworm being cured after cessation of all local treatment, might be due to the remote rather than to the immediate effects of the topical remedies.

Dr. L. P. Yandell (Louisville) considered that, under suitable circumstances, ringworm was easily curable. A popular remedy in America was burnt paper; another was the juice of the walnut.

Dr. McCall Anderson (Glasgow) was in the habit of employing caustic in obstinate cases. Local remedies were either stimulant or parasiticide; and the greatest care should be exercised in guarding against auto-infection. There was nothing specific in the action of any of the parasiticides, but every case did not bear the same treatment.

Note on the Neurotic Origin of Lichen Planus. By T. Colcott Fox, M.B. (London).—The author's object was to redirect attention to the neurotic origin of lichen planus, a disease which was now well known to dermatologists, but which had long baffled their observation as to its true causation. Having quoted authors to show that either not any cause at all was made out, or only nutritive and digestive disturbance, Dr. Colcott Fox referred especially to the definite statement by Dr. Tilbury Fox (*Skin-Diseases*, third edition, 1873), as to its neurotic causation, and also to the similar suggestion by Mr. Hutchinson (*Clinical Lectures*, 1879). The author first alluded to his own observation of nearly thirty cases, in confirmation of a history precedent to the rash of worry, anxiety, nervous depression, and disturbance of the sympathetic system. Secondly, he pointed out that the eruption is not of an inflammatory nature, as described, but is simply a chronic neuro-paralytic hyperæmia in localised areas, with its effects. Thirdly, he quoted two cases he had met with, in which there was a remarkable distribution of the eruption in a band on the inner aspect of the leg, from the thigh to the malleolus. And, fourthly, he took occasion to place on record a case of lichen planus, which passed into the lichen ruber of Hebra.

The Use of Arsenic in Skin-Diseases. By Robert Farquharson, M.D. (London).—About thirty years ago, the British Medical Association issued a series of queries to its members, with reference to the use of arsenic in skin-disease; and, considering the somewhat haphazard way in which the drug was then used, it was no doubt necessary to reassure the public mind, as was effectually done by the replies, that its use was at all events not attended with danger. We know now much more precisely in which cases to prescribe the remedy with good effect; and the question naturally arises: How do we explain the undoubted fact that, whilst arsenic frequently relieves and even cures certain forms of cutaneous disorders, at other times it appears to be inert or even to do harm? It has been supposed by some authorities that, following up the analogy of the vesicular and pustular eruptions, which form an occasional, though rare, part of its physiological action, it simply acts as a cutaneous irritant, by stimulating sluggish processes of repair; or, again, we may hold that it effects some alteration in the blood, through a general influence on cell-growth; or, thirdly, and most suggestively, we may seek for our clue in the regions of nervous pathology. We know that eczema and psoriasis and lichen, etc., often show their neurotic origin in heredity and symmetry, and itching and tingling; they not uncommonly appear in connection with mental shock and depression; and may alternate with, or accompany, such undoubtedly nervous disorders as chorea. Arsenic is generally held to be a nervine tonic, and, speaking generally, we find it to be an useful and reliable remedy in all the skin-affections of the dartrous class (Clifford Allbutt). In pemphigus, it acts almost as a true specific (Hutchinson). It is most valuable in lichen ruber, and has been recommended as an antidote to bromide acne; although the question might arise, whether the arsenic in any way lessens the restraining influence of the bromide over the epileptic fits. Over impetigo, strumous and syphilitic diseases, it has no influence; and it would be interesting to note its effect on herpes zoster, which has been reported as occasionally following its administration. Concerning the mode of administration, the author preferred to begin with

a full dose of ten minims to fifteen minims, and push boldly on, believing that, as with quinine and iodide of potassium, troublesome physiological symptoms are here more likely to follow small quantities than large. Some authorities strongly insist upon the necessity for producing some conjunctival and gastric irritation before we can obtain the full curative influence of the drug; but the author was opposed to this, believing these symptoms to be an unnecessary addition to the discomfort of the patient. When they do arise, they need not cause any alarm; but the sickness which sometimes follows each dose of the medicine is quite a fatal obstacle to its use. It is important to see that the natural elimination of the drug is not checked by any renal obstruction; and Dr. McCall Anderson warns us that patients, under the influence of arsenic, are specially susceptible to cold. May it not be, however, that the bronchial irritation occasionally observed may really be due to the curative influence of the remedy causing metastasis to the pulmonary mucous membrane? The liquor arsenicalis seems to be, on the whole, the best preparation; the liquor sodæ arsenitis being, in the author's experience, in no degree less irritating. Children will bear large doses with impunity; and although it is generally held that girls can take more than boys, the only case in early childhood in which it had been found seriously to disagree belonged to the female sex. Finally, it may be asked: Can we really *cure* chronic disease with arsenic? and the answer must be in the affirmative, if we get our case early, treat it systematically and carefully, continue the use of the drug for some time after the skin has become clear; and remember the importance of good food and air, and mental and bodily rest.

Erythema Nodosum. By CHARLES F. MOORE, M.D. (Dublin).—Dr. Moore began by giving a description of the condition and surroundings of the cases of the disease that he had seen. 1. A sailor lad, aged 16, on one of his first voyages to the Mediterranean, had lately left his home on the shores of a muddy estuary. 2. A married woman lived in a house permeated with the odour of sewage, which flooded the yard in a narrow street in Dublin (September 1868). She was nursing a strong child several months old. 3. A girl aged 12, living in a back room on the first floor in a poor locality, also suffered from pains in the ears and chest, with dyspnœa and palpitation. 4. A boy aged 8 suffered much from restlessness. 5. A girl aged 7 had also an old skin-disease of the scalp, discharging matter; she suffered from shivering, febrile symptoms, gastralgia, and foul tongue. 6. A boy aged 13, delicate, with a fair complexion, had also diarrhœa and much debility. This boy, who lived in a top back room, had pain "under the shoulders". The spots were recurrent. Dr. Moore, some time afterwards, heard that this lad died of disease of the kidneys, of which disease his father also died a little time subsequently to his son's death. 7. J. B., a girl aged 9, had white tongue, was "always over the fire", and suffered much from pain in the legs. 8. C. L., aged 23, lived on the ground-floor in a back street. He had the nodes on the legs and shins, and also had rheumatism. He was a weakly looking young man, and complained much of the offensive condition of the house in which he lived. 9. In M., a boy aged 8, the elevations were described as "purpuric looking". 10. L. F., aged 6, lived in a court that was a *cul-de-sac*, the sanitary condition of the place being very bad. The child was strumous, with tumid abdomen, muscles generally flabby and feeble. The weather (June) being hot, rendered the surroundings of this child doubly unwholesome. 11. E. B., aged 8, lived in an unhealthy locality. The nodes were on the anterior aspect of the legs chiefly; there were smaller tumours also on the arms and shoulders; none on the abdomen. In 1868 and 1869, when ten of the preceding eleven cases were seen, there was also a prevalence of herpes zoster. In 1873, also, erythema nodosum was rather common. 12. C. McC., aged 7, was born and reared in comfortable circumstances in the county of Cork, but had been lately living with her parents and their several other children in a small room in Dublin, within a few yards of the river Poddle, the locality being as a rule severely visited by epidemics when prevalent. She was seen by Dr. Moore in June this year for several patches of erythema nodosum upon the anterior surface of both legs. Her little brother of four years had enteric fever, and a little sister of two years had bronchitis. After a succession of nodes on the legs and knees, C. McC. had, on July 26th, pretty well regained her health. Early in July, she also had pain in one ear and a cough, and had been passing very little urine. Erythema nodosum, in the author's experience, occurred far more frequently in children than in adults, and as often in delicate boys as in girls. Debility from defective sanitation or bad food, from childhood from nursing, appeared to predispose to it, as did that state of the blood that disposes to rheumatism, erysipelas, and glandular affections. Exposure to cold also seemed to favour its occurrence. A decided febrile state mostly marked some part of its course; and possibly attendant on the same, or more probably as a sequel, renal troubles appeared to occur; at all events, not very rarely. So far as Dr. Moore's recorded observations went, the disorder did not show a necessary connection with the state of the uterine functions. Analysis of the renal secretion would appear an useful field of observation in this interesting disease, which, in Professor Hebra's experience, invariably ended in recovery.

Scarification as a Remedy in Skin-Disease. By MALCOLM A. MORRIS, F.R.C.S. (London).—After stating the advantages to be gained from surgical interference in certain skin-diseases, Mr. Morris described the mode of treating port-wine marks, as advocated in a pamphlet by Mr. Balmanno Squire, published in 1876. He then gave the notes of three cases treated by scarification during a long period, all of which were unsuccessful. In one case, the operation had been performed 130 times, but with no improvement; in fact, rather the reverse, in consequence of the formation of a keloid growth. Mr. Morris then went on to give the reasons, in his opinion, why the process was a failure; remarking that, as the minute scratches healed so rapidly by first intention, the continuity of the vessels was not destroyed, and so no alteration in colour could be produced. He then passed on to other diseases treated in a similar way, and gave three instances of acne rosacea, in which multiple linear scarification had produced marked benefit. He also thought it was of considerable use in certain stages of lupus erythematosus.

Dr. MCCALL ANDERSON was struck by the successes in Mr. Squire's paper, and, after a trial of his method, came to the same conclusion as Mr. Morris, viz., that the method was valueless in the treatment of port-wine mark.

LUPUS: ITS NATURE, VARIETIES, AND TREATMENT.

Lupus and its Treatment. By JONATHAN HUTCHINSON, F.R.C.S. (London).—In Mr. Hutchinson's unavoidable absence, Mr. Malcolm Morris read a paper by him, introducing the discussion. Mr. Hutchinson described lupus as a disease characterised by infective cell-growth, limited to the skin or mucous membrane, and only by accident involving deeper structures; in this respect differing from "malignant" disease. Its alliance with common inflammation was shown by similarity of exciting causes. It was wholly independent of syphilitic taint, though it might be closely simulated both by acquired and by inherited syphilis. There was, however, good reason for associating it with scrofula, to the state which produced diseases of the psoriasis type, and to the condition of feeble circulation which favoured the occurrence of chilblains. Mr. Hutchinson regarded lupus as not a specific nor even a well specialised disease. It did not always preserve identity of type, nor acknowledge identity of parentage. The diagnosis of the varieties of lupus from each other was usually easy; but sometimes it was impossible. The author discarded the old division of lupus into *exedens* and *non-exedens;* these terms simply distinguished the destructive lupus of the nose from the lupus of flat surfaces, although the process was the same. He then described the characters of *lupus erythematosus*, distinguished especially by its tendency to symmetrical development, and including as varieties *lupus sebaceous*, *lupus erythematosus hæmorrhagicus*, and a rare form closely resembling nævus. Of *lupus vulgaris*, the following varieties were described: single-patch lupus; many-patch lupus; ulcerating lupus; acne-lupus; eczema-lupus; and lupus marginatus. Lupus of the mucous membranes was also alluded to. In the treatment, the remedies indicated were tonics, good food, bracing air, cod-liver oil, and the judicious use of stimulants. Arsenic might also be usually given with much advantage. Iodides and mercury must be avoided. Local treatment, to destroy the new cell-growth, was also necessary. Mr. Hutchinson had had much experience of the use of caustics, the actual cautery, and Volkmann's erasion method; and he unhesitatingly preferred the last of these.

The Use of the Iodide of Starch in the Treatment of Lupus Erythematodes. By MCCALL ANDERSON, M.D. (Glasgow).—After remarking on the obstinate way in which this affection resists internal remedies, Dr. Anderson stated how he was first induced to try the administration of the iodide of starch, it having been employed with the most happy results by Dr. Colligan of Paisley in a case in which all the ordinary remedies failed to make any lasting impression; and Dr. Anderson now regarded it as a valuable addition to our means of combating this most obstinate disease. The following is the formula for its preparation. ℞ Iodi, gr. xxiv; amyli, ʒj. Triturate the iodine with a little water, gradually adding the starch and continuing the trituration till the compound assumes an uniform blue colour, so deep as to approach black. The iodide should be dried with a heat so gentle as to run no risk of driving off the iodine, and it ought to be kept in a well-stoppered bottle. On no account should spirit be used in its preparation instead of water. The dose is a heaped-up teaspoonful in a draught of water or water-gruel thrice daily; but it may be safely increased even up to an ounce in some cases. In using it, care must be taken, first, that

the cases are really undoubted cases of lupus erythematodes and not lupus vulgaris; and, second, that the medicine is freshly prepared, and in accordance with the directions abovementioned.

On the Treatment of Lupus by Linear Scarification. By BALMANNO SQUIRE, M.B. (London).—The treatment of lupus by pricking the skin at short distances with a pointed instrument was long since advocated by Dubini of Milan, and subsequently by Volkmann of Halle. The author has devised an improvement on this plan, namely, by cutting the skin into thin strips by means of a many-bladed instrument he has contrived, and which has been constructed by Messrs. Weiss of London. The Dubini-Volkmann method (known as multiple punctiform scarification) has been highly successful. The author's method (termed multiple linear scarification) has, he said, proved still more successful. It has been tested and commended in this country by Dr. Walter Smith of Dublin and Mr. Malcolm Morris of London; while in Paris, at the Hôpital St. Louis, Dr. Vidal and his assistants treat every Wednesday as many as from forty to fifty patients by the author's method. The advantages are the same as those which attend punctiform scarification, namely, the setting up of a traumatic inflammation under which the disease heals; but the superiority claimed for treatment by closely and regularly spaced incisions is a more rapid and at the same time a more complete cure of the disease than can be effected by means of irregularly distributed punctures. Dr. Vidal had observed, in sections of the skin thus healed, the gradual conversion of the lupus-cells into fibrous tissue. The advantages of treatment of the disease by the excitement of traumatic inflammation as compared with other means of treatment were described in detail as being less painful, as causing less loss of substance, and as leaving less permanent trace of its performance than the customary methods of local treatment, namely, the application of caustics or semi-caustics.

Lupus. By J. HERBERT STOWERS, M.D. (London).—Dr. Stowers read a paper upon lupus, in which he first spoke of the original misunderstandings produced by the confounding of the three affections now long since known to be separate and distinct, viz., lupus, cancer, and syphilis. After urging that the term "syphilitic lupus" should be entirely discarded, as likely to mislead, and pointing out the essential origin of true lupus to be a constitutional defect of strumous nature, while admitting local injury to be an occasional exciting cause, the writer proceeded with several observations upon the pathology of the affection bearing upon the investigations of Virchow, Friedländer, and others. Concerning the frequency with which this disease occurs in practice, after reviewing the statistics of Dr. White of Harvard University, published in the *Transactions* of the late Philadelphian Medical Congress, the author stated that his own experience in hospital practice during the last four years showed that 58 cases of lupus occurred in 2,296 general skin-patients, or about 2½ per cent. Of these (agreeing with the observations of Devergie and Mr. Jonathan Hutchinson that lupus is more common among females), thirty-six were females and twenty-two males; the ages of the patients commonly ranging from fifteen to thirty years. In a table giving full details of thirty-two cases of which full notes were taken, including the respective ages at which lupus first showed itself, Dr. Stowers stated that the face or neck was affected in each of thirteen females presenting simple or non-ulcerating lupus, and in three out of seven males; in each of the six females with ulcerating lupus, as well as the three males; and also that the face was the seat of the disease in the three females having lupus erythematosus. Besides the above, lupus was observed once on the forearm, three times on the hand (dorsum), twice on the dorsum of the foot, and once on the thigh and prepuce. After several observations upon the nature and pathology of lupus erythematosus, Dr. Stowers referred to the investigations of Dr. Thin published in the Royal Medical and Chirurgical Society's *Transactions*, in which the latter concluded that no changes antecedent to the capillary congestion are discoverable, and that the affections of the sebaceous and sweat glands should be considered rather the consequence than the cause of the congestion.

Dr. L. P. YANDELL (Louisville) was convinced that lupus in its various forms was a thoroughly scrofulous disease, and was curable by constitutional means alone.

Mr. MALCOLM MORRIS said that his experience led him to believe in the association of lupus with scrofula or tubercle. He laid stress on the necessity of constitutional treatment, at least in the first instance. As to local treatment, the method of linear scarification gave undoubtedly good results, and for severe cases the method of scraping was the best. For small isolated nodules, the best way was to forcibly bore out the morbid tissue with nitrite of silver.

Dr. WALTER SMITH preferred, as a rule, to begin at once with local treatment. He had tried both erasion and scarification. In some situations—*e. g.*, on the tip of the nose—erasion was not easily applicable, and scarification was preferable. He mentioned a case of lupus of the face of twenty-five years' standing, which had been under surgical treatment for a length of time, and in which erasion proved highly successful.

Dr. MCCALL ANDERSON believed in the scrofulous affinities of lupus, and was accustomed to prescribe internally cod-liver oil and phosphorus. Local treatment alone was not completely to be relied on, even if the local manifestations of the disease were stamped out.

A vote of thanks to the Chairman concluded the business of the subsection.

THE DINNER.

THE annual dinner of the members of the British Medical Association took place on Thursday evening, August 7th, in the Assembly Rooms, South Mall, Cork. Dr. D. C. O'CONNOR, President of the Association, occupied the chair; and there were over three hundred guests present, amongst whom were: Dr. Alfred Carpenter, President of the Council; Dr. Falconer, ex-President; Mr. Husband, Treasurer of the Association; Mr. Savory; Dr. Waters; the Mayor of Cork; the High-Sheriff of the City; Dr. Sullivan, President of the Queen's College; Dr. Sayre, President of the American Medical Association; Major-General Hamilton; Surgeon-General Crawfurd; Very Rev. Dean Madden; Mr. William Goulding, M.P.; Very Rev. Dean Neville; Dr. Mapother, President of the Royal College of Surgeons of Ireland; County-Inspector Barry; Professor Charcot, Paris; Professor Yandell, Louisville, U.S.; Dr. Noël Gueneau de Mussy, Paris; Dr. Hirschberg, Berlin; Professor Cordès, Geneva; Professor Ball, Paris; Dr. Gallard, Paris; Dr. Bonnafont, Paris; Dr. Weber-Liel, Berlin; Dr. Byford, Chicago, etc.

The cloth having been removed, the CHAIRMAN gave the toast of "The Queen", saying that it was a toast which required no preface. It was accepted with all honour.

The CHAIRMAN then proposed "The health of the Prince and Princess of Wales, and the rest of the Royal Family". In the toast which he had last proposed, it was unnecessary for him to make any comment, for the personal virtues of their beloved sovereign were not necessary to be related in order to make them accept the toast. The sentiment of loyalty was quite sufficient in that assembly. When he spoke of the virtues which the Royal Family possessed, he could not help thinking that those virtues reflected the training which they had obtained from our beloved Queen. [*Hear, hear.*] It was this example of virtue which had made the Royal Family of Great Britain one not surpassed by any royal family in Europe. In this age of anti-social and antireligious sentiments, it was well that Great Britain had such a Royal Family as at present occupied the throne. It was no small source of power and strength and confidence to the nation to have a Royal Family that ruled by love, and not by force, who gave freedom to freemen. A member of the Royal Family had lately honoured Cork with his presence, and Cork entertained him in an assembly as large as the present; and there was no guest that ever arrived amongst them who had been received with more honour. [*Applause.*]

The CHAIRMAN then gave the toast of "The Army and Navy". That was a toast more suggestive of action than of words. That morning, he had been at a temperance breakfast; but he should say that, before he became converted—[*laughter*]—he believed there was nothing that tended to make persons drunk more than long and bad speeches, and, therefore, he would simply give the toast of the "Army and Navy".

Major-General HAMILTON, in responding, said it was always a high honour and a great gratification to an old soldier like him to return thanks on the part of the army. It called to his mind that he was connected with what he might call a highly honourable profession. He was surrounded that evening by, and he had the honour to address, members of another great profession intimately and closely connected with that of the army, but with this difference—that, whereas the army was trained to kill, the medical profession was trained to cure. [*Laughter and applause.*] The medical profession would understand him if he made a slight momentary allusion to the subject of vivisection, which had been very much condemned. But, at all events, he would venture to express no opinion whatever on that point. He ventured to mention the word in order to say that the army had been a great subject of experiment during the past ten years; and he thought it spoke remarkably well for the vitality of the army that, though it was rather attenuated at the present moment, still it was pretty healthy. There was last year a heavy political cloud on the horizon, and upon that occasion the army was called to attention—and it responded. It was not called upon

to act on the particular occasion which he alluded; but since then it was called upon to act in the war of Afghanistan, which, he was happy to say, was brought to a successful and happy conclusion. He thought it would be admitted that the army had done its duty. [*Cheers.*] There had been another war, which, he hoped, was also to be brought to an almost successful conclusion—he meant the war in South Africa. The British Army there had been opposed to an enemy of a nature they had never met before—an enemy of enormous physical strength, with tactics of their own, and with a courage unsurpassed by any European troops. That war, he hoped, was near its termination; and there the army had done its duty. [*Hear.*] There had been a talk of the manner in which our men dealt with the enemy; and it appeared as if some people thought that when the British lion was sent abroad to roar in a savage country, he should "roar as gently as a sucking dove". [*Applause.*] He thanked them for the manner in which they had received the toast of the army, who knew that their countrymen thought of them in difficulty and danger.

Surgeon-General CRAWFORD also returned thanks, and referred again in graceful terms to the gold medal which he had received that morning from the Association for Surgeon-major Reynolds. He also narrated the circumstances of Surgeon-Major Shepherd descending from his horse in the face of a savage enemy, in order to attend upon a wounded drummer-boy, losing his own life in the act. Such acts, he said, must enhance the pride of the profession in their brethren serving in the army.

Mr. HUSBAND (York) proposed, amid cheers, the toast of the "Houses of Parliament". He said he rose to propose a toast on the part of the Parliament of the profession to which they belonged, and he held that they did represent the interests of the great body of the profession. Indeed in some respects they were better able to manage their affairs than the Parliament of the nation, although, like the Senate of ancient Rome, it exercised power over the most distant nations of the earth by force of arms and its prestige. The British Medical Association in its parliament had only a message of peace to give to all; it recognised no party politics and had no sectarian differences. It was engaged in a war, indeed, against all evils which lowered the public health, and threatened to shorten human life. He thought the people were beginning to see the object of the medical suggestions which were being made, and that the time was not far distant when, by the advice of the British Medical Association to the British Parliament, the diseases which had ravaged this country, and which now sent thousands to a premature grave, and doomed others to a painful existence, would be greatly lessened. Honours were given to the army and navy for bravery when the efforts exercised tended to destroy life; but it was worthy of remark that the surgeon and physician daily laboured in the face of deadly dangers—dangers of which the workers were fully cognisant, but did not shrink from. He trusted that the Parliament of the nation would grant to the profession the power of self-government which it ought to possess. [*Cheers.*]

Mr. WILLIAM GOULDING, M.P. for Cork city, in responding, said he felt very greatly honoured at being asked to return thanks for the House of Commons. He heard what Mr. Husband had said as to the work the Association had done in a sanitary point of view. He (Mr. Goulding) could say there was no doubt that the House of Commons had taken every notice they possibly could of the subject, and had gone very far in the right direction; but allowance should be made for them that they had had a great deal to contend with for the last three years. They had, first of all, bad harvests and bad trade, and besides that bad trade, wars within and wars without. He was glad to say that the wars without had been brought to an end, and not only to an end, but a glorious and an honourable end. He trusted that the wars within had nearly come to an end also. After a little time, he hoped the House of Commons would be able to devote more time to internal social matters, when improvements should all follow in the train, and he hoped that, when the British Medical Association met next year, they would see the cloud dissipated, trade revived, and the country prosperous again. [*Loud applause.*] He had great pleasure in returning thanks for the manner in which the toast had been received.

Mr. R. C. HALL (City High Sheriff) then proposed, amid applause, the toast of "The British Medical Association". Mr. Hall said this was the second time the British Medical Association had met on Irish soil—the second time on which they had honoured the Irish people with a visit. He would remind them that, on their first visit to Ireland, the number of the Association was only 3,000, while now, on their second visit to the Emerald Isle, he found that the number of members on the list was nearly 8,000. In modern times, the noble profession of medicine had been recognised as one calling for the profoundest and deepest attention of the intellect of men, dealing, as it did, with subjects of such tremendous importance for the welfare of the human race; and when they saw such associations as the British Medical Association, with thousands of educated men, many of them the most eminent of the present day, banded together that they might, in the various fields of research in the field of natural science, bring to bear the knowledge they acquired on one great subject, the science of human life—when they saw those men devoting their lives to this; when they saw them coming together on an occasion such as that which had occurred this week, they could not but believe that these converging rays of light from so many fields laid on the altar of science should indeed be beneficial and infinitely valuable for society at large. [*Applause.*] This profession presented a great contrast to other labours of men. The inventor of an infernal machine for the destruction of human life had it patented, and he was rewarded for it by some Government or other; but, in the case of the medical profession, the discovery of a cure for afflicting human disease, the discovery of some means of relieving human suffering, when made, was conveyed by a medical man to the world freely; it was brought before his professional brethren in public meeting assembled; every virtue of his discovery was thrown open to everyone, and he was contented with the reward, that he had benefited his fellow men. [*Great applause.*] Elevating as the people of Cork must feel the meetings of the British Medical Association held amongst them to be, he thought the profession was also elevated by such a gathering, for it brought high intellects together to consider those medical subjects again and again, and learn more and more of them by communication of ideas. He could only say that the people of Cork applied to the British Medical Association the three words *cead mille failthe*, words familiar to all Irishmen; but as there were some foreign gentlemen who would not understand the words, he had better translate them, and tell those gentlemen that the words meant "a hundred thousand welcomes". He hoped that, when the visitors returned to their homes, they would not carry away an unfavourable impression of the city of Cork, or of Ireland. The citizens of Cork might have shown the visitors their charities, their refuges, and their hospitals, and they might have seen about Cork some traces of native genius; therefore, when the visitors returned to their homes, they would not think that the people of Cork had brought disgrace on this part of Ireland, which was the School of Western Europe and the seat of learning one thousand years ago, when there were students attending it from England and from all parts of Europe. They hoped such visits as those of the Association would stimulate a wish for knowledge amongst them. He could not sit down without saying that he thought the people of Cork owed this visit of the Association to the high character of the local physicians. He could not, as a citizen of Cork, but express the pride and the high feeling he had to see in the President's chair to-night a gentleman so esteemed and honoured by all classes and creeds in the city for his kindliness and for the high and honourable eminence he had attained. [*Great applause.*] He had great pleasure in proposing the health of the British Medical Association. The toast was drunk with enthusiasm.

Dr. CARPENTER, in responding to the toast, which, he said, had been so eloquently and feelingly proposed by the High Sheriff of Cork, begged leave to express his heartfelt thanks for the kind way in which the High Sheriff had spoken of the profession. He (Dr. Carpenter), as representative of that great body which was now amongst them, felt that, in having the honour to reply, a great weight had been placed upon his shoulders, which, however, he would do his best to bear. There had been times, and there still were times, when, with all his proud feeling for the profession, he had been forced to ask himself the question—Is it the profession I thought it was? Is it the noble profession I was told it was in my early days? And he was told it was, because he was nurtured and brought up in the profession. He was led to put those questions by hearing evidence given not long ago before a Select Committee of the House of Commons, by members of his own profession, to the effect that the members of the medical profession of this country were not capable of exercising the franchise for the purpose of electing representatives. He had actually heard it stated by respected members of the profession that the members of the profession were not fitted to exercise the franchise in regard to the election of the medical Parliament—the General Medical Council. Their Treasurer had called the Association the medical Parliament; and so it was. The Council over which he (Dr. Carpenter) had the honour to preside assembled three or four times a year in London or Birmingham, and they came from all parts of the kingdom to perform their work without fee or reward, and to do it in the way that was right. There was no reward attached to their office; and yet they were told before the Select Committee of the House of Commons that they were not fit to be trusted to exercise the franchise for the purpose of electing members of the General Medical Council. Who had attended to the general education of the practitioner? Had the colleges? No; they ignored the question, and it was left to a trading community—the Apothecaries' Company—to undertake it. Again, whom had the

country to thank for all the improvement and advancement in sanitary science effected during the past thirty years? Was it the Colleges in London—the College of Physicians or of Surgeons? No; it was the British Medical Association, who still carried on this work [*applause*]—it was the Council over which he had the honour to preside, that studied the great impediments in the way of the good health of the community, and laid before the public the means to be adopted for the removal of many diseases which afflicted different parts of the country [*cheers*]. In consequence of the action of the British Medical Association, life had been prolonged in this country, because it was through the operation of the Society that measures had been passed through Parliament—the recent Sanitary Acts—which, though defective in some respects, were still extremely useful, and a step in the direction in which Parliament would go further. He thought there was an inclination on the part of the Government to only look to the cure of disease rather than to the prevention of disease, as was seen by the fact that those to whom the offices of medical officer of health were given were often uneducated so far as prevention of disease was concerned [*cheers*]. The British Medical Association looked to the one as well as the other, and in that way it had nobly done its duty to the country and to the profession [*applause*]. In conclusion, he thanked the High Sheriff for the kind manner in which he had proposed the toast, the meeting for the way in which they had received it; and he could assure all present that this visit to Cork of the British Medical Association would be long remembered by all taking part in it [*applause*].

The PRESIDENT next proposed the health of the President and authorities of the Queen's College, Cork. In proposing the toast, he said that he never saw so many happy faces as he had seen during the past three or four days. It was a source of great happiness to them all in Cork that the Association had visited the city; but they could not at all have done without the services of one gentleman—the President of the Queen's College. Nobody else could or would have taken the pains that Dr. Sullivan did. He was architect, builder, and everything else in the preparations for the visit; and nothing was wanting on his part in doing all that was necessary for the proper reception of the British Medical Association. [*Applause.*]

Dr. W. K. SULLIVAN (President of the Queen's College), on rising to respond, was received with loud applause. He said that he was almost vain from the manner in which the toast had been proposed. In fact, the toast should not have been proposed at all; for the authorities of Queen's College were but discharging a simple duty in receiving the Association within their walls. The College was established for the promotion of learning, and it was the duty of the authorities to receive those who were the investigators of the highest science, that of life, and those who applied the results of that science for the purpose of curing human disease and lessening human suffering. [*Cheers.*] It was clearly the duty of the College to receive them, and he did not see any reason for the toast being proposed. Indeed, if thanks were to come to them from any one, it should be from the Mayor and the High Sheriff, the representatives of the city; because, without the College, there would have been no possibility of receiving the Association, or of having a meeting such as that; and it was something to have a meeting like that in the extremity of the land, where they were (to use the words of a distinguished statesman) so close to the "melancholy ocean", and where things were moving rather slowly. Indeed, they were debtors to the British Medical Association for having come amongst them. Unfortunately, the Queen's College was in a peculiar state at present—a great disturbing element was about to be introduced into their system, and they were about to be shot out into space. He hoped, however, that one of these days they would find, on visiting the College, that there was some internal energy in it, and that, when they were sent on their new orbit, they might have power to shine by their own inherent light. He thanked them for the manner in which the toast had been received, and he should say he should be more than happy if he knew the Association would soon come again amongst them.

Dr. FALCONER (Bath) then proposed the health of the President. Before they came to Cork, they had heard a great deal of the virtues of the President, and he was sure it would be said by those who had sojourned in Cork that those promises had been more than realised. [*Cheers.*] He had been told of the President's high professional character, of his great integrity and probity, and his character as a defender of the interests of his profession, and this character had been amply verified. By this time, they were all aware of the President's unbounded hospitality and his genial disposition, not unmixed with a sparkling Hibernian humour. [*Cheers.*] Dr. O'Connor had endeared himself to the members of the Association with whom he had come into contact; and there was no doubt but that all would remember with the liveliest feelings of joyousness their venerable President. [*Cheers.*]

The PRESIDENT, in responding to the toast, said he felt that the honour done him was too great and far more than he was worthy of. He had no claim whatever to the compliments paid to him. All he had heard about himself had literally astonished him; but he had heard it so often now that he was willing to believe there was something in the compliments. [*Laughter.*] There were some parts of the compliments that he could take honestly to himself. He had an affection for his brethren in the profession; and could say that, during nearly half a century, he never had half an hour's difference with any one of them. [*Cheers.*] He had lived in harmony with the seniors, and tried to help the juniors as well as he could. [*Cheers.*) These were not very high qualities; but yet there was something in them satisfactory to a man growing towards the closing days of life. [*Cheers.*] He thought there was a good deal of the irony of fate in the fact of his being President at a meeting at which there were so many eminent men present. They had heard that morning an address from Mr. Savory, which combined the eloquence of Demosthenes with the wisdom of Hippocrates; and the previous day they had heard the lecture of Dr. Hudson, which was an example of the highest class of eloquence; so that, indeed, he might feel greatly proud of his position as President of the Association. [*Applause.*] He concluded by returning thanks for the toast.

Dr. BALTHAZAR FOSTER (Birmingham) then rose to propose the health of the "Readers of Addresses and the Presidents of Sections". He said the toast was one which by its importance was somewhat startling. Its geographical distribution was so wide that it embraced the three kingdoms of Great Britain and Ireland; but, in addition to that, when it comprehended the names of three such eminent teachers as Savory, McCall Anderson, and Kidd, he felt that no words could do justice to it. [*Applause.*] Whoever had perused the works of Dr. McCall Anderson must be filled with gratitude for the information which had been opened up with regard to the treatment of disease, and for the development of new ideas on the subject of clinical teaching. [*Applause.*] Whoever had been a pupil of Dr. Kidd, as he had been; whoever had been helped by him to encounter the worst forms of the special diseases that he treated; must feel that he had deservedly won the high position which the profession in this kingdom had given him. No one had been more loyal to his professional brethren, no one had deserved more thoroughly the high position he had achieved. Any one who had listened that morning to the oration which was delivered by the orator in surgery must have felt, as the high-toned eloquence glided like honey from his lips, that Mr. Savory was a worthy representative of the great School of St. Bartholomew's. As they sat fascinated by the orator that morning, they were in turn thrilled by his high-toned eloquence, by the scientific skill with which he dealt with other points of practice and theories, but above all by his splendid courage in rescuing them from the tyranny of a theory which, however good in its operations, had not yet attained the position of scientific truth. From whatever point of view they might regard the address, whether they regarded it as advocates of Listerism, or as opponents of Listerism, they must all feel that the address which they listened to to-day must result in the advance of scientific truth and in the advance of the glorious reputation of the British Medical Association. [*Applause.*] The toast was drunk amid great enthusiasm.

Mr. SAVORY said that, although no stranger to the proverbial generosity of Ireland, he confessed he was taken by surprise at this very striking proof of it. [*Hear, hear.*] He should have thought that they had heard enough of his voice for the present, and, although they professed to be pleased with his address that morning, he was perfectly sure that their patience would be sorely tried if he unloosed his tongue once more. He proposed now not to trespass on their patience further than to thank them most heartily for the welcome they had given the Association, for the welcome, so warm and universal, with which they had crowned the pleasure that every one had derived from this visit. It was no light responsibility to have set a city like Cork in the midst of such a scene of action as had been witnessed for the past few days; but he could say without affectation that the work of the local gentlemen had been done well and nobly, and might it ever be that the verdure of this island should pass into the vigour of her sons. [*Applause.*]

Dr. MCCALL ANDERSON next responded. He said he should have thought that it was unnecessary for more than one gentleman to respond to this toast, but he had been informed that it was desirable that each division of the kingdom should be represented. He asked to be allowed this opportunity of expressing a hope that the time was not far distant when the Association would honour Glasgow with a visit. [*Hear, hear.*] In recent years, their new University buildings had been erected at an expense of over half a million; last year they had received a legacy of £75,000 to complete the buildings, and, finally, through the munificence of the Marquis of Bute they had received £45,000 to build the new Town Hall. That building would be completed shortly, and he trusted then that they would be able to provide a suitable home for the British Medical Association. After not only the eloquent speech but the ad-

mirable address with which they were all charmed that morning by Mr. Savory, and in anticipation of the eloquence of Dr. Kidd, who was to follow him, he thought the best thing now for the poor Scot to do was to hide his diminished head. [*Applause.*]

Dr. KIDD (Dublin), also responded to the toast. He expressed his gratification at the great success which had attended the present meeting, and his thanks to the people of Cork for having received them with open arms, for their hospitality, and for their zeal. [*Applause.*]

Mr. COOPER FORSTER (London) then proposed the toast of "The Mayor, Corporation, and citizens of Cork." The members of the British Medical Association felt deeply indebted to the citizens of Cork for the kind and hospitable manner in which they had received them—[*applause*],—and in that toast he thought the ladies of Cork ought to be included, for anyone present at the theatre last night, and he was glad to see so many of the members of the British Medical Association there, could not but have enjoyed their pleasure to the utmost. As far as he was personally concerned, he never enjoyed himself so much at any previous meeting of the Association as at this. [*Applause.*] He felt satisfied in mind, and he felt satisfied in body.

The MAYOR of CORK, who was very warmly received, in responding, said he had to thank the meeting for the cordial manner in which he had been received by that distinguished assembly. That was the first opportunity he had of welçoming the Association to the city, and he was most happy now, as Mayor of the city, publicly to welcome the members of it to Cork, publicly to thank them for the great honour they had conferred on the city by visiting it, and to assure them that the citizens deeply appreciated the compliment thus paid them. As far as he was personally concerned, he should tell them that he did not feel that he at all deserved the compliments showered upon him; but, on the part of the Corporation and the citizens, he should certainly plead that the laudation bestowed on them was perfectly well deserved; for from the moment the fact became known that the Association was about to visit them, every person in Cork determined, to the best of his ability, to make it as agreeable and pleasant as possible. He hoped they had succeeding in doing so. [*Applause.*] He assured them if there were any shortcomings on their part, it was not because they were wanting in intention and determination to please them in every respect. He was glad Mr. Forster had alluded to the ladies of Cork, for he certainly thought they had contributed to the pleasure afforded the visitors during their stay in the city. He himself felt proud of the ladies of Cork, and felt proud of the array of beauty presented to the strangers present at the Conversazione on the previous evening. [*Applause.*] He hoped the members of the Association would take away with them pleasant memories of their visit to Cork, and he assured them that, if the recollection of it was pleasant to them, it would be equally pleasant to the citizens of Cork. [*Applause.*]

Dr. ANDREW CLARK (London) in proposing the health of "Our Guests", said he had an accusation, and a very serious accusation, to make against the authorities of the British Medical Association. He had enjoyed himself in conversation with his friend Dr. Gueneau de Mussy, but his peace of mind had gone, and his digestion had been interfered with since he had been made aware that he was to speak. [*A laugh.*] They were always glad to welcome their foreign visitors, and they were especially glad to welcome them on the present occasion. [*Cheers.*] In the first place, there were men of distinction among those visitors who gave *éclat* to their meetings; they were friendly genial men, and contributed to give a crowning geniality to the assembly they had had in that place. It struck him to inquire what it was that brought together so many distinguished persons from America, Italy, Spain, Germany, and other parts of the world. What brought them all there? It was not profit, it was not pleasure—though they had experienced a good deal of that; there could be no doubt that the object was knowledge. They had all met from various parts of the world to contribute not only to the advancement of knowledge, but to see how to make that knowledge subservient to the uses of mankind. That was a very sacred thought, and ought to crown the reasons for welcoming their guests. [*Renewed applause.*] He begged to couple with the toast the names of his jolly, able, and genial friend, Dr. Sayre (America); the calm, quiet, dignified Professor Charcot (Paris); Dr. Weber-Liel (Berlin); and Dr. Noël Gueneau de Mussy. [*Applause.*]

Dr. SAYRE said he was called upon to respond to the toast of their foreign guests, and he almost felt that to call him a foreigner was to insult him. He was not *un étranger* there. [*Cheers.*] The Association had treated him so warmly on the present and last occasions on which he was amongst them, and he remembered so well their hospitality and friendship that he, at all events, could not look upon himself as a foreigner. [*Hear, hear.*] They in America felt highly complimented by the British Medical Association holding their meeting that year in Cork, looking upon it as if they had come half way to meet the visitors from America. [*Laughter.*] They all knew that that beautiful island was the first land which met their gaze after leaving the far distant shore of America, and their hearts beat high as they entered the harbour, which increased in beauty until they came to that most beautiful of commercial towns Queenstown, which, with its streets rising tier above tier, was a city possessing all the beauties of a fashionable watering-place. He was delighted to meet so many of his medical brethren, and he could not help remarking that, as men, women, and children at some time or other came under the critical observation of the family physician, the medical profession held the power, in the castle or in the cabin, for raising the elements of mental culture, so as to bring a bond of union between all nations of the earth. [*Applause.*] He expressed the hope that during next year, when the American Medical Association met in New York on the 1st of June, they would have many visitors from Europe, who would find awaiting them all the luxuries of an American climate and sunshine—which would cordially welcome them, would take the bronchial disturbance out of their throats, the rheumatism out of their joints, the gout out of their blood, and make them young and vigorous boys. [*Laughter and applause.*] As the President of the Medical Association of America, he would then be able to tender to all—not alone the members of the British Medical Association, but the representative men of all medical associations in Europe—a most cordial welcome. [*Loud applause.*]

Professor CHARCOT (Paris) and Dr. WEBER-LIEL (Berlin) also responded.

Dr. NEL GUENEAU DE MUSSY: I doubt if I am entitled to speak in the name of the foreign physicians; not only on account of my unworthiness of such an honour, which could have been conferred more rightly on many others, but because so kind, so delicate, so brotherly has been the reception you have given me for several years, that I cannot feel myself a foreigner amongst you. I am sure that I express the feelings of all the foreign medical men here present, in saying that we find ourselves here quite at home. Besides, I cannot forget that an half part of myself is Irish, and, I must confess, not the worse. You bid us to remember that we are your guests. Do not fear that we will ever forget it. We shall never be forgetful of your kind and genial hospitality. We shall never forget this great meeting of the British Medical Association, at once so instructive and so pleasant, which according to the word of old Horace "omne tulit punctum". for "miscuit utile dulci." We shall no more forget that we visited the land of Graves, of Stokes, of Corrigan, these teachers of our youth, and who will remain the teachers of all future medical generations. We will always remember that we spent some happy days with the fellow-countrymen of Bright, of Marshall Hall, of Hope, and of so many modern glorious names which have too soon belonged to posterity, and amonst whom we regret all to inscribe that dear and illustrious Murchison, who left such a blank in medical science.

Dr. WATERS (Chester) then proposed the toast of the "BRITISH MEDICAL JOURNAL". [*Applause.*] He said this meeting of the British Medical Association in Cork was about one of the most successful meetings ever held, thanked the local press for the assistance which they had given to the Association in publishing their proceedings, and referred to the able management of the JOURNAL, which, he said, was now one of the most important periodicals in the land.

Mr. ERNEST HART, who was received with loud and long-continued cheers, said that at that late hour he should respond in the fewest possible words. He could bear testimony that the Association was most ably served. [*Cheers.*] It was most faithfully and assiduously served by its honorary officers—by its President of Council, Dr. Carpenter; by its Treasurer, Mr. Husband of York; by its Committee of Council; and upon these honorary officers rested a great burden of work for the public benefit—a work which the public generally had little opportunity of knowing and appreciating. [*Hear, hear.*] The Association was also faithfully served by its paid officers—by its energetic and able General Manager and Secretary, Mr. Francis Fowke—[*cheers*]—by the able and experienced assistant editor, the senior on the staff, Dr. Alexander Henry—[*cheers*]—and by the sub-editors and writers whom the liberality of the Association afforded to the JOURNAL. It was the pride of his (Mr. Hart's) life to serve the Association with the utmost fidelity; and he trusted that, when he left the JOURNAL, he should leave it in a more powerful position than that in which he found it. The press of the country was looked to to maintain the liberties of the country; and he hoped, as editor of the JOURNAL, he should be regarded as one

> "Who knew the seasons, when to take
> Occasion by the hand and make
> The bounds of freedom wider set." [*Cheers.*]

He should like to say a word of another Association of which the JOURNAL had succeeded in gaining the confidence—the Irish Medical

Association. When the British Medical Association first came to Ireland in 1867, in the ever remembered visit to Dublin, the Irish Medical Association hardly understood the purposes of the British Medical Association; but it was soon found that the Associations were friends and assistants, and that the British Medical Association was ready to assist its sister Association in every possible way. The Irish Association deserved the same support as the British Medical Association, for they were united in the same good purpose of elevating the status of the profession. [*Applause.*] It would be always the object of the BRITISH MEDICAL JOURNAL to act as a helper and friend to the Irish Association, to assist them in carrying out their objects. [*Applause.*] In conclusion, he thanked them for the manner in which the toast of the BRITISH MEDICAL JOURNAL had been drunk.

Dr. ALFRED CARPENTER proposed the next toast—"The Health of the Local Committee". He said the duty that devolved on him now was to present to their notice the toast of the Local Committee. [*Applause.*] There was one thing peculiar about Ireland, and that was that the Irish people always did everything in earnest. When it rained even, it rained in earnest; and there was no mistake about the Local Committee having done their work in earnest in the arrangements for that meeting. He could testify to the great work that had been done by the Committee, and also to the wonderful way in which Dr. Macnaughton Jones had discharged the duties of Local Secretary. The able way in which Dr. Jones had managed the arrangements, and the judgment he had used, had elicited the admiration of the members of the Association. [*Applause.*] Not alone did Dr. Jones work well and earnestly, but he was ably assisted by all the members of the Local Committee, who obeyed his behests readily. In conclusion, on behalf of the Committee of the Council and every member of the British Medical Association, Dr. Carpenter tendered Dr. Macnaughton Jones and the members of the Local Committee the heartfelt thanks of the British Medical Association. [*Applause.*]

Dr. H. MACNAUGHTON JONES, in returning thanks, said he felt that night as he never had felt before; and if he did not feel so, he should not be worthy of the position he occupied. Among the multifarious duties of his position as Local Secretary and the many arrangements he had to make, he had had no time to arrange a speech. [*Laughter.*] But there were a few points which he would wish to lay before the meeting, in order to show how the Local Committee had worked. [*Hear, hear.*] It would be quite a mistake to say that he, as an individual, had done more than he ought to have done. He had received very active and warm support from his professional brethren in the city. [*Hear, hear.*] They had worked together with a degree of harmony not excelled at any previous meetings of the Association. It was no small honour for a citizen of Cork to know that they had there to-night assembled amongst them so many distinguished visitors from all parts of Europe and America. Such a meeting, so far as he knew, never occurred before in the history of this city; and he sincerely trusted it would not be long before they had a similar one again. [*Cheers.*] All he could say was that if, when the British Medical Association visited them again, he and those who had acted with him were to the fore, they would receive as warm a welcome as they had received on the present occasion. [*Applause.*] Of course he need not allude to the great aid he had received from his distinguished friend, the President of the Association. [*Applause.*] Outside the members of his profession, he had been assisted by many others. He was sure some of them that day enjoyed thoroughly the hospitality of a gentleman not far from that place—Mr. Pike—whose name it was only sufficient to mention. [*Applause.*] His Grace the Duke of Devonshire would provide for them a good reception on Saturday, at Lismore; and also Sir George Colthurst, at Blarney. But, independently of those, there were others who had helped him to carry out the details of the sanitary museum and other departments: Messrs. Hill and Shaw, Mr. Colbeck, Mr. Allman, and Mr. Ogilvie. The President of the Association had accorded to him at the close of his address far more praise than he deserved. ["*No, no.*"] He had said, "Honour to whom honour is due"; and it was on that principle that he wished to mention those who had helped to bring the meeting to a success. Dr. Jones also referred in most complimentary terms to the assistance he had received from Dr. Ringrose Atkins, whose intense love and regard for his profession had urged him on to do everything and anything at any cost and sacrifice to himself for its good. [*Loud applause.*] He also thanked Dr. T. G. Atkins, Dr. Harvey, and Dr. D. C. O'Connor, junior, for the efficient assistance they had rendered him.

Dr. CORDÈS (Geneva) desired to express his thanks to the people of Cork and to the British Medical Association for their kindness to the foreigners present. When a French heart spoke plainly to an Irish heart, he was sure to be understood. [*Cheers*].

The band of the 7th Royal Fusiliers performed during the dinner.

ENTERTAINMENTS.

RECEPTION BY THE PRESIDENT AND LOCAL COMMITTEE.—At 8 o'clock on the evening of Tuesday, August 5th, the first public reception was held by the President and Local Committee at the Queen's College. The grounds of the College, the examination hall, reception room, and museum were lighted by the electric light—Jablochkoff candles; and the novelty and brilliancy of the illumination attracted thousands of spectators, in addition to the invited guests, who numbered, we believe, over two thousand. Bands were stationed at more than one point. At 9 o'clock, M. Berly delivered a lecture on the electric light. The museum and galleries were lighted, and some experiments were conducted with a rocket-apparatus. There was a well-spread buffet; and altogether the reception was organised with surprising liberality and on a large scale.

CONVERSAZIONE BY THE MAYOR, CORPORATION, AND CITIZENS OF CORK.—This entertainment took place on the evening of Wednesday, August 6th, at the Opera House. It was an entertainment in which neither time, energy, nor expenditure had been spared. The pit had been boarded over on a level with the stage, and the whole floor was occupied by exhibits of great interest; while the house was brilliantly lighted by the electric light and by gas, and the whole building was profusely decorated with flags supplied from H.M. guardship *Revenge*. The Mayor in his official robes, Mr. Robert Hall, High Sheriff of the city, Mr. W. Goulding, M.P., Mr. J. G. McCarthy, M.P., Mr. Robert Scott, and Dr. Sullivan, President of Queen's College, received the visitors. The theatre was lighted by the electric light, and filled by a brilliant company, numbering upwards of two thousand. The tables were covered with objects of great antiquarian and artistic interest, including local Irish antiquities, ancient and rare glass beads, and bronze pins discovered from time to time in bogs and old churchyards; a collection of Belleck china, one of the most promising and beautiful of modern Irish industries; and a collection of pictures brought together from the galleries of local collectors, including specimens of the best known Irish artists—Maclise, Barry, Grogan, Lyster, Sheil, James Mahony, John Day, R. Scanlan, John Brennan, A. H. Hartland (a very accomplished living Cork artist), W. Magrath, Henry O'Shea, Stopford, J. B. Brenan, and others.

LUNCHEON AT BESBOROUGH.—On Thursday, Mr. and Mrs. Pike of Besborough opened their extensive and beautiful grounds, and entertained all comers at a luncheon, which formed a fitting sequel to the morning's discourses at the breakfast of the Medical Temperance Association; for, the hosts being earnest and consistent abstainers, the elegant *déjeuner* provided did not include any stronger drink than coffee and mineral waters. The family of Mr. Pike gave a very graceful and cordial welcome to their very large party of guests; who also visited the adjoining estate of Lakelands, where Mr. Crauford did the honours in person of his fine and extensive orchid-houses, filled with rare and lovely flowers.

THE GARDEN PARTY.—On Friday afternoon, a garden party by the President and Reception Committee, in the beautiful grounds of the Queen's College, came as a pleasant sequel to the close of the business of the last general meeting on that afternoon; and fine weather, excellent military music, a flower-show by the Cork Horticultural Society, and the presence of a great number of the far-famed ladies of Cork, who had lent charm to all the previous receptions, made the party a complete success. Two excellent photographs were taken by M. Sauvy of groups of some of the principal visitors and officers of the Association. These photographs will include excellent portraits of Dr. O'Connor, Dr. Waters (Chester), Dr. Andrew Clark, Mr. Savory, Dr. Falconer, Dr. Carpenter, Dr. Noel Gueneau de Mussy, Mr. Ernest Hart, Dr. Sayre, Dr. Macnaughton Jones, Dr. Ringrose Atkins, Mr. Wheelhouse (Leeds), and many others.

THE CONCERT.—On the evening of Friday, the round of entertainments terminated by a grand concert, which did the highest honour to the musical talent and cultivation of Cork. It was organised under the direction of a most efficient conductor, Dr. Marks, who presided with great skill over a well-disciplined and efficient band and chorus of about one hundred and thirty performers. The music and singing—exclusively by amateurs—was of rare merit: a very young lady, Miss L. A. Hackett, raised a storm of enthusiasm by the purity and power and flexibility of her voice, showing natural gifts and already a facility of execution such as is usually only met with in artists of high operatic rank. Some thousands of auditors were included in the Hall; and Dr. Carpenter, the President of Council, bade farewell to the citizens of Cork in well-chosen words, which did justice to the feelings which such unbounded, intelligent, and successful hospitality had raised, and which were greeted with continued applause.

EXCURSIONS.

EXCURSION TO BLARNEY.—About thirty members of the Association joined this excursion, a large number having previously visited the grounds and castle of Blarney during the week. On Saturday, August 9th, the hospitality of the proprietor, Sir George Colthurst, Bart., was liberally offered. The day was fine, and the very happy party enjoyed their visit to the castle, so often celebrated in song and story, and the repository of the famous stone, which few failed to kiss. Luncheon was presided over by Sir G. Colthurst; and he received the hearty and well deserved thanks of his guests for the most courteous and hospitable reception which he had afforded to them. Thence the party adjourned to St. Anne's Hydropathic Establishment. This famous and well appointed institution, beautifully situated on an eminence near Blarney, commanding fine views of the surrounding country, became celebrated for its Turkish baths and complete system of hydrotherapeutic treatment under its founder and proprietor, Dr. Barter, and still maintains its character as a retreat of unsurpassed beauty and convenience, and replete with all the necessaries for invalids seeking a "water-cure", or for the weary seeking health in repose, pure air, fine scenery, and a simple and wholesome *régime*. Under the resident direction of Dr. Sächs, St. Anne's retains a wide popularity, and is often sought as a retreat from professional labours and the round of work by physicians as well as by their patients. A dinner was provided for his guests by Dr. Barter, and evening fell before they departed.

THE BLACKWATER AND LISMORE EXCURSION.—A party numbering one hundred and forty joined this excursion. They reached Youghal by railway from Cork; thence by steamer slowly ascended the Blackwater, enjoying the lovely scenery of the Irish Rhine, to Cappoquin; and then proceeded by road to Lismore, which was reached at about two o'clock. Here, by the kindness of the Duke of Devonshire, the castle and grounds were thrown open; and thus the opportunity was afforded of a delightful ramble through scenery unsurpassed in picturesque and smiling beauty by any demesne in Great Britain. The generous hospitality of the Duke, and the personal kindness and active exertion of his agent, Mr. Currey, had supplied a bountiful repast at Lismore to the whole of the party; and a suitable vote of thanks was accorded to the Duke on the suggestion of Dr. Macnaughton Jones, responded to by Mr. Currey, who, with his son, was untiring in his kind attention to the party of visitors throughout the day.

THE KILLARNEY EXCURSION.—The excursionists to Killarney left Cork by special train at 7.45 on Saturday morning, arriving there at about half-past ten o'clock. The party, which numbered seventy-eight, were met at the railway station by Dr. Oscar Woods and the Reception Committee, who provided them with carriages, in which they drove to the Gap of Dunloe. Arriving at this wild and narrow mountain pass, the excursionists alighted from their carriages, and either walked or rode on ponies up through the narrow track or road, overhung with craggy cliffs, which lead to the Black Valley. Reaching the top of the Upper Lake, the excursionists rowed across in the boats lent by Lord Kenmare for the occasion to Derrycunnihy Cottage, where a splendid luncheon was provided by the Reception Committee. The luncheon over, there was a delightful row back to Killarney through the three lakes. The boats reached Killarney after six o'clock, and the greater number of the excursionists returned by the special train which left for Cork at seven o'clock.

THE RIVER AND HARBOUR EXCURSION.—A steamer had been chartered by the Reception Committee to show to a large party the beauties of the famous river and harbour which have made Cork at once celebrated and prosperous. A very handsome luncheon was provided at Queenstown by the Reception Committee, and upwards of one hundred guests sat down. Dr. Ringrose Atkins occupied the chair. After the repast, Dr. Macewen of Glasgow gave the toast of "The President and Reception Committee". He referred to the great success of the meeting and the splendid hospitality which they had received in all quarters during their visit. Dr. Ringrose Atkins responded. Dr. Joseph Rogers said there was one man to whom undoubtedly the visit of the Association and the great success which followed it were due, and he asked them to drink the health of Dr. Macnaughton Jones. The toast was most warmly received; and the Chairman replied on behalf of Dr. Jones. Dr. Cassells of Glasgow said there were foreigners amongst them who had come from all parts of the world to assist at the annual meeting of the British Medical Association, and he asked that they should in a bumper wish them a safe return to their homes. This toast was most cordially received; and Dr. Hirschberg of Berlin responded, and gave the health of the members of the profession in England and Ireland. Dr. T. C. Shinkwin of Cork was called upon to respond as the senior member of the profession present. He avowed that he was originally one of those who opposed the invitation to the British Medical Association to visit Cork, because he thought they were too small a body in Cork either to entertain or provide matter to interest so great an institution. With indomitable perseverance, however, Dr. Jones worked the thing up, and the result, he was delighted to find, was that the Association were thoroughly pleased with their visit in every respect. Dr. T. G. Atkins proposed "the Ladies", which was responded to in a felicitous speech by Dr. C. Harvey. After this, the party returned to the steamer, and there was a trip to sea and a run up a portion of the Carrigaline River. A most enjoyable day having been spent, the party were landed at St. Patrick's Bridge about five o'clock, all expressing the greatest delight and admiration with the trip, the scenery, and the surroundings.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

M.R.C.P. (Birmingham).—The Medical Relief Book, whether district or workhouse, is provided by the Guardians, and is therefore the property of the Board; and, however much our correspondent may object to having his entries criticised by his successor, it is his duty to give up that which he has no moral or legal right to retain.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ISLINGTON.—Dr. Tidy's last published report is for the years 1876 and 1877; but some of the statistics, especially those relating to small-pox, come up to a much later date. The comparisons given of the Islington figures with those of London generally are valuable and interesting, but are too long for reproduction. It may be stated, however, that, throughout the report, the tabular statements are of the most full and varied kind. The number of births, deaths, and marriages were nearly the same for each of the two years. The birth-rate for 1876 was 36.3 per 1,000; and for 1877, 35.6 per 1,000. In 1876, 4,789 deaths (or 18.9 per 1,000) occurred in the parish; and in 1877, 4,838 (or 18.5 per 1,000) were recorded. Of these, 1,397 in 1876, and 1,302 in 1877, occurred in children under one year of age. A full account is given of the epidemic of small-pox which commenced in September 1876, and which, up to the end of 1877, had caused 125 deaths. The action taken to prevent the spread of the disease seems to have been very energetic, and disinfection of houses and bedding was carried on with considerable vigour. Altogether, zymotic diseases caused 1,034 deaths in 1876, and 1,026 in 1877. There is nothing very remarkable in the figures for the other diseases of this class; but we note a gratifying and considerable decrease in the number of deaths from puerperal fever, which were in 1877 less than one-third what they were in 1874. In referring to the water-supply of the parish, and the continued excellence of the New River water, Dr. Tidy takes up the cudgels on behalf of river water, observing that the change from river to well or to spring does not necessarily mean change from impurity to purity, or from worse to better, but may mean change from better to worse. There is certainly some truth in this; but we can hardly agree with Dr. Tidy that the risk is no greater at the present time with Thames or Lea water than it would be if London had chalk water. Dr. Tidy's duties as analyst must take up a considerable part of his time. Since his appointment, he has analysed for Islington 591 samples, and the number seems to increase year by year. The mortuary provided has already been of considerable service, and promises, now that some improvements have been effected, to be so still more. During the period included in the report, an important alteration has been made, with marked benefit to the householders, by transferring the duty of removal of the contents of dust-bins from contractors to the Vestry themselves. This is an improvement which deserves much more general adoption.

MILITARY AND NAVAL MEDICAL SERVICES.

NAVAL MEDICAL SERVICE.—The following are the names of the successful candidates for commissions in the Royal Navy, and the marks gained by them in the competitive examination, held at London from the 11th to the 14th instant.

	Marks.		Marks.
Kirker, Gilbert	2345	MacMunn, J. A.	1520
Gimlette, T. D.	2095	Mackenzie, M.	1250
Crowley, Joseph	1845	Brunt, John	1220
Tait, Wm.	1720		

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 23RD, 1879.

LESSONS OF THE ANNUAL MEETING.

IT is often well, after any important meeting, to take up the various threads of suggestion, remonstrance, and criticism which are woven by candid friends and kindly critics, and to knot them on a skein for future use in mending or embroidering the woof and warp of our Association web.

We may take first the suggestions which have been made as to the further improvement of the conduct of the general business. In the first place, it is a matter of complaint that so little time is given to the discussion "so greatly needed for the pressing and ephemeral affairs of the profession. At the past meeting were presented reports upon Medical Reform, upon Coroners' Law, Contagious Diseases Legislation, Habitual Drunkards, Out-Patient Reform, and other subjects without number, respecting which a large proportion of the members of the Association were warmly interested, but which were passed by in absolute silence, wanting the time to enter upon them. It may, we think, be seriously doubted whether such business should be kept in abeyance in order to permit of the delivery of orations which generally are erudite, sometimes interesting, and seldom directly useful; and we think that the experience of all those who attend the Association will corroborate our feelings that some alteration of system must take place, in order that the legitimate scientific and medico-political work may be brought within the compass of the four working days of the meeting's life."

It is not the first time we have noticed this subject; and the regulations, of which a draft was published in a past number of the JOURNAL, proposed by the Committee of Council for the regulation of the annual meetings, showed that the matter has been under consideration in the Committee of Council. These draft regulations were withdrawn for further consideration, as, on open review, it was clear that they would not have answered all the desired purposes.

What is needed is, that the reports of Committees shall be in the hands of the members attending the meeting, before they are called upon to adopt and confirm them; and that sufficient time be provided, so far as possible, for their convenient discussion before an adequate audience prepared to discuss them, when necessary, by a previous knowledge of their contents, and sufficiently numerous to be fairly representative, and to be capable of taking decisions entitled to rank as those of the Association in that year, and for that purpose assembled. The present arrangements do not fulfil these desiderata, nor would the proposed regulations have done so. The arrangement which seems to us most likely to secure this end is the adoption of a rule that the annual reports of Committees should be printed in the BRITISH MEDICAL JOURNAL of the week previous to the meeting; and they would then be ripe for discussion at the first general meeting of the Association, after the President's address, which now opens the meeting. The report of the General Council, which is passed on the first day, prior to the first general meeting, could then be printed in the Daily Journal, and thus placed in the hands of every member attending the meeting, and discussed at a subsequent general meeting, the second or third. At present, the annual report of the Council is read to a meeting to which it is new; and, as it is a long document, it cannot always be mastered at the moment. On the other hand, the highly important reports of Committees are hurried through before a thin audience, collected with difficulty on Friday afternoon, and, for the most part, naturally anxious to get through what they are led to think of as a purely formal business—although it really expresses the most important part of the public work of the Association, and that which most definitely commits it to various lines of policy. Whether the arrangement which we have suggested be considered the best is, of course, a very open question; but there is an admitted need, and a published intention, of some improved regulation in this respect; and the moment is opportune for discussing it.

Another subject of discussion by our critics is the sectional work. The advantage of the settlement of a programme of subjects for discussion is admitted, and in this respect the Cork meeting showed a marked advance in front of any of its predecessors; the papers were good, the subjects well chosen, and sometimes the discussions were remarkably satisfactory. On the other hand, we think the experience of this year shows that the papers introducing the discussions should not be too long or too numerous, probably although the paper itself may reasonably be more elaborate. Not more than twenty minutes should be allotted to the reading of its leading points and principal conclusions, and not more than one paper should be read. The conclusions at which the paper opening the discussion arrives, might properly and usefully be printed beforehand in the JOURNAL. The introduction should not overweight the discussion, and the arrangements should ensure an active and well nourished fire of debate. All the departments were not equally successful in these respects this year, although, on the whole, the sectional business was excellently well conducted, largely attended, and full of interest. We expressed at the outset the opinion that the programme should not settle the discussions for all the three days, but that the third day should be devoted to the reading of those volunteer papers of interest which had been accepted, and which it was desirable to cultivate. We approve of organisation to a suitable extent, but should regret to see voluntary initiative strangled in official hands; and the excellent system of selecting subjects of discussion should not be allowed altogether to crowd out the voluntary papers, which have been the backbone of so many meetings.

Finally, one of our journalistic critics fears that the Association is "outgrowing its strength", and that the "voracity of the JOURNAL" is "bringing the financial balance to the wrong side". It will calm these painful apprehensions, if we remind this gentleman that the income of the Association from subscriptions of its members is not over £12,000 a-year, but about £8,000; that upwards of £4,000 a-year is contributed by the JOURNAL; that there is a sum of £3,000 from the accumulated yearly balances invested in consols; that for the annual guinea, which forms the whole subscription of each member, he is furnished with a JOURNAL, which we shall not pretend to compare with our critic, the *Medical Press and Circular*, but which is good of its kind; and besides that, there is an available annual sum of upwards of £1,500 for administrative, political, and scientific purposes. On the whole, it may be doubted whether any guinea a-year devoted to "a journal and other purposes" can be shown to yield more satisfactory results.

We shall not inquire how much, for example, the "voracity" of the *Medical Press* shares of its annual guinea for public, scientific, and other purposes. The fact is, that the results achieved for that moderate subscription are, we believe, such as give no reason for regret either in respect to its literary, scientific, or public achievements. We observe that the success of the Association is exciting, not only acceptable criticisms at home—tending to show us our faults, and therefore to help us to amend them—but imitation abroad, which is a flattering criticism from which we may take comfort.

ALCOHOL IN HEALTH AND IN DISEASE.

We have received almost simultaneously a pamphlet on *Temperance, Abstinence, and Common Sense*, by Mr. Harry Lupton, Surgeon to the Infirmary at Stratford-on-Avon, and also the sixth annual report of the London Temperance Hospital. A series of articles from the pens of different distinguished men, which appeared lately in one of the leading magazines, and many other indications, combine to show that professional interest in the alcohol question has not diminished. As our readers will have gathered from former references in this JOURNAL, the London Temperance Hospital is an institution for the treatment of disease of all sorts without the use of alcohol; and we see from this report that the non-alcoholic nature of the treatment is carried so far, that even the use of tinctures has not been had recourse to during the past year. If many cases were admitted requiring the administration of drugs which, like digitalis, are generally given in the form of an alcoholic solution of the plant, this method of using the remedy must involve a great deal of extra trouble in dispensing; as watery infusions do not generally keep for any length of time. No doubt, alkaloids can in many instances be made to take the place of tinctures; but in the case of a considerable number of plants the alkaloids have not yet been extracted. However, it is well to be consistent; and we have formerly pointed out that, unless a drug be administered without any admixture of alcohol, it may possibly be objected that some of the effect is due to the alcohol. The number of patients admitted annually into this hospital is yet, however, too small and unimportant to afford the basis necessary for an induction as to the value of alcohol in the treatment of disease. One hundred and forty patients cannot present sufficient variety as to severity, age, duration of disease, and other important particulars, which would enable us to make a fair comparison between them and a similar number of patients treated at an ordinary hospital. We are glad, however, to see that steps are being taken to remedy this defect; and we sincerely hope that the new building which has just been commenced will enable the directors to present the public with the results of this treatment on a scale sufficiently wide to be of scientific value. More facts, for example, are required before we are able to judge whether the case of the woman, E. C., aged 21 (Case 679), which is described as one of cellulitis of the right leg, and which seems to have been very severe, would have recovered more quickly if a little alcohol had been administered. We have no wish to dogmatise, and freely admit, of course, that the recovery of the patient justifies the treatment adopted; but if alcohol be of use at all, it would have been proper to have recourse to its stimulating effects when, as we are told in this case, "the strength was decreasing, owing to the exhausting nature of the discharge, pain, and want of sleep". If the patient's stay in the house could have been shortened by a week or two, both patient and hospital would have benefited; and, at any rate, a little wine would have formed a suitable addition to the quinine, cod-liver oil, and good nourishing diet, which were wisely prescribed in this case. We notice that a case of chronic alcoholism (Case 701) was dismissed cured in eighteen days, without the use of alcohol. Some time ago, this would have been considered improper treatment; but now, many medical men, who do not at all eschew the help which they think alcohol can give them in general, do not have recourse to it in delirium tremens till other means have failed. We feel bound to add that cases have come under our observation where, in spite of the administration of calmatives and soporifics, no sleep could be obtained in delirium tremens until after the use of malt liquor which was drugged with chloral.

Mr. Harry Lupton's pamphlet deals with the subject in a somewhat different way. Administration of alcohol in disease is not his topic, but only its use in health. It is beyond our scope to enter into either the local reasons which induced Mr. Lupton to publish his pamphlet, or into the considerations adduced under his first heading: "Is the use of alcohol enjoined by Scripture?" The former can have no general interest; and as to the latter, the circumstances of the Jews as to race, climate, food, labour, and manner of living generally were so different from ours, that it would be absurd to apply to ourselves in the present day injunctions given to the Jews in totally different circumstances. Even if it were proved that such injunctions were given, we are surprised that so much time should have been occupied by a discussion of so little practical value.

As to the effects of excess, the author of this pamphlet is in accord with authority and with fact. Drinkers to excess may be divided into two classes: continuous and spasmodic drinkers. The latter are those who may remain sober or even total abstainers for weeks or months, and then break out into a bout of drinking. They are very often hard-working energetic persons, able in their respective departments, but, being nervous and excitable, they cannot work continuously without some change. This change they too often find in a fit of drinking. When their habits become more confirmed, the drinking fits become more prolonged, and the intervals between them shorter and shorter, until at last they are apt to degenerate into the class first mentioned; namely, the continuous soakers. It is a peculiarity of these latter that they are seldom drunk, or at least not noticeably so; their habit being to retire to bed, or to escape observation, when they take sufficient drink to make them perceptibly drunk. Their constitutions suffer much more from the effects of alcohol than those of the spasmodic drinkers, since the effects of moderately large quantities taken at somewhat long intervals are much less noticeable than those of much smaller quantities taken more continuously. In its effects on the human body, alcohol is no exception to the rule followed by other agents, in which we find much more emphatic effects from a small cause acting over a long period than from a far greater cause acting only at intervals. *Gutta cavat lapidem*, says the proverb; while a large body of water might periodically run over the rock, and leave scarcely any mark behind it. It is in the body of the soaker, therefore, rather than in that of the spasmodic drinker, that the characteristic effects of alcohol are to be found, and it is in it in *post mortem* examination that we see thickened membranes obstructing secreting cells; and after life has been cut short by dropsy or imbecility, we enter in the *post mortem* book, in the words of Dr. Moxon: "Liver hard and nodulated; brain dense and small, its covering thick." During life, these men recover badly from injury; they suffer much from collapse in the first instance, from over-reaction in the second, and from prolonged depression in the stage of convalescence; if, indeed, they recover at all. All illnesses are apt to have complications in such patients; and in such cases the question arises whether it is proper, when life is in imminent peril, to withhold a certain quantity of that stimulant to which, unhappily, they have been too much accustomed in health. Speaking generally, it is a safe rule to follow, that it is not advisable to make during illness any very violent change from those conditions to which people have been subject during health; and the administration to drinkers of a certain quantity of alcohol would be in accordance with this wise rule. It is a good plan to begin with a liberal allowance of stimulant, and to diminish gradually the quantity until by degrees the patient is able to do without any.

Is alcohol in moderation necessarily evil in its effects during health? or are there cases where healthy people are distinctly the better for it? The weight of medical authority is at present in favour of the view that a small quantity of alcohol is at least not necessarily evil, and perhaps even goes so far as to say that it is beneficial to many persons. We believe that this may be taken as on the whole a fair statement of the case. Much, no doubt, depends on custom; and we are not prepared to say that a pint of beer daily, or its equivalent in alcoholic liquor, is injurious to the majority of people. There seems to be, however, a small percentage of persons with whom alcohol does not agree in any form or in any quantity; and the majority of those in health, especially the young, do their work quite as well, if not better, without it. We have already pointed out in this JOURNAL that the hardest work, physical as well as mental, in the most depressing cold and in the most intense and enervating heat, has been performed better without alcohol than with it. The best and most universally safe guide in this

as in other matters is personal observation and experience. For the temperate, no rule can be better than this; the misfortune is, that the intemperate and besotted have already become incapable of applying this rule, or of judging impartially of the effects of an agent which has blunted their intellectual perceptions and weakened their moral power. For such, there is no remedy but total abstinence and recourse to such help as they may get from the advice of their fellow-beings or from a higher power. It is, we have always thought, from this point of view that total abstinence is of most value, since the force of example and sympathy may possibly save from utter destruction some for whom no other means of escape were possible. If the chance be a small one, it is at least better than none; and so long as this course is followed without fanaticism, total abstinence rests upon a basis that seems to us quite impregnable, and capable of doing a considerable amount of good.

In connection with this subject, we would direct the attention of our readers to the report of the interesting discussion at the meeting in Cork, on the medicinal use of alcohol, given at page 283 of the present number of the JOURNAL.

ON THE PROCESS OF HEALING.

UNDER the above title, there is a paper in the last number of the *Journal of Anatomy and Physiology*, which, having a special bearing on surgical theory and practice, may claim a short notice. According to the author, Mr. D. J. Hamilton, M.B., there is first of all, in a clear cut wound, a viscid fluid effused, which is no more nor less than the fluid from the cut lymphatics, with its half formed corpuscles; this albuminous but non-fibrinous fluid dries and temporarily glues the sides of the wound together, but has no further office, a true union being effected solely by the proliferation and elongation of the surrounding nucleated cells, tissue for tissue. By such an elongation, and not by the deposit of fibrine, the fibrous character of the cicatrix is brought about. In ordinary and favourable cases, neither the blood-vessels nor the blood are concerned in the operation, except so far as supplying the cicatrix with the means of its circulation, nor are leucocytes thrown out as in an inflamed part.

Such is healing by the *first intention;* and there is no essential difference, according to the author, between this and healing by the *second*. Here, indeed, granulation takes place—not as a process necessary to healing, but from the want of the normal pressure of the elastic skin and tissue, and from the free exposure; it is not an operation of the *vis medicatrix naturæ*, but, on the contrary, is rather an impediment to the healing process. The formation of granulations is likewise due to the increased impulse of the adjacent arterioles, a kind of anastomosis, many of the blood-channels being interfered with; vegetations or granulations rise, and vascular loops and tufts form in them, and the secretion of pus-corpuscles and liquor puris is a sequence. When the cavity is healed, it is not by means of the granulations, but quite in spite of them; in fact, by the same means as in wounds healed by the first intention; the granulations become strangled by the contraction of the tissues at their base, and encroached upon by the surrounding epithelium and by connective tissue elements which may have been carried forwards by the formation of the vascular loops. That the cutis cannot be generated by the granulations may be argued from embryonal considerations; it is a tissue *sui generis* from the first.

But though granulations are here looked upon as one of the chief obstacles to healing, and the reverse of necessary, and though it is evident that the formation of epithelium from them is doubtful, yet there will be less doubt with some observers that granulation is a provisional process of healing, without which one hardly sees how an excavated ulcer, the subsurface of a slough, or a deep dug cavity, can be repaired at all; though certainly sometimes under antiseptic treatment, by the formation of a scab or crust, or by the use of escharotics, as practised in veterinary surgery, cicatrisation takes place in such wounds as we are speaking of without suppuration.

The author calls attention to the effect of ligatures on arteries, especially of such as are of catgut. He attributes little effect in the arrest of hæmorrhage to the formation of a clot, considering that it is often insufficient to close the lumen of the tube, but thinks that under ordinary circumstances it is due to the thickening of the inner coat from the lesion done to it by the ligature, and its reaction, and not to the clot or its organisation, so far as a permanent and secure closing is concerned. In fact, a process takes place here very similar to the consolidation of any open wound: though the granulations, which are the result of the violence done to the inner coat, act a more useful part than they do in a wound healing by the second intention, the cicatrisation around the end of the artery gives the final security.

He shows, and we are informed that the experiments of Mr. Garner of Stoke-upon-Trent agree with this view, that there is no reason to call in vital action as regards the disappearance of animal ligatures after operation. They dissolve at a similar rate, in similar fluids, kept at the same temperature, out of the body, swelling up to a much larger bulk, and demonstrating the flat strip of gut out of which they are formed. In the paper, the *ligamentum nuchæ* is suggested for the formation of ligatures, and as requiring a longer time for its solution, and the same substance has been tried by others. Its properties, when fresh, are precisely the same as those of India-rubber; and the conclusion was that its great elasticity and capability of being extended were obstacles to its use. Fine catgut is frequently broken by the tyro in securing a vessel, though this commonly need not be; and another point may be worthy of notice, that, from the nature of the manufacture, the thicker gut is liable, even when taken from carbolised oil, to have a doubtful kind of odour when softened and untwisted. Split tendon is extremely strong, may be twisted, dried, and carbolised as gut; or, perhaps better, may be used moist, as taken from carbolised spirit, when it is as flexible and capable of being tied as silk or hemp; or the latter property may be produced by folding the dry ligature in a cloth damped with warm water. Tendons, however, cannot be procured from our domestic animals of any great length, but ligatures of fully sixteen inches may be had from the extensor tendons or the broad flexor tendons of a healthy horse, one set of tendons producing a great number of ligatures. As already intimated, they may be used in the moist flexible state, or they may be twisted and pinned down to dry, in either of which states they are very eligible ligatures.

ELEVEN students have passed the separate examination in Physiology, now introduced into the Cambridge Higher Local Examinations. None of these attained the standard of distinction.

A LARGE number of persons were lately poisoned by eating poisonous fungi at Domslau, near Breslau. Death occurred in ten of the individuals affected, belonging to four families.

AT the annual business meeting of the Social Science Association, held on Thursday week, at the rooms of the Society in John Street, Adelphi, it was announced that F. S. Powell, Esq., had consented to accept the office of President of the Department of Health at the forthcoming congress, which will be held at Manchester from the 1st to the 8th October.

PRIVATE telegrams having announced several cases of sporadic cholera at Constantinople, the Ottoman agency has communicated to the newspapers a declaration that the announcement is devoid of foundation. No disease of suspicious character, it declares, exists in the capital; and the public health is affirmed to be in a perfectly satisfactory condition.

THE inundations, and consequent destruction of communications on the line of railway from Holyhead to London, have detained in Dublin for several days a number of members of the Association, who were prevented from crossing by the fear of suffering from the floodings, especially as their severity had on several occasions this week caused the mails to be delayed.

PRIVATE letters mention the deaths of Surgeons C. Lloyd and M. E. Murphy, of Her Majesty's Indian Medical Service, from cholera, in British Burmah.

THE Academy of Medicine in Paris has awarded an "encouragement" of 2000 *francs* (£80) from the Barbier prize fund to M. Burq, for his researches on the therapeutic action of metals; and a sum of 1000 *francs* from the same fund to M. Roussel for his work on Transfusion of Blood. Dr. Lambert of Nice has received 1000 *francs* from the Desportes prize fund, as an encouragement for his work on the Action of Compressed and Rarefied Air in Diseases of the Lungs and Heart.

AN average of ten deaths daily from yellow fever continues to be announced from Memphis. It is stated that the terrible lessons of the last year were thrown away; and that, during the winter, the civic authorities and population, although warned by medical advisers that the defective hygienic conditions of the city were such as to invite the recurrence of zymotic diseases, did not take adequate steps to remove the predisposing causes of a disease which is favoured by filth, and finds its hot-bed in a polluted soil and doubtful water-supply.

SMALL-POX last week caused two deaths in Dublin, and four in London, but not one in any of the large English provincial towns. There were 101 small-pox patients in the metropolitan asylum hospitals on Saturday last, of whom 35 were fresh cases admitted during last week.

IN London, 1,349 deaths were registered last week, being 233 below the average, and the death-rate was 19.4. During the past seven weeks of the current quarter, the death-rate in London has averaged but 17.9 per 1,000, against 20.4 and 24.5 in the seven corresponding weeks of 1877 and 1878. The Registrar-General states that this marked decrease of mortality has been mainly due to the comparatively slight fatality of infantile diarrhœa in recent weeks.

MILITARY AND NAVAL MEDICAL SERVICES.

A COMPETITIVE examination of candidates for medical commissions in the Royal Navy was held in London on the 11th instant. Ten candidates presented themselves, of whom three were found to be unfit, on account of physical unfitness, for the service. The remaining seven gentlemen passed the examination. A competitive examination for sixteen commissions in Her Majesty's Indian Medical Service has been announced in our advertising columns to take place on the 28th instant. There will not be on this occasion any examination of candidates for the Army Medical Department, a notice having been issued from the Director-General's office that the examination, which was intended to take place in August, is unavoidably postponed to the end of September. The continued delay in effecting a completion of the arrangements connected with the new Army Medical Warrant is stated to be the cause of this postponement.

ACARDIAC FŒTUS.

A CORRESPONDENT in Vienna has sent us the following description of an acardiac fœtus, which is interesting in a developmental point of view. The case was one of twins, the other twin being healthy and well developed. It was an irregular mass, weighing about three or four pounds, covered with epidermis, and presenting at one part a quantity of hair—apparently the scalp, though no proper head could be said to exist. Just in front of this hairy region were two rounded discoloured projections; and, again, just in front and between these was the insertion of the cord. At each extremity of the more or less crescentic mass was a projection, each with several subdivisions; these were apparently the upper and lower extremities. On further dissection of the fœtus, it was seen that the right projection corresponded to one upper extremity; the left to a lower extremity. There was a partially developed cranium, but not quite corresponding to the hairy region. The larger projecting sac, about the size of a walnut, was found to contain about half of the intestines, the remainder forming a little knot just inside the abdominal cavity, which was filled with a discoloured serous fluid. The other projection contained a viscid dark brown fluid; and the walls of the sac were much thicker than those of the other; it apparently represented the liver. There were a well-developed spinal column, rudimentary ribs, and a more or less complete pelvis. At the upper part of the trunk could be seen a single capsule; the corresponding one of the other side was apparently wanting. In the extremities were well-developed blood-vessels, which had been very nicely injected. There was no trace of a heart to be discovered. At the lower part of the abdomen was a large sac, apparently the bladder. On each side and above this were two bodies, probably either ovaries or testes. If either, however, they would be the former, for the other twin was in this case a female; and it has been clearly established that twins developed from a single ovum, and having only a single placenta and one amniotic sac, are of the same sex. The mass was of the normal colour of the newly born infant, thus showing that it must have been living up to the time of birth, or very nearly. And now comes the question; viz., how this mass of flesh could live, grow, and how its circulation could be kept up, without a heart. The theory put forward by Czernowitz is the following. One fœtus (A) is considerably more developed than the other (B), and consequently A's heart beats much more strongly than that of B. There is a free communication, in the placenta, of the blood-stream from the umbilical arteries of A with that from those of B. A's heart is much more powerful than that of B, and so the blood-stream from A overpowers that from B and changes its direction. Thus the blood that leaves A's heart passes down the aorta, through the hypogastric and umbilical arteries, to the placenta, into the umbilical arteries of B, up the aorta, and so to the heart. But, naturally, it closes the aortic valves; and so B's heart is shut off from the circulation, quickly atrophies, and in a short time disappears. Thus the circulation is kept up in the two bodies by one heart. In A, the healthy fœtus, the umbilical arteries carry venous blood, and the umbilical vein arterial blood, as is usual; whereas in B the whole course of the circulation is reversed: the umbilical arteries receive arterial blood, and the umbilical vein returns the impure blood to the placenta.

ASSOCIATION OF GERMAN NATURALISTS AND PHYSICIANS.

THE fifty-second annual meeting of this Association will be held in Baden-Baden during the week from September 18th to 24th. There will be twenty-three sections, including, among others, Anthropologic and Prehistoric Research; Botany; Zoology and Comparative Anatomy; Anatomy and Physiology; Pathological Anatomy and General Pathology; Medicine and Diseases of the Skin; Surgery; Gynæcology; Psychiatry and Neurology; Diseases of Children; Ophthalmology; Laryngology, Otology, and Rhinology; Public Medicine; and Military Hygiene. Among those who have promised contributions, we observe the names of Professors Bäumler, Maas, and Hegar, of Freiburg; Professors Leichtenstern and Jürgensen of Tübingen; Professors Schnitzler and Benedikt of Vienna; Professors Lossen, Czerny, Erb, Moos, and Drs. Cohnstein and Jurasz, of Heidelberg; Professors Rose of Zurich; Sonnenburg, Lücke, and Freund, of Strasburg; Martin of Berlin; Eulenburg of Greifswald; etc.

NEGLECTED LUNATICS.

A BILL, introduced by Lord O'Hagan into the House of Lords, and printed on Thursday last, extends to Ireland the provisions of English law relating to neglected lunatics. The Bill commences by extending to Ireland the provisions of English law relating to pauper lunatics, their visitation, and confinement. It gives jurisdiction to the judge of a Civil Bills Court over the persons and property of lunatics, whose property is so small as to be entitled to exemption from fees and percentages under the Irish Lunacy Regulation Act of 1871. Another provision authorises the guardians to relieve a poor person, either in the workhouse or out of it, where his destitution is caused by his being temporarily disabled, by reason of mental defect, or the mental infirmity of any one dependent on him for support. Moreover, the Bill empowers the governors of Irish district lunatic asylums to board out a

lunatic with any private person, upon the latter undertaking that the lunatic shall be properly taken care of, and shall be prevented from doing injury to himself or to others. Every lunatic so boarded out is to be subject to the periodical inspection of the medical officer of the dispensary districts.

DRINKING FOUNTAINS.

LOOKING to the importance of maintaining everywhere an accessible supply of cool fresh and pure drinking-water, we cannot but warmly approve the recent suggestion to utilise the fire hydrants placed at short intervals through the city, by attaching to them at frequent points the necessary fittings for drinking fountains of a simple kind.

INQUESTS.

DURING the three months ending June last, 6326 inquest cases were registered in England and Wales, equal to 4.8 per cent. of the total deaths : in the nine preceding corresponding quarters the average proportion of inquest cases was 5.0 per cent. In the twenty towns, the proportion of inquest cases averaged 5.9 per cent. ; and, while it did not exceed 3.1 in Bradford, 3.2 in Oldham, and 3.3 in Sheffield, it ranged upwards in the other towns to 6.9 in Leicester, 7.3 in Nottingham, 7.9 in Birmingham, and 8.5 in Manchester.

DIARRHŒA IN ENGLISH TOWNS.

THE low death-rate from diarrhœa still continues. The deaths referred to that disease in the twenty largest English towns were but 210 last week, against 753, 488, and 818 in the corresponding weeks of the three years 1876-7-8; the largest proportional fatality of diarrhœa was recorded last week in Liverpool, Leicester, and London. The deaths from diarrhœa in London, which had been 25, 46, and 90 in the three preceding weeks, further rose to 127 last week, but were 156 below the corrected average of the week ; in the corresponding week of the last three years, the fatal cases of diarrhœa were 232, 194, and 263 respectively. Of the 127 deaths registered last week, 102 were of infants under one year of age. The diarrhœal death-rate in London was 1.8 per 1,000.

THE UNITED STATES ARMY MEDICAL SERVICE.

THE following rules for the admission of candidates to the medical service of the army of the United States have been issued. No person shall receive the appointment of assistant-surgeon in the army of the United States, unless he shall have been examined and approved by an Army Medical Board, to consist of not less than three surgeons or assistant-surgeons, who shall be designated for that purpose by the Secretary of War ; and no person shall receive the appointment of surgeon in the army of the United States unless he shall have served at least five years as an assistant-surgeon, and unless, also, he shall have been examined by an Army Medical Board constituted as aforesaid. The medical department of the army shall hereafter consist of one surgeon-general ; one assistant surgeon-general ; one chief medical purveyor, four surgeons, with the rank, pay, and emoluments of colonels ; two assistant medical purveyors, eight surgeons, with the rank, pay, and emoluments of lieutenant-colonels ; fifty surgeons, with the rank, pay, and emoluments of majors ; and one hundred and twenty-five assistant-surgeons, with the rank, pay, and emoluments of lieutenants of cavalry for the first five years' service, and with the rank, pay, and emoluments of captains of cavalry after five years' service. All candidates for appointment in the medical corps must apply to the Secretary of War for an invitation to appear before the Medical Examining Board. The application must be in the handwriting of the candidate, stating age and birthplace, and be accompanied by testimonials from professors of the college in which he graduated, or from other physicians in good repute. Candidates must be between twenty-one and twenty-eight years of age (without any exceptions), and graduates of a regular medical college, evidence of which must be submitted to the Board. The morals, habits, physical and mental qualifications, and general aptitude for the service of each candidate will be subjects for careful examination, and a favourable report will not be made in any case in which there is a reasonable doubt. The following will be the general plan of the examination : 1. A short essay, either autobiographical or upon some professional subject, to be indicated by the Board. 2. Physical examination. This will be rigid, and each candidate will be required to certify "that he labours under no mental or physical infirmity, nor disability of any kind, which can in any way interfere with the most efficient discharge of his duties in any climate". 3. Oral examinations on scientific subjects, including chemistry and natural philosophy ; and on literary subjects, including English literature, History of the United States, and general history (ancient and modern). Candidates possessing a knowledge of the higher mathematics, the ancient and modern languages, will be examined therein, and due credit given for a proficiency in any or all of these subjects. 4. Written examination on anatomy, physiology, surgery, practice of medicine and general pathology, obstetrics, and diseases of women and children. Oral examination on these subjects, and also on medical jurisprudence, materia medica, therapeutics, pharmacy, toxicology, and hygiene. 5. Clinical examination, medical and surgical, at a hospital. 6. Performance of surgical operations on the cadaver. The Board will deviate from this general plan whenever necessary, in such manner as they deem best to secure the interests of the service. The Board will report the merits of the candidates on the several branches of the examination, and their relative merit in the whole, according to which the approved candidates will receive appointments to existing vacancies, or to vacancies which may occur within two years thereafter. An applicant failing one examination may be allowed a second after one year, but not a third. No allowance will be made for the expenses of persons undergoing examination ; but those who are approved and receive appointments will be entitled to transportation on obeying their first order.

VIOLENT DEATHS.

THE deaths referred to different forms of violence during last quarter in England and Wales were 4028, and were 280 less than those returned in the preceding three months : they were equal to an annual rate of 0.64 per 1000 persons living, and to 3.0 per cent. of the total deaths. Among the agricultural population of the South-western division, the death-rate from violence did not exceed 0.49 per 1000 ; whereas it was equal to 0.76 in the Metropolitan, 0.77 in the North-western, and 0.86 in the Welsh divisions. In the twenty large towns, the death-rate from violence averaged 0.73 per 1000, and ranged from 0.37 and 0.38 in Portsmouth and Sheffield, to 0.99 and 1.08 in Liverpool and Birmingham. It is somewhat difficult to account for the fact that the proportional fatality from violence is almost invariably more than twice as large in Birmingham as in Sheffield.

CAVEAT EMPTOR.

IT appears that fine distinctions are now drawn by milk-sellers between adulteration of milk with water which is injurious to health, and dilution with water which is not injurious to health. Two cases decided simultaneously—one at Newport (Monmouth), and the other at Salford—bring out, in an interesting manner, the care which even "diluters" sometimes take of our health, and the scientific exactness with which they temper their mercantile eagerness with a due regard to chemical considerations. In the Salford case, the dealer whose milk was questioned in court, came off with flying colours, as he produced a card suspended in his shop, inscribed with the words, "This is sold as a mixture of milk and water, not injurious to health". On the other hand, the less accurate milk-seller at Newport was shown to be in the habit of largely diluting his milk with water from a brook into which soil-pipes discharged. He was heavily fined. There is here, no doubt, a marked distinction. If, however, milk-sellers, who dilute their milk thus considerately, wish completely to reassure their customers, we ought to be provided with an analysis, not of the milk for being duly watered—we may accept that as a mixture of which we may consider the flavour rather than the nutritive value—but of the water. All chemists tell us that water most sparkling to the eye and agreeable to

palate may be precisely that which is most dangerous; and, under these circumstances, the Salford magistrate, before acquitting the scientific milk-vendor, should have been a little particular as to the source of the water, however lenient as to the richness and quality of the milk.

DEATHS IN PUBLIC INSTITUTIONS.

We gather from the Quarterly Return of the Registrar-General, that the deaths that occurred during April, May, and June in England and Wales in workhouse establishments, hospitals, and public lunatic asylums, were 13,535, or 10.2 per cent. of the total deaths registered during the quarter: the average proportion in the nine preceding corresponding quarters was but 9.4 per cent. In the twenty large towns, 6584, or 16.1 per cent., of the deaths occurred in these public institutions, against 16.2 and 15.7 per cent. in the corresponding quarters of 1877 and 1878. The proportion of deaths in institutions in these towns last quarter ranged from 7.5 and 8.6 in Sunderland and Leeds respectively, to 16.3 in Wolverhampton, 18.2 in Manchester, and 19.2 in London. Excluding the twenty large towns, the proportion of deaths in institutions in the rest of England and Wales did not exceed 7.6 per cent.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The proceedings of the forty-ninth annual meeting of this Association commenced at Sheffield on Wednesday last. The chair was taken by the retiring President, Mr. W. Spottiswoode, F.R.S., who introduced his successor, Professor G. J. Allman, M.D. Dr. Allman delivered a presidential address, in which he gave an account of the most generalised expression of living matter, and of the results of the more recent researches into its nature and phenomena. The animal sarcode of Dujardin, and the vegetable protoplasm of Hugo von Mohl, had been demonstrated by Schultze to be identical; and his conclusions had been confirmed by subsequent research; and it had been shown that this protoplasm lies at the base of all the phenomena of life, whether animal or vegetable. Dr. Allman then proceeded to give an account of protoplasm and of the modifications to which it is subject. In his concluding remarks, he said:

"In protoplasm, we find the only form of matter in which life can manifest itself, and though the outer conditions of life —heat, air, water, food—may all be present, protoplasm would still be needed, in order that these conditions may be utilised.....We are thus led to the conception of an essential unity in the two great kingdoms of organic nature—a structural unity, in the fact that every living being has protoplasm as the essential matter of every living element of its structure, and a physiological unity in the universal attribute of irritability which has its seat in this same protoplasm, and is the prime mover of every phenomenon of life. Form has little to do with the essential properties of protoplasm.....To suppose, however, that all protoplasm is identical where no difference, cognisable by any means at our disposal, can be detected, would be an error. Of two particles of protoplasm, between which we may defy all the power of the microscope, all the resources of the laboratory, to detect a difference, one can develop to a jelly-fish, the other to a man; and one conclusion alone is here possible: that deep within them there must be a fundamental difference which thus determines their inevitable destiny, but of which we know nothing, and can assert nothing, beyond the statement that it must depend on their hidden molecular constitution.....Life is a property of protoplasm. In this assertion, there is nothing that need startle us. The essential phenomena of living beings are not so widely separated from the phenomena of lifeless matter as to render it impossible to recognise an analogy between them; for even irritability, the one grand character of all living beings, is not more difficult to be conceived of as a property of matter than the physical phenomena of radial energy. Though the refined synthesis of modern chemistry may have succeeded in forming a few principles which, until lately, had been deemed the proper product of vitality, the fact still remains that no one has ever yet built up one particle of living matter out of lifeless elements—that every living creature has its origin in pre-existent living matter—that the protoplasm of to-day is but the continuation of the protoplasm of other ages.....When, however, we say that life is a property of protoplasm, we assert as much as we are justified in doing. Here we stand upon the boundary between life in its proper conception, as a group of phenomena having irritability as their common bond, and that other and higher group of phenomena which we designate as consciousness or thought, and which, however intimately connected with those of life, are yet essentially distinct from them.....The chasm between unconscious life and thought is deep and impassable, and no transitional phenomena can be found by which, as by a bridge, we may span it over; for even from irritability, to which, on a superficial view, consciousness may seem related, it is as absolutely distinct as it is from any of the ordinary phenomena of matter. It has been argued that, because physiological activity must be a property of every living cell, psychical activity must be equally so, and the language of the metaphysician has been carried into biology, and the 'cell-soul' spoken of as a conception inseparable from that of life. That psychical phenomena, however, characterised as they essentially are by consciousness, are not necessarily co-extensive with those of life, there cannot be a doubt. How far back in the scale of life consciousness may exist, we have as yet no means of determining. Certain it is that many things, to all appearance the result of volition, are capable of being explained as absolutely unconscious acts; and when the swimming swarm-spore of an alga avoids collision, and, by a reversal of the stroke of its cilia, backs from an obstacle lying in its course, there is almost certainly in all this nothing but a purely unconscious act.....But, even admitting that every living cell were a conscious and thinking being, are we therefore justified in asserting that its consciousness, like its irritability, is a property of the matter of which it is composed? That consciousness is never manifested except in the presence of cerebral matter, or of something like it, there cannot be a question; but this is a very different thing from its being a property of such matter in the sense in which polarity is a property of the magnet, or irritability of protoplasm. .....The power of conceiving of a substance different from that of matter is still beyond the limits of human intelligence, and the physical or objective conditions which are the concomitants of thought, are the only ones of which it is possible to know anything, and the only ones whose study is of value. We are not, however, on that account, forced to the conclusion that there is nothing in the universe but matter and force. The simplest physical law is absolutely inconceivable by the highest of the brutes, and no one would be justified in assuming that man had already attained the limit of his powers. Whatever may be that mysterious bond which connects organisation with psychical endowments, the one grand fact—a fact of inestimable importance—stands out clear and freed from all obscurity and doubt, that, from the first dawn of intelligence, there is, with every advance in organisation, a corresponding advance in mind. Mind as well as body is thus travelling onwards through higher and still higher phases; the great law of evolution is shaping the destiny of our race; and though now we may at most but indicate some weak point in the generalisation which would refer consciousness as well as life to a common material source, who can say that, in the far-off future, there may not yet be evolved other and higher faculties from which light may stream in upon the darkness, and reveal to man the great mystery of thought?"

DEATH OF A VETERAN OF THE ARMY MEDICAL DEPARTMENT.

Surgeon W. H. Young, of the Army Medical Department, who served during the Peninsular war and at the battle of Waterloo, died at Wrington, Somerset, on the 12th instant. Surgeon Young was born in the year 1786, and was consequently in his 93rd year of age at the time of his death. He entered the army in December 1811; and the official record of his military service shows that he was on active duty in the Peninsula from March 1812 to January 1813, including the last siege of Badajoz and battle of Salamanca. He was subsequently engaged in the campaigns of 1813, 1814, and 1815, in Germany, Holland, and the Netherlands, and took part in the attack on Bergen-op-Zoom and the battle of Waterloo. For these services he received the Peninsula medal with two clasps, and the Waterloo medal. After the conclusion of peace, Surgeon Young served for some years with the 28th Regiment in India, and ultimately retired from the army on half-pay in November 1854. He was one of the eight medical officers of the army receiving a pension of £100 a year for meritorious service, so that this reward is now at the disposal of the Director-General.

THE NEW SYDENHAM SOCIETY.

The annual meeting of this Society was held in Queen's College, Cork, on Friday, August 8th; W. D. Husband, Esq., Vice-President, in the chair. The report of the Council was read and adopted. It stated that it was intended to publish a translation, made under the supervision of Professor Lister, of Koch's Researches in the Etiology of Diseases consequent on Wound-Infection; a volume of selections from the

works of Duchenne of Boulogne; and a volume of selections from Billroth's Surgical Clinic. Arrangements were also being made for the publication, in two volumes, of Cohnheim's Lectures on General Pathology. The Council hoped to be able to publish the second volume of M. Charcot's Lectures next year. The first part of the Lexicon having been printed with a too narrow margin, the Council had it reprinted on larger paper; and suggested that the part already in the hands of members might be used as a means of obtaining new subscribers. The financial statement showed a balance in hand on December 31st, 1878, amounting to £1082 13s. The following officers and Council were elected for the ensuing year. *President:* Prescott G. Hewett, Esq., F.R.S. *Vice-Presidents:* *R. Barnes, M.D.; Sir G. Burrows, F.R.S., Bart.; R. W. Falconer, M.D., D.C.L. (Bath); W. D. Husband, Esq. (York); E. Long Fox, M.D. (Bristol); *W. T. Gairdner, M.D. (Glasgow); Cæsar H. Hawkins, Esq., F.R.S.; *T. Holmes, Esq.; Joseph Lister, Esq., F.R.S.; *D. C. O'Connor, M.D. (Cork); Sir James Paget, F.R.S., Bart.; A. P. Stewart, M.D.; T. Grainger Stewart, M.D. (Edinburgh); Sir Thomas Watson, M.D., F.R.S., Bart.; Hermann Weber, M.D. *Council:* *T. Barlow, M.D.; W. H. Broadbent, M.D.; T. Buzzard, M.D.; A. Carpenter, M.D. (Croydon); W. Cholmeley, Esq.; W. Colles, M.D. (Dublin); R. M. Craven, Esq. (Hull); J. Langdon H. Down, M.D.; Dyce Duckworth, M.D.; A. E. Durham, Esq.; J. Matthews Duncan, M.D.; John Easton, M.D.; Sir J. Fayrer, M.D.; C. J. Hare, M.D.; *G. E. Herman, M.D.; *George Johnson, M.D.; J. Hughlings Jackson, M.D., F.R.S.; *H. Macnaughton Jones, M.D. (Cork); J. C. Langmore, M.B.; *P. W. Latham, M.D. (Cambridge); J. W. Moore, M.D. (Dublin); G. V. Poore, M.D.; P. H. Pye-Smith, M.D.; S. W. Sibley, Esq.; J. K. Spender, M.D. (Bath); T. P. Teale, Esq. (Leeds); W. Turner, M.B., F.R.S.E. (Edinburgh); J. Walters, M.B. (Reigate); James West, Esq. (Birmingham). *Treasurer:* W. Sedgwick Saunders, M.D. *Auditors:* E. Clapton, M.D.; S. Fenwick, M.D.; F. M. Corner, Esq. *Honorary Secretary:* Jonathan Hutchinson, Esq. (Those marked with an asterisk were not in office last year.)

INFLUENCE OF SINGING UPON THE HEALTH.

THE *St. Petersburgh Weekly Medical Journal* writes:—Professor Manassein of this city has published the result of a most interesting inquiry in which he has been engaged. He has made an examination of two hundred and twenty-two singers, varying in age from nine to fifty-three years, with particular reference to their chest-measurement and pulmonary condition, as compared with persons who are not singers. He finds that the size of the chest is greater among singers than other classes, and that the relative advantage increases with the age of the vocalists. Among singers who drink, he is convinced, the habit prevents the due development of the chest. The vital capacity of the lungs is also greater in vocalists than in other persons. Singers often suffer from soreness of the top of the throat, but seldom from bronchial catarrh; and the mortality from phthisis among them is, therefore, small. Vocalists, both drinkers and non-drinkers, are, however, more subject to Bright's disease than people who do not sing. Singing is an excellent prophylactic for incipient consumption; and, as a means for the the development and strengthening of the chest, is more efficacious than gymnastic exercises.

WATER-SUPPLY.

THE bad condition of the London water during July is confirmed by the Registrar-General, who states that Dr. Frankland reports, as the result of his analyses of the waters supplied to the metropolis during July, that, taking the average amount of organic impurity in a given volume of the Kent Company's water, during the nine years ending December 1876, to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other Companies, and by the Tottenham Local Board, was: Colne Valley 1.3, Kent 1.4, Tottenham 1.8, New River 4.5, Chelsea 4.8, Lambeth 5.6, East London 6.2, Grand Junction 6.5, Southwark 6.6, and West Middlesex 6.7. The Thames water supplied by each of the five Companies drawing their supply from that source was much polluted with organic impurity, and was unfit for dietetic purposes. The West Middlesex Company's water was, moreover, "slightly turbid and contained moving organisms". The Lea water delivered by the New River and East London Companies was only slightly superior to the Thames water; the New River water was "slightly turbid, owing to suspended crystals of carbonate of lime". The deep-well waters delivered by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were, as usual, clear and bright, and of excellent quality.—Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town, although clear, contained a larger amount both of solid and organic impurity than that supplied in recent months.—Dr. Mills reports that the Loch Katrine water delivered in Glasgow contained "much suspended matter, together with a decided amount of iron".

INTERNATIONAL QUARANTINE.

AT a conference of the Association for the Reform and Codification of the Law of Nations, assembled last week in the Council Chamber, Guildhall, Sir Travers Twiss in the chair, Sir Sherston Baker, Bart., read a paper on the International Rules of Quarantine; and, as a brief outline of his suggestion, with reference to plague, yellow fever, and cholera, propounded a scheme drafted in the form of forty articles, setting forth that an international bill of health might be granted by the ocal authority of the port of departure to every vessel, to be delivered up by the vessel at the ultimate port of destination. The scheme further contained the following provisions. The bill of health should be *viséd* at the port of departure by the consul representing the port of destination in such terms as he might think fit; and a similar *visé* should be required at every port touched at, both from the local authority and from the consul representing the port of destination. This bill of health should be accepted in all ports of the high contracting parties. A foul bill of health, or a case of disease past or present on board, or the fact of any port having become infected within a limited time after the departure of a vessel from it, should entitle the local authority of the port of arrival to place the arriving or touching vessel in quarantine, according to a certain scale containing a maximum and a minimum period of quarantine; it being optional to every State to adopt any period within these limits. Every State should preserve its own municipal quarantine system, except on such points as might nullify or contradict these articles. Measures of disinfection for passengers, crew, and cargo should be required, but in every case it should be left to the municipal regulations to supply the details. Lazarets and hospital-ships should be provided in sufficient number, and should be regulated according to the best sanitary principles, but again the details should be left to the municipal authority. To avoid the necessity of placing a whole State in quarantine, especially where a State comprised distant colonial possessions, each country should be divided by its own Government into territorial divisions, to be termed quarantine centres. Each State should guard rigidly against any infected centre, and should place the same in quarantine. The matter was referred to a committee for examination: it may be doubted, however, whether forty such regulations are worth a cake of soap.

WATER IN PHILISTIA.

THE authorities at the Alexandra Palace have given hospitality to the plans, models, specimens, maps, filters, etc., relating to water-supply, which have for some time been on view at the Westminster Aquarium. The first necessity of health, and a main element (if not the main element) in the prevention of a vast mass of zymotic disease—typhoid, cholera, and diarrhœa—is the provision of a pure water-supply. This has been the great discovery of modern preventive medicine. It is slowly penetrating the minds of the educated classes; is making its way into the legislative intelligence; filtering into the unabsorptive parts which do duty as minds to the local sanitary authorities of the country; and may ultimately become the cherished conviction of rate-payers. The adoption of a "water-supply museum", as a thing worthy of house-room under any circumstances at the Alexandra Palace, the paradise of small cockneys and East-end fashionables, proves that the great

Philistine stratum in this metropolis—to which we owe so much of good and of evil—is being reached; and that, perhaps, ultimately the small rate-payer, who inhabits the back streets of the poorer suburbs, may be brought to understand that a water-butt is not a thing intended by nature to be left in a backyard uncovered, exposed to pollution by every kind of aërial or volatile abomination (not to speak of accidental solid impurities), and that it needs to be covered, and cleansed once a quarter at least. Mr. Sclater-Booth said rightly that, if the Londoners, who are just now so hard—and not unwisely hard—on the water companies, would show their appreciation of the necessity of having clean drinking-water, by cleansing their water-butts and allowing the waste-pipes to pass out into the air and not into the soil-pipes, a great part of the present drinking-water difficulty would be solved without expense. But it is much more easy for the British householder to grumble at others than to protect himself; and some of the richest clubs and most distinguished residents of London are much more active in abusing the water-supply of the metropolis than in taking care that the excellent water, which one or two of the London companies supply, is not fouled by the neglect of their own cisterns and the evil communications of their waste-pipes. Of this, we could give some melancholy and some amusing instances.

THE PELLAGRA.

In a Blue-book recently presented to Parliament, containing consular reports for the past year, reference is made to an extraordinary number of cases of this disease which have occurred in the Venetian provinces. From the source mentioned, we learn that pellagra prevails only amongst those peasants who are badly fed, clothed, and housed, and who almost exclusively subsist upon maize flour. The characteristic symptoms are an exfoliation of the epidermis and mucous membranes, together with a general loss of power over the muscular system. A Commission which was appointed in Mantua to examine into the subject addressed a communication to all the syndics of the provinces, suggesting that special asylums should be provided, and asking for information on various points bearing reference to the disease. There is first a redness, with desquamation of those parts more exposed to the sun, together sometimes with blisters and blains, followed by a similar condition of the mucous membrane of the mouth and throat, with severe and obstinate diarrhœa. The patients rapidly become weak and emaciated, and in addition to other troubles the faculties of sight and hearing are implicated. The mind also becomes deranged, the insanity occasionally assuming the form of a merry folly, or of a ferocious frenzy with tendency to crime. The duration of the malady is several years, marked by recurrent fits lasting several months. Death is usually from diarrhœa. *Post mortem* examination has given no very definite results. Pellagra is hereditary, and the skulls of the descendants are generally deformed, while cases of rickets, scrofula, etc., are frequently met with. The disease was first described by Mr. Casal, a physician of the Asturias, where it was endemic, who, writing in 1755, described pellagra under the name of "mal della rosa", given to it by the peasants on account of the reddish colour of the skin of those affected. It has also been termed "La miseria rurale" (the rural misery), in reference to the condition of the destitute country labourers who are the subjects of its attacks. The disease at present exists in Spain, Italy, France, Roumania, the Banat, and the Danubian principalities; the condition common to all of these countries being the almost exclusive consumption of Indian corn-flour by the peasantry. Now, the analysis of Indian corn shows a deficient quantity of albuminoids as compared with wheat, while there is an excess of non-nitrogenous matters. In conclusion, the Commission recommends certain measures having for their object to remedy the present state of the peasantry.

HOME HOSPITALS FOR PAYING PATIENTS.

"An Old Fidget" describes in a picturesque and graphic fashion this week his sufferings in private chambers during seven months of illness. He wore out the patience of six nurses. "Perfect quiet, the best of nursing, and nourishment every two hours", was the doctor's prescription; and in this "four doctors agreed". The nourishment was at command. From accounts since rendered, he finds that he consumed the concentrated essence of many oxen; and the wine-merchant's bills speak eloquently. But the nurses, allowed the run of the chambers, supervised only by a comatose patient, proved to be frail creatures; and, for "quiet", there was the roar and rattle of a thousand wheels surging against the windows, in a competition between the roar of Niagara and of London. Niagara would be nowhere. There remained the alternative of a hospital; but this pathetic sufferer of "the paying classes" had lived—like how many others—for years alone. "I am", he says, "a poor, nervous, fidgety creature. I sicken at the sight of blood; bad smells make me feel faint. I have a physical horror of dead people; I have never seen a man die, and hope I never shall." Besides, paying wards do not exist in any London hospital for middle-class people, and are never likely to exist, for reasons too cogent to be easily combated, and too trite to need to be repeated. He wants, too, a place "that is as free as an hotel, where he can choose his room, pay his money, and be ill at his leisure". Had this been possible, he believes his weary seven months' illness might have been reduced to two. All this would have been at his command in virtue of the organisation of the Home Hospital Association, which aims precisely at meeting this want, but for the course taken by Lord Portman, who has disputed the right of the Association to employ for such a purpose a house on his estate, of which the lease was purchased some months ago for the use of members of the Association. Proceedings in Chancery were instituted by Lord Portman to prevent the completion of this most useful and publicly important scheme, and they are still pending, after much vexatious delay. The Association were, of course, in the first instance, confident that they were strictly within their legal right, and are so still; and it is, at any rate, much to be regretted that vexatious delays and obstacles should thus be thrown in the way of opening a house which would not be a nuisance if it were situated in a Belgrave Square or next door to Buckingham Palace. No sort of infectious disease will be admitted into the proposed home, ample provision at present existing for the purpose of fevers and infectious diseases occurring among persons of the middle class in the comfortable private apartments of the Fever Hospital; and the opposition, due in the first instance to unnecessary alarm and defective information of some of the neighbours of the proposed home, is very greatly to be regretted.

SCOTLAND.

LUNACY COMMISSIONERS' REPORT.

The twenty-first annual report of the Commissioners in Lunacy for Scotland has just been issued, and contains much valuable information. The Commissioners mention, with regret, the death of Sir James Coxe. The vacancy on the board caused by his death has been filled by the appointment of Dr. John Sibbald; and the vacancy caused by his elevation has been filled up by the appointment of Dr. Robert Lawson, formerly of Wonford House Asylum, Exeter. Exclusive of unreported lunatics in private dwellings, the Commissioners have official knowledge of 1,578 maintained from private sources, 7,751 from parochial rates, and 57 at the expense of the State. The following changes have occurred during the past year. In royal and district asylums, there was an increase of 11 private, and 192 pauper, patients; while in private asylums, there was a decrease of 6. There was no pauper patient in any private asylum. In parochial lunatic asylums, there was an increase of 47; in lunatic wards of poor-houses, an increase of 13; and in the General Prison at Perth, an increase of 2. In training schools for imbeciles, there was an increase of 2 private, and 13 pauper, inmates. The whole increase of registered lunatics during 1878 was 272, of whom 7 were private, and 265 pauper, patients. The ratio of recovery in

private and in other asylums was about equal. The number of deaths in private asylums was greater proportionately than in other asylums; but the Commissioners hold it would not be safe to draw an inference from this fact to the disadvantage of private asylums. In the reports on the royal and district asylums, it is stated that Ayr District and Perthshire District Asylums are overcrowded.

HEALTH OF THE LARGE TOWNS IN JULY.

IN the eight large towns of Scotland, during the month of July, there were 1,979 deaths; of these, 998 were females, and 981 males. This is the smallest number of deaths registered any July since 1862, and is actually 586 lower than the average of the last ten years. The death-rates per thousand in the respective towns were: Greenock, 16; Aberdeen, 17; Edinburgh and Dundee, 18; Glasgow, 19; Leith, 20; Perth, 22; and Paisley, 29. Thirty-nine per cent. of all the deaths were of children under five years of age; the lowest death-rate being 27 per cent. in Perth, and the highest being 57 per cent. in Leith, of such children: 13.3 per cent. of the mortality was due to zymotic diseases. Of 263 deaths, 60 were due to whooping-cough; while it is noticeable that the number of deaths from diarrhœa had risen to 56, and from dysentery to 4: 118 deaths were from cardiac disease, and 70 from premature birth-debility. Phthisis caused 256 deaths, equal to 12.9 per cent. Other inflammatory affections of the respiratory organs caused 347 deaths, or 17.5 per cent. There were registered during July, 3,863 births, 1,936 being females, and 1,927 males. The mean barometric pressure was less by .211 inch; the mean temperature less by 2.7°; and the rain greater by 1.86 inch than during the average of the same month during the twenty-two preceding years.

POISONING BY LAUDANUM.

ON Thursday afternoon last week, a woman in Glasgow, named Carson, having purchased four-pennyworth of laudanum (half an ounce), swallowed it, when she was seriously ill from it. After having been seen by two medical men, she was removed to the infirmary, where she died the next day.

EXTENSION OF THE WATER-SUPPLY AT AYR.

A LARGE extension of the waterworks at Ayr, which was rendered necessary by the increase of the town, has been in progress for some time past, and has now been completed by the ceremony of turning on the water into the new reservoir. This reservoir is situated at a distance of five miles from Ayr. Its area is five and a half acres, depth twenty-five feet; and it will store 20,000,000 gallons. The old reservoir adjoins it, and is about half the size of the new, the united capacity of both being 30,000,000 gallons. A large new filter has also been erected, forty-five feet square, having three filter-beds. The cost of the entire works is £7,000.

HEALTH OF GLASGOW AND HILLHEAD.

THE death-rate of Glasgow for the past week is reported as 15 per 1,000 per annum, being the lowest recorded in the sanitary annals of the city. In the corresponding week of the previous year, it was 21. The burgh of Hillhead Medical Officer's report for the month of July states the death-rate to be 9.53 per 1,000 of the estimated population. During the year, the burgh has been remarkably free from epidemic disease, there having been only two deaths from diseases of this class in January.

THE FILTRATION OF SEWAGE.

A VERY important contribution towards the solution of the question, how best to deal with the sewage of our large towns, is being carried out in Govanhill, one of the suburbs of Glasgow. A tenement, containing twelve separated dwellings, has been fitted up with one of Strang's patent sewage-filters. It is an oblong box, three feet long, eighteen inches broad, and three feet six inches deep, and it is divided into three spaces internally; and as the inlet or soil-pipe is connected with the lowest, and the outlet-pipe with the highest, of these spaces or compartments, the sewage-water must pass upward through them. The filter under trial was fitted up last March, and the sanitary committee appointed in reference to the matter have now reported that the following points seem to have been established by the experiments with this filter. The effluent water appears almost clear, free from solids, and with scarcely any perceptible odour; the solid matter had been found to be of considerable value as a manure; the use of the filter involves no change or restrictions on the present closet system; its use requires the complete isolation of the sewage-pipes from the buildings to which it is applied from those adjoining, and so renders it impossible for sewer-gas to get into the buildings by the drains.

ANNUAL MORTALITY OF GLASGOW.

A PAMPHLET has just been issued by Dr. J. B. Russell, medical officer of health for Glasgow, which bears on the mortality of the city during the past year. The death-rate, it appears, was 25.7, which compares very favourably with the previous twelve months; while the birth-rate was 38 per 1,000. Of the causes of death, consumption and lung-disease were the most fatal. Infectious complaints have not been very rife, and during the last four years there have been only 22 deaths from small-pox. The pamphlet also points out that, basing the estimate on the number of inhabited houses, there has been an apparent check in the growth of the population of the city during the past three years. Attention is also directed to the deaths of children connected with friendly societies, and to the motives which prompt the enrolment of these unfortunates.

IRELAND.

LONGEVITY IN IRELAND.

IN the June quarter, the deaths of fifteen persons stated to have been one hundred years and upwards are referred to by the Registrars, viz., seven at 100 years; one each at 101, 102, and 103; two at 104; and one each at 105, 107, and 117 years. The deaths entered at 105 and 117 respectively took place in Coolmountain District, Dunmanway Union; and the Registrar states that he knows the former to be correct, but that the latter is doubtful.

POISONING BY CARBOLIC ACID.

A SWEDISH sailor died last week at Queenstown from having drank a quantity of carbolic acid in mistake for grog; while a companion of the deceased, who took a smaller amount, had a narrow escape. It appears that the carbolic acid was used on board for cleaning brasswork; but, by some great neglect, no poison-label was attached to the bottle containing the acid.

VACCINATION PROSECUTION.

AT a meeting of the Limerick Board of Guardians last week, Mr. Jacob, who has rendered himself notorious by refusing to have one of his children vaccinated, he having been twice summoned and fined for the offence, addressed the guardians, asking them not to take any further legal proceedings against him, as he had a conscientious objection to vaccination. Lord Clarina said that, if gentlemen were permitted to indulge in newfangled ideas on the subject of vaccination, the consequence might be a serious outbreak of small-pox; and it was ultimately decided by the guardians that the law agent should be directed to prosecute in the case.

SANITARY CONDITION OF IRISH DISTRICTS.

THE Registrars' notes in the report of the Registrar-General for Ireland for the June quarter, in reference to the sanitary state of their respective districts, disclose defects in water-supply, sewerage, and general sanitary arrangements in too many places. As heretofore, many registrars regret the existence of manure-heaps and cesspools in proximity to dwelling-houses, but some point out the difficulty of dealing with this evil in

consequence of the want of proper accommodation around the houses of the poor. For, until suitable dwellings with yard and ashpit at rear be provided, all night-soil and refuse matter must be placed in receptacles close to the dwellings.

QUEEN'S COLLEGE, BELFAST.

THE report of the President of this Institution for the session 1878-79 records a steady and encouraging increase in the number of the students. During the year ended July last, 500 students have been in attendance, of whom 131 were in the Faculty of Arts, 14 in the Department of Engineering, 20 in the Faculty of Law, 324 in the Faculty of Medicine, and 11 were students attending various courses of lectures. An increase of 43 took place in the number of those attending the medical lectures from that of the preceding session. The report draws attention to the success which has attended the introduction of summer classes into this College in accordance with the rules and regulations adopted by the Council. In 1866, summer classes chiefly for the use of medical students were opened for the first time in the Queen's College, Belfast; for two years they were limited to botany and practical chemistry, but experimental physics, medical jurisprudence, and midwifery were subsequently added. The transfer of these courses from an earlier period of the session to summer has proved of great advantage to the medical students, who had previously suffered from the overcrowding of subjects within the limits of the ordinary college session. The President records his conviction that the perfect practicability and public advantage of united education, carried on within the same walls and in the same lecture-rooms, has been year after year tested and established in all the departments of this College. Professors and students of the various religious denominations meet and mingle there, exercising towards one another all due respect for the rights of conscience, forming friendships that endure, and affording a salutary example that a fixed adherence to religious opinions is perfectly compatible with all the charities, engagements, and amenities of public and social life.

THE PHARMACEUTICAL SOCIETY OF IRELAND.

TWO firms in Dublin were prosecuted by the above Society last week for having, contrary to the provisions of the Pharmacy Act of 1875, they not being registered as members of the Society, or as chemists and druggists, compounded and sold certain prescriptions, contrary to the provisions of the thirtieth section of the Act. In the first case, the defendants, having admitted the offence, for which they expressed regret, were fined in the nominal penalty of ten shillings. In the second case, it appeared that the prescription in question, one for pills and a lotion, was not made up in the defendant's shop—a drug-hall—but that, according to the custom followed in the establishment, it was taken by an assistant out by the private hall-door of defendant's house to a well-known chemist's in the neighbourhood, and there compounded. The pills were then put into a different box, and the label on the bottle of lotion changed. The sale of the medicine having been proved, the defendant was fined £5 and £3 10s. costs. An appeal, however, has been lodged, as the defendant claims exemption for the selling upon which he was fined under the thirty-first section of the Act, which, he states, reserves all rights previously enjoyed by persons in business at the passing of the said Act. In any case, we are glad to see that the Society is beginning to exert itself in the performance of a public duty incumbent upon it.

THE LATE REGISTRAR-GENERAL FOR IRELAND.

WITH reference to the fatal illness of the Registrar-General for Ireland, a brief account of which appeared in last week's JOURNAL, we are requested to state that the serious nature of the affection from which Dr. Burke suffered was recognised from the first by the physician in constant attendance on him for the fourteen days his illness lasted. During the last week of the lamented gentleman's life, he was seen daily in consultation by both the eminent physicians whose names were mentioned last week.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.

THE annual temperance breakfast of the members of the British Medical Temperance Association took place on August 7th, at 8 A.M., in Faulkener's Lane, Cork.

In the absence of the President, B. W. RICHARDSON, M.D., F.R.S., Dr. NORMAN KERR presided. Amongst those present were: Dr. D. C. O'Connor, President of the British Medical Association; Dr. Alfred Carpenter, President of Council; Mr. Ernest Hart; Dr. Andrew Clark, and many others.

Dr. CARPENTER said it told wonderfully well for the progress of temperance to see such a gathering upon that occasion. He took it that all present were of opinion that alcoholic stimulants were not necessary, and ought not and need not enter into daily consumption. They, as medical men, knew full well there were plenty of other means by which they could treat disease without the aid of alcoholic stimulants, and that it was an evil which, if not grappled with, would lead their patients into habits of intemperance. There were, however, other things they should do besides thinking of remedies of that kind; they should take such measures as were absolutely necessary to be provided for the people, and to provide institutions which would supplant those too frequently visited by the working classes—the public-houses. There was in progress throughout the country a system which, he thought, would tend very much to counteract the progress of public-houses, and he had been told since he came to Cork that these institutions had been in operation there since 1866—he alluded to the coffee-houses. Although he could not pretend to speak in the name of the British Medical Association, and was only speaking as an individual member of it, yet it was something to know that the Executive Council did not taboo him from the position of President of their Council in consequence of his known temperance proclivities. There was a time when, if it became known that a man had these proclivities, he would be tabooed from office; but, notwithstanding that, the Association did him the honour of appointing him President of their Council. He took it as an indication that they believed that alcoholic stimulants were not necessary for the promotion of health or the preservation of life.

Dr. O'CONNOR said his duty was to return thanks on the part of the guests. Some of them, like himself, had not pledged themselves to temperance, but they practised temperance for their own health sake. For many years, his whole thoughts had been turned towards the deplorable influence of the use of intoxicating drinks amongst the classes of society that came under his notice in practice. He thought that by giving his unprejudiced opinion in private he might do good, and he was proud to say that he had done good; he had not alone saved life, but, what in society was more valuable than life, he had saved people's characters, and he had restored them to their families; he had made men who were cast down hold up their heads erect and face their duties in life, and he was more thankful for that than any other medical act of his whole life. He was glad to perceive that the opinions of medical men generally were becoming much more moderate than they used to be with regard to that very important question, and that, as had been stated by Dr. Carpenter, a man was not tabooed now for having moderate opinions on the subject. He did not discard the use of stimulants in certain stages of disease, but their great desire should be to try to moderate the opinion of the public on the subject. He concluded by remarking that their Chairman deserved the thanks of the Association for the deep interest he had at all times taken in the subject. He proposed: "That the thanks of the guests be given to the Temperance Association for their hospitality."

Dr. MACNAUGHTON JONES seconded the proposal. He said that they could not possibly overestimate the importance of such a meeting in a city like Cork; and he might remark that, were it not for Dr. Kerr, they would not have had that breakfast at all. Most of those present remembered the hospitality of Mr. Samuel Bowly, who most generously invited the whole Association to breakfast. Unfortunately, Mr. Bowly was unable to be present, and, in his absence, Dr. Kerr undertook the conduct of affairs. It would be strange indeed if they permitted a meeting of the British Medical Association to pass over without any expression of opinion on the temperance question in that city, in the principal street of which most of them must have noticed the statue of a man who was honoured throughout the length and breadth of Ireland—Father Mathew, to whom Ireland perhaps owed a deeper debt of gratitude than she did to any other individual or any of her sons. He boldly started the temperance cause, and no man, either medical or otherwise, need be ashamed to follow in his footsteps. There were some in that city who might not be aware of the exertions made in the cause of temperance by Dr. Norman Kerr, but in the temperance field his name was a household word. He thought the medical men of Cork

owed him a debt of gratitude, for an expression of opinion coming from such a man tended to elevate the tone of all who were inclined to look favourably on temperance.

Mr. ERNEST HART dwelt upon the practical measures that had been adopted for the repression of intemperance, and pointed to the successful starting of coffee-taverns in London, which afforded the working and middle classes every comfort without any of the dangers of the public-house. But they had in addition another evil to fight, and they were now attempting to combat intemperance and supply recreation for the working classes in places of sober influence by establishing a coffee music-hall in London.

The CHAIRMAN said: It is my pleasing duty to offer you all, in the name of the Council of the British Medical Temperance Association, our hearty thanks for the honour you have done us by your presence this morning. From the year 1830, when one of our Vice-Presidents, Dr. Daniel Richmond of Paisley, founded two of the earliest teetotal societies in Britain, up to the present hour, representatives of our profession have been among the standard-bearers of temperance. The first medical declaration, in 1839, drawn by Mr. Julius Jeffreys, and signed by seventy-eight leaders in medicine and surgery; the second, in 1847, signed by two thousand of the most distinguished physicians and surgeons; and the third, in 1871, originated by Professor Parkes, Mr. Ernest Hart, and Mr. Rae, and signed by nearly all the hospital staffs, have powerfully contributed to the revolution which is rapidly being effected in the medical mind and practice with reference to both the social and medical use of alcoholic beverages. The British Medical Temperance Association has, during the three years of its existence, made till recently little progress. We began our year's work with a total abstinence dinner at the Langham Hotel, London, attended by a numerous and distinguished company of guests; and, by the aid of several munificent friends of the cause, we have sent a copy of Dr. Richardson's address, with a blank form of application for membership enclosed, to every practitioner in the kingdom. We have also held the first of a series of quarterly scientific meetings, at which the results of recent French experimental researches on the differential toxic power of the alcohols were presented. The *Quarterly Medical Temperance Journal* will contain our proceedings, and a copy is sent to each member. We do not meddle with extraneous questions, such as alcohol as a medicine, each member being as free to prescribe alcohol as profusely as if he were not an abstainer. Our only bond of union is "Personal Abstinence from the Social Use of all Intoxicating Liquors". To this happy revolution, the fearless utterances of Dr. O'Connor in his presidential address on Tuesday last will largely contribute. It is already conceded to the profession that intoxicating liquids are not a necessity of healthy existence, and even our foremost apologists for alcohol defend its use only in very limited quantity, and never between meals, except on rare occasions of extreme mental or bodily exhaustion. Our Medical Temperance Association is a standing protest against the sanction of the educated classes to those drinking customs, and that unwise legislation which have brought upon us the stain and disgrace of our national sin of intemperance. Whoever may be wrong, we who socially abjure alcohol must be right. We commit a breach of no professional code of honour, we violate no law of either God or man by our practice of abstinence; and I, for one, deem it a high privilege, as well as an imperative duty, to adopt any lawful mode of living which has been blessed by God in the rescue of ten times ten thousand despairing ones, who, but for abstinence, would have made utter shipwreck of health and home and happiness and Heaven. In view of the terrible extent in all classes of the great evil against which we contend, I feel that I cannot carry on my professional work amongst either rich or poor except as an abstainer. Lighter in pocket I am, but lighter too in conscience, stronger in health, clearer in mind, able now to look the most degraded dipsomaniac straight in the face with a confidence to which I was formerly a stranger, and invite him to stand with me on the safe platform of abstaining sobriety. If you do likewise, you will not only experience the truth of the utterance of Seneca, "Happy is that man who eats only for hunger and drinks only for thirst"; but, when recalling to mind the drunkards you have been the honoured instruments in the course of your professional avocation of saving, you will be able to apostrophise temperance in the language of Oliver Wendell Holmes:

> "Entranced while we summon the phantoms around us
> That blush into life at the sound of thy name."

And, while benefiting others, you yourselves will be benefited. Your capacity for work will be increased, and your enjoyment of the refined pleasures of life sensibly heightened. Here in Ireland, where George Cheyne and Joshua Harvey of Dublin, two honoured members of our profession, set to work in 1829 to advocate temperance—here do I most earnestly appeal to you to give the claims of our Medical Temperance Association your careful and candid consideration. No fitter spot on earth for entering on a temperance career than the city made illustrious for ever by the life and labours of Theobald Mathew. Our mission, as members of the great profession of medicine is too lofty, the call to arms in our nation's desperate struggle with intemperance is too urgent for us to loiter by the way or cast even a passing glance on the lions in the path. To the muster of the army of abstinence, humanity, patriotism, religion, and honour loudly summon us; one hundred and sixty-eight of us, few in number, but strong of purpose, have obeyed our country's call, and have resolved, courting no man's favour and fearing no man's frown, come weal come woe, come gain come loss, come success come failure, to avow ourselves abstainers to the profession and to the world. Patients may desert us because we, by the powerful influence of silent example, record an emphatic protest against their self-indulgence; but a higher motive than self-indulgence or self-interest urges it on. The only applause we look for is the approval of an enlightened conscience, the only privilege we seek is the possession of the courage of our convictions, the only reward we aspire to is the fulfilment of duty, for well we know that, in the noble words of the poet-laureate—

> "Not once or twice in our fair island story
> The path of duty was the way to glory;
> He, that ever following her commands,
> On, with toil of heart, and knees, and hands,
> Through the long gorge to the fair light has won
> His path upward and prevailed,
> Shall find the toppling crags of duty scaled
> Are close upon the shining table-lands
> To which our God Himself is moon and sun."

Dr. HOLDSWORTH (Wakefield) gave his experience of the successful treatment of the insane without the use of alcohol; after which the proceedings terminated.

IRISH GRADUATES' ASSOCIATION.

THE annual meeting of this Association was held on August 6th, at Cork, in Queen's College, Mr. W. MAC CORMAC, President, in the Chair. The report of the Council was read and adopted.

The PRESIDENT proposed: "That this association desires to record its opinion that the Queen's University in Ireland has proved a valuable institution, and that the *status* and value of degrees possessed by graduates of the Queen's University will be seriously impaired, should the proposed disestablishment be carried out in this instance, a course which would be unprecedented in this country; and that a copy of this resolution be forwarded to the Home Secretary." He said it was a hard case for them who were Graduates of the Queen's University, to lose their *Alma Mater*, and it appeared to him very questionable justice to deprive them of their rights under existing circumstances, although probably any expression of opinion on their part would not have the effect of altering the action of the Government on the subject. He could not but think that the medical degrees, which they had received from the Queen's University, would, if the proposed disestablishment were carried out, lose very considerably in public estimation. He thought it was right on this occasion that they should place on record the feelings of injustice they entertained in regard to this matter, and if they thought with him he would ask them to vote for the resolution which he had proposed.

Dr. MACNAUGHTON JONES seconded the resolution. He said that, occupying as he did a position in the teaching body of the Queen's University, of course it was perfectly obvious that he must regard the resolution now before them as a very important one. He agreed with every word that had fallen from the President with reference to the danger which at present threatened the graduates of the Queen's University, and also the value of the degrees of that University. Though, perhaps, the time was now gone by when they could take any effectual action with reference to this proposed movement, still he was of opinion that no meeting of Irish graduates should take place without placing on record some resolution such as the present, giving expression to the degree of alarm with which they regarded the present attempt to deprive the Queen's University of its just rights. He thought that the resolution contained nothing but what anyone outside would regard as perfectly true and correct. The Queen's University had in the past faithfully discharged its duties to the public and particularly to the medical profession; and certainly not alone in the Cork College, but elsewhere, the teaching body, the graduates, and all connected with the University ought to regard the present attempt to deprive them of their rights as a very serious one, and they could not possibly estimate what might be the after consequences to the Queen's University if the measure now being proposed were carried out. They were in that unfortunate position that they knew very little from the present bill, but in a short time they might know a great deal more.

Dr. JACOB (Dublin) said he did not wish to enter into his reasons or

to move an amendment, but in justice to his own conscience he could not sit there without expressing his dissent from the terms of the resolution.

Dr. M'KEOWN (Belfast) expressed his surprise that anyone interested in the collegiate institutions of this country should say a single word against the resolution, or against the position of the Queen's University in Ireland. No matter in what respect the Dublin schools might be conducted, the teaching was conducted in the Belfast, Cork, and Galway colleges in a manner calculated to lead the students into the fullest sources of information, and to give them the fullest benefit of lectures. He looked upon the whole system of the Queen's University as an admirable system. As regarded medical matters, they did not want the interference of the clergy or of any political party, and in justice to them the Queen's University should be maintained, and the system of education should not be changed in the slightest degree.

Dr. B. FOSTER (Birmingham) thought there was a great deal to be said for the proposed changes, yet, on an occasion like this, they ought to sink individual opinions in order to help those who were in sore need at the prospective loss of their *Alma Mater*.

Dr. PIERCE (Manchester) also supported the resolution, which was passed.

The TREASURER (Dr. Foster) reported that the funds of the Association were in a favourable condition. A balance remained over from last year, and there were due in respect of the current year, seventy-eight subscriptions.—On the motion of Dr. JACOB, the Treasurer's report was adopted.—Dr. WATERS (Chester) proposed a vote of thanks to the retiring President, Mr. William Mac Cormac, to whom he paid a very warm compliment.—Dr. FOSTER seconded the vote of thanks, which was passed.

Dr. THOMPSON (Leamington) proposed that the President for the next year be Dr. George Edward Paget, F.R.S., of Cambridge. The proposition was seconded by Dr. OAKES, and passed unanimously.

On the motion of Dr. VANCE, it was decided to hold two meetings next year, one in London, on St. Patrick's Day, and one at Cambridge on the occasion of the annual meeting of the British Medical Association.

On the motion of Dr. STEWART (Bristol), seconded by Dr. HADDEN, a vote of thanks was passed to Dr. Foster, the Treasurer. Votes of thanks were also passed to the Council of the British Medical Association, and to the President and Local Reception Committee, and the Honorary Local Secretary, for their assistance to the Association.

In the evening, a dinner was held. Mr. Mac Cormac occupied the chair, Dr. Foster and Mr. Thompson of Leamington acting as croupiers; and about fifty members and guests sat down. Among others present were Professor Charcot; Dr. Waters, Chester; Dr. A. Carpenter, President of Council; Professor Yandell; Professor Pacchiotti, Turin; Dr. Fancourt Barnes; Captain Slater; Dr. Vance; Dr. Fegan; Dr. Pollock; Professor H. M. Jones; Dr. Sigerson, Dublin; Dr. Waters, Chester; Dr. Bodington, Kingswinford; Dr. M'Keown, Belfast; Dr. Stewart, Clifton; Dr. Broadbent, Durham; Dr. Malins, Birmingham; Dr. Oscar Woods, Killarney; Dr. Southey, London; Mr. Nicholson, Hull; Mr. Wright Baker, Derby; Dr. A. H. Jacob, Dublin; Dr. Oakes; Dr. Walter; Mr. Ernest Hart; Dr. C. Y. Pearson, Cork, etc. The Chairman proposed "The Queen and the rest of the Royal Family" and "Our Guests", responded to by Professor Charcot, Dr. Yandell, and Dr. Johnston (Birmingham). In proposing "Our Elder Brethren", he said that the British Medical Association had aided them; they had met under its wing, so to speak, and with its strong arm it had helped them along, and they could do no less than return their cordial thanks to that Association for its kindness towards them. Their Association was chiefly formed through the philanthropic motives of their Secretary, in order to make Irishmen in England better known to each other. The toast was responded to by Dr. Carpenter and Mr. Ernest Hart. The health of the President was drunk with great cheering; and an entertainment marked by the most hearty and genuine hospitality and warmth of feeling was brought to a close.

RECENT OBSERVATIONS ON MUMPS.

MUMPS were known at very early period of medical knowledge. Hippocrates left us a very faithful and minute description of the disease. But a great diversity of opinion as to its nature and etiology has always prevailed among medical authors. Some, and among these several leading practitioners, consider the affection to be local, brought on by taking cold; while others are of the opinion that it is the local indication of some general affection whose places of predilection are the glands, such as the parotids and testicles in man, and the parotids, breasts, and sometimes the ovaries, in woman. Those who consider mumps as a local affection differ in their opinion as to whether the disease is caused by acute inflammation of the parotid gland or by retention of the saliva caused by some obstruction of Stenson's duct. The principal questions which remain to be elucidated on the subject are the following. Is it a local or a general affection? Is it either a miasmatic or a contagious disease, or both miasmatic and contagious at the same time? Ought it to come under the head of fevers which accompany eruptions, or is it a disease which belongs to an entirely new group?

Further light has been thrown on several of these questions, especially as far as infection is concerned, by an able thesis by Dr. Pinet of Paris, discussed in the *Journal des Connaissances Méd.*, January 1879. The author, an army surgeon, has had ample opportunity of studying the disease closely in French barracks (where it seems to occur epidemically), and of tracing it to its origin. After giving a historical sketch of the labours of his predecessors on the subject, Dr. Pinet very carefully enumerates and analyses a number of cases, and draws from them the following conclusions.

1. The affection must be considered as being general, not local; because, in certain cases, general symptoms have preceded the local ones, which manifested themselves in the form of affections of the parotids, testicles, prostatic gland, urethra, intestines, eyes, brain, etc. 2. It has never been known to occur twice in the same individual. 3. It occurs epidemically. 4. It is contagious.

As far as the etiology of the disease is concerned, the author ascribes it to miasmatic and contagious causes, which both infect the whole organism; but he does not exclude the possibility of infection caused by the medium of outward circumstances and surroundings or individual predisposition. He traces back to these influences the first impression caused by the zymotic germs on certain organisms, where they find a fertile soil that is ready to receive them; as well as to their predilection for certain organs. It is well known that inflammation of certain glands may either exist alone or follow in the rear of some other similar inflammation. The prevailing idea as to this affection is that, although painful, it is harmless; but the disease is known to have given rise to serious complications, among them atrophy of the testicles, which seems to occur much more frequently than has been suspected. It either affects only one testicle or spreads to both, reducing them to the size of a nut or almond. Another and not less dangerous complication is disease of the kidneys, which manifests itself as albuminuria, uræmia, and œdema of the skin and extremities, and generally appears when the swellings of the glands have begun to decrease. In some cases the patients have died of uræmia; in others, a milk-diet, combined with the internal administration of perchloride of iron, has proved successful.

The symptoms of mumps are not always clearly defined, so that often a doubtful case can only be diagnosed from the outbreak of an epidemic. Several such cases have been described by Dr. Penzoldt in the *Deutsche Medicinische Wochenschrift*, August 19th, 1878, of which we give here a short sketch.

CASE I.—The patient, a boy aged 8, had complained of feeling hot and uncomfortable, and of pain during deglutition. The temperature was 104.6 deg. Fahr.; but no distinct changes could be traced either in the fauces or on the body, except a moderate swelling of the submaxillary glands and their surroundings. The next day, the temperature had risen to 105. The left submaxillary gland was of the size of a pigeon's egg; the swelling had spread to the lower border of the left lower jaw. The right submaxillary gland was of the size of a nut, and the tonsils were red and swollen. The author suspected that there might be some complication with parotitis, but could find nothing except a small swelling on the left ear. During the two following days, the swelling gradually diminished, and the temperature fell till it reached its normal height. It is to be noticed that in this case the characteristic swelling of the parotid gland was absent, and that the lower part of the face rather presented the peculiar features of acute swelling of the tonsils, or tumours of the lymphatic glands. The author, however, was of opinion that the case was one of epidemic parotitis, which had probably originated from infection. There was then no trace of any epidemic of mumps; but nine days later, several cases of acute parotitis occurred.

CASE II.—A boy aged 2 had felt unwell for a whole week; but no distinct symptoms could be found, except a swelling of the left submaxillary gland and a gland behind the ear. The temperature was 106.6 deg. Fahr. The swelling spread to the right submaxillary gland, and the patient recovered on the third day.

In a third case, there were fever and vomiting, but no characteristic swelling of the parotid glands. As, however, a few days later, mumps broke out among the other children of the same family, this case may be considered as belonging to the prevailing epidemic.

These few cases tend to show how difficult it sometimes is to diagnose this affection. In such a dilemma, the possibility of an epidemic of

mumps, of which similar cases seem to be in some respects the forerunners, ought always to be present in the physician's mind. He will be likely to find his suppositions verified after a certain time. The duration of incubation varies from nine to fourteen days. It is to be regretted that neither of the authors has made any observations on the treatment of the disease. Dr. Pinet specially might, with his experience, have given many a valuable hint also as far as regards the prophylactic treatment.

Jaborandi, according to Dr. Testa (*Il Morgagni*, July 1878), is a most powerful and efficient remedy. Its efficiency may be explained by its hydragogue and sialagogue properties; and if given in time it may prevent the affection from breaking out.

HEALTH OF COLONIAL AND FOREIGN CITIES.

THE Registrar-General publishes returns which show that the average annual death-rate during the second quarter of this year, in thirty-one Indian and foreign cities, having an aggregate population of nearly thirteen millions of persons, was equal to 28.3 per 1000. In the twenty-one European cities the average rate was 30.5 per 1000, against 22.2 in twenty of the largest English towns. The lowest death-rates in the thirty-one Indian and foreign cities were 16.0 in Philadelphia, 16.9 in Christiania, and 17.6 in Brooklyn; whereas the rate was equal to 39.9 in Munich, 42.5 in Buda-Pesth, and 44.7 in St. Petersburg. Cholera caused 722 deaths in Calcutta, 55 in Bombay, and but 2 in Madras. Small-pox showed increased prevalence in the Indian cities and in Paris; in St. Petersburg, Vienna, and Buda-Pesth, however, the fatal cases of this disease were less numerous than in the preceding three months. Diphtheria showed fatal prevalence in Paris, Berlin, Vienna, Naples, and Brooklyn. Typhus and typhoid fever caused 460 deaths in St. Petersburg and 203 in Paris. The deaths from measles were excessively numerous in Buda-Pesth and in Paris. The rate of mortality last quarter was equal to 27.6 in Paris, 29.1 in Berlin, and 32.6 in Vienna; each of these rates comparing most unfavourably with that which prevailed in London, 22.4 per 1000. The proportional mortality from the principal zymotic diseases showed a marked excess in Paris, Berlin, Vienna, and St. Petersburg, compared with that which prevailed in London. The returns from Berlin showed a remarkable fatality of diarrhœal diseases, to which 1,252 deaths, principally of infants, were referred during the quarter. The rates of mortality in the American cities were again remarkably low, notwithstanding the excessive fatality of zymotic disease; so low as to suggest grave doubts whether the American system of registration affords trustworthy mortality statistics.

CERTIFICATION OF CAUSES OF DEATH.

THE causes of 126,095, or 90.6 per cent., of the 132,186 deaths registered last quarter in England and Wales were, according to the Registrar-General's return, certified by registered medical practitioners, and of 6,326, or 4.8 per cent. of the deaths, by coroners, inquests being held. The causes of 6,091, or 4.6 per cent., of the deaths were uncertified, no certificate of a registered medical practitioner being furnished to the Registrar, and no inquest being held. The proportion of uncertified deaths showed a decline from that which prevailed in recent quarters, and ranged from 1.2 in London, and 2.8 both in the South-eastern and South-midland, to 6.6 in the Northern, and 12.4 in the Welsh registration divisions. The percentage of uncertified causes of deaths was equal to 6.5 in Herefordshire, 6.9 in Durham, 8.2 in Cumberland, 10.7 in Cornwall, and 11.7 in Westmorland; it was 12.9 in South Wales and 14.4 in North Wales. The proportion of deaths registered without the production of a certificate, either from a registered medical practitioner or from a coroner, was exceedingly high in Truro, Helston, Redruth, Wolstanton, Leek, Dudley, Chesterfield, Stockport, Skipton, Keighley, Huddersfield, Halifax, Auckland, Durham, Newport (Monmouth), Carnarvon, and Anglesey registration districts. The proportion of uncertified causes of death in the twenty large English towns averaged 2.6 per cent., against 2.8 and 2.7 in the two preceding quarters. In London, the percentage of these uncertified deaths did not exceed 1.2, whereas it averaged 4.0 in the nineteen provincial towns. The smallest proportions of uncertified deaths in the nineteen provincial towns were 0.8 in Plymouth and Portsmouth, 1.1 in Brighton, and 1.8 in Birmingham; the largest proportions were 6.4 in Sheffield, 6.6 in Wolverhampton, 7.0 in Hull, 7.1 in Sunderland, and 9.5 in Oldham.

The Registrar-General further remarks that the proportion of uncertified deaths in Nottingham and Bristol has shown a marked and steady decline since the medical officers of health called the attention of their sanitary authorities to the excessively large proportion of deaths that were being registered without any scientific evidence of their cause; and he considers that similar action, on the part of medical officers of health and of sanitary authorities in other towns, would probably meet with similar success, as it is difficult to imagine any satisfactory reason why the proportion of uncertified causes of deaths should be 9.5 per cent. in Oldham, whereas it does not exceed 2.1 in Nottingham. The cause of this large proportion of uncertified deaths in Oldham needs investigation; it may, however, be noted that the proportion of inquest cases in Oldham last quarter did not exceed 3.2 per cent., whereas it was 7.3 per cent. in Nottingham.

ASSOCIATION INTELLIGENCE.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held at the Belfast Royal Hospital, on Friday, September 5th, 1879, at 12 o'clock noon.

Members intending to read papers or to bring any subject before the meeting, will please communicate with

JOHN MOORE, M.D., *Honorary Secretary*.

2, Carlisle Terrace, Belfast, August 11th, 1879.

PROCEEDINGS OF THE GENERAL COUNCIL OF THE ASSOCIATION.

AT a meeting of the Council for 1878-79, held at the Queen's College, Cork, on Tuesday, August 5th, 1879: Present: Dr. A. Carpenter, President, in the Chair; Dr. Borchardt, Dr. Dempsey, Dr. G. F. Duffey, Mr. J. Elliot, Mr. J. Fagan, Dr. Falconer, Dr. S. Felce, Dr. B. Foster, Mr. E. Hart, Dr. A. Henry, Dr. Holdsworth, Mr. W. D. Husband, Dr. J. Johnston, Dr. N. Kerr, Dr. E. Malins, Mr. F. Mason, Mr. E. J. Morris, Mr. G. W. Mould, Mr. R. H. B. Nicholson, Dr. C. Parsons, Mr. A. Prichard, Dr. R. Roberts, Mr. W. A. S. Royds, Mr. W. D. Spanton, Dr. A. P. Stewart, Dr. W. Taylor, Mr. Jabez Thomas, Dr. J. Thompson, Dr. W. F. Wade, Dr. E. Waters, and Mr. C. G. Wheelhouse:

The minutes of the last meeting were read, and found correct.

Read letters of apology for non-attendance from Dr. Sympson, Lincoln; Mr. Sampson Gamgee, Birmingham; Mr. Hartill; and Mr. Thomas Amyot.

The annual draft report, as prepared by the Committee of Council, was then considered paragraph by paragraph.

Moved by Dr. Falconer, seconded by Dr. Felce, and

Resolved: "That the annual report, as amended, be adopted, and, together with the financial statement for the year ending December 31st, 1878, be presented to the general meeting of members of to-day.

At a meeting of the Council for 1879-80, held at the Queen's College, Cork, on Wednesday, August 6th, 1879: Present: Dr. A. Carpenter, President, in the Chair; Dr. M'Call Anderson, Mr. J. S. Bartrum, Dr. L. Borchardt, Mr. S. W. Broadbent, Dr. J. P. Cassells, Dr. P. J. Cremen, Dr. G. F. Duffey, Dr. R. W. Falconer, Mr. J. Farrar, Dr. S. Felce, Dr. B. Foster, Mr. J. Harker, Mr. Ernest Hart, Dr. A. Henry, Mr. J. R. Humphreys, Mr. W. D. Husband, Dr. Talfourd Jones, Dr. N. Kerr, Dr. J. Kirk-Duncanson, Mr. C. Knott, Mr. W. Mac Cormac, Mr. F. Mason, Mr. A. Mathias, Dr. R. Miller, Mr. G. B. Morgan, Mr. E. J. Morris, Mr. A. A. Napper, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. G. H. Philipson, Mr. H. Power, Mr. A. Prichard, Mr. R. Robertson, Mr. J. V. Solomon, Mr. W. D. Spanton, Mr. C. Steele, Dr. W. Taylor, Mr. Jabez Thomas, Dr. J. Thompson, Dr. E. Waters, Mr. R. W. Watkins, and Mr. C. G. Wheelhouse:

Read letters of apology for non-attendance from Dr. Bowles and Mr. H. Stear.

Read letter from Dr. Eastwood.

Moved by Dr. Borchardt, seconded by Mr. Bartrum, and

Resolved: "That the letter of Dr. Eastwood be referred to the Journal and Finance Committee."

The twenty gentlemen whose names are as follows: Dr. Clifford Allbutt, Dr. J. T. Arlidge, Dr. L. Borchardt, Dr. Bradbury, Mr. G. W. Callender, F.R.S., Dr. B. Foster, Dr. E. L. Fox, Dr. C. E. Lyster, Mr. Arthur Jackson, Mr. F. E. Manby, Mr. F. Mason, Dr. E. Morris, Mr. R. H. B. Nicholson, Dr. G. H. Philipson, Dr. T. L. Rogers, Dr. E. H. Sieveking, Mr. Stear, Dr. A. P. Stewart, Dr. W. F. Wade, Mr. C. G. Wheelhouse, and who were nominated by the Committee of Council, were then balloted for, and declared to be unanimously elected members of the Committee of Council for the ensuing year.

Read letters from Professor Humphry, Dr. Bushell Anningson, and

Dr. Paget, with formal invitation from fifty-two members of the profession at Cambridge, inviting the Association to hold its Annual Meeting in that city for the year 1880.

Moved by Dr. Falconer, seconded by Mr. Husband, and

Resolved: "That the invitation to Cambridge, for the year 1880, be accepted with the warm thanks of the Council."

Moved by Dr. Waters, seconded by Mr. C. G. Wheelhouse, and

Resolved: "That Professor Humphry be nominated President-Elect."

Moved by Mr. Solomon, seconded by Mr. Bartrum, and

Resolved: "That the Committee of Council be requested to take into consideration the propriety of permitting the Branches the alternative of electing one of their members, in place of the Honorary Secretary, to serve on the Committee of Council."

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held in the Examination Hall, Queen's College, Cork, on Tuesday, August 5th, 1879—Present: Dr. Carpenter (President of the Council), in the Chair; Dr. R. W. Falconer, President; Mr. W. D. Husband, Treasurer; Dr. L. Borchardt, Dr. P. J. Cremen, Dr. W. J. Cummins, Dr. G. F. Duffey, Dr. B. Foster, Mr. F. Mason, Mr. R. H. B. Nicholson, Dr. D. C. O'Connor, Dr. C. Parsons, Dr. A. P. Stewart, Dr. W. F. Wade, Dr. E. Waters, Mr. C. G. Wheelhouse.

The minutes of the last meeting were read and found correct.

The President of Council reported that Dr. Philipson's name had been substituted for that of Dr. Edwards of Cardiff in the list of members nominated as the Committee of Council for 1879-80, the latter being ineligible in consequence of not being a member of the Council, and Dr. Philipson being next upon the list as having the greatest number of votes.

The President of Council reported that he had communicated with Director-General Muir, inviting him to receive the medal on behalf of Surgeon-Major Reynolds. The following is a copy of the reply.

"Army Medical Department, War Office, July 25th, 1879.

"Sir,—I have the honour to acknowledge your letter of the 23rd instant, with enclosure acquainting me that the Executive Committee of the British Medical Association has awarded the Gold Medal of the Association to Surgeon-Major J. H. Reynolds, V.C., and requesting me to nominate a proxy who shall receive the medal in that officer's behalf.

"In reply, I beg to inform you that I have selected Surgeon-General T. Crawford, Principal Medical Officer in Ireland, to act for Mr. Reynolds in the matter; and I take the opportunity to express my appreciation of the honour conferred by the Association upon the department of which Surgeon-Major Reynolds has proved himself so distinguished a member.

"I have the honour to be, sir, your obedient servant,

"(Signed) "W. MUIR, Director-General.

"The President of the Council,
British Medical Association, 161, Strand."

The President of Council also reported that he had written to Surgeon-General Crawford, who had stated that it would give him much pleasure to receive the medal on behalf of Surgeon-Major Reynolds.

Dr. Macnaughton Jones reported that it was the intention of the Queen's College authorities to confer the honorary degree of Doctor of Medicine on the retiring and incoming Presidents, as a mark of appreciation of the British Medical Association.

Resolved: That the seventy-eight gentlemen whose names appear on the circular convening the meeting be and are hereby elected members of the Association.

The Draft Annual Report, as prepared by the Subcommittee, was then considered paragraph by paragraph.

Resolved unanimously: That the Annual Report, as amended, be adopted and presented to the meeting of the Council to-day.

At a meeting of the Committee of Council, held in the Examination Hall, Queen's College, Cork, on Thursday, August 7th, 1879—Present: Dr. Carpenter (President of the Council) in the Chair; Dr. Clifford Allbutt, Dr. L. Borchardt, Dr. G. F. Duffey, Dr. B. Foster, Mr. W. D. Husband, Mr. A. Jackson, Mr. F. Mason, Mr. R. H. B. Nicholson, Dr. G. H. Philipson, Dr. C. Parsons, Dr. W. F. Wade, Mr. C. G. Wheelhouse.

Resolved: That the gentlemen whose names are as follows be reappointed the Journal and Finance Committee for the ensuing twelve months:—The President of Council, the Treasurer, Mr. Alfred Baker, Mr. Callender, F.R.S., Dr. Chadwick, Dr. R. W. Falconer, Dr. B. Foster, Mr. F. E. Manby, Dr. E. Morris, Mr. R. H. B. Nicholson, Dr. A. P. Stewart, Dr. W. F. Wade, Dr. E. Waters, Mr. C. G. Wheelhouse.

Resolved: That the President-elect, the President of Council, the Treasurer, Dr. Chadwick, Mr. Mason, Dr. Sieveking, Dr. Macnaughton Jones, Dr. B. Anningson, Dr. Bradbury, Mr. Stear, and two to be added by the Local Committee, be appointed the Committee for considering the arrangements of the Annual Meeting at Cambridge in 1880.

Resolved: That the fifteen gentlemen whose names appear in the Daily Journal of the Annual Meeting of Wednesday, August 6th, and Thursday, August 7th, be elected members of the Association.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 14th, 1879.

Ballance, Charles Alfred, Stanley House, Lower Clapton
David, William, Rhondda Valley, Glamorganshire
Davies, Arthur Mercer, 2, Barnard's Inn, E.C.
Davies, Evan Naunton, Cymmer, Pontypridd
Davies, John Morgan Lloyd, Bank House, Cardigan
Hooley, Arthur, Heaton Chapel, Cheshire
Hoskyn, Donald Templeton, Birchington Road, Kilburn
Parette, James, Sirhowy Ironworks
Vaz, Jacinto Caetan, Bombay

The following gentlemen also on the same day passed their primary professional examination.

Collier, William, Sheffield Medical School
Fordham, Alfred, London Hospital
Taylor, Benjamin Robert Archer, Guy's Hospital

UNIVERSITY OF EDINBURGH.—The following gentlemen received degrees in Medicine and in Surgery on Friday, August 1st, 1879.

Doctor of Medicine, under the new Statutes, with the Titles of the Theses.—(*** denotes those who obtained Prizes for their Dissertations; ** those deemed worthy of competing for the Dissertation Prizes; * those commended for their Dissertations).—**James Anderson, Scotland, M.B. & C.M., 1876: Hystero-Epilepsy. *John Barlow, England, M.B. & C.M., 1875: Ozone. Charles George Beaumont, England, M.B. & C.M., 1877: Leprosy. Joseph Senior Boothroyd, England, M.B. & C.M., 1876; Medicine and Morals. Daniel Catlin Burlingham, England, M.B. & C.M., 1876: Suppuration. ***John Theodore Cash, England, M.B. & C.M., 1876: Separated and Unseparated Muscles. Francis Pritchard Davies, Wales, M.B. & C.M., 1869: The Treatment of Insanity. *Francis Vardy Davison, Monte Video, M.B. & C.M., 1874: Animal Grafting. ***William John Dodds, England (D.Sc. Edin.), M.B. & C.M. (with First Class Honours), 1876: The Brain of the Mole. Charles Glasier, England, M.B. & C.M., 1875: Chyluria. **James Dundas Grant, Scotland (M.A. Edin.), M.B. & C.M., 1876: Laryngeal Phthisis. John Home Hay, Scotland, M.B. & C.M., 1876: Some Cases in Practice. ***James Milner Helme, England, M.B. & C.M., 1875: Acute Rheumatism; with Observations on Salicylate of Soda. *Robert Bryden Hill, England, M.B., 1875; Enteric Fever. *David Johnston Jones, England, M.B. & C.M., 1876; Paresis. **Robert Kirk, Scotland, M.B. & C.M., 1876: Excision of the Hip-Joint. *Henry William Laing, Scotland, M.B. & C.M., 1875: Diphtheritic Paralysis. *William Henry Maberly, England, M.B. & C.M., 1876: New Zealand. Benjamin Francis Massiah, England, M.B., 1877: British Convalescent Institutions. *Henry Lee Norris, America, M.B. & C.M., 1872: Clinical Notes. *George William Potter, England, M.B. & C.M., 1877: The Residuum: an Inquiry into the Sanitary Condition of the London Poor. *James Wilkie Smith, Scotland, M.B. & C.M., 1873: Puerperal Eclampsia. ***William Stewart, Scotland, M.B. & C.M., 1875: Spina Bifida. *Charles Vernon Taylor, England, M.B. & C.M., 1877: Nitrite of Amyl. Herbert Owen Taylor, England, M.B. & C.M., 1872: The Theory that Acute Rheumatism may be due to a Neurosis. Alexander Walker, Scotland, M.B. & C.M., 1876: House Sanitation. *Charles Henry Waterhouse (B.A.Lond.), England, M.B. & C.M., 1876: Cerebral Lesion. Arthur Watson, England, M.B. & C.M., 1874: Therapeutics of Uterine Hæmorrhage. Richard Wearing, England, M.B. & C.M., 1875: Cases of Malarious Fever. Walter Thomas Prideaux Wolston, England, M.B., 1865: Erysipelas.

Doctor of Medicine, under the Old Statutes, with the Titles of the Theses.—*Edwin Drew, England: Endemic Influences. **William Jackson Kennedy, Ireland: Diabetes Mellitus.

Bachelor of Medicine and Master in Surgery.—(*a.* indicates that the Candidate passed the Examinations with First Class Honours. *b.* indicates that the Candidate passed the Examination with Second Class Honours.)—James Porteous Aitchison, England. David William Aitken, Scotland. (*b*) Alexander Hugh Barbour, Scotland. (*a*) Johannes Hendrikus Meiring Beck, Cape of Good Hope.* Robert Glaister Samuel Bell, Jamaica. Meyer Joseph Bernstein, England. (*a*) Alexander Bruce, Scotland. Robert William Dickinson Cameron, Scotland. Patrick Edward Campbell, England. Perkins William Case, England. Edouard de Chateauneuf, Mauritius. Pierre Selmours Chauvin, Mauritius. Claud Herbert Clabburn, England. Thomas Clarke, (M.A.Edin.), Scotland. (*b*) John Clouston, Scotland. John Codner, England. R. Percy Cox, England. Judson Coy (B.A. New Bruns.), New Brunswick. J. Cowan, Scotland. R. Crerar, Scotland. J. Davidson, England. Frederick Henry Davies, Brecon. George William Dickson, (M.A.Edin.), Scotland. William Duncan, Scotland. David Edwards, Wales. William Clement Evans, Wales. John Frazer Ewan, Australia. David Fairweather

* Mr. Beck did not appear at graduation.

(M.A.Edin.), Scotland. William Fligg, England. John Gibson, Orkney. John Gill, Scotland. Thomas Gordon (M.A.Edin.), Scotland. John Baldwin Smithson Greathead, Cape of Good Hope. (*b*) Edwin Hyla Greves, England. Thomas Harkness, England. (*b*) George Hurst, England. Edward de Warren Hutchinson, England. James Hyslop, Scotland. Edward Siddall Jackson, England. Alfred Goodwyn Kay, India. Henry David Rooke Kingston, England. Frank Colet Larkin, England. John Thomas Leask, Orkney. Jonathan Edward Lees, England. Duncan Alastair MacGregor, Scotland. Thomas Alfred Machattie, Australia. Charles Alexander MacLean, Monte Video. John Clark MacLeod, Scotland. Henry Martin, England. Harry Wharton Mason, England. William Maule, Scotland. Robert William Mead, England. William Clement Milward, England. Richard Blackwell Mitchell, Orkney. Herbert Cecil Moore, England. A. Jas. Morris, England. James Murray, Scotland. Robert Alexander Murray, Scotland. (*b*) Robert Milne Murray (M.A. St. And.). Scotland. William Murray, Scotland. Arthur William Oakes, Australia. Russell James O'Brien, India. Peter Daniel Ohlmüs, Ceylon. William Bruce Oliphant, Scotland. James Oliver, Scotland. Arthur Murray Oram, Australia. Robert Lloyd Parker, England. Philip Atkin Pearcey, England. Stephanus Johannes Jacobus van der Poel, Cape of Good Hope. Emyr Owen Price, Wales. James Reid, Orkney. Stanley Morton Rendall, England. Nathaniel Edward Roberts, Wales. Emile Leonce Roussel, Mauritius. (*b*) William Rowlands, Wales. Edward Fowler Scougal, (M.A. Aberd.), England. James Linn Sherlaw, Scotland. George Shewan, India. (*b*) George Bailey Silke, Mauritius. Walter Stanley, Ireland. William David Symington, England. Charles Templeman, Scotland. (*b*) James Thomson, Scotland. William Turner (M.A.Aberd.), Scotland. Archibald Hutton Veitch, Scotland. Derwent Hutton Ryder Waldron, Jamaica. Thomas Nicholas German Te Water (B. A. C. of G. Hope), Cape of Good Hope. (*b*) James Leith Waters, Scotland. Alexander Wattie (M.A. Aberd.), Scotland. Thomas Fowle Watts, Barbadoes. Valentine Wm. Tell Werdmüller, Cape of Good Hope. George Graves Whitwell, England. Robert Richard Harvey Whitwell, India. (*b*) William Lloyd Owen Williams, Wales. (*b*) Wm. Wilson, England. Edwd. Pettingall Youngerman, India.

Bachelor of Medicine.—Edward Fuller Martin, England.

Master in Surgery.—Hugh Logan Calder, Scotland. Walter James Strang, Scotland.

The Ettles Prize for 1879 was awarded to Alexander Bruce, M.B., C.M.; the Beaney Prize was awarded to J. H. M. Beck, M.B., C.M., Cape of Good Hope, and Edwin Hyla Greves, M.B., C.M., England; the Wightman Prize was awarded to James Leith Waters; and the Cameron Prize was awarded to Paul Bert, M.D., Professor in the Faculty of Sciences, Paris.

UNIVERSITY OF GLASGOW.—The following degrees were conferred by the University on July 31st, 1879.

Doctor of Medicine (M.D.)—Archibald Brown, M.B., Scotland. Charles D. Hunter, M.B., Scotland. John Hutchinson, M.B., Ireland. Thomas Reid, M.B., Scotland. Robert Sinclair, M.B., Scotland. Arthur R. Waddell, M.B., Scotland.

Bachelor of Medicine and Master in Surgery (M.B. and C.M.)—Thomas B. Adam, Scotland. William Allan, Scotland. John A. Barton, Scotland. Thomas B. Birchall, England. Peter Buchanan, Scotland. John M. Cameron, Scotland. Archibald K. Chalmers, Scotland. Alexander W. Crawford, Scotland. John Crawford, Scotland. Peter H. Cunningham, Scotland, Alexander Davidson, Scotland. William S. Donald, Scotland. John Duff, Scotland. Neil Fullarton, Scotland. Robert Hamilton, Scotland. Mark K. Hargreaves, England. Edwin Haworth, England. Robert Lees, Scotland. David Longwill, Scotland. Robert Lyon, Scotland. Harry S. Lyons, Biscay. William M'Alister, Scotland. Angus M'Aulay, Scotland. James B. Mackenzie, Scotland. William J. Mackenzie, India. Angus Macphee, Scotland. William M'Vie, Scotland. Arthur Mechan, Scotland. Robert D. W. Mecredy, Ireland. Dugald Mitchell, Scotland. William B. Moir, Scotland. Islay B. Muirhead, M.A., Scotland. Daniel Mungall, Scotland. Sambhu Chandra Nandi, India. Charles Napier, Scotland. William Nicol, Scotland. William K. Peden, Scotland. Charles Harry Pinck, England. Charles Pinkerton, Scotland. Alexander Barr Pollock, Scotland. William Pollock, Scotland. Robert Porter, Ireland. John M. Smith, Scotland. Ralph D. Stevenson, Australia. Geo. Storer, Scotland. Wm. Taylor, Scotland. George F. Wickens, England. Wm. R. Willis, Scotland. Jas. S. Wilson, Scotland. John Neil Wilson, Scotland. John M. Yair, Scotland. Henry Yarrow, Scotland.

Bachelor of Medicine (M.B.)—John Glaister, Scotland. William D. MacKeith, Scotland. John Sinclair, Scotland.

The following gentlemen were named as entitled to honours, to high commendation, and to commendation, on account of distinguished merit at the various examinations for the degrees of M.B. and C.M.

I.—*Honours.* William K. Peden. Ralph D. Stevenson.—II.—*High Commendation.* Archibald K. Chalmers. Islay B. Muirhead, M.A. William Nicol. III.—*Commendation.* Thomas B. Adam. John Glaister. William M'Alister. Charles Pinkerton.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

BANTRY UNION—Medical Officer for Glengarriff Dispensary District, at a salary of £90 per annum, with £10 per annum as Sanitary Officer, Registration and Vaccination Fees. Election on the 29th instant.

*DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich — House-Physician. Salary, £75 per annum; House-Surgeon, £50 per annum, with board, furnished rooms, and attendance. Applications on or before September 10th.

EAST LONDON HOSPITAL—Resident Clinical Assistant. Applications on or before September 8th.

HOSPITAL FOR DISEASES OF THE THROAT AND CHEST—Physician. Applications on or before September 1st.

JERSEY GENERAL DISPENSARY—Resident Medical Officer. Salary, £120 per annum, with apartments, attendance, etc. Election early in September.

LONDON FEVER HOSPITAL—Resident Medical Officer. Salary, £200 per annum, with residence, coals, gas, and attendance. Applications on or before September 6th.

LOYAL UNITED BRETHREN SOCIETY, Oporto Stores, Bloomsbury—Surgeon and Apothecary. Salary, £40 per annum. Applications on or before August 25th.

NORTHAMPTON GENERAL INFIRMARY—Physician. Applications not later than the 26th instant.

*NOTTINGHAM GENERAL HOSPITAL—Assistant House-Surgeon. Salary, £80 per annum, with board and residence. Applications on or before August 23rd.

PARISH OF ST. JOHN'S, Hampstead—Medical Officer of Health. Salary, £125 per annum. Applications on or before September 1st.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road—Resident Medical Officer. Salary, £60 per annum, with board and residence. Applications on or before September 1st.

RAMSGATE AND ST. LAWRENCE ROYAL DISPENSARY AND SEAMAN'S INFIRMARY—Resident Medical Officer. Salary, £130 per annum, with apartments, gas, and attendance. Applications to be made on or before August 30th.

*ROYAL CORNWALL INFIRMARY—House-Surgeon. Applications to the Secretary.

*ROYAL HANTS COUNTY HOSPITAL—House-Surgeon and Secretary. Salary, £100 per annum, with board and lodging. Applications to be made on or before September 10th.

ROYAL UNITED HOSPITAL, Bath—House-Surgeon. Salary, £60 per annum, with board and residence. Applications on or before September 6th.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay—House-Surgeon and Dispenser. Salary, £100 per annum, with board, lodging, and attendance. Applications not later than September 9th.

WESTMINSTER HOSPITAL—Pathologist and Curator of the Museum. Remuneration, £52 : 10 per annum. Applications on or before September 13th.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

CHURCH—COCHRANE.—At Park House, Canonbie, Dumfriesshire, on July 16th, by the Reverend William Snodgrass, D.D., Minister of the Parish, Henry Macdonald Church, M.D., F.R.C.P., Edinburgh, eldest son of D. M. Church, Liberton (late Dalhousie), to Eleanor Christian, youngest daughter of the late Reverend James Cochrane, D.D., Minister of the First Charge, Cupar-Fife.

MACKENZIE-ASHTON—TIFFEN.—On the 14th instant, at St. James's, Piccadilly, by the Rev. W. M. Schribben, Vicar of Wigton and Rural Dean, assisted by the Rev. Lionel Davidson, Curate of St. James's, Arundell Mackenzie-Ashton, of Highfield, Cheshire, only son of Fitz Arundell Mackenzie, Esq., late H. B. M. Consul to the Cantons of Switzerland, to Mary Elizabeth (Lizzie), only daughter of Robt. Tiffen, Esq., M.D., of Wigton, Cumberland.

DEATHS.

BLACK.—At Mauldslie Cottage, Eskbank, on August 13th, Jane, relict of the late James Black, M.D., F.R.S.E., of 2, George Square, Edinburgh, aged 88.—Friends will please accept this intimation.

DENTON.—On the 12th August, at Leicester, Joseph Denton, M.R.C.S.E., L.S.A., aged 84.

WOOLDRIDGE.—At Withdean, Brighton, on August 13th, of abscess in the liver, Edward Wooldridge, M.D., aged 62.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 19 in every 1,000 persons living; it was 15 in Glasgow, 16 in Edinburgh, 19 in London, and 28 in Dublin. The highest death-rates in the twenty English large towns were the following: Newcastle-on-Tyne 20, Nottingham 20, Leicester 21, and Liverpool and Manchester each 22. The highest zymotic death-rates were the following: Bristol 4.2, London 4.3, and Liverpool 5.1. Scarlet fever showed fatal prevalence in Sunderland. In London, 1,349 deaths were registered, being 233 below the average, and affording a death-rate of 19.4. The 1,349 deaths included 4 from small-pox, 58 from measles, 45 from scarlet fever, 5 from diphtheria, 37 from whooping-cough, 20 from different forms of fever, and 127 from diarrhœa, being 296 deaths altogether from these diseases, or 165 below the average, and giving a zymotic rate of 4.4 per 1,000. The deaths from diseases of the lungs were 181, and exceeded the average by 45. Different forms of violence caused 72 deaths; 55 were the result of negligence or accident, including 22 from fractures and contusions, 5 from burns and scalds, 12 from drowning, and 13 of infants under one year of age from suffocation. No fewer than 16 cases of suicide were registered. At Greenwich, the mean temperature of the air during the week was 63.1°, and 0.7° above the average. The direction of the wind was variable, and its horizontal movement was 3.6 miles per hour below the average. Rain fell on Saturday to the amount of 0.03 of an inch. The duration of registered bright sunshine in the week was equal to 37 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

ANCIENT TREATMENT OF URETHRAL STRICTURE.

SIR,—In the second edition of Fergusson's *Surgery*, 1846, p. 623, allusion is made to "the ancient Egyptian who used the gut of a small animal which, while it was in the canal, was distended with air", for the cure of stricture. Can any of your readers tell me what is the authority for this statement, and where I can find any further information on the subject?—I am, etc., A. H. J. CAMERON.

THE COMMITTEE ON THE REGISTRATION OF DISEASE.

THE names of several members of the Committee were accidentally omitted from the list published at page 261 of last week's JOURNAL: viz., Dr. G. H. Philipson, Dr. A. P. Stewart, Dr. E. Waters, Dr. J. Whitmore, and Dr. E. T. Wilson.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

ANTI-FAT.

SIR,—In June last I received a letter from a patient, asking what I thought of "anti-fat" and fucus vesiculosus, some account of which he had seen in the JOURNAL. He suffered from winter-cough, with, at times, a little shortness of breath, and thought that he might be better for some reduction in weight. I told him I knew very little about the fucus, and suggested that he should give it a trial, and let me know the result. I sent him a prescription for some fucus pills, four grains of the solid extract in each, one to be taken three times a day. The accompanying letter gives his opinion of the treatment. I may mention that he is a man in the prime of life, of fine physique, and gifted with considerable powers of observation. The diuretic powers of fucus were noticed twenty years ago, when first it was introduced as a remedy for obesity.—I am, sir, your obedient servant,

WILLIAM MURRELL, M.D.

38, Weymouth Street, Portland Place, W., August 8th, 1879.

"August 6th, 1879.

"Dear Sir,—I should have sent you the result of anti-fat before, but I have been very busy. I now now send it. I noted down each day the points I think you will require.—June 25th. Weight, 15 stone 6¼ lbs.; three pills; food and exercise as usual; had two motions.—June 26th. Weight, 15 st. 6½ lbs.; three pills; four motions; urine very copious (not often, but when about it felt as if I was never going to leave off), smelling like some old horse, and very dark coloured.—June 27th. Weight, 15 st. 6½ lbs.; three pills; five motions; much urine; appetite much increased; felt as if I had a tape-worm.—June 28th. Weight, 15 st. 6 lbs.; three pills; woke with bad diarrhœa; ten motions; up till eleven o'clock; cured that with five drops of Rubin's tincture of camphor on lump sugar.—June 29th. Weight, 15 st. 5½ lbs.; five motions, ordinary; urine same as usual; feet, always dry and cool before, began to perspire and smell very badly; appetite for food and drink ravenous.—June 30th. Three pills; six motions; weight, 15 st. 6¼ lbs.; more urine than ever.—July 1st. Three pills; four motions; urine as last; breath began to be offensive.—July 2nd. Weight, 15st. 6lbs.; three pills; six motions; appetite, etc., still increased.—July 3rd. Weight, 15st. 5½ lbs.; three pills; five motions; breath and feet a nuisance to myself, and feeling anything but well; would not take any more. On the 4th, I had three motions, but just as much urine.—July 5th. Weight, 15 st. 5¾ lbs.; two motions; feet quite in the old state; breath the same; and only about half the quantity of urine. With the exception of the 28th, the motions were rather scanty and hard, with a deal of straining. During the whole time, though I felt very hungry and thirsty, I only took the usual quantity, though often I could have done double. Towards the end, I fancied that I exhaled a kind of fusty odour from my whole body, but my feet and breath were stern facts. I have just weighed, and am 15 st. 7 lbs. If you think the liquid preparation will act I will try it, but the other seems (to use a vulgar expression) to be making me as rotten as a pear.—I remain, yours truly, C. G.—Dr. William Murrell."

SIR,—As several letters have recently appeared in the JOURNAL concerning the so-called remedy for corpulency, "anti-fat", and as I know large quantities of it are now being sold in this country at a high price, it would, I think, be very interesting and useful if some reliable accounts of medical experience of its efficacy or uselessness could be obtained. Two friends of mine, one a medical man, have recently given "anti-fat" what I think may be said to be a fair trial, having taken it most regularly, and according to the directions, for a month, with in one case no result, and in the other a decided increase in weight. I should be glad to hear of the experience of others.—I am, sir, yours faithfully, J. HIGHAM HILL, M.D.

London, August 19th, 1879.

MR. REGINALD HARRISON (Liverpool).—The subject shall receive our careful consideration.

AN INDIAN APPOINTMENT.

SIR,—A letter, headed as above, appeared in your issue of May 24th. Being a personal friend of the Rev. R. R. Winter, and also a medical missionary myself, I think I am at liberty to reply to it. I take it for granted that the "Medical Officer of Meerut" is correct in the terms offered by the Rev. R. R. Winter for a medical missionary for Delhi. The amount mentioned—viz., £175 a year, with quarters—is certainly not large pay; but it has been collected with difficulty, and Mr. Winter would doubtless offer more, willingly, if he had means at his disposal; but the fact is that, with many demands on him, he does not receive from his society a great deal more stipend than this himself. I belong to the Church Missionary Society, and I find that I receive about £250 a year; and, knowing how difficult it is to collect money for charitable purposes, I could not look for a larger amount. I always place money which I receive as fees to the credit of my hospital; and, though there is no rule of my Society compelling me, I believe it is universally the custom of medical missionaries to do so. I therefore see nothing extraordinary in Mr. Winter mentioning this condition about fees, though I can hardly think any medical missionary would desire to make money by private practice.

I regard the "Medical Officer's" remarks about the Delhi mission, especially when he speaks of the mission "making a good thing out of the doctor", as being quite uncalled for, and as showing extremely bad taste; and when he says that the medical missionary will be "tabooed in society", it is difficult to say whether I am more astonished at the impertinence or the incorrectness of the statement. Medical officers in the public services may be right in making the best bargains they can for themselves, for government is well able to pay, and the question is merely one of supply and demand, but I protest against applying the same argument to missionary work. A medical missionary is in quite a different position, and has different aims and ambition. I believe that any medical missionary who first counts the cost will never regret his choice if he join the Rev. R. R. Winter at Delhi in his noble work, even on a salary of £175 a year.—I am, etc.,

E. DOWNES, L.R.C.P.Lond., Medical Missionary of Kashmir.

Srinagar, Kashmir, June 29th, 1879.

ST. SAVIOUR'S CANCER HOSPITAL.

ST. SAVIOUR'S Hospital for Cancer is a charity which could, we believe, be very well spared by the public. Indeed, we are inclined to doubt whether it deserves to be ranked as a charity at all. A few weeks ago, a person, residing in a distant part of the country, was so unwise as to write to the Hospital for advice. The surgeon not only undertook to prescribe powders and a tincture without seeing the patient, but also sent him a bill for 2s. 4d. This bill has been forwarded to us, and a very business like appearance it has. Where, it may be asked, is the charity? and what is the value of advice given in this haphazard manner?

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE IDENTIFICATION OF THE PRINCE IMPERIAL.

WE have received from Mr. Oakley Coles a letter stating the circumstances under which he attended the late Prince Imperial. His Imperial Highness came to Mr. Coles on March 13th, 1876, suffering from pain in the upper jaw on the right side, due to impending eruption of the wisdom-teeth. There was also a cavity in the first molar, which had evidently been filled; but the filling had come out. Mr. Coles applied a dressing to the cavity: and the Prince left, with the intention of returning in two days to have the tooth filled if the pain ceased, or the gum lanced if the pain continued. In the evening of the same day, Mr. Coles received a telegram (of which he encloses a copy) from the late Count Clary, asking him to go to see the Prince at Chislehurst the next morning. He accordingly went, and relieved his Imperial Highness by making a crucial incision over the neighbourhood of the right upper wisdom-tooth. He also filled the right upper molar tooth with gold. Mr. Coles says that he would not have made known his professional connection with the Prince Imperial but for the remarks of Dr. Evans, and in justice to Dr. Rottenstein, by whose advice the Prince and Count Clary placed themselves under his care.

ERRATUM.—In the JOURNAL of August 9, in the article on the Hygienic Condition of Malta, page 234, column 2, line 13 from bottom, for "soldiers in Malta", read "soldiers in Gibraltar". The error was a slip of the pen on the part of the writer.

VOMITING OF PREGNANCY.

SIR,—Your correspondent "A Helper of Nature" will find that Dr. Wood, in his *Treatise on Therapeutics*, p. 283, speaks of the bromide of potassium as being of service in the vomiting of pregnancy. Professor Ferrier, I believe, also very strongly recommends the salt in that distressing complaint. I myself have used it in a considerable number of cases, and always with complete success. The first time I tried it was in a case which had resisted all the ordinary remedies. It yielded at once and permanently to thirty grains of the bromide three times a day. I cannot but think that the drug must have been extensively used in the vomiting of pregnancy, for, considering that the complaint is purely a reflex nervous action, and that the bromide is a direct sedative to the reflex centres of the cord and to the peripheral ends of afferent nerves, it must have occurred to every one who has thought on the subject at all, that of all remedies the bromide is the most likely to be of service. I am inclined to think that, used in doses sufficiently large to obtain the decided physiological action of the drug, it will reduce to a minimum those cases in which it is necessary to resort to the unpleasant operation of dilating the os.—Yours, etc.,

WILLIAM WHITE, M.D.

Hollingworth, Manchester, August 1879.

MR. G. O. M. KANE (Spennymoor).—1. Dr. M. Foster's *Text-Book of Physiology*; or Dr. McKendrick's *Outlines of Physiology in Relation to Man*; or, for practical work, Foster and Langley's *Elementary Course of Practical Physiology*. 2. Soelberg Wells on *Diseases of the Eye*; Macnamara on *Diseases of the Eye*; Lawson on *Diseases and Injuries of the Eye*. 3. Ringer's *Hand-Book of Therapeutics*, and Dr. Farquharson's *Guide to Therapeutics*.

EUONYMIN.

SIR,—Professor Rutherford remarks that the samples of the above met with are not always of the same strength. In the sample I enclose—procured from a first-rate house—you will perceive two distinct colours, green and brown. I presume the former is the euonymin; but what is the brown material, of which there was no small quantity present?—Yours faithfully, JOHN G. CAMPBELL, L.K.Q.C.P.

*** We have examined the euonymin made by Keith and Co., of New York—the same as that used by Professor Rutherford in his experiments—and we find that it is an olive-green substance without any admixture of brown particles. We fear the latter must be an adulteration. We are unacquainted with its nature.

SIR,—Can any of the members of the British Medical Association inform me if they know anything about the curative properties of guaco in cancer?—Yours truly,

August 16th, 1879. ALPHA.

THE RAINFALL OF THE WORLD.

MOST rain falls where hilly or elevated coasts are exposed to the inflow of warm ocean winds—at least where prevalent winds drift in from cold dry regions to low-lying sunny lands. But over and above this, there are circumstances connected with the sculpturing and exposure of the land which make the difference very great within very narrow limits of territory. Thus in Cumberland there are places within two miles of each other, at one of which the average annual rainfall is forty-seven inches more than it is at the other. The annual fall at any one place also differs materially in different years, accordingly as warm and moist, or as cold and dry, winds have been predominant. On account of the great diversity in the amount of rain deposited on different parts of the earth, it becomes very difficult to ascertain what the sum total over the whole earth must be. If the amount of water that is thrown up into the air from seas, rivers, moist ground, and living vegetation could be measured, that of course would give a fair estimate of the rainfall of the earth, because it may be safely assumed that all the water which is raised into the air as vapour is ultimately thrown down again to the ground as rain. Commodore Maury, the distinguished meteorologist of the United States, calculated that about sixteen feet of water, assumed to be of the same area as the surface of the earth, is evaporated into the air within a year. More recent authorities consider, however, that if all the rain which falls upon the earth were allowed to accumulate in a basin of the same area as the terrestrial surface, it would amount to a collection of eight feet deep at the end of a year. The average rainfall of the British islands appears to be something like thirty-six inches in the year; and the average rainfall of London is certainly about twenty-five inches, or a little more than two feet in the year. The annual rainfall in the driest parts of the British islands amounts to about eighteen inches, and in the wettest parts, amongst the mountains of Cumberland, it amounts to one hundred and eighty-nine inches in the year. The heaviest rainfall known upon the earth occurs upon the mountain slopes beyond the head of the Bay of Bengal, and amounts upon the average to six hundred and ten inches, or nearly fifty-one feet, in the year. One inch of rain implies a fall of one hundred and one tons of water upon each acre of ground. The average rainfall of London, therefore, entails a supply of two thousand five hundred and twenty-five tons of water in the year to each acre of ground, or thirty-one millions three hundred and ten thousand tons for the entire metropolis, estimating it at an area of twenty square miles.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

HYDROBROMIC ACID.

SIR,—My growing faith in this medicine, from personal experience of its effects and from my observations in practice, induces me to venture to lay before my colleagues that practical experience, if I may so call it, of this remedy, so that they may test its utility in what is commonly called "tickling or hacking cough in the throat" particularly, apart from its efficiency in throbbing of the ears, or what is technically called "tinnitus aurium". From the latter annoying complaint, I suffered frightfully; to such an extent that I asked my wife one night if she could hear my heart's pulsations thumping on the pillow. I was well physicked by my medical friends, and I did justice to their remedies—honour bright. At last, I resorted to fifteen-drop doses of hydrobromic acid in water, three times a day; the first night, after two doses, I slept like a top—heard scarcely anything; in three days, I was free from all noises and well. About six months afterwards, I caught cold; my tinnitus aurium returned, and I could not get rest, owing to a nasty hacking cough in my throat (not from elongated uvula, but it had that feeling). I resorted to the hydrobromic acid; it acted—as Yankees say—angelic; I slept, and had no more cough, no more noises. Since the discovery of its peculiar action on the mucous membrane of the fauces in general, I have given it in several cases of spasmodic cough, particularly to ladies, in doses of ten drops in cold water, at bedtime, and I have always found with satisfactory results. My own constitution is, I may say, good, certainly not peculiar, not even after thirty-five years' service in the army; and had I again one thousand sick in hospital, I would give this acid a fair trial in the early stages of most catarrhal affections, and I should much like to use it in whooping-cough.—Yours faithfully, COSMO G. LOGIE, M.D., late Royal Horse Guards.

August 4th, 1879.

THE TREATMENT OF BLUSHING.

SIR,—Would you or any of your readers kindly inform me as to the causes and treatment of involuntary and frequent blushing, and whether such a phenomenon is likely to become habitual or its frequency induced by habit?—I am, yours faithfully,

August 6th, 1879. "SCRUTATOR."

SIR,—I strongly recommend your correspondent X. Z. to go to Giessen for the coveted M.D. degree. There he will be treated as a gentleman; his examination will only occupy one day, will be thorough in character, and conducted in the English language. J. BEADNELL GILL, M.D.(St. And.)

Hastings, August 3rd, 1879.

THE WEST CHESHIRE PROVIDENT ASSOCIATION.

THE West Cheshire Provident Association has, no doubt, a good object in view; but we can hardly suppose that the handbill which it is now circulating has met with the approval of the medical men whose names are mentioned thereon. In the rules of the Association no "upward limit" is stated; but, on the contrary, a great deal of stress is laid on the fact that there are no "class restrictions". But in every well regulated provident dispensary there ought to be class restrictions. It is a simple act of justice to the medical profession that a line should be drawn and strictly adhered to; otherwise, provident dispensaries will perpetuate one of the worst evils of clubs, by admitting persons who are well able to pay a doctor's ordinary charges. We would advise the West Cheshire Provident Association to adopt the same limit as the Manchester Provident Association, and decline all applicants who are earning more than thirty shillings a week. So many catch-penny dispensaries have been set on foot of late, that it behoves every respectable institution to be careful to show that it stands on a sound basis.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. T. McCall Anderson, Glasgow; Dr. Grimshaw, Dublin; Dr. Douglas Powell, London; Mr. S. M. Bradley, Manchester; Alpha; Dr. H. Sutherland, London; Mr. A. H. F. Cameron, Liverpool; Dr. A. Gamgee, Manchester; The Secretary of Apothecaries' Hall; Messrs. T. Cook and Son, London; Mr. H. Halfstone, London; Mr. A. Jackson, Sheffield; Dr. Philipson, Newcastle-on-Tyne; Dr. Hickinbotham, Birmingham; Mr. W. A. Greet, London; Mr. Reginald Harrison, Liverpool; Mr. R. Paramore, London; Dr. R. Atkins, Waterford; Dr. H. Macnaughton Jones, Cork; The Registrar-General of England; Dr. Spender, Bath; Dr. Garson, London; The Registrar-General of Ireland; Mr. A. Cooper, London; Dr. Eames, Cork; X.; Dr. Lombe Atthill, Dublin; Our Dublin Correspondent; Dr. Ringrose Atkins, Waterford; Mr. W. D. Hemming, Bournemouth; Dr. D. Hack Tuke, London; Mr. H. Power, London; M.B. and M.A.; Our Edinburgh Correspondent; M.; Dr. H. Hastings, London; Our Glasgow Correspondent; Dr. W. White, Hillingworth, Manchester; Dr. E. M. Skerritt, Clifton; Mr. J. G. Barns, Swindon; Mr. Stonard Edge, Monte Video; Dr. V. Poulain, London; Dr. J. Higham Hill, London; Dr. W. Frazer, Bournemouth; Mr. John Moore, London; A Member; Dr. Wade, Birmingham; Mr. G. A. Keyworth, Hastings; Mr. A. B. Prowse, Cambridge; Mr. R. T. Cæsar, Shirley; M.D.; Dr. Joseph Rogers, London; Mr. G. Eastes, London; etc.

BOOKS, ETC., RECEIVED.

The New Sydenham Society's Lexicon of Medicine and the Allied Sciences, based on Mayne's Lexicon. By H. Power, M.B., and L. W. Sedgwick, M.D. Second Part, A—An; including re-issue of First Part. London: 1879.

The Bath Waters: their Uses and Effects in the Cure and Relief of various Chronic Diseases. By James Tunstall, M.D., M.R.C.P. Fifth Edition. By R. Carter M.D. London: J. and A. Churchill. Bath: J. Davies. 1879.

FORTY-SEVENTH ANNUAL MEETING

OF THE

BRITISH MEDICAL ASSOCIATION.

Held in CORK, August 5th, 6th, 7th, and 8th, 1879.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of the papers presented to the several Sections at the annual meeting, and of the discussions thereon.

SECTION B.—SURGERY.

Wednesday, August 6th.

THE Chair was taken by the President of the Section, W. K. TANNER, M.D., F.R.C.S.I., Professor of Surgery in Queen's College, Cork, who delivered an address, which was published at page 225 of the JOURNAL for August 9th.

THE DIAGNOSIS AND TREATMENT OF JOINT-DISEASES IN THEIR VARIOUS STAGES.

The discussion was opened by LEWIS A. SAYRE, M.D. (New York). After some introductory remarks, Dr. Sayre referred briefly to the general anatomy of the joints. He said that he would confine his observations to the joint-diseases generally termed scrofulous, such as strumous disease of the ankle-joint, white swelling of the knee-joint, hip-joint disease, and Pott's disease of the spine. All these diseases were generally considered to be dependent on a constitutional dyscrasia. But, Dr. Sayre would ask, if this were true, how was it that many patients, after recovery from hip-joint disease, were ever afterwards perfectly well and sound. The family history of many of these cases could be traced back for generations, without any trace of scrofula or any other debilitating affection. In Dr. Sayre's experience, disease of the joint is the result of injury, often very slight. If it be a concussion, an extravasation of blood occurs, which undergoes degeneration and acts as a foreign body, and the cartilage may become loosened and necrotic. Or the injury may be a severe wrench, with laceration of the fibrous tissues and effusion of serum or blood. In either of these instances, there is the starting-point of a chronic inflammation, especially if the injury be so slight as not to attract attention, because then the proper treatment is not applied at the time when the injury is received. The degenerative processes going on in and about a slightly injured joint produce constitutional disturbance before the local manifestations attract attention; and hence these local manifestations are regarded as the result of the constitutional dyscrasia. Even in strumous subjects, there must be some local injury before disease of a joint can occur. Scrofula will not produce it spontaneously; although scrofula—whether congenital or (as Dr. Sayre believed to be often the case) acquired in consequence of bad hygienic conditions, etc.—necessarily developes any disease or accident from which a patient may suffer. In the treatment, the first point to be attended to is the employment of extension and counter-extension, carefully regulated so as to readily relieve the parts from pressure, as indicated by the comfort of the patient. The next great element is rest, as complete and perfect as can be given to the parts. Mercury in minute doses is a valuable tonic; and iron, cod-liver oil, and quinine may often be added with great advantage. Friction and elastic compression are also useful in certain stages. If the effused fluid have undergone degeneration, it should be removed by the aspirator. If this cannot be done, the joint should be incised under the antiseptic spray, and washed and dressed according to Lister's method. If caries or necrosis set in and continue to make progress, exsection of the diseased parts is the only remedy.

Notes on the Treatment of Disease of the Wrist, with report of a successful case of Excision of that Joint in a child six years old. By JOHN FAGAN, F.R.C.S.I. (Belfast).—The author considered that there was one feature in the treatment of all joint-diseases, as well as of that of the wrist, that was not sufficiently attended to, and that was rest; and, to be effectual, it should be both comfortable and continuous. By that, he meant that all sources of irritation, both extra- and intra-articular, should be avoided. He did not approve of blistering, strapping, painting with iodine, etc.; and advocated keeping up an extending and counter-extending force, so as to counteract the toxic contraction of the muscles surrounding the joint. This principle he had applied very successfully in a reported case by means of a splint that he had constructed for diseased wrist-joint; and, speaking of it, he said: "I believe this splint which I have contrived, and which I now show you, meets all the requirements of the case. It produces extension and counter-extension with any degree of force you may wish to apply; it serves as an easy support for the arm and hand; it does not cause the slightest pressure on the diseased joint, both extra- and intra-articular irritation being avoided, while the parts are quite accessible for dressing purposes. To sum up, by means of this splint, rest for the joint, both comfortable and continuous, is secured." He gave the notes of three cases as illustrating different modes of treatment. The first two he treated by what is known as the expectant method; the third by excision—he never met with a case sufficiently bad to recommend amputation. He gave the notes of a case of excision of the wrist in a child six years old, which he considered interesting from several points of view. He believed it was the first case recorded in which complete extirpation of the joint was practised in a child so young. In doing the operation, he followed the method recommended by Professor Lister, but had to observe certain precautions that the peculiarity of the case demanded. The child made a good recovery; in four weeks, the wounds were nearly healed, and she began to do some knitting; and at the present time—three years after the operation—she was in good health, with an useful hand, and able to perform with comfort and efficiency her ordinary duties. Casts and photographs of the case, taken before and after the operation, were exhibited.

A Case of Excision of the Shoulder and Elbow Joints for Gunshot Wound in the same Arm, with final Result. By WILLIAM MAC CORMAC, F.R.C.S. (London).—Mr. Mac Cormac recounted the principal details of a case of resection of the shoulder and elbow-joints in the right arm, performed eight years before on account of severe gunshot injury, in which excellent motion at the elbow-joint and fair movement at the shoulder were preserved to the patient, the man expressing himself as able to accomplish all the needful purposes of life with his injured arm.

Excision of Joints.—Mr. OWEN, for Dr. MACNAUGHTON JONES, exhibited patients whose cases were illustrative of operative interference in diseases of the hip, knee, and ankle joints. He showed a fine little boy from whom Dr. Jones excised a diseased hip-joint. Dr. Jones operated when the child was a year and eight months old; and the result, he said, was simply perfect. Mr. Owen next exhibited a young girl whose case was illustrative of an injury to the ankle-joint. The operation was performed in March 1878. The next case was that of a child whose ankle-joint had been diseased. Dr. Jones had scraped away the diseased bone, and there was now an excellent movement in the joint. The next case was one of chronic disease in the interior of the knee-joint, which was treated by aspiration. Mr. Owen described the operation, and said he expected the child would have a sound joint.

Excision of the Knee-Joint under Special Circumstances. By F. J. GANT, F.R.C.S. (London).—Mr. Gant's case was one in which excision of the knee-joint was performed for synovial disease of fourteen years' duration, with dislocation of the tibia backward, and retraction of the leg to a right angle. The patient was a man aged 24; and at the date of the report, nearly three months after the operation, there was firm union of the bones, and his general health had much improved.

On a Case of Excision of the Knee, in which Contraction of the Limb to a Right Angle occurred Sixteen Months after Firm and apparently Osseous Union had taken place. By G. B. MORGAN, L.R.C.S.I. (Bishopwearmouth).—J. R., aged 12, was admitted into the Sunderland Infirmary in May 1875 with disease of the knee. Rest and position having failed to effect any improvement, the joint was excised on January 6th, 1876. The synovial membrane was found dark red and much thickened, and the cartilages were eroded and peeling off. There were a few drops of pus in the back of the joint. The girl left the hospital with the limb soundly united, and was able to walk with ease and comfort, on May 24th, 1876. She was readmitted on September 7th, 1877, with the knee contracted to a right angle, and stated that it had imperceptibly contracted to this angle. All attempts at extension had failed, both under chloroform and by patient use of screw-extension; and the girl left the hospital with the limb flexed to a right angle and perfectly rigid. (Photographs of the case were shown.)

Chair-Supports in Spinal Curvature. By CHARLES STEELE, F.R.C.S. (Clifton).—After speaking in high terms of the principles and treatment introduced by Professor Sayre for the relief of spinal curvatures—whereby, while the affected parts were kept in the best position for recovery, the erect position and exercise in the open air were obtained—Mr. Steele stated that, while several severe cases for which he had been consulted had succeeded well when treated by suspension and the application of plaster-of-Paris bandages and felt corsets, yet some had occurred where these could not be borne continuously, and others where, by early diagnosis and treatment, these supports, though applicable, were rendered unnecessary. He said that, as he felt sure other surgeons must meet with similar cases, and have to devise means for their individual relief, he would describe a simple means of treatment which in

his hands had proved of great service—namely, axilla-rests, and for some patients head-supports, fitted to ordinary easy chairs. He illustrated the former class by the case of a lady, aged 58, much weakened and reduced by long-standing lateral curvature, who suffered great pain in her right iliac region owing to the lower ribs rubbing against the crest of the ilium, but who was so much benefited by using axilla-rests fitted to her chair that she was able to take moderate exercise, and improved much in general health; and the latter by the case of a young gentleman suffering from slow inflammation of his upper three dorsal vertebræ, as was proved by the careful application of several diagnostic tests: percussion, pressure, and a test-tube containing hot water giving pain, while the application of ice, and raising by the arms or head, so as to diminish pressure, gave relief, and suspension with cord and pulleys entirely took away the pain in the affected bones directly the feet left the ground, which pain returned again when the patient was lowered. The use of axilla-rests and a head-support, consisting of a curved iron rod carrying crossbar and head-straps, produced marked good; the pain was at once relieved; the severe headaches were gradually got rid of; appetite and strength improved; and—a very remarkable fact—asthmatic breathing, which had been constant, never recurred from the first day the supports were used: all pain, heat, and tenderness in the back were gone, nor could they be produced by careful percussion or other examination of the spine; recovery by resolution had taken place, and the patient was now studying to enter the medical profession. Mr. Steele then explained the points he observed in the construction of the axilla and head supports, and in applying them to the chair of each individual patient.

Dr. BARTON (Dublin) wished to say one or two words with regard to the essential point of Dr. Sayre's paper; viz., with regard to the disease called *morbus coxarius*. He had in his hospital a children's ward, to which a great many cases of this disease were admitted. He had made careful inquiries as to the cases and their origin, and was convinced that, on the whole, Dr. Sayre's theory was correct—that this disease arose from some injury, and took its tone afterwards from the particular diathesis. Those cases varied very much, according to the strumous tendency or otherwise; but had not their origin in that, but in some injury, accidental or otherwise.

Dr. HODGEN (St. Louis) desired as far as possible to settle the difficulty that seemed to exist between Professor Gross and Professor Sayre. Dr. Sayre said that it was utterly impossible that morbus coxarius could be regarded as being derived from scrofulous parents. Dr. Gross said that it was impossible that local injury could produce it. Now, it might appear that those two propositions were very different; and yet to him (Dr. Hodgen) it appeared that they were not greatly opposed; for it seemed that Dr. Gross only insisted that, without a constitutional condition favourable to that particular disease, that particular disease could not occur; while Dr. Sayre said that the existence of a peculiar condition of liability to the disease was greatly increased when the individual was subjected to an accident. Both would accept this proposition: that, if there were not this condition of the system rendering it liable to this particular disease, no amount of force would develop it; and that, when a certain condition of the system existed, a very trifling injury would cause morbus coxarius. Dr. Sayre had very clearly said that, if he were to put the question to the audience, and make inquiry as to what scrofula was, he would probably get as many answers as there were members present; and, as he took it, that meant that no one had as yet reached the foundation of this disease; that its pathological change was not distinctly known; and that the various conditions on which it was dependent had not been traced. They went back to the ancestry, and said that scrofula was inherited; that it depended on the early marriage of both parents, or on one being old and the other young; or that the child was the last of a numerous progeny, born in the old age of the parents; and that those conditions might determine the existence of the disease. Again, it might be said that it might be developed by certain conditions of a different character; and he should say that, unfortunately, in Ireland, from what he had seen during the past week, the conditions were far more favourable to the development of scrofula than in his own country. Absence of sunshine, residence in an atmosphere supercharged with moisture, residence in hovels such as he had seen about Cork, the food used by the poorer class of people, all these, with other matters, must be very conducive to scrofula. Then, again, there were a great many things which were called scrofulous. Running from the ear was scrofulous; thinning of the hair was scrofulous; a peculiarly transparent complexion, an abnormally large pupil of the eye, were evidences of scrofula. So far as its development was concerned, its transmission from parent to offspring, its presentations were multifarious; and the expression was applied to a great variety of conditions.

Dr. E. H. BENNETT (Dublin) said that the opinions of surgeons were very much with Dr. Sayre, especially with reference to the traumatic origin of joint-disease as contrasted with its strumous origin. He would wish to say a word about what Dr. Sayre had referred to as a classification of joint-disease into traumatic, gouty, syphilitic, and scrofulous. The rheumatic and gouty anatomic changes in this disease were well known and recognised. He would like to ask Dr. Sayre as to his knowledge of syphilitic disease in the joints. Did it ever produce a tangible articular change in the joint? He had not seen such, and he thought that authors overstated the frequency with which it existed. He did not know what changes it produced in the articular surfaces. With reference to scrofulous disease, he thought that the term "scrofulous" applied to such disease was simply a blind, and nothing more. They could recognise tubercular disease in joints definitely, and no doubt this had fallen into the same category as what was known as scrofulous. Nélaton had long ago shown that. He had never seen it in the hips, but had often and often seen it in the spine. They should, he thought, have a distinct name for those diseases, and not put them all under the name of scrofula.

Mr. OWEN (London) agreed with Dr. Bennett that the term "scrofula" was too often and too widely applied. He believed that if a man were badly fed and badly clothed, even without injury, disease might attack the joints. He was of opinion that Dr. Sayre went too far in saying that each case required an exciting cause. Dr. Sayre also said that he was disinclined to believe that those cases were of strumous origin because so many of them recovered; but surely, if a man having strumous disease of the testicles could recover when they were removed, strumous disease of the joint might be just as curable.

Dr. MACEWEN (Glasgow), referring to the splint which had been exhibited, said it was excellent, and appeared to be a thoroughly practicable one. With regard to the principle of counterextension, he should say that it had been a long time in practice in Glasgow, but not by means of a special splint. Certainly, this was a very finished and admirable contrivance. He had had five cases of wrist-excision, four of them after Lister, and he believed the mode of excision by Lister was a very admirable one. The first patient he had recovered in about four weeks; he was able in five weeks to write his name, and in two months he was able to go back to his profession, which unfortunately was to put his fingers into other people's pockets. The next patient he had was able to go about in three months; the other cases were under treatment still, and were progressing favourably.

Dr. WHEELER (Dublin) said that they all admitted the value of Dr. Sayre's paper, but there was one portion with which he could not agree, and that was with regard to the effects of motion in joint-diseases. He would like to know Dr. Sayre's experience as to cases in which it would be advisable to cause motion. If it were competent for him to speak on another point—viz., Mr. Fagan's paper—he should say that his suggestions had been carried into effect in the City of Dublin Hospital. He thought, however, that in cases of children, in which repair would be carried on so actively, they should be very slow to excise joints. Children often recovered without such excision; and if Mr. Fagan had tried the expectant treatment for some time longer, perhaps there might be a better result. With regard to family history in strumous or scrofulous cases, he thought they need not dwell on that, for whether it was acquired or was dependent on parentage was indifferent.

Mr. WM. ADAMS (London) agreed with Dr. Hodgen, that there was no very wide difference between Dr. Sayre and Dr. Gross on the subject of scrofula. He himself had been in favour of the traumatic origin of the disease, but he also felt that it must be grafted on the constitutional. He had had opportunities of seeing a good deal of the practice in America—and he should say that Dr. Sayre and his friends had been very kind to him while he was there—and he had in his practice since carried out a great deal of what he had seen in New York, Philadelphia, and elsewhere. He had largely adopted the extension principle. The treatment in this country seemed to lead to immobility, fixation, and ankylosis; but the American gentlemen allowed that motion which prevented ankylosis, and he thought that surgeons in this country had a good deal to learn in that respect.

Dr. GOODING (Cheltenham) asked whether in America the bone-setters flourished as they did in this country. Here the medical men and surgeons left nearly the whole of the practical work to the bone-setters.

Dr. SAYRE said it would be better to commence at the last of the questions put to him and go back to the first. They had a race of bone-setters in America as well as anywhere else. There was a Swedish family which had practised bone-setting for the past two hundred years nearly, and they had achieved a wonderful reputation. In many instances, they had done more good than could possibly be imagined by curing ankylosed limbs that had been neglected by the regular profession; and that was the reason why, in his lecture-room, he insisted

strongly that there was a time for motion as well as a time for rest. He believed that medical students should be instructed in those matters by their teachers, so that the medical profession should know at least as much as the quacks. They would fail in their duty to the students if they did not teach them that motion was necessary at the proper time. He had seen many cases of fibrous ankylosis which had been neglected by the medical profession cured by quacks. They certainly should try to do as well as that. His idea was, that in all cases of inflamed joints the first principle was rest, as absolute and complete as it could be made for the individual joint involved in the disease; and the next thing was to prevent the muscular contraction that would always take place wherever there was inflammation. There should be extension of the part, just such as would prevent pressure, and no more; otherwise, destructive changes would go on. Take the case of the capsular ligament in hip-disease. The capsule was not involved in the disease at first. They would not want to confine that capsule by a porous bandage or any other immobile bandage, for if they did it would become ankylosed. Any joint would become ankylosed sooner or later without inflammation. The joint, unless ankylosis were prevented, assumed an abnormal condition, and motion was as necessary for it as for the movement of the muscles. Anatomical change would take place, and the destructive progress would go on. The speaker described one case of disease of the hip-joint which he saw. The medical man attending the case was completely deceived; there was no pain on pressure and no deformity, and that misled the eminent surgeon. The cause of there being no pain, however, was that the acetabulum had been completely eaten away by the disease. This principle of complete rest he (Dr. Sayre) did not believe in; but he thought it would be well if rest could be given to the parts below and above, so that the pressure might be taken away. If extension were made so as to prevent contraction, perfect movement would at the same time be secured without any difficulty. As to the subject of scrofula and struma, the more he had heard, the more he was confirmed in his opinions. He looked upon it simply as the result of malnutrition: bad air, bad clothing, bad diet. It was a disease, he believed, which could be produced by excessive diet as well as by want of food, by putting into the stomachs more food than could be assimilated or appropriated at one time. The two extremes would meet in producing the same result, because it was an abnormal mode of life. With regard to the disease being inherited, he remembered one case bearing on the subject. Dr. Nott, formerly of Alabama, one of the most distinguished men in America, an all-round man—good physician and good surgeon—was attending a case of midwifery, and he (Dr. Sayre) went with him. While attending to the woman, he saw the old woman—the nurse—holding the baby with its legs wide apart. He cried out to her, and made her stop such a proceeding. What was the result? In six months, he was called in to see the child with Dr. Nott, and it had disease of both hip-joints. There was a case in which the advocates of the theory of transmission from the parents would have a most powerful example, because the mother in that case was affected also with disease. The cases of the three children treated by Dr. Jones, he thought, also told powerfully in favour of his theory. As to the instruments and machinery used for the purposes of extension, he did not care what they were, so long as their fundamental principle was observed. He had been asked about syphilitic disease of the joint, but he knew nothing about that. Inasmuch as constitutional treatment would come in there, local treatment would be only of secondary importance. He thought the chair exhibited by Mr. Steele was excellent, but it was the same principle all through.

On the motion of Mr. MORGAN, a vote of thanks was unanimously passed to Dr. Sayre for his valuable paper.

Thursday, August 7th.

The chair was taken by J. COOPER FORSTER, F.R.C.S.Eng., Senior Surgeon to Guy's Hospital, Vice-President of the Section.

SUBCUTANEOUS OSTEOTOMY.

The discussion on this subject was opened by Mr. WILLIAM ADAMS (London). He commenced by referring to the history of subcutaneous osteotomy, which had been gradually developed to its present state of perfection since Langenbeck, during the Schleswig-Holstein war of 1848, first introduced the use of small straight-pointed saws for the section of bones. Langenbeck removed in this way exposed portions of bones when suppuration existed, introducing the small saw through the narrow opening in the upper arm in bullet wounds, without further disturbing the soft parts. In this way, he made resections of small portions of bones. He then decided to employ this method for other diseases of bone; and, in 1852, operated upon cases of bony ankylosis of the knee, and rachitic deformities of the legs. Langenbeck used a drill, with which he pierced the bone, and then introduced his pointed saw, dividing the bone nearly through, and completing the operation by breaking the remaining portions. In the course of some observations on subcutaneous surgery, Mr. Adams remarked that we were indebted to Stromeyer for subcutaneous tenotomy in the year 1836, and to M. Guérin in 1841, for a clear exposition of the subcutaneous law in its scientific and practical bearings. In Germany, Meyer, Wernher, and others followed; and in America, Pancoast, Brainard, Gross, etc. The author remarked that a great impulse to subcutaneous osteotomy in England had been given by the operation of dividing subcutaneously the neck of the thigh-bone with a small saw passed through the track made by a knife a little larger than a tenotomy-knife; and this operation, which he had first performed in December 1869, had been repeated with great success by many surgeons in this and other countries. Mr. Gant soon afterwards divided the shaft of the femur below the small trochanter in the same manner; but the largest and boldest operation in which the same instruments were used was that first performed by Dr. Ogston of Aberdeen, who applied it to cases of knock-knee, and, introducing the saw into the healthy knee-joint, split the lower end of the femur, and detached the inner condyle. This operation was performed on May 17th, 1876, and had been repeated by many surgeons, both at home and abroad, with great success. It had already become an established operation in surgery, and was the greatest triumph of subcutaneous osteotomy. After some observations on the method of performing subcutaneous operations, so as to ensure the full protective influence of the subcutaneous law; and also on the use of the small subcutaneous saw and the chisel in the different classes of cases, Mr. Adams suggested the following points for discussion at the meeting: 1. The method of performing the operation of subcutaneous osteotomy, and the instruments to be employed, viz., whether saw, chisel, or drill: 2. The selection of cases in reference to their pathology, the joint involved, and the instruments to be used: 3. The relative merits of subcutaneous osteotomy, and osteotomy by open wound under Lister's antiseptic method.

Osteotomy in Genu Valgum. By W. MACEWEN, M.D. (Glasgow).—There were several points, in addition to those already published, concerning the operation which the author had advanced for the rectification of genu valgum by the transverse incision through the femoral diaphyses, which were considered worthy of attention. The first related to the direction of the osseous incision, which ought to be made so as to avoid the external condyle, which may be effected by cutting parallel to the condyles, or by commencing the incision a short distance above a line drawn from the upper margin of the external condyle across the limb to the inner side, the incision commencing from the inner side of the limb. The exact seat of the incision in the soft parts ought to be noticed, with the intention of showing that an incision may be made which would cut no vessel requiring a ligature. This may be done if a point be selected where the two following lines meet each other: a line drawn transversely from the upper border of the patella when the limb is in the extended position; and a line drawn longitudinally, about half an inch anterior to the spine, for the insertion of the adductor magnus tendon. That position is below and anterior to the anastomotica magna, and above the superior internal articular artery; and by making an incision half an inch in length directly to the bone at this point, it is impossible to touch any normal distribution of these branches. The extent of the transverse osseous incision depends upon the nature of the case: in young persons, fully two-thirds of the bone are divided; in old persons with hard brittle bones, the whole bone up to the external dense layer is cut, and force is never applied in bending or breaking the limb to a greater extent than what may be easily done by taking the limbs in the surgeon's hands, and using the one as a fulcrum, the other as a lever. This femoral incision neither impairs nor arrests the growth of the bone, as the experience of the last three years has pointed out; those operated on being increased in height as an immediate result of the operation, and the limbs have grown proportionately since. One or two remarks regarding the pathology of genu valgum may be mentioned, as they have a practical bearing. In genu valgum, there is a lowering of the internal condyle in all cases. Secondly, this lowering may be due to a bend in the lower third of the femur, to a lowering of the internal part of the diaphyses, or to an actual increase in the length of the internal condyle. A slight increase in the length of the tibial diaphyses toward the inner side is also in some cases present; but, in the great majority, not to a sufficient extent to require operative interference. Generally, the knock-knee is made up from several of the above pathological conditions. Regarding the tibial incision in knock-knee, in by far the greater majority of cases it is not required in any way; even the most aggravated cases have been rectified without it; but, in some aggravated cases, it may be justifiable, and may contribute slightly to the restoration of the symmetry of the limb. The division of the tendon of the biceps often does more good than a tibial division. The division

of the femur from the external surface has many disadvantages, and not one single merit. Regarding anterior tibial curves and their correction, where a single osteotomy can be performed, it is to be preferred; but where a series of osteotomies is required, a wedge of bone is more easily removed, and is more satisfactory. A method of measuring the size of the required wedge was mentioned.

Subcutaneous Osteotomy in Young Children. By ROBERT WILLIAM PARKER, M.R.C.S. (London).—Although the East London Hospital for Children had afforded him considerable scope for the performance of osteotomy for a variety of deformities—including ankylosis of the hip-joint at various angles to the pelvis, rickety deformities of the shafts of the femur and of the tibia, genu valgum and genu varum—he purposed confining himself to the subject of genu valgum chiefly. He would only say that, out of a large number of osteotomies performed on children varying in age from three to thirteen, he had never lost a case; and in only one instance had there been any suppuration. This one exception had been a severe case of erysipelatous œdema, which, however, yielded to treatment, and the boy finally made a good recovery. It was now generally admitted that the cause of genu valgum lay in a hypertrophic lengthening of the internal condyle of the femur; and although this fact had long been known, it had never occurred to surgeons to utilise the knowledge for the correction of the deformity. Mr. Parker thought that a special acknowledgment was due to Dr. Ogston for having thought out this treatment, and for his boldness and success in putting it into practice. It was no doubt the first step in the right direction in the treatment of this disease. Personally, however, he had not adopted Ogston's operation, but the modification of it first performed by his colleague, Mr. Reeves, and described by the latter gentleman in the BRITISH MEDICAL JOURNAL as "subcutaneous extra-articular osteotomy". This operation was a less serious one than Ogston's, and just as effective. He (Mr. Parker) believed that in children the operation could be performed without entering the joint; for the layer of encrusting cartilage, together with its synovial lining, would stretch rather than crack sharply off, as was probably the case in adults. Fortunately for his patients, he had had no opportunity of putting this opinion to the test of the *post mortem* room. But clinical facts bore him out. Thus, out of about twenty-five operations, in three or four there had been slight effusion into the knee-joint. In one case, this effusion had been especially distinct, and was anticipated at the time of the operation; for, in using the chisel, owing to the extreme softness of the condyle, it had accidentally entered the joint, a fact of which he was well conscious. He believed, therefore, that the extra-articular operation was feasible in children, and that it was merely a matter of operative dexterity. If, six or eight days after the operation, on removing the first dressing, the joint were found to be normal in size, and capable of being spontaneously flexed to about two-thirds of its extent, he did not see what more could be wanted in support of the belief that the joint had not been entered. Photographs of children both before and after the operation were shown. One of these showed a child five days after the operation, and the amount of flexion which was then possible. Both legs had been operated on at the same time. There had been no constitutional disturbance whatever. Mr. Parker had been gradually led to the present plan of removing the dressings about the fourth day; for he found that the wound was generally closed by this time. He was of opinion that, in children and young adults, this (Reeves's) operation was the best, because: (1) it is a subcutaneous one; (2) it is (almost always) extra-articular; (3) it counteracts exactly the pathological condition which causes the genu valgum; (4) because of the short time necessary for complete recovery.

Notes of a Dozen Cases of Osteotomy. By THOMAS JONES, F.R.C.S., M.B. (Manchester).—The cases of deformity which had fallen under Mr. Jones's observations, and in which osteotomy had been performed, might be arranged in three groups: 1. Cases of rachitic distortion of the legs, in which the tibia was operated upon; 2. Those in which there had been much inbending of the knees, relieved by division of the internal condyle; 3. A case of osseous ankylosis of the hip-joint in a flexed position straightened by dividing the neck of the femur. For the sake of brevity, the cases were arranged in a tabulated form. In several of these patients, both limbs were operated upon, so that the twelve cases constituted nineteen osteotomies. In sixteen of these, the operation was made by a saw, which was introduced through a small puncture in the skin. The bone-*débris* which resulted from the working of the saw did not produce any local irritation or inconvenience; primary union of the skin-wound was obtained in all. A wedge-shaped piece of bone was removed in each of the remaining three osteotomies. This was accomplished partly by a saw, and partly by a chisel. We succeeded in getting primary union in one of these only. Lister's antiseptic precautions were duly carried out in the majority of the operations.

Table of Cases of Osteotomy.

No.	Name.	Age.	Character of Deformity.	Nature of Operation.	Result.	Remarks.
1	John Ed. H.	6	Outward and forward curve in both legs.	Osteotomy of both tibiæ.	Legs quite straight; firm.	Late dentition; expanded epiphyses; large head.
2	Sarah N.	5	Outward curvature of right leg.	Division of right tibia.	Good.	Late dentition.
3	Jessia W.	5	Deformity of both legs; more marked in right.	Osteotomy of right tibia.	Good.	Forcible straightening by fracture of left leg.
4	Edwin H.	4½	Both legs; seat of extensive curve outwards.	Osteotomy of both tibiæ.	Good.	Late in walking; large rickety head; bended ribs.
5	Jessia Wyatt	6	Outward and forward curvature of both tibiæ (very marked)	Division of both tibiæ, also of both tendo-Achilles.	Very satisfactory.	Simple division of tibia corrected outward curve, but rendered anterior curve more prominent; was overcome by tenotomy.
6	Alfred K.	6	Very pronounced forward curve in both legs.	Removal of a wedge-shaped piece of bone from each tibia.	Very good in left leg. Still in hospital.	Simple osteotomy of right tibia, with division of tendo Achillis, did not improve position: afterwards, removal of wedge of bone from tibia.
7	Clara Eds.	7	Genua valga.	Division of internal condyle of femur on both sides (Ogston's operation).	Good.	Other members of same family rickety.
8	Edith H.	11	Genua valga.	Removal of wedge of bone from left internal condyle; Ogston's operation on right.	Very good on right; satisfactory on left.	Cause of deformity somewhat obscure: only commenced seven months before admission.
9	Fanny V.	5	Genua valga.	Division of internal condyle (both sides).	Not very satisfactory.	Extremely rickety; distortion of femur and tibia.
10	Emma W.	13	Genu valgum (right).	Division of internal condyle of right femur.	Good.	Complained of pain in knee; movement o joint quite free and painless.
11	Eliza H.	5	Genua valga.	Ogston's division of left internal condyle, with tenotomy of biceps: forcible straightening (with tenotomy) of right leg.	Fairly good.	Distortion of almost all the long bones. Has had measles since her discharge; this has left her very weak.
12	Mary J.	11	Faulty osseous ankylosis; left hip-joint.	Division of neck of femur (Adams).	Good position. Leg shorter and less developed than the other.	The limb could not be brought to a straight position until the sartorius and adductor muscles had been divided at their origins.

On an Operation for Genu Valgum, with some remarks on Osteotomy. By BERNARD E. BRODHURST, F.R.C.S. (London).—Mr. Brodhurst considered that osteotomy was not necessary in all cases. In many instances, a certain amount of separation of the ends of the bones was necessary before the limb could be straightened; and this might be gained by dividing the biceps tendon and the external lateral ligament, and, when it was tense, the ilio-tibial band. If the deformity were not very severe, the limb might at once be brought into the straight position.

On Osteotomy of both Thigh and Leg. By RICHARD BARWELL, F.R.C.S. (London).

On Subcutaneous Osteotomy below the Trochanter. By F. J. GANT, F.R.C.S. (London).—Mr. Gant advocated infratrochanteric osteotomy as an alternation in cases for which Adams's operation of intertrochanteric osteotomy was not suited: viz., 1, where, from continued disease, the head of the femur had disappeared, leaving only a stunted nodule of neck above the trochanter; 2, where, the ankylosis having arisen from rheumatic arthritis, there was an exuberant deposit of new bone around the neck of the femur, this being entire.

Mr. FAGAN (Belfast) described a case in which he had performed the operation of osteotomy at the upper end of the femur.

Mr. OWEN (London), referring to the subject of Mr. Adams's paper, said he was afraid that the reputation of the operation would suffer from the indiscriminate use made of it. Dr. Macewen's patients appeared to be of all ages; and Mr. Parker had been operating in cases of patients three, four, and five years of age and upwards. One could hardly see where this subcutaneous osteotomy would end. Possibly, in a few years, in cases of chest-disease, the ribs would be divided subcutaneously. It seemed to him that the more the operation was performed, the younger should be the patient upon whom it was performed. The question then was, whether it should be performed antiseptically; and it appeared that Mr. Parker had a case in which it was performed with antiseptics with the greatest success. Dr. Macewen had not stated whether or not it was performed under Mr. Lister's antiseptic spray. As to the pathology of genu valgum, which might be considered as strumous, it was only reasonable to suppose that, under the weight of the body and the large hydrocephalic head, the rickety limb and ligaments would give way. If the cases were taken early, everything could be done by judicious splint-bandaging. He did not, think, however, it would be adding to the reputation of the operation to have it performed on every rickety case that came under their care.

Mr. MAC CORMAC (London) said he wished to endorse what the previous speaker had said. He had performed the operation on several children of from two to five years of age, and he could not help feeling that the operation was a very serious one. He thought very highly of Mr. Parker's ingenious plan for using an elastic bandage and splints, which might well be made concave; and also of the plan of encasing the limb in plaster-of-Paris bandages, after straining it under chloroform. He found that, in cases of children up to six years of age, the limb would yield; and that, after two or three applications of plaster-of-Paris bandages, it could be made as straight as could be. He was very much interested, of course, in the remarks of Dr. Macewen, but could not quite make out his reasons for preferring to have the operation performed on the outside of the convexity. In one case, a rather severe one of genu valgum, he performed the operation after the manner of Ogston. It was the case of a boy fourteen years of age, and he divided internally the condyles of both limbs. He succeeded in straightening one, the less severely bent of the two; but he could not straighten the other, except partially. There was no inflammatory action afterwards, and the patient recovered. Some time since, he divided the femur with a facility that astonished even himself, and straightened the limb perfectly.

Mr. R. W. PARKER (London) said he would not like that it should be thought that he would operate on every child brought into the hospital. He believed, however, that childhood was the time when such operations could be undertaken with the greatest chance of success; for they repaired very easily after injuries of that kind. He had come to perform those operations, having been led on, so to speak, by the success that had attended them, and by the absence of all dangerous constitutional symptoms. He could not agree with Mr. Owen's estimate of those cases, because he had seen cases of genu valgum in children going from one hospital to another, and finding no relief, until Ogston's mode of treatment was tried on them. Of course, if it were the children of wealthy parents that were so treated, a great deal might be said for the postponement of the operation; but, as a general rule, it was the children of the poorest of the poor in London that came into the hospitals suffering from such disease; and no good results at all could be expected if those poor children were debarred from the advantages of this operation. Mr. Owen had said that they would, one of these days, operate on rickety chests by dividing the ribs. And what harm if they did? He thought it would be well if they could improve the bad chests of children. If he could rectify a rickety chest as easily as he could a diseased limb, he did not see why they should not operate.

Mr. ADAMS (London) thought that the operation should not be performed on very young children, who required general constitutional strength. Those cases which were fairly amenable should be treated on the ordinary plan, with mechanical splints and bandages; and they depended largely on constitutional treatment. The rickety class formed the best possible subjects for such operations; but he did not think any case under ten years of age should be operated upon. As to the use of antiseptics, he should say that he had never adopted them, nor had he found them necessary.

Dr. MACEWEN (Glasgow) said that he used antiseptics in his operations, and found them very serviceable. He would never operate until the bone was perfectly hard. He would not operate on any one under nine years of age at the very least, and would always prefer to operate on cases between fifteen and sixteen years. He had operated on about a dozen cases between the ages of twenty-four and thirty-two, and they had done remarkably well.

The following papers on various subjects were read:

Removal of the whole of Right Parietal, and half the Frontal, Bones, the result of Burn: Skin Grafted on Surface of Dura Mater: Recovery. By J. R. HAYES, M.D. (Tralee).—On May 24th, 1874, Dr. Hayes was called to see Mrs. S., aged 32, who was found insensible, lying with her head and face on the hearth, where a turf fire had been burnt out. The upper part of the cheek and eyelids of the right side were vesicated; the forehead and side of the head also suffered; a small portion of skin over the parietal bone appeared charred. She was quite unconscious, and continued so until the following morning. For three or four days, she was greatly depressed, but free from pain. Reaction having set in, she suffered very much from pain and sleeplessness, which was relieved by full doses of opium. She appeared to improve until about the sixteenth day, when suddenly she became slightly delirious, and suffered from nausea and occasional vomiting, with paralysis of the left side. The face was not engaged. Those symptoms passed off in ten days, and her health gradually improved. The injured part of the face and upper portion of the ear, which had sloughed away, cicatrised, and she was able to go about doing her household work. About October 1st, the bones had separated at the sutures in a line extending from the mastoid portion of the temporal to the posterior angle of the parietal, along the lambdoid and sagittal sutures to the superciliary ridge, and outwards to the outer angle of the frontal bone. On October 3rd, Dr. Hayes removed the bones included (the whole parietal and half the frontal). The under surface of the bone was covered with a thick curdy matter; the depressions for the arteries, etc., were obliterated. No pulsation could be felt over the meningeal arteries, and a quantity of fœtid pus welled up from between the hemispheres. The dura mater, which was covered with granulations, continued to secrete pus freely. Finding the ulcerated surface was not cicatrising, about December 2nd, Dr. Hayes grafted skin on four places on the dura mater; three of them took, and cicatrisation commenced from those points, and covered the whole of the exposed surface, the skin-grafts acting successfully. During the whole time, and up to the present, she has not suffered from any brain-symptoms, except that, when the skin-grafts were put on, he placed a pad of lint over them, and bound it with a strip of adhesive plaster. The following day, her left side, including the face, was paralysed; this continued for four days, when the pad was removed, and the symptoms immediately passed away. She has been since, and is at present, doing her ordinary work, and carries a heavy basket on her arm for a great part of the day. Her general health is excellent. (The woman, and the portions of bone removed, were exhibited.)

Fracture of the Patella: and the Report of Cases treated by a New Splint. By WILLIAM J. WHEELER, F.R.C.S. (Dublin).—The author commenced by stating that large numbers of fracture of the patella had come under his care, and many of them had been treated by the apparatus exhibited. He detailed the results of some of the cases, referring to the condition of the quadriceps extensor muscle, which he did not find thin nor weakened; there was not rigidity of the upper fragment in the cases he treated. He showed a specimen of bony union which had been macerated and cut longitudinally. It was bony throughout, and had been taken from a young man who sustained transverse fracture of his right patella, and who died of phthisis two years and five months after he had been discharged from the City of Dublin Hospital, where the writer had treated him with his splint. In conclusion, the advantages of the apparatus were stated.

On the Characters and Mechanism of the most common form of Comminuted Fracture of the Upper Third of the Shaft of the Femur. By EDWARD H. BENNETT, M.D. (Dublin).—Having excluded from consideration the fractures of the trochanters occurring in extracapsular fractures of the neck of the femur, the varieties of simple fracture of the trochanteric region of the femur of Cooper and of Hennequin, and gunshot fractures of the bone, the author proceeded to demonstrate that the commonest form of comminuted fracture of the upper third of the femur is of a definite type, in which secondary fractures, and among them fracture of the neck, are produced by the splitting of the upper fragment, by impaction into, or against it, of the lower. The demonstration consisted of the illustrations of Sandifort (*Mus. Anatom.*, p. 80, f. 1, 2, 3. Cont. Sec. 4, No. 288, p. 207) and of Angers (*Traité Iconographique*, p. lxxv, f. 1, 3, 5, 6, 7) of seven fractured femora—three from the collection of Trinity College, and four from the Museum of the Royal College of Surgeons, being the entire number of specimens of comminuted fractures of the upper third of the shaft of the femur contained in the museums of Dublin, and in the record of a case observed in the living subject by the author. The features of each of the speci-

mens were shown to be in all essential particulars identical, and to agree closely with the illustrations above quoted. In all, a fracture of great obliquity traversed the upper third of the shaft of the femur, from in front and above, downwards, backwards, and outwards; terminating on the outer and back part of the shaft, near the junction of its upper and middle third, or even further down; while the upper fragment was comminuted by lines of fracture extending to the summit of the great trochanter and detaching the neck. From the clinical facts recorded in reference to these cases, the author arrived at the conclusion that these injuries result from indirect violence, possibly even from muscular action. He discussed also the diagnosis of this form of fracture from extra-capsular fracture of the neck of the femur of the ordinary type.

On Colles's Fracture, and the Fractures of the same part of the Lower End of the Radius. By EDWARD H. BENNETT, M.D. (Dublin).—The author of this paper exhibited a collection, containing in all sixty specimens, of those contained in the Museum of Trinity College, Dublin. With this collection there were also shown two recent specimens of Colles's fracture from the Royal College of Surgeons in Ireland. The specimens were arranged in the following groups: Colles's fracture, simple 33, comminuted 21—54; fractures in which the lower fragment was displaced forwards, 4; separations of the inferior radial epiphysis, 3; fracture through the base of the styloid process of the radius, 1. In the analysis of these specimens, the term "comminuted", as applied to Colles's fracture, was limited to fractures which extended into and through the carpal articular surface of the lower fragment. Having referred to the views of Smith and Voillemier, and of others, so far as their accuracy could be tested by the examination of the series, the author discussed particularly the bearing of comminuted fractures on the disputed question of impaction—showing that the proportion of comminuted to simple fractures is greater than has been admitted by Smith, and that the majority of these fractures present a remarkable constancy in their pattern. He demonstrated that the simple fracture without impaction, and the fracture with impaction only posteriorly, occur as seen in the specimens exhibited by the College of Surgeons; and again, that in comminuted fractures, reciprocal penetration of the fragments, contrary to Voillemier's opinion, is the more frequent form of impaction. The following complications of Colles's fracture were shown to be present in exceptional cases: 1. Necrosis of the lower fragment occurring in the simple fracture; 2. Fracture of the shaft of the radius and of both bones of the forearm; 3. Fracture of the styloid process of the ulna. With reference to the last of these complications, he showed that the fracture of the ulna is probably the result of traction exercised by the lateral ligament of the wrist; that the fractured styloid process unites commonly by ligament, with very trivial displacement. The specimens of the second group presented, in two instances, the features of the "articular fracture" of Gordon; in two, they agreed with the figure of Voillemier, being the reverse of Colles's fracture. The separations of the radial epiphyses were, in two cases, accompanied with the casts of the deformities presented by the limbs during life. The author briefly pointed out the diagnosis of this injury in the living from Colles's fracture: a distinction recently asserted to be impossible. The specimen of united epiphysary separation, if so rightly interpreted by the author, showed that in this instance only, in the entire series, was the relation of the radial and ulnar styloid processes preserved. The fracture of the styloid process of the radius was shown as of interest from its rarity, and the small amount of deformity attending its union.

Intravenous Injection of Milk. By A. S. MELDON, L.K.Q.C.P.I. (Dublin).—Dr. Meldon read a paper on intravenous injection of milk, which was illustrated by five cases operated on by him. The first was one of exhaustion after typhoid fever. The second and fifth were patients in the last stage of phthisis, and in both life was considerably prolonged by the operation. The third and fourth were cases of anæmia, in both of which life was saved by the transfusion of milk. In the three last cases, goat's-milk was used, to which was added carbonate of ammonia. Dr. Meldon reviewed all the cases on record in which milk had been transfused, and made an analysis, showing the large proportion which have been successful. The paper wound up with suggestions and precautions in the performance of the operation.

Mr. JOHN FAGAN (Belfast) exhibited some splints.

Friday, August 8th.

The Chair was taken by WILLIAM MACCORMAC, F.R.C.S. (Surgeon to St. Thomas's Hospital, London), Vice-President of the Section.

Poroplastic Splints. By T. GELSTON ATKINS, M.D. (Cork).—Dr. Gelston Atkins exhibited, and read a paper on, Cocking's Poroplastic Jackets as used for Sayre's method of Treatment of Diseases of the Spine.

Mr. W. ADAMS (London) said that the plaster-of-Paris jacket was not at all as good as it might be, and the one now exhibited appeared to be much superior. It could be changed each morning, whereas the other was quite immobile, and could not be removed for two or three months. The great object of cleanliness, which was impossible with the plaster-of-Paris jackets, was easily attainable with those. The only difference was, that they could not be put on unless while the patient was hanging; with that little drawback, he thought those jackets must be of immense value in treating spinal disease. Dr. Sayre had told them that the good was done by the suspension, but they could not, by the plaster-of-Paris jackets, retain whatever good was thus done. The patient might gain an inch by suspension, but that inch would afterwards be lost. It was a great deal, however, to have passive support for the patient, and he cordially approved of the jacket now exhibited.

Dr. LAFFAN (Killeenford) had found great difficulty in using plaster-of-Paris jackets, and he found that the heat of the body changed the shape of the jacket very soon.

Mr. OWEN (London) said that, for the plaster-of-Paris treatment of spinal disease, the great advantages claimed were these. Any medical man could treat a case from beginning to end, no matter how remote the district in which he lived; the treatment was serviceable and extremely simple, and there was no need of continually calling in the services of the orthopædic mechanician. By leaving the plaster-of-Paris treatment, and going back on this special treatment, they would lose a great many valuable advantages. He had treated many cases of curvature of the spine with plaster-of-Paris, and after each case he believed in it more and more. It was objected to the plaster-of-Paris jacket, that it was immobile, and could not be easily taken off; but it should be remembered that its primary object was to give absolute rest to the joint. He did not think it would be well to have the jacket frequently removed, and he doubted the advisability of having a struggling child, suffering from angular curvature of the spine, suspended two or three times a-week.

Dr. MACEWEN (Glasgow) thought that paraffin would be preferable to plaster-of-Paris for those jackets. It could be laid on with a bandage, and, by pouring cold water over it, would in five minutes become as hard as bone. If necessary, the paraffin could be cut off; and it might be taken off at night and put on in the morning. He had, in some cases, kept on such jackets for three or four months, and found them very fair. Its method of application was very easy, and, although a little dearer than plaster-of-Paris, it did not break down as often as the latter did. Besides, when a jacket had served its purpose, it could be melted down, and the paraffin would be as good as new.

On the Cause of Eversion of the Limb after Fracture of the Neck of the Femur. By EDMUND OWEN, F.R.C.S. (London).—Sir Astley Cooper attributed the eversion to the superior strength of the muscles of external rotation; and his views, which have afforded an excellent working hypothesis, have been generally adopted by subsequent writers. Mr. Owen asserted that the thick mass of muscles of internal rotation, which filled up the deep fossa between the front of the iliac crest and the great trochanter, are more powerful than the muscles of external rotation, though the latter are much more numerous. This important fact he had ascertained by testing the relative power of the two groups of muscles by means of a specially arranged spring-balance and indicator. The muscles of internal rotation are the tensor fasciæ femoris, the anterior two-thirds of the glutæus medius, and the front part of the glutæus minimus. The pyriformis and company would probably be rendered useless as external rotators when, after fracture of the neck of the femur, the great trochanter had fallen towards the great sacro-sciatic notch. Some time since, an old woman came under treatment, who, three months previously, had broken the neck of her thigh-bone. There had been no attempt at union, and the limb lay persistently on the whole length of its outer side; but, on being instructed, the patient could roll it inwards until the foot was at right angles to the surface of the bed. She could not have done this if the characteristic eversion had been due to the superior strength of the external rotators. The posterior surface of the thigh of a man lying supine on a flat surface hardly touches that surface, the weight being transmitted partly by the pelvis, partly by the calf. The centre of gravity of the limb is well to the outer side of a straight line connecting the middle of the acetabulum and the heel. In its search for stable equilibrium, the sound limb rolls outwards until further eversion is checked by the front of the capsular ligament being rendered tense. In this position we find the limb in sleep, after paralysis, and in death. In the mortuary, rigor mortis having passed off, division of the front of the capsule is followed by still further eversion; or, the neck of the femur being divided inside the capsule, the limb will roll over on to its outer side. Similarly, when the neck of the living femur is broken, the limb "tumbles" into the position of eversion; muscular action has nothing to do with it. The administration of chloroform is never followed by a righting of the limb.

Those rare cases of fracture of the neck with inversion are to be explained by the fact of the limb having been left in a position of inversion by the violence which caused the fracture; if the fragments are unhitched, eversion at once declares itself and persists. When the femur is fractured below the level of the lesser trochanter, eversion is still a most characteristic feature of the lesion.

Mr. COOPER FORSTER (London) said that it took a good deal to knock out of an old man's head the ideas he had learned when he was a young man; and it was only some months ago, when he heard of Mr. Owen's investigations on this matter, that he was induced to doubt what he heard taught by Sir Astley Cooper himself. He had heard the matter discussed more than once in Cooper's presence, and then muscular action was thought to be the explanation of all the distortions of fractures. Now, as Mr. Owen had satisfactorily shown, the mechanical explanation was quite sufficient, without bringing in the question of muscular action. He thoroughly concurred with Mr. Owen's theory, and would compliment him on the satisfactory way in which he had proved his theory by his diagrams, which were taken from dissections and clinical observation.

The CHAIRMAN said that Mr. Owen had proved his case by observation and experiment, and he congratulated him on the admirable way in which he had placed this matter before the meeting.

On the Immediate Cure of Inguinal Hernia by a New Instrument. By W. D. SPANTON, M.R.C.S. (Hanley).—After alluding to the large number of cases of hernia in this country, and the comparatively small proportion in which any attempt is made to cure the affection, the author pointed out that the methods hitherto practised might be classed under the following heads: 1. Contraction of skin and sac by excision, cautery, or ligature; 2. Closure of the sac by adhesive inflammation; 3. Plugging the inguinal canal; 4. Bringing the walls of the canal together. The last of these was first alluded to by Sir W. Lawrence, and brought into practical notice by Mr. John Wood, whose success in this operation is well known. The great point in securing a successful result being, according to Wood, to establish "complete union along the whole length of the canal", the author was led to devise a new instrument, by which that result might with more certainty and safety be attained, than by any of the methods hitherto in use. The instrument is of the shape of an ordinary corkscrew, and is introduced from above downwards in such a way as to bring together the outer and inner pillars of the inguinal canal at three or four different points, and at the same time to secure the invaginated sac or fascia (separated subcutaneously, after the manner of Wood) in the inguinal canal for a sufficient length of time to ensure complete occlusion of the hernial opening. The author related fourteen cases in which the operation had been performed, in all but one of which the result had been quite satisfactory; and in the one exception, the patient had been exposed to great strain in a hay-field too soon after the operation; but in that instance, although the hernia returned, it was much more easily controlled by a truss than before the operation. In not a single instance had any dangerous symptoms resulted; and the author concluded by claiming for the operation that, although it may not in all cases be perfectly successful, yet in a large proportion such an issue may be legitimately looked for, and that, even if it fail, we should at least have the satisfaction of knowing that it is almost impossible to incur the odium of having left the patient in a worse state than he was before.

Mr. ALCOCK (Burslem) said that he had had a case of inguinal hernia in hospital the previous week, and was anxious that it should be treated according to Mr. Spanton's system. He had previously operated for the cure of hernia according to Wood's mode, but he thought Mr. Spanton's operation was incomparably easier. He (Mr. Alcock) performed the operation on a young woman on Thursday, and saw her again on Sunday, and there were then no abnormal symptoms except about the wound, which was becoming gradually consolidated.

Mr. SPANTON said that he had observed in most cases a temporary swelling of the scrotum, sometimes to a considerable extent, but no ultimate inconvenience had resulted from the temporary pressure on the cord. If there were any danger, the instrument could be easily withdrawn, and any further injury prevented, the surgeon being satisfied with what had been effected.

Analysis of One Hundred Consecutive Cases of Operation for Stone in the Bladder. By W. F. TEEVAN, B.A., F.R.C.S. (London).—The series consisted of one hundred and two cases of stone in the bladder; but, as one patient with extensive heart-disease died on the operating-table from the effects of the administration of gas and ether before an intended operation, and as no operation was performed on an old man with cerebral disease, the number was reduced to one hundred cases, all of which were operated on. Three of the number were females, twenty-two were boys, and seventy-five were adult males varying from seventeen to seventy-seven years of age, the majority being between sixty and seventy years old. The first series of operations by any surgeon could not show such good results as the second series, for two reasons: firstly, because it contained the results of his inexperience; and, secondly, because the proportion of hospital cases to private ones was very much larger in the first series than in the second, it being well known that the mortality after stone-operations in hospital practice was much greater than in private, for the simple reason that they were of a more severe kind, as private patients applied for advice much earlier than hospital ones. When he commenced to operate for stone in February 1863, he put before him two distinct objects: firstly, to push the crushing operation wherever practicable, in order to ascertain what were the limits within which it might be advantageously employed; and, secondly, to cut out a stone rather than extract it by the so-called process of dilatation after the primary incision had been made. From two of the females he removed the calculi by forcible dilatation, no incontinence resulting in either case. From the third female the stone was extracted through a vesico-vaginal fistula. All the cases recovered. Of the twenty-two boys, the youngest was one year and a half old, and the eldest fourteen years. Lateral lithotomy was performed in every instance. All the twenty-two boys recovered. Three of them were troubled with incontinence of urine after the operation. Of the seventy-five men operated on, no fewer than fifty-five were relegated to lithotrity, showing the extent to which the crushing operation had been pushed by him. The fifty-five cases occurred in fifty different men. In one case, lithotrity was attempted, but not persevered with, the man being relegated to lithotomy. In another instance, lithotrity was supplemented by median lithotomy; the patient, aged 68, dying from exhaustion produced by cystitis. In a third case, cystotomy was performed with success one year after lithotrity, for the cure of local irritation. In a fourth case, lithotrity was tried because the patient would not consent to be cut; he was successfully cut one year and a half afterwards. Most of the cases were complicated by the presence of cystitis, enlarged prostate, stricture of the urethra, atony of the bladder, or renal disease. Six patients died in his hands, three of whom perished from the operation, and three from causes not connected with it. Five patients were troubled with local irritation after the removal of the calculi. All the rest were cured. Lateral lithotomy was performed on thirty-four patients, twenty-two of whom were the boys already mentioned, and who all recovered. Of the twelve adult males, six recovered and six died. Three old men with extensive renal disease were submitted to recto-vesical lithotomy; one recovered and two died. Medio-lateral lithotomy was performed on two gentlemen; one died, one recovered. The medio-bilateral operation was executed on a patient aged 66, who died from suppression of urine. In two instances, lithotrity at one sitting, followed immediately by external urethrotomy, was performed, both patients making good recoveries. Of the one hundred cases operated on, he lost but two under fifty years of age, one of whom, aged 29, died from pyæmia ten days after lithotomy; and the other, aged 25, died from the presence of large calculi in the kidney after complete convalescence from lithotrity.

Dr. BARTON (Dublin) said that great weight must, of course, be attached to Mr. Teevan's paper, but there was one point to which he should direct attention. If he understood Mr. Teevan correctly, he objected to the dilatation process, as it was called; and, without disputing his correctness in saying that there was no such thing as a pure dilatation, yet very successful results had been attained by surgeons by what was called dilatation with moderate external incision. He would wish Mr. Teevan to explain whether he would decide against the operation altogether, especially in cases where the stone was very large.

Mr. SPANTON (Hanley) inquired whether, in making an incision instead of dilating, greater hæmorrhage was found to occur; also whether, in such cases, he would use the tube which most surgeons were now quite ready to discard.

Mr. BAKER (Derby) asked what Mr. Teevan would recommend as the safest mode of dealing with an unusually large stone. He understood Mr. Teevan to suggest that a probe-pointed bistoury should be introduced, but he (Mr. Baker) was not sure that with that instrument one could be sure of avoiding to cut the capsule of the prostate. He thought they were much indebted to Mr. Teevan for the honesty with which he had told the history of all his cases.

Dr. LUNN (Hull) detailed the particulars of a case in which he had recently operated for stone in the bladder.

Mr. TEEVAN (London) said that, with regard to dilatation of the prostate, it was remarkable that, in University College, the Professor of Surgery had been for years teaching one thing, and the Professor of Anatomy another. Anyone who had seen Professor Marshall's demonstrations, would be fully convinced that there was no such thing as dilatation of the prostate. He had heard Professor Ellis, on the con-

trary, state that, in most of Liston's fatal cases which he examined, he found dilatation. Professor Erichsen, who had made such cases a special study, and who for years said "you must dilate the prostate", afterwards announced to the Pathological Society that, in despite of his previous teaching, he was satisfied that "stone must either come out or be torn out". He would at all times prefer to cut out rather than to tear out. As regards hæmorrhage, although there might be a great gush of blood at first, it would cease immediately, and he would not use any tube. Sir Henry Thompson and Mr. Coulson agreed with his method of treatment. In the case mentioned by Mr. Baker, the treatment he would recommend would be electricity, ergot of rye, and an application of a solution of nitrate of silver.

A New Method of Using Ice. By EDWYN ANDREW, M.D. (Shrewsbury).—This paper pointed out the advantages in certain surgical and medical cases of employing moulded or unmoulded ice; the cold being rendered more effective by being combined with the active principles of drugs, and this combination obtained by freezing various medical solutions. In operations, ice by this means may be rendered highly antiseptic, caustic, or styptic, etc., or these properties may be combined; it may be moulded into various forms, which can be readily handled and applied to parts of the body not easily reached. In medical cases, especially of the throat, stomach, and hæmorrhages from internal organs, ice may be thus pleasantly used to relieve symptoms, and convey at the same time medicine and food to the stomach, when the latter would resist them in any other way.

Remarks upon a Case of Phagædænic Ulceration. By JOHN K. BARTON, M.D. (Dublin).—The term phagædæna was employed to designate ulceration of very different kinds and degrees, and consequently was a somewhat uncertain term. The object of these remarks was to point out the course, signs, and proper treatment of one particular form of this disease. Details of a case in which the disease lasted six months, and for a long time resisted all treatment, were briefly recorded; and the paper concluded with proposing a name for this form of the disease, viz., "chronic syphilitic phagæna".

Dupuytren's Fracture. By W. THOMSON, F.R.C.S. (Dublin).—Mr. Thomson exhibited a specimen of this rare fracture, which had been described by Dupuytren, and of which that author had only seen one example in two hundred cases. A similar specimen was in the museum of St. Thomas's Hospital. The injury consisted of fracture of the fibula, as in Pott's fracture, the lower end of the upper fragment lying upon the astragalus, between the outer malleolus and the tibia, which was completely dislocated inwards. The astragalus, the tibia, and the two portions of the fibula were ankylosed.

SUBSECTION OF OPHTHALMOLOGY.

Wednesday, August 6th.

IN the absence of Mr. JONATHAN HUTCHINSON, the Chair was taken by FREDERICK MASON, M.R.C.S. (Bath), who opened the meeting with a short address, in which he referred to the great desirability of an annual Ophthalmological Subsection, and to a resolution to that effect, which had been passed at a meeting of ophthalmic surgeons held at the Cork Ophthalmic Hospital that morning.

Knapp's Peripheral Division of the Capsule. By C. E. FITZGERALD, M.D. (Dublin).—The object of this paper was to bring under notice an important innovation in the method of performing von Gräfe's linear peripheral operation for extraction of cataract, lately introduced by Dr. Knapp of New York. Dr. Knapp first proposed this method in a paper (May 20th, 1878) in the sixth volume of the *Archives of Ophthalmology and Otology*, and he subsequently brought the matter before the meeting of the Ophthalmological Society at Heidelberg in the following August. The operation is performed in the following manner. After the conical section and iridectomy have been completed, the operator makes slight pressure with the fixing forceps on the globe, so as to make the conical wound gape somewhat, and then draws the point of the cystotome through the capsule along the conical section, so that the instrument scarcely, if at all, enters the anterior chamber. At the time when Knapp brought the subject before the Heidelberg meeting, he had, in forty-eight operations performed by this method, lost four, but the latter were all complicated cases. The others healed without any inflammatory reaction. The author of the present paper had performed twenty-five operations by this method, and had had no loss. In one case, there was a copious escape of vitreous humour, and Taylor's vectis had to be introduced to remove the lens; yet, notwithstanding a further escape of vitreous humour the following day, the wound healed, and the visual result had been very good. In all the other cases, the healing took place with great rapidity, and was accompanied with little or no irritation. In fact, rapid healing of the wound, and the almost total absence of any irritation, are the two most noticeable features of this procedure. Knapp lays great stress upon the importance of using a very sharp cystotome. The section in the capsule must be a cut, not a tear; for this purpose he uses cystotomes, whose straight cutting edges form an angle of 120° to 150° with the stem. The principal advantages claimed for this peripheral division of the capsule were: 1. The simplicity of the operation; 2. Liability of doing injury less than by the ordinary method; 3. The easier exit of the lens; 4. "The rapid healing of the linear wound of the capsule confines whatever remains behind within a closed cavity, thus placing the eye, from which a cataract has been removed, in conditions akin to those which follow a single iridectomy." (Knapp). The only disadvantage which can be urged against the procedure is the necessity for a secondary operation on the capsule. This objection, however, has little weight against the singular immunity from danger afforded by the primary operation.

How to Obviate the Complications which render Cataract Operations Precarious. By J. R. WOLFE, M.D. (Glasgow).—The risks attendant on operations for cataract were described as being connected with—1. The cornea; suppuration and sloughing of which may occur from various causes. 2. The iris; inflammation and destruction of the eye may arise from injury of this membrane during the operation, or from its subsequent prolapse into the wound. 3. The vitreous humour; which may be lost from the effects of disease, or the use of force. 4. The lens; which may sink or injure some of the structures in its exit, or its *débris* may cause panophthalmitis and collapse. The operation must be planned so as to avoid these risks, and the incisions and other steps must be adapted to the circumstances of each case. In *infantile cataract*, after opening the capsule widely, and allowing the aqueous humour to soften the lens for two or three days, Dr. Wolfe removed it by means of a broad needle. This did away with all necessity for introducing pumping instruments through the cornea for the removal of soft cataracts. In *senile cataract*, he generally performed iridectomy downwards, two or three weeks before the extraction, in such a way that there was no risk of the iris being invaginated in the wound. In the extraction, he exposed the eye by means of a speculum, and fixed it with forceps. With von Gräfe's knife, he made the incision at the junction of the cornea and sclerotic (including a line more than the third part of the corneal circumference), but did not complete it, leaving a small bridge. In withdrawing the knife, he opened the capsule widely with the point. Substituting his thumb and finger for the speculum, and using a cystotome, he made sure that the capsule was thoroughly opened, and then completed the corneal incision with another knife, and, by gentle pressure and counter-pressure, made the lens advance to the opening. He avoided giving chloroform, if possible. In *traumatic cataract*, when the lens was *in situ*, he made an iridectomy, and extracted it subsequently. When dislocated forwards, he removed it without interfering with the integrity of the pupil. When it was dislocated backwards, he brought it into the anterior chamber with a needle, and extracted it through a small corneal incision, not interfering with the iris, unless any injured portion of it called for removal.

Mr. G. E. WALKER (Liverpool) considered, from the results of his own experience, that an upward or downward corneal section, without iridectomy, was far better than von Gräfe's operation with iridectomy.

Mr. VOSE SOLOMON (Birmingham) considered it doubtful whether any of the modern operations gave a smaller percentage of losses than was obtained by some of the best operators from the old flap operation. He usually performed iridectomy; but a colleague at Birmingham was at present using eserine before and after the extraction, and dispensing with iridectomy. He thought the retention of portions of lens in the capsule, in Knapp's operation, a serious drawback.

Dr. ANDREW (Shrewsbury) thought that there was great difficulty in obtaining good statistics of cataract operations, and hence in arriving at a judgment as to the procedure which was most generally advisable. Removal of the lens in its capsule often gave the best results.

Dr. A. H. JACOB (Dublin) thought the retention of fragments of lens in the capsule a bar to Knapp's operation. He advocated one or other of the corneal operations without iridectomy.

Dr. HIRSCHBERG (Berlin) made the incision more corneal than in von Gräfe's peripheral linear operation, but thought that no one operation was universally applicable. Hasner of Prague, who had extracted seven thousand hard cataracts, still adhered to the old flap operation, sometimes with iridectomy.

Dr. J. B. STORY (Dublin) suggested that Knapp's opening in the capsule might not always be large enough for the easy exit of a full-sized hard nucleus. He had lately begun to extract under carbolic spray, and with encouraging results.

Dr. LITTLE (Manchester) anticipated that the retention of cortical matter in Knapp's operation would lead to frequent necessity for second-

ary operations. He adhered to von Gräfe's modified linear with iridectomy as the best operation, the operations of Liebreich and Lebrun ranking next.

Mr. FITZGERALD, in replying, considered that von Gräfe's peripheral section had lost credit only with those who, by making the incision too small, failed to carry out von Gräfe's own directions. In Knapp's operation, the remains of cortex, although imprisoned, became absorbed without trouble.

TOBACCO AND ALCOHOLIC AMBLYOPIA.

DR. HIRSCHBERG (Berlin) opened the discussion on this subject. He said that much attention has been devoted to it since amaurosis from smoking was described by Mackenzie; and there has been, both in England and abroad, much difference of opinion regarding the share to be assigned to tobacco in the causation of certain well-known and common cases of failure of sight. Whilst von Gräfe and many of his followers in Germany were drawing out the symptomatic differences between progressive atrophy and benign amblyopia, other observers, especially Hutchinson and others in England, worked at the natural history of the latter class of affections, and established the fact that abstinence from tobacco was followed by cure in most cases. Förster, uniting these two points of view, has given much greater definition to the subject, and shown that tobacco causes a symmetrical defect in the central part of each visual field, which accounts for all the symptoms, and which disappears partially or entirely when smoking is abandoned. The speaker had confirmed and amplified Förster's observations. He maintained strongly that tobacco is the cause of the majority of cases of amblyopia which present the following features: failure of both eyes alike, with nearly central scotoma and corresponding defect of colour-perception, without any contraction of the visual field, never passing on to complete blindness, accompanied often by other symptoms of chronic nicotism, and improving or disappearing when tobacco is relinquished. In a minority of cases, alcohol alone appears to be the cause; but the defect of the field in these is thought to be more truly central than in the tobacco-cases. In a very few cases, symptoms exactly like those from tobacco and alcohol occur without the operation of either of these causes.

A case of Tobacco-Amblyopia reported by Professor COHN of Breslau was read, in which the importance of considering the quantity of nicotine contained in the cigars consumed, as well as the number of cigars, was prominently brought forward.

Mr. SWANZY (Dublin) thought the amount of nicotine and other deleterious substances contained in various tobaccos had been greatly lost sight of in explaining the difference of opinion which existed in different countries as to the frequency of tobacco-amblyopia. In Germany, although smoking was almost universal, and indulged in excessively, this affection was rare, because the tobacco was light. In Turkey, the same fact might explain an observation of Mr. Brudenell Carter. In Ireland, amongst the lower orders, tobacco-amblyopia was very common, the tobacco smoked being Limerick twist, an intensely black and moist tobacco, which probably contained large quantities of poisonous matters.

Mr. G. E. WALKER (Liverpool) said he found optic neuritis (fluffiness of the margins of the disc, with hyperæmia of its surface) frequently to come on in cases of tobacco-amblyopia in one eye some time before it did so in the other. The reason why atrophy came on in some cases, and not in others where apparently similar causes existed, was to be sought for very possibly in the fact of the mothers of the former individuals having borne many children and lost much blood in childbed, thus making their offspring more liable to nervous atrophy. Mr. Walker had repeatedly seen complete blindness result in cases of tobacco-amblyopia. For the cure of tobacco-amblyopia, complete abstinence was not enough. Mercurialisation must also be largely employed. Later on, the neutral sulphate of strychnia might be employed, not by the subcutaneous method, but by instillation into the eye.

Mr. NETTLESHIP (London) was of opinion that tobacco-amblyopia certainly did exist, but he did not think that alcohol gave rise to an amblyopia similar to that of tobacco. Tobacco never caused complete blindness. The amblyopia came on in both eyes simultaneously, but the ophthalmoscope never revealed anything approaching neuritis in this affection. Chewing tobacco was even more liable to cause amblyopia than smoking. In confirmation of Förster's observations, the speaker had found a central defect in the field for green and red. He considered mere abstinence the only essential point in the treatment.

COLOUR-BLINDNESS.

A discussion on this subject was opened by H. R. SWANZY, F.R.C.S.I. (Dublin).—He said that a good test for the colour-sense should fulfil the following desiderata. 1. It should be capable of rapidly detecting the existence and nature of the anomaly. 2. It should make the least possible demand upon the intelligence of the patient. 3. It should render deception, whether intentional or unintentional, impossible. Hence every method which depends upon the correct name being given to a colour is bad. 4. The possibility of any interference of the judgment must be excluded in order that the sensation to be tested may alone come into play. The spectroscope employed alone does not answer any of the above requirements, and can only be employed in conjunction with other methods. The method by means of coloured shadows, an application of an old experiment, as suggested by Dr. Stilling, is very beautiful, and goes far as an argument in favour of Harvey's theory of perception of colour. Dr. Stilling's pseudo-isochromatic tables have not met with universal favour. They consist of figures and letters in red and pink upon a brown background. Red and brown appear to the red-green blind as similar colours, consequently in such cases the figures and letters should not be distinguishable. Dana of Kagerö has published a table with coloured wools arranged in rows, which are to be recognised by the persons examined as being composed of similar or of different colours. The method of Professor Holmgren of Upsala has received the greatest meed of popularity. It is conducted by means of coloured wools, which are to be sorted according to a system, the two chief tests being by a skein of pale green wool and one of purple wool. By this means, the colour sense of an individual may be tested in the space of a minute or a minute and a half, while no word need be uttered on either side, and a large roomful of other people about to be tested may look on without vitiating the tests. There is also a method much in use in these countries upon railways, etc.; it consists in a card with four coloured squares, red, green, yellow, and blue, to which the correct names are to be given. This is a bad method, for colour-blind persons are often able to name colours correctly by virtue of a certain brightness which one colour possesses as compared with another. Again, some uneducated people are not familiar with the names of colours, and in this way many seem, with such a test, to be colour-blind when not so. Holmgren, Cohn, Magnus, and Joy Jeffries have been the principal observers of late as to the frequency of colour-blindness. Donders, Fontenoy, and others have also examined large numbers. The percentages given by these observers was, amongst men, from 2.87 to 6.6. Amongst women, colour-blindness is extremely rare. The highest percentage for them is given by Dr. Minder at 1.3. Cohn, in 1,061 females, did not find one colour-blind; Magnus only one in 2,216; and Joy Jeffries four in 7,942. Mr. Swanzy had examined 1,320 persons by Holmgren's method; of these, ninety were women, and none of them were colour-blind. Of the 1,230 males, eighty-two were more or less colour-blind, or a percentage of 6.6. He hoped to add to these numbers, and to make his investigations more complete, especially as regards blue-yellow blindness. It is to be regretted that the above-mentioned observers have not sought more carefully for the latter interesting, although apparently rare, form of colour-blindness. The practical importance of colour-blindness is as great as its physiological interest. It would be most desirable that the various railway companies and the Board of Trade should be induced to adopt Holmgren's test.

Dr. WOLFE (Glasgow) had examined two thousand persons, and found about the same proportion of colour-blindness as Mr. Swanzy. He did not explain his method. He thought that an efficient examination of all sailors and railway servants should be compulsory.

Dr. HIRSCHBERG (Berlin) agreed with Mr. Swanzy that Holmgren's wool-test was the best for clinical purposes. The spectrum was the best means for scientific investigation of the defective perception on which colour-blindness depended. Red and green blindness were not the same.

Mr. NETTLESHIP (London) had used several of the tests mentioned by Mr. Swanzy, and was strongly in favour of Holmgren's test as most reliable, and easily used for clinical work.

Mr. SWANZY agreed with Dr. Wolfe, that provision was much needed for the compulsory examination of seamen and railway officials.

Thursday, August 7th.

ON GLAUCOMA.

THE discussion on this subject was opened by Mr. HENRY POWER (London). He began by referring to the great interest that attached to it, both from the clinical and etiological points of view. The central feature of the disease, to which all others were subordinate in a clinical point of view, was increased tension. The question immediately arose, To what cause is the increased tension referable? The views that had been successively entertained upon its causation were the early ones of Beer, Lawrence, von Gräfe, and others, that it is an inflammation; the main objection to it being the absence of microscopical evidence; then

the theory of Donders, supported by some experiments of Hippel and Grunhagen on the fifth nerve, that it arose from nervous irritation, or at least from disordered nervous influence leading to increased secretion, the inflammatory symptoms being merely accidental and secondary. For Donders, simple glaucoma was the type, and acute glaucoma the complication. Then followed the hæmostatic view, advocated by Stellwag, Cusco, and Coccius, which attributes it to rigidity of the sclerotic, which, by preventing variations in the amount of fluid in the globe, sets up inflammation or interferes with the escape of blood from the interior of the eye. More recently, the view of Wecker, Knies, and Brailey had been advanced, which might almost be termed the lymphostatic theory, since it referred the origin of the disease to a loss of balance between secretion and absorption of the fluids. Special attention was called to the paper written by Dr. Brailey, showing that in many cases there was adhesion of the base of the iris to the cornea, and to atrophy of the ciliary muscle. The main objection to this view was, that the adhesion was sometimes present without glaucoma being established, and that it was sometimes absent when glaucoma was present. Mr. Power thought that scarcely enough weight had of late years been laid on general and especial nervous conditions. A large proportion of cases occurred in women, and especially women at the age of forty to sixty. Such people were often left in a depressed mental and bodily state. They had often had much night-watching; the bowels had been neglected; and there was a strong tendency to rheumatism. With this, the loss of the bread-winner led to imperfect nutrition; and the care of a family so left occasioned great mental prostration. He was inclined to attribute a certain *rôle* in the etiology of the disease to cerebral disease, or disease of the medulla oblongata affecting the roots of the fifth pair of nerves, leading to increased secretion; whilst another part was played by the arthritic condition, which led to relaxation of the vessels and engorgement of the ciliary processes: a condition that was further aided by a loaded and torpid state of the bowels. In support of this view was the fact that large veins developed and came into view in a ciliary region—proving, not that the blood escaped from the eye with difficulty through the venæ vorticosæ, but that so much blood entered the eye that it had to seek new channels. That such a dilated condition of the vessels of the ciliary processes was present, was clearly shown by the excellent observations of Adolf Weber of Darmstadt. Their enlargement would lead to the periphery of the iris becoming pressed against the cornea, to which it formed adhesions, and thus led, as Wecker, Brailey, and others strongly urged to a loss of the proper relation between secretion and absorption. Such rheumatic condition might easily affect the ciliary muscle, and, by paralysing it, interfere with its action in accommodation. Mr. Power had not found much advantage from the employment of eserine. Mr. Hancock's operation had been eminently successful in his hands. He had often practised it, and had recently seen a case in which he had employed this operation for very acute glaucoma nearly fifteen years ago, the patient still preserving excellent vision. It was, he thought, a very simple and a very effective method.

Dr. BRAILEY (London) exhibited a number of microscopical specimens of glaucoma, and explained the changes he had found in about one hundred glaucomatous eyes, so far as these affected the ciliary region and the part of the globe traversed by the long ciliary arteries. These consisted in adhesion of the base of the iris to the periphery of the cornea; atrophy of the ciliary muscle, especially of its circular fibres; dilatation and thinning of the circulus arteriosus major; and, in about half the cases, similar changes in the long ciliary arteries. The canal of Schlemm was often diminished. The changes in the ciliary muscle and iris were sometimes confined to a part of the circle, and in some cases followed injury. These changes coincided with the injured part: proving, in Dr. Brailey's opinion, that the atrophic changes referred to were the cause, and not the consequence, of the glaucomatous process. In certain rare cases, he had found accumulation of fluid in the suprachoroidal space, with dilatation of the sheath surrounding the long ciliary artery, but with an absence of the other changes. In reply to questions, Dr. Brailey stated that a few of his specimens were from cases of recent glaucoma; and in these there were sometimes inflammatory changes at the base of the iris, but nowhere else. He regarded these inflammatory changes as the result, and not the cause, of the increase of pressure. He had examined several iridectomised eyes, and usually found that the iris had been imperfectly removed. In sclerotomised eyes, he had always found the iris adherent to the scar.

On Sclerotomy in different forms of Glaucoma. By L. DE WECKER, M.D. (Paris).—The author had preferred to advance slowly towards the substitution of sclerotomy for iridectomy in the treatment of glaucoma, although himself the originator of the former proceeding. In his *Chirurgie Oculaire*, he had recommended sclerotomy in the following conditions, which he recapitulated here. 1. In the incipient stage of glaucoma, when between the attacks there exists a completely intact visual function. 2. In cases of simple glaucoma, in which both central and peripheral vision are nearly normal. 3. In simple glaucoma, when the margin of the visual field, even at one side, only touches slightly or comes very near to the point of fixation. In short, he now said he was of opinion that, in every form of chronic simple glaucoma, iridectomy should be definitely given up, and sclerotomy exclusively performed. He also had extended the use of sclerotomy to cases of irritative glaucoma in which the use of myotics transforms the disease into the simple form, and where well marked myosis is produced by eserine. Accordingly, iridectomy would for the present be reserved for attacks of acute glaucoma, and for irritative forms in which the tension is such that myotics do not produce any effect, or but an imperfect one. In order to form an opinion as to the curative effect of sclerotomy, it is necessary that the operation be most accurately performed. The author had lately used von Gräfe's knife in preference to his own sclerotome. He did not confine himself to the formation of a flap two *millimètres* in height, of which the central third is left undivided; but, especially if the depth of the anterior chamber allowed it, he formed a flap of from three to four *millimètres* high. The knife penetrated the sclerotic one *millimètre* from the clear cornea; and, the point of the instrument being passed slowly across the anterior chamber, the counter-puncture should fall precisely one *millimètre* from the internal border of the cornea. The section should be made by slow sawing movements. In no case in which the author employed sclerotomy was any deterioration of vision noted, whilst in most of them an improvement was evident.

Mr. G. E. WALKER (Liverpool) and Dr. WOLFE (Glasgow) advocated Hancock's operation as most suitable for many cases of glaucoma.

Dr. HIRSCHBERG (Berlin) had found iridectomy to give very satisfactory results in a large majority of all his cases of glaucoma, and was not at all disposed to substitute sclerotomy for the older operation. He referred to a statistical account of 78 cases which he had published in the *Archiv für Ophthalmologie*, including 18 cases of acute, 10 of chronic inflammatory, and 23 of simple glaucoma, besides some cases of complicated and absolute glaucoma. Many of his cases have remained under observation several years. Astigmatism of low degree was often caused by iridectomy, but it decreased after some months. He agreed with an observation in Dr. de Wecker's paper, and with other observers, that, in chronic glaucoma with defect of field reaching almost up to the fixation point at some one part, iridectomy was sometimes followed by a still further encroachment, and even by loss of central vision.

Mr. VOSE SOLOMON (Birmingham) spoke in favour of the neurotic origin of glaucoma. He preferred a modification of Hancock's operation to iridectomy and the modern sclerotomy; his incision was about two lines long, close to the corneal margin, and was made with a Wenzel's double-edged knife.

Mr. SWANZY (Dublin) had cured one case of acute glaucoma permanently by the use of eserine only—a 1 per cent. solution three or four times daily. In two cases of advanced chronic glaucoma, vision had notably improved after sclerotomy was performed instead of iridectomy. Prolapse of iris into the sclerotomy-wound could be avoided by the previous use of eserine in cases where the iris responded well to this drug.

Mr. PRICHARD (Bristol) preferred an antero-posterior section of the sclerotic nearly identical with Hancock's, and allowing a slight escape of vitreous humour.

Mr. MASON (Bath) was in favour of iridectomy.

Mr. STORY (Dublin) had seen marked temporary benefit from eserine in a case of double acute glaucoma, but the symptoms returned in a few days.

Dr. ANDREW (Shrewsbury) spoke of the necessity of avoiding eserine in those rare acute glaucomatous cases where there was also some iritis.

Mr. NETTLESHIP (London) thought that, in estimating the value of eserine and of the scleral puncture-operations of Hancock and others in acute glaucoma, we should not forget that attacks of acute glaucoma sometimes passed off, at least temporarily, without treatment, and that in such cases a mere paracentesis of the anterior chamber had sometimes given a permanent cure.

Diphtheritic Ophthalmia. By EDWARD NETTLESHIP, F.R.C.S. (London).—The questions proposed were—(1) Should the distinction drawn by von Gräfe (1854) between "diphtheritic" and "membranous" ophthalmia be maintained? (2) What is the relation between diphtheritic ophthalmia (including "membranous" ophthalmia) and (*a*) primary throat-diphtheria, (*b*) secondary diphtheritic inflammation of the throat and other parts? (3) Do the facts of diphtheritic ophthalmia throw any light on the predisposing causes of diphtheria of the throat, etc.? (4) Is diphtheritic ophthalmia so rare in England as is commonly stated? 1. The first question was answered in the negative, on the grounds that both forms often occurred under the same circumstances, were associated with the same states of health and led to the same re-

sults, and that transition-forms were frequent. In this connection, attention was called to certain cases in which the disease becomes chronic, lasting in a well-marked form for many months. 2. Diphtheritic ophthalmia appeared to be rare in connection with primary diphtheria of the throat. The great majority of the epidemic cases occurred in patients suffering from or lately convalescent from measles, scarlet fever, severe diarrhœa, and acute pulmonary diseases. More information was wanted on this subject, which might be of interest in relation to the spread of some contagious diseases. 3. All ophthalmic surgeons were agreed that a conjunctiva which had been diseased, and especially had been recently inflamed, was much more prone to take on diphtheritic inflammation than a healthy one. Hence, patients with granular lids and children with measles were especially liable. The fact was mentioned for comparison with the frequent statements that an unsound condition of the throat predisposed to diphtheria. 4. The supposed rarity of diphtheritic ophthalmia in England and other countries, compared with its frequency in North Germany, appeared to be in great part accounted for by the fact that many of the published German cases were mild, whilst in England, France, etc., it was almost exclusively the worst cases that had been published. But that diphtheritic ophthalmia should be commoner in Germany than in England was not surprising, since purulent ophthalmia also, from collateral evidence, seemed to be or to have been also more rife; and a greater carelessness of contagion among the poorer classes in Germany was suggested as an explanation.

Friday, August 8th.

The Use of Eserin, Pilocarpin, Gelsemin, Duboisin, etc. By H. MACNAUGHTON JONES, M.D. (Cork).—In this communication, Dr. Jones gave a history of the researches on the myotic and mydriatic action of these substances, and summarised the results of his own experience. He had found eserin useful in the various forms of corneal ulcer, especially marginal with suppurative tendency; in ulceration with perforation and collapse; in traumatic inflammation of the cornea, and suppurations of the corneal wound after cataract-extraction; in mydriatic states, diplopia, asthenopia, aberrations of accommodation; and in glaucomatous states. The preparation used was the hydrobromate. He had employed a solution of gelsemin (six grains to the ounce) for ophthalmoscopic purposes, thus avoiding the inconvenience of the prolonged action of atropin. It sometimes produced marked motor disturbance, and slight conjunctival irritation, but these soon passed off. He had tried sulphate of duboisin in cases in which atropine was indicated, and had found it to have a beneficial action in keratitis, corneal ulcer, and in inflammatory and painful states. It had been successful where atropin had to be relinquished on account of the irritation which it produced. He had never met with an instance of the toxic effect of atropin in ophthalmic practice.

Mr. VOSE SOLOMON (Birmingham) said his experience with eserin had taught him that it was of use sometimes in simple glaucoma for reducing the tension, while sometimes it rather aggravated the symptoms. It often caused intense pain, and frequently produced conjunctival irritation. Daturin Mr. Solomon found to be as apt to cause irritation of the conjunctiva as atropin was.

Mr. G. E. WALKER (Liverpool) thought eserin useful in preventing prolapse of the iris after cataract-extraction and in glaucoma. He employed a solution of eserin of four grains to the ounce of water, instilled into the eye, before performing cyclotomy for glaucoma. He thought that the action of eserin disproved Donders's theory, according to which accommodation of the eye for distant objects was a passive action.

Dr. EDWYN ANDREW (Shrewsbury) said he found that the use of eserin was liable to cause posterior synechia. He used the alkaloids not in solution, but in the form of ointment, with vaseline as its base. By this means, decomposition of the alkaloid was prevented.

Mr. SWANZY (Dublin) said he had been able to cure a case of acute glaucoma by instillation of solution of eserin. Duboisin, in his experience, had no advantage over atropin, but in some persons readily caused toxic symptoms.

Mr. STORY (Dublin) also had had cases of poisoning from duboisin. He had employed the alkaloids in ointment form with vaseline with satisfaction for a long time.

Mr. NETTLESHIP (London) had employed a four-grain solution of sulphate of duboisin in a few cases, and had repeatedly got well-marked toxic effects resembling belladonna-poisoning. In more than one case there had been considerable delirium. These effects had followed sometimes from the use of only a drop or two or three to the conjunctiva. Mr. Nettleship attributed this to the fact that his duboisin was an extremely pure and therefore potent solution, made from a dry crystalline sample. Isolated cases had been reported by others, but these formed an almost continuous series.

Mr. SWANZY thought it right to mention that in one case, that of a boy aged 12, where duboisin had produced symptoms of poisoning, including delirium, the patient died within a few weeks of meningitis. No head-symptoms had shown themselves until the duboisin had been used. Only a few drops in all of a four-grain solution had been instilled.

Epiphora: a Note on its Medical Treatment. By J. V. SOLOMON, F.R.C.S. (Birmingham).—The author said that, very valuable as was the treatment of this disorder by Bowman's method, failure was in many instances to be attributed to the exclusive employment of mechanical means. Each case of epiphora required to be clinically studied in all its bearings. The state of the membrane lining the excretory lacrymal apparatus was often such, that the employment of dilatation by a sound proved positively injurious. The author considered that injections were too much neglected; and said, after an extensive trial of a variety of medicated waters, he now relied upon pure water, which he injected with some force into the sac through a syringe with a long and straight nozzle. Cases in which there was considerable dilatation of the sac and copious discharge yielded to this plan, the cure of the nasal structure being the first step in the treatment. In a very bad case, he had used pressure during the night-time by means of a gutta-percha splint and bandages. Epiphora was in some instances a pure neurosis, the branches of the fifth nerve supplied to the lacrymal gland and the conjunctiva being in a state of irritation. This state Mr. Solomon believed to be often present where a stricture of some part of the drainage-tubes existed, which required mechanical dilatation for its relief. With the object of diminishing the lacrymal and serous secretions, Mr. Solomon had been since November 1878 giving internally, in selected cases of epiphora, from one to two grains of the leaves of belladonna in powder. The dose was repeated three times a day until the specific physiological effects of the medicine were obtained, when one dose only in the twenty-four hours was allowed. In some cases, the belladonna alone effected a cure; in others, this result was not attained until the canaliculi had been slit; and, in cases of stricture under treatment by probing, the relief had been earlier, and dilatation resorted to less frequently. The severity of the late winter had put the remedy to an unusually severe test, and it had stood it. Considering the influence of belladonna upon neuralgia of the fifth nerve and upon the vaso-motor system, it seemed remarkable that surgeons had not long since employed the drug in epiphora.

Dr. C. E. FITZGERALD (Dublin) thought it most important that there should be no confusion in the use of the terms epiphora and stillicidium lacrymarum, and pointed out that the author of the paper had not used the word epiphora in its proper sense. In treating strictures of the nasal duct, Dr. Fitzgerald liked large-sized probes and the conical probe of Weber. Where the sac was dilated, Galezowski left the probes in for a lengthened period.

Dr. WOLFE (Glasgow) said that, in treating these cases, he used catheters of his own, but was of opinion that, with every method, recurrence of the stricture was common. When the sac was dilated, he cauterised it with an instrument similar to Lallemand's for the urethra.

Mr. SWANZY (Dublin) believed there could be no greater mistake than the use of very large probes in the treatment of stricture of the nasal duct. He did not agree with Pott that these cases should be treated on the same principles as cases of stricture of the urethra. The surgeon had here to deal with a bony canal, not with a passage dilatable *ad libitum*. The immediate results with large-sized probes might be brilliant; but before long a constriction in the upper part of the canal, or at its entrance, almost always resulted. This was produced probably by development of connective tissue at that place where the probe became jammed. The continuous wearing of styles or probes had similar bad consequences.

Mr. MASON (Bath) said that, in his experience, the treatment of epiphora dependent on excessive secretion of the lacrymal gland was very difficult of cure. He had not tried the belladonna treatment, but would do so on the next opportunity.

Mr. SOLOMON briefly replied.

Eye-Dressings after Operations. By H. MACNAUGHTON JONES, M.D. (Cork).—He would only say a few words in favour of the method of dressing eyes after cataract operation, and indeed after severe injury, when rest was required. It was of importance to secure this latter without either causing pressure on the globe, heating the organ, or preventing the escape of tears or any other secretion. So also to resort to the use of cold dressing was often a dangerous step. If employed, it must

be sedulously sustained, and its effects carefully watched. Once commenced, it was difficult to relinquish it. The small ice-bladder or the piece of linen must be changed occasionally. Nevertheless, it often became heated, and was a source of danger. The cotton-pad was heating, and required a skilful hand in applying it. It imprisoned the secretion, often adhering to the eyelids. In January 1877, having seen recorded Dr. Levis's plan of dressing, in the *Philadelphia Medical and Surgical Reporter*, Dr. Jones determined to try it, and since had pursued it almost entirely, especially after cataract operations. He could strongly recommend it. He quoted the description there given. "A few semicircular pieces of black silk are placed on the upper lid, to stiffen it, and cause it to act like a splint, and then a straight piece of the adhesive plaister is superposed from the root of the nose to the cheek. The other eye is also closed the same way. This—much lighter and cooler than the cotton packing usually placed over the eye—allows all secretions, which are so apt to cause conjunctivitis, to drain away from under the lid, and enables the surgeon to look at the eye and instil atropia without moving the dressing. At the same time, it perfectly protects the eye, which cannot be opened because the stiffened upper lid will not allow itself to be raised." Dr. Jones used a few pieces of isinglass adhesive plaister (Seabury and Johnson's). The lids being closed, from the nose to the external angular process, smoothly and lightly over the upper eyelid, a few more were then placed on the lower eyelid, and then some pieces were brought from the upper to the lower lid, and held in place by a few extra transverse strips. The patients liked the dressing; the upper lid acted as a splint to the wound, and it had all the advantages described above. He showed his method of applying it.

Injurious Effects of Tea-drinking Habits upon the Nutrition of the Eyeball. By J. R. WOLFE, M.D. (Glasgow).—The affection of which Dr. Wolfe spoke was softening of the vitreous humour, which became filled with floating particles of pigment. It had come under his notice in persons who at first sight seemed to have very little in common. He had found it among—1. The mining population, who pass a deal of time underground; 2. Washerwomen; 3. Middle-aged labourers, masons, and out-door workers; 4. Shop and factory girls; and 5. Not a few belonging to the upper classes. His attention was specially directed to the affection by its frequent occurrence among Australians who came to consult him. He could discover no assignable cause for the disease, either in the tissues themselves, or in the history of the patient; and it was only on directing his inquiries to their diet, and finding that they all agreed in consuming large quantities of tea, that he came to suspect its agency. A comparison of the numerous cases of opacity of the vitreous humour occurring among tea-drinking populations, with its less frequency in France, Germany, and America, and its rarity among the Turks, tended to confirm his suspicions. Physiology did not suggest an explanation; but chemistry pointed to theine and tannic acid as most likely to cause disease. Theine might be left out of consideration, being identical with caffeine, which was innocuous; so there only remained tannic acid. This precipitated albuminoids from their solutions; hence it probably acted injuriously by precipitating some of the most important constituents of the food, and also by affecting the mucous membrane of the stomach and alimentary canal, and thus preventing digestion and assimilation. Some observations had been made as to the effects of tea-drinking on the healing of wounds and ulcers by a Glasgow surgeon, who had noticed that, in persons addicted to this habit, they took on a sort of scorbutic character. Physicians also ascribed numerous cases of rebellious dyspepsia to the use of tea. The disease of the vitreous humour above alluded to could hardly be an isolated pathological fact, but must be associated with deleterious changes in other parts of the economy, and probably only made its appearance in organs which had a predisposition to be so affected. Without venturing upon any theory as to the action of tea on the vitreous humour, he would point out that the first expression of acute irritation of the fifth nerve in sympathetic ophthalmia was opacity of the vitreous humour and detachment of pigment from the whole uveal tract. So it was possible that chronic irritation of the same nerve might give rise to such changes in the nutrition of the eyeball as to bring about the condition under consideration. He commended this subject to the notice of general practitioners, who had better opportunities of judging of it than he had.

Dr. PEELE (Sydney, Australia) had not observed any eye-symptoms produced by tea-drinking in Australia, although dyspepsia from this habit was very common.

Dr. ROBERTSON (Australia) gave similar testimony.

Mr. VOSE SOLOMON believed the ill effects of tea meant merely that the same individuals were ill-fed.

Dr. WOLFE replied.

SUBSECTION OF OTOLOGY.

Wednesday, August 6th.

THE work of the subsection was opened by Dr. CASSELLS (Glasgow), with the following remarks. We are met to discuss the subject of Otology in general, separated from the other sections into which the work of this Association is divided. It is indeed a memorable occasion, seeing that this subject of otology has received to-day, for the first time, a distinct recognition in the proceedings of any medical congress in this country. On the continent of Europe, and in the United States of America, it has long been distinctly recognised in every great medical gathering. That it should have remained unrecognised till now in Great Britain, where scientific aural surgery had its birth, and still has its home, notwithstanding the immense and valuable labours of our *confrères* on the continent of Europe and America, is to me inexplicable. For Saunders, who, in the early part of this century, laid down the principles of conservative aural surgery for the first time in the history of otology; Toynbee, who laid the foundation of aural pathology, and may justly be called the father of British aural surgery; Wilde, who advanced the subject of aural therapeutics as no one had done before him; and Hinton, who gathered up the sum of the labours of his predecessors, so that it has been said of his works in this department that "they will serve as stepping-stones for others to rise upon", had not the satisfaction of seeing the subject of otology recognised as it is, happily for us, to-day. We have to elect a chairman of this subsection. I shall not detain you longer than to say that our choice has fallen upon a gentleman who is well known, not only in his native country, but all the world over, as one who has advanced, not only the subject of otology, but science in general. I allude to Dr. Laurence Turnbull of Philadelphia; and I propose that he be requested to preside this day over the labours of this subsection.

The proposition having been seconded and carried unanimously, Dr. LAURENCE TURNBULL took the chair, and said:

I return you my most cordial thanks for the honour you have done me in electing me the chairman of this subsection. I do not accept this as a compliment to me alone as an otologist, but as an expression of kindness and good feeling on your part to the otologists of the United States, of whom I am the representative. It is true I have won my spurs in this department, as the larger portion of my professional life has been devoted to its study and practice. It seems perfectly proper at this time to look back to the source whence I received my chief inspiration, and to the fountain from which I first drank its living waters. I can with pleasure refer to the late Sir W. R. Wilde of Dublin, whose work did more for the advancement of true and scientific knowledge of the ear and its diseases than any of its predecessors; and I am proud also to state that it was at once republished in Philadelphia, and became the standard authority on the subject throughout the United States. Our specialty has made great and rapid advances of late years in Germany, France, Great Britain, and the United States. The true scientific reformation, however, began in Ireland; and I am happy to think that the mantle of the lamented Wilde has fallen upon a most worthy successor, Professor Macnaughton Jones of Cork. England and Scotland have also done much to extend the true knowledge of otology; and it is but my duty to enumerate amongst its most devoted workers the names of James Patterson Cassells and Duncanson in Scotland; Lennox Browne, Woakes, and Purves in London; Douglas Hemming of Bournemouth; Pierce of Manchester; and McKeown of Belfast.

On the Production of Artificial Deafness, being an experiment in Physiological Acoustics, and its bearing on the Etiology and Evolution of Diseases of the Ear. By J. PATTERSON CASSELLS, M.D. (Glasgow).—The object of this experiment was to show that a disturbance in the tympanic tension not only causes defect of function, but tissue-changes as well. The experiments employed for the purpose of disturbing the tension of the tympanum were the Valsalvan experiment and Maissiat's experiment; and these seemed to bear out the following theory of the etiology and evolution of ear-diseases. 1. A certain degree of tympanic tension is essential to perfect function—that is, perfect hearing. 2. The essential cause of all the affections of the organ of hearing is a disturbance of the normal tympanic tension. 3. All the pathological phenomena of the diseases of the ear evolve themselves with regular sequency.

Throat-deafness associated with Paresis of the Palato-tubal Muscles. By E. WOAKES, M.D. (London).—This paper set forth a source of deafness from loss of power—paresis—of the intrinsic muscles of the ear, the clue to which is furnished in a coexistent paresis of the muscles of the Eustachian tube and palate. The latter condition, which is readily observed, affords the clue to the existence of the former; the correctness of the diagnosis being established by the identity of the sources of nerve-

supply of the muscles proper to the ear, and of those of the tube and palate. The symptoms whereby this form of deafness may be diagnosed from other ear-affections were detailed; and the paper concluded with an illustrative case, in which the proper remedial measures were given.

Dr. WEBER-LIEL (Berlin) considered Dr. Woakes's observations very valuable, and as much bearing out his own researches.

Mr. LENNOX BROWNE (London) thought we must not lose sight of the catarrhal element in the case narrated. He criticised the use of the pneumatic tractor; he would incline more to the use of Politzer inflation than of the tractor, as the latter was probably not without danger.

Dr. MCKEOWN (Belfast), comparing the ear with other organs—the eye, for instance—remarked how small was the number of cases in which the nervous element was present, especially paralytic ones.

Dr. WOAKES, in reply, remarked that his paper was necessarily much compressed; the case narrated was one of many. Politzer inflation was used with the catheter. The power of the tractor could be regulated; and, even in cases where the effects of its use were apparently severe, the results were satisfactory. He did not profess that all cases of tubal deafness were due to paresis, but contended that there were cases due to this cause, the result of vaso-motor influences.

THE THERAPEUTIC VALUE OF INTRATYMPANIC INJECTIONS OF MEDICATED FLUIDS IN THE CATARRHAL AFFECTIONS OF THE MIDDLE EAR.

A discussion on this subject was opened by Dr. J. PATTERSON CASSELLS (Glasgow).—As a pupil of the late James Hinton of London, of Weber-Liel of Berlin, and of Professor Politzer of Vienna, he was, he said, imbued with their opinions as to the undoubted value of these injections as a curative means in chronic catarrhal affections of the middle ear. Therefore, for many years, in his earlier practice as a specialist, he consistently carried out the teaching of these men by using medicated solutions by way of injection to the diseased tissues of the middle ear. After a few years' use of them, he began to ask, with what object he was using them, and what were they expected to do? The result of that investigation was to convince him that the use of intratympanic medication of the diseased tissues of the middle ear was without value separated from the act of inflation, by which the introduction of the fluids into the tympanic cavity was effected; and he had therefore abandoned their use for the last seven years. The good results which were obtained, in his opinion, by those injections, where they were obtained at all, were due to the inflation of the tympanum by the air contained in the fluid, or driven in along with it, and not to the medicated fluid itself. It was not possible to break up adhesions, dissolve mucus, and generally restore the mobility of the tissues of the ear by medicated solutions, such as of zinc, copper, iodide of potassium, chloral, and chloride of sodium, while these tissues themselves, and the mucus contained in the tympanum, outside of the body, were found totally insoluble in such solutions as liquor potassæ, absolute alcohol, and nitric and muriatic acids. The discussion ought to be one on chronic non-suppurative catarrhal affections of the middle ear; and it was necessary to eliminate the value of the act of inflation from the action of the medicated fluid itself. He asked that those who gave their opinions should take care that they were opinions supported by facts in their own experience.

Intratympanic Injections. By Dr. WEBER-LIEL (Berlin).—Dr. Weber-Liel's paper was read by the acting Honorary Secretary at the author's request. He said that his experience of sixteen years of aural practice had forced him to give up the idea that it might be possible to cure inveterate catarrh of the tympanic cavity by means of intratympanic injections of medicated fluids. 1. The symptoms of catarrh of the tympanum may depend upon extension of a simple catarrh from the Eustachian tube and the pharyngo-nasal cavity; then the latter only must be the object of treatment. In this treatment, injections of strong nitrate of silver solutions into the mouth of the Eustachian tube, followed four days afterwards by the use of the air-douche, will be found of the best effect in reducing the catarrhal symptoms. But in order to avoid inflammation of the tympanum, not more than a few drops of the solution must be blown in with force by means of the Eustachian catheter; and the patient must be forbidden to blow his nose till four hours after the injection. 2. Or, secondly, the symptoms of the intratympanic catarrh are due not only to a catarrh of the tube, but to a collapse of the walls of the Eustachian canal, dependent on insufficient or paralysed action of the Eustachian tube muscles. In such cases, not intratympanic injections, but the awakening of the activity in the tubal muscles by intratubal electricity, must be the treatment, to cause the disappearance of the symptoms of the secondary intratympanic vascular stasis and catarrh. 3. Symptoms of congestion and catarrh of the tympanic cavity may arise from alterations of the vaso-motor and trophic nerves and of the sympathetic supplying the tympanic cavity. Dr. Weber-Liel had found solutions of nitrate of silver, corrosive sublimate, and common salt, to produce inflammation and perforation of the membrana tympani. Carbonate of soda, however, had not this effect. Mucus, incrusted and transuded purulent matter, may be diminished by it. Tissue (false bands, for instance) and intratympanic adhesions may be softened by it; so that it may become more easy to loosen intratympanic adhesions by means of the air-douche, and to cause absorption of hardened masses. For this kind of catarrhal affection, he had found intratympanic injections to have a really good result. The injections, combined with air-pressure, were effected by means of his pharmaco-koniontron.

The Treatment of Non-Suppurative Hypertrophic Catarrh of the Middle Ear. By LENNOX BROWNE, F.R.C.S.Ed. (London).—The author preferred to treat the subject in its broad aspect, because he feared that the discussion of the subject of intratympanic injections might give to many the idea that such was the treatment *par excellence* for chronic middle ear-disease. He quoted from authorities to show how many aurists had abandoned this measure, and how many more had found it necessary to either greatly limit the cases in which they pursued it, or to reduce to a minimum the strength of the fluids used. He then proceeded to show objections to the procedure alike on physical, anatomical, physiological, and practical grounds. Quoting at length from Wreden of St. Petersburg, who had made most complete experiments on models, as well as on the dead body and on the living subject, it was urged that, to send fluids in the form of drops or as sprays, it was necessary to pass the instrument through which they were introduced quite within the tympanum, a proceeding of great danger, being liable to injure the ossicles and certain to set up suppurative inflammation of the drum; or at least to pass the instrument far beyond the isthmus. But fluids could be driven *en masse* by great force, this also being a measure only more dangerous than the other. The anatomical relations of the tympanum were pointed out, and it was shown how much danger there was of cerebral inflammation, of jugular phlebitis, of mastoid or labyrinthine suppuration, or of facial paralysis, if an acute catarrh were induced. Stating how invariably severe were the symptoms when fluid really entered the tympanum, Mr. Lennox Browne expressed his belief that, when authors reported that they had never had a bad result, such an experience shewed that the injected fluid had never passed beyond the isthmus of the Eustachian tube. Again, there was the physiological objection. The tympanum was an air-cavity, whose office was impaired by the presence of a very little mucous fluid, when such was effused as a result of disease. It was often very difficult to disperse this fluid, and there was a great tendency for the lining of the cavity to become thickened, and, as a natural consequence, for its absorptive properties to become diminished. Why should one expect medicated fluids (necessarily, for safety, of very feeble quality) to have a good effect, and why not a bad one, considering the injury done by simple water when it entered the tympanum, as in bathing or on use of Weber's douche? And supposing these fluids were not absorbed, nothing but harm could result, as many authors, Kramer and Bonnafont among the number, had agreed. When one considered the intimate relation of the mucous membrane of the throat and middle ear, and how frequently topical applications of strong mineral solutions failed to cure hypertrophic inflammatory conditions in the former region, what right had we to suppose that these feeble fluids would do good to similar affections of the middle ear? On all grounds, therefore, Mr. Browne objected to this treatment. He stated that after their use he had never, on subsidence of the increase of bad symptoms—in his belief the only proof of entry of fluid into the tympanic cavity—found the slightest gain of hearing power. On the other hand, he had often seen most alarming inflammation induced. If, therefore, they were to be employed at all, he would limit their use to suppurative cases in which there was already a pervious tympanic membrane, or he would, at the time of making them, perforate the membrane, a procedure now established as free from danger. The speaker concluded by pointing out that, by means of inhalations, Valsalvan, Politzer, and catheteric inflations, with either pure air or medicated vapours, by use of the post-nasal douche, by faradisation, by use of the exhausting speculum (an improvement of Siegel's instrument being exhibited) and lastly, by careful attention to the constitutional diathesis of each individual case, it was possible to greatly alleviate—he doubted if they were ever cured—the conditions under consideration.

Dr. CASSELLS disapproved of the treatment, not because he feared putting fluids into the middle ear, but because he did not get good results. Injections might be used with great effect if there were perforation of the membrane. Solutions of salt and water might be used without danger if there were a larger perforation of the membrane, and

with good effect. In children, he had perforated in a great number of cases, and injected salt with great success in removing the mucus.

Dr. KIRK DUNCANSON (Edinburgh) asked how Dr. Cassells removed all the fluid. He had been accustomed to use these injections both through the Eustachian tube and through the meatus, when the membrana tympani was perforated. When fluid was injected by the Eustachian tube, only a very small portion came out through the perforation in the membrane.

Dr. CASSELLS, in reply, thought a large portion of the fluid went down the throat. He did not use the catheter, and only operated when the tubes were open to Politzer inflation.

Dr. DUNCANSON thought some portion of the fluid must remain in the tympanum, the floor of that cavity being much below the floor of the meatus.

Dr. PIERCE (Manchester) considered this question specially with respect to permanent benefit. He had met with many cases treated in this way by other surgeons. In some cases, improvement was said to exist, but he (Dr. Pierce) had found that, after some length of time, the hearing had not been improved. The amount of success as to permanent improvement was unsatisfactory. He could see no increased value in the injection of medicated fluids over that of medicated air. The results were not sufficiently satisfactory to warrant the continued use of these injections. All the good could be obtained by medicated air.

On the Treatment of Relaxed Membrana Tympani. By W. A. MCKEOWN, M.D. (Belfast).—Dr. McKeown said that he proposed to deal not only with the treatment of relaxed membrana tympani, but with the prevention and rupture of adhesions of the membrane with different structures within the tympanic cavity, the restoration of motion to the ossicles, the prevention of shortening and retraction of the tendon of the tensor tympani, the prevention and relief of labyrinthine pressure, the mode of keeping open a puncture of the tympanum so as to admit of prolonged intratympanic medication, the relief of noises and other painful subjective sensations in the ears. He started with the fundamental proposition, that almost all the evils resulting from affections of the tympanum arose from a drawing in or pushing in of the membrana tympani, and that the primary consideration in treatment should be to prevent this. To effect this, we simply required some agent which, when applied to the membrane of the tympanum, would diminish its concavity, and therefore pull it out, and at the same time increase its resistance. Whilst experimenting some time since on sound, he had occasion to use fine tense membranes. Having experienced trouble sometimes in securing the necessary degree of tension and smoothness, he was led to seek some agent which would remove wrinkles and depressions. He found that collodion answered the purpose. It afterwards occurred to him that, if he could tighten up the lax membranes with which he had been experimenting, he might in like manner tighten up a flapping, relaxed, or depressed membrana tympani. He resolved to try it. He applied it for the first time on June 1st, to the relaxed membranes of a middle-aged lady, who had been more or less deaf from childhood. Improvement followed, but he learned afterwards that it did not continue, and he believed this was owing to his having been too sparing in its use on this his first trial. On June 2nd, he applied it freely in another case which had been under his care for three years, and for which he had ceased doing anything but administer tonics. The patient was a woman about forty years old. She could hear a moderate voice at the distance of three feet, but her hearing varied remarkably. She suffered from noises so distressing, that she believed she would have gone mad had she not had her attention somewhat diverted by her struggles for her daily bread. Sometimes the noise was like thunder, at other times like the noise of machinery, at other times like the blowing of a horn; the voices of other people were confused, and her own voice seemed to herself most unnatural. Before her illness she used to sing in church, but she had not been able since to do so because of the unnatural character of her own voice. The membrane of the left ear showed a number of depressions between handle of malleus and posterior attachment of membrane. She could inflate the drum, and when she did so, the part of the membrane which was the seat of the depressions bulged out, but afterwards collapsed at once. Dr. McKeown applied collodion freely. The membrane became tense, the hearing for the voice improved to eighteen feet, and all the troublesome subjective symptoms disappeared. The collodion remained adherent till July 28th, viz., three months, and was then only partially loose. He removed it, and found the membrane greatly improved. The depressions had disappeared, but it was still somewhat too lax. Removal of the collodion made little, if any, change; however, he thought it better to apply it again. Dr. McKeown read notes of several similar cases. He sustained the claim of collodion to effect the following objects: 1. To rupture adhesions, as shown by a case in which an adhesion of the membrane to the promontory was torn through, leaving a perforation in the membrane. That perforation was kept open for ten days by another application of collodion on the membrane on each side of the perforation, and medicated fluids were injected generally twice daily through the perforation without causing any pain or inconvenience. 2. To rupture even the membrane itself. In three cases, the application caused a rupture of the dermic and fibrous layers of the membrane close to its inferior attachment to the wall of the meatus, but no inconvenience resulted. 3. To restore mobility to a rigid malleus. This occurred in the cases referred to under No. 2. 4. To keep open an artificial perforation, as shown in two cases in which a puncture was made and kept open by traction of collodion applied peripherally on the membrane, and fluids injected into the tympanum as in the first case. 5. To prevent adhesions in case of recent catarrh, shown by a case of one month's standing, fluid in the tympanum, obstruction of the Eustachian tube, buzzing noise in the ears, feeling of oppression in the head, depression of the posterior segment of the membrane; the subjective sensations and depression were relieved by collodion, and very great improvement followed quickly. 6. To relieve noises in the ears; shown by cases referred to, and others. 7. That it will prevent adhesions of the membrana tympani, prevent retraction of the tensor tympani, prevent and relieve labyrinthine pressure, followed as a corollary from its established influence on the membrana tympani and handle of malleus. He pointed out the possibility of collodion enabling surgeons to keep an artificial opening in the membrane patent through its tractile action, separating the margins of the opening, and giving time for cicatrisation of the margins. He had not yet met with a case in which such a proceeding was called for; but on the first occasion which offered, he would put it to the test. He thought all the methods yet tried for this purpose were irrational. He questioned whether even a foreign body introduced into a wound succeeded in keeping the parts from adhering when the body was removed; and most of the methods hitherto adopted were based on the introduction of foreign bodies. He suggested the analogy between the action of atropin and iridectomy on the eye, and the action of collodion on the ear, and expressed his belief that the mode of treatment advocated would solve many of the knotty questions of aural surgery. In conclusion, he said that he wished to guard against the idea that the cases referred to were unusual in his practice. To show to what an extent he daily adopted the mode of treatment recommended, he submitted a table of eleven cases, which came before him for the first time on July 28th and 29th, and in which he applied collodion to the membrana tympani with satisfactory results.

Dr. PIERCE (Manchester) thought much might be done by collodion. It was unfortunate that Dr. McKeown had not limited his cases more to the use of collodion alone; he seemed to have mixed up other methods of treatment. The collodion must be applied with care. Dr. Pierce used for applications to the membrane the speculum with a piece cut out, described by him some years ago. He would like to know whether, in cases of prolapse of the membrane, collodion had a permanent effect. He had been in the habit of using gelatine for the purpose of covering perforations. Collodion might be used for the same purpose and for closing perforations.

Dr. MACNAUGHTON JONES (Cork) thought that Dr. McKeown's paper covered such a large range, that many questions must arise from it. He asked whether the collodion was applied in a particular way in different cases, and where.

Dr. MCKEOWN said that, as to the danger of the collodion doing harm to the walls of the meatus, the fact was that it would not stick to them. He had never found any trouble arise from it. The application of collodion to very small points was useless. It was used when we wanted to cover a considerable surface. As to permanence, the collodion was found adherent in one case at the end of three months.

Thursday, August 7th.

Dr. FITZGERALD of Dublin took the chair.

The Audiometer as an Exact Test of Hearing. By LENNOX BROWNE, F.R.C.S.Ed. (London).—Mr. Lennox Browne exhibited the audiometer of Professor Hughes, and demonstrated its use, reading a paper on its value as a test of hearing. He considered that it supplied the great desideratum of the aurist, viz., an accurate, uniform, and exquisitely fine method of testing, registering, and comparing the hearing. After describing its construction and mode of use, he remarked that it was essential in using it, that the patient should not see the movements of the instrument, which should be placed at some distance from him. He also gave some directions as to the manner in which the key should be worked. The first advantage of the instrument he considered to be that the zero point was absolute and not personal,

since it depended upon a fixed law of electrical induction. In order to secure perfect uniformity in the instrument, certain constructive conditions were necessary, and these were mentioned by Mr. Browne. He suggested that a certain standard should be adopted, and each instrument marked by some competent authority, the Society of Arts for instance, in order that uniformity might be guaranteed. The audiometer was stated to be useful not only as a test of hearing in deaf persons, but also as promising to afford a standard of hearing power. It would also be serviceable for testing the fineness of auditory perception in those about to be educated for the musical profession. The audiometer represented exactly the amount of sound it was necessary to pour out for the sonorous vibrations to be appreciated by the recipient. Each degree on the audiometric scale represented an exact amount of electrical power, which electricians could reduce to an absolute measure correlative with other forces. In conclusion, Mr. Browne drew attention to the possibility of the audiometer being of service for improving the auditory perception of deaf patients. Professor Hughes, when working with the instrument, had found that his ears became more sensitive, not only to the sounds of the instrument, but to all external noises.

Dr. PIERCE (Manchester) thought that, in working the instrument, it was better to use the scraping noise only, and not the tapping. A single movement of the key was better than repeating it frequently. A stop would be of great advantage. The instrument must be kept out of sight of the patient. Practically, he had found that people with bad watch-hearing heard much better with this instrument. No comparison was possible between the watch and the audiometer; patients hearing the watch only at one-third would hear the audiometer at one-half; therefore, at present both tests must be employed.

Dr. KIRK DUNCANSON (Edinburgh) thought a simple telephone gave a better sound without any electrical elements. He did not consider the audiometer a very trustworthy instrument.

Dr. MCKEOWN (Belfast) thought the instrument which would give the best sounds for testing the hearing was the phonograph. The audiometer had the same defect as a watch or clock. What was wanted was a test for the hearing power for the voice. The quiet necessary for the use of this instrument also was unattainable in ordinary practice. Improvement of the hearing power took place by use; this was also the case with the voice. He asked what this instrument would do which a watch would not.

Dr. WEBER-LIEL (Berlin) said that some experiments had been made with the telephone in Berlin, and different effects were found from different kinds of noise.

Dr. JACOB (Dublin) considered that the instrument did not meet the object of aurists, viz., the establishment of an uniform standard of sound. The results he had obtained in testing with three separate instruments had been all different. The instrument would be useful for one man to compare his own patients *inter se*, or the hearing power of the same patient at different times, but it did not give an universal basis of sound by which we could communicate with one another. The instrument had considerable value, but something more was to be done, *i.e.*, to establish an unit of sound.

Dr. CASSELLS (Glasgow) considered that what was wanted was something which would utilise the human voice as a test of hearing power. Until a relation was established between the audiometer and articulate speech the instrument would not be of much value. The ear might be sensitive to sounds like this or to those of a watch, but be very dull to the human voice.

Dr. BEARD (New York) had tried this instrument, but found it easier to test the hearing by the stop-watch.

Dr. FITZGERALD (Dublin) was convinced that the watch was an useless test, as it contained but two tones, and this instrument seemed open to a similar objection. For the present, there was no better test than the voice.

Mr. LENNOX BROWNE, in reply, was glad he had exhibited the instrument, as it had produced a most valuable discussion. As to uniformity, something was required in the manufacture. Of course, all these tests were merely tests of auditory perception and not of the hearing of the voice. Practice with this instrument, however, enabled one to hear the voice better.

Perforation of the Membrana Tympani. By Dr. BONNAFONT (Paris).—Dr. Bonnafont demonstrated his method of performing perforation of the tympanic membrane with his charcoal points, and remarked that perforation of the tympanic membrane as just shown was always attended with satisfactory results, hearing being preserved as long as the opening persists. Unfortunately, the opening had always a tendency to close, and nothing had up till now prevented its doing so. He had employed various caustics, but without success. Latterly, he had endeavoured to maintain the opening by means of a cannula or tube, but the good results obtained had not been constant, owing to the production of neoplasm, which blocked up the opening. Twice only had he tried to perforate the membrane by means of the actual cautery, to effect which a pencil or stick of charcoal and dragon's blood was used. The membrane being previously rendered insensible by Richardson's apparatus, with the aid of a good otoscope, the operation was quickly performed, and without any pain; the patients heard immediately, as one would see immediately after an operation for cataract. The last two methods had never been followed by any serious accident, even locally; and the patients had been able to resume their occupations immediately after the operation. The results obtained had not been of a permanent nature, nor the cure radical, as the opening always had a tendency to close; but when once effected there always remained some improvement in the hearing. Finally, Dr. Bonnafont appealed to his *confrères* occupying themselves specially with diseases of the ear, to endeavour to devise some better means of maintaining the opening into the tympanum.

On the motion of Dr. CASSELLS, seconded by Dr. PIERCE, a vote of thanks was passed to Dr. Bonnafont for his demonstration and remarks.

Cases of Aural Exostosis. By F. M. PIERCE, M.D. (Manchester).—The author had met with only nine cases of exostosis out of three thousand cases of ear-disease. It had been studied by aurists only during the last twenty-five years, and, until recently, had been regarded as incurable. Of the above nine cases, the history of the treatment of seven was given. All but one of these seven cases were of acquired exostosis. All were in males. Five had exostosis in both ears, and had not had rheumatism or gout. Two cases presented a history of syphilis; three had otorrhœa, but only in one case of the middle ear; in two of the cases, the exostoses were accompanied by polypi. In none of the cases were the exostoses limited to the upper wall of the meatus, nor were there indications of a similar condition in the middle or internal ear. The exostoses were almost wholly non-pedunculated, and the etiology included chronic periostitis, chronic otorrhœa, gout, rheumatism, and syphilis. There are no symptoms peculiar to auditory exostoses, but mechanical closure of the meatus may lead to serious results. The only chances of successful treatment appear to be removing the growths in cases of exostoses which threaten complete occlusion, by the application, first, of strong nitrate of silver, followed by chloracetic and nitric acids; and if these be not successful, the galvano-cautery; and in cases of entire closure, the use of the dental engine.

On the Etiology of Aural Exostoses, and on their Removal by a New Operation. By J. PATTERSON CASSELLS, M.D. (Glasgow).—Dr. Cassells expressed his belief that difficulties had been caused by regarding all bony tumours in the auditory canal as exostoses. There were two kinds of bony tumours in this situation, exostosis and hyperostosis, the former consisting of new growth, the latter of hyperplasia of the osseous tissue of the meatus. Dr. Cassells believed that the origin and development of an aural exostosis were as follows. A subperiosteal abscess formed over the mastoid, made its way out in the line of least resistance, and discharged; from and around the opening vascular granular growths sprouted up, and increased in size, becoming at the same time changed into bony tissue from the conversion of their cells into bone-cells. The new method of treatment advised for these cases of exostosis consisted in first passing a loop of wire over the tumour, and twisting it upon itself so as to grasp the pedicle firmly. Chloroform being administered, a sharp gouge with a curve carefully adjusted to that of the auditory canal was carried down to the base of the tumour, and, being firmly held there, two or three smart blows with a mallet effected the separation of the bony mass, which was drawn from the meatus by the wire attached. The patient on whom Dr. Cassells operated thus recovered without a bad symptom; and he believed that every aural exostosis might be easily removed in this way.

Dr. WOAKES (London) had seen these cases in the proportion of about 3 per 1,000, which corresponded to Dr. Pierce's figures.

Dr. FITZGERALD (Dublin) thought Dr. Cassells's paper very interesting and important. We must be careful to distinguish between exostosis and hyperostosis.

Dr. PIERCE, in his reply, said he was glad to find that his experience of the rarity of these cases, and their existence in the male sex only, was corroborated by other observers.

Dr. CASSELLS, in his reply, said that the exostoses described by him were not polypi, but granulations which had become gradually ossified.

A vote of thanks to Dr. Fitzgerald for presiding concluded the day's proceedings.

Friday, August 8th.

Dr. J. PATTERSON CASSELLS took the chair.

A Contribution to the Knowledge of Fungus Ear-Disease. By Dr. LÖWENBERG (Paris).—The author described a peculiar form of fungus in the external meatus, consisting of a small, closed, oblong, and rather flat bag or cyst, which he had met with in three cases. The symptoms were deafness and the other symptoms usually observed in cases of myringo-mycosis. With regard to the etiology of cases of fungus in the ear, the author attributed them in many cases to the astringent and other solutions used for syringing out the ear in cases of otorrhœa and for arresting the discharge. He instanced cases in his own practice supporting this view. To avoid it, he recommended that all solutions used for instillation into the ear should be filtered and boiled previously to use, and preserved in bottles previously rinsed with freshly boiled water. The diagnosis of these cases was easily made with the aid of the microscope; and the treatment consisted in the free application of diluted alcohol gradually increased in strength.

Dr. LAURENCE TURNBULL (Philadelphia) thought that in the majority of cases the liquids contained fungi; and these might be propagated on to the patient by the use of a dirty syringe. The fungus thus produced was the *penicillium*. A case occurred in his practice which was due to damp cellars. True aspergillus was very rare, the proportion in the practice of different practitioners varying from 1 in 800 to 1 in 1,000.

Mr. LENNOX BROWNE (London) agreed with Dr. Turnbull that these fungi might be propagated by the use of dirty instruments. In the hospital with which he was connected, however, out of at least 10,000 cases, not one of this kind had yet occurred. Poor patients were never recommended to syringe with water only, but with a solution of permanganate of potash. Glass syringes were recommended. For the better class of patients, he (Mr. Browne) prescribed "sanitas" or some other antiseptic solution; and after the syringing, the meatus was dried with cotton-wool. If proper care be taken to use antiseptic measures, these formations would be prevented.

Dr. FITZGERALD (Dublin) called to mind two cases. In the first, which was a persistent one, the disease was traced to the patient having spent much time in a conservatory where there were many geraniums.

Dr. CASSELLS (Glasgow) protested against conclusions without proved facts. Hinton had never seen a case in England. He (Dr. Cassells) was the first aural surgeon to find it in the ear. As to the etiology, it was due to dirt propagated from decaying matter, mud especially. Dampness seemed to be a factor. Treatment must be directed to the constitutional condition as well as the local.

TINNITUS AURIUM.

A discussion on this subject was opened by LAURENCE TURNBULL, M.D., of Philadelphia.

Three Hundred and Seventeen Cases of Ear-Disease, in One Hundred and Sixty-six of which Tinnitus Aurium existed as a Prominent Symptom.—Dr. Turnbull said that the very frequent concurrence of tinnitus aurium with certain local lesions had, of late years, attracted much attention; to him, it had been for a long time a subject of special study. Having, after prolonged observation, concluded that the subjective symptom was not of reflex origin, as the rule, or in the majority of cases, he expressed this opinion in a paper, which he presented to the Philadelphia County Medical Society, in March 1874. It was published in the *Philadelphia Medical Times* for June 1874, and reprinted and passed through two editions, as it was one of the earliest monographs on this subject. Following this were the *brochures* of Field (London, 1875); Theobald (Baltimore, 1875); the younger Izard (Paris, 1877); Woakes (1877); and Hemming (1878). Toynbee was by no means satisfied with the prevailing ideas of the pathology of tinnitus; and the lamented James Hinton, after quoting Politzer in support of this view, states (in the supplement to Toynbee's work on *Diseases of the Ear*), that it would be better, therefore, that the cause of tinnitus should be held as yet a very open question". Reviewing the field in the light of later experience, Dr. Turnbull could see no reason for changing his opinion that, in the great majority of cases, tinnitus aurium is by no means a sure indication of brain-trouble, nor can it be frequently ascribed to congestion of the labyrinth, nor to auditory neuritis, except as an evidence of long-continued irritation of the terminal filaments of the nerve; moreover, he had repeatedly proved that many of these cases are curable. Mr. Field, in his paper, arrived at the same conclusion, and thought that "the mischief can always be traced to the membrana tympani"; and reported seventeen cases benefited by faradisation. Dr. Turnbull's opinion was that the subjective noises always have their origin in an excitation of the terminal filaments of the auditory nerve. Dr. Theobald had made an ingenious attempt to explain the production of tinnitus in accordance with physical principles, when it occurs as a symptom in chronic catarrhal inflammation of the middle ear, and obstruction of the external auditory canal; but he did not distinguish more clearly between the different classes of sounds that occur in tinnitus. The pulsating sounds are rarely, if ever, associated with chronic catarrhal inflammation, but generally accompany the acute or subacute forms. Since these pulsating sounds vary in intensity, but are uniformly increased by any means that increases the intracranial circulation, this points conclusively to the relation which the cerebral blood-supply bears to the tinnitus as a prominent factor in its production. Dr. Turnbull showed a table, containing observations from three hundred and seventeen cases of ear-disease, carefully registered by competent medical assistants, and for the most part from his own examinations. In these, one hundred and sixty-six had tinnitus; out of which there were but four of a pulsating character; while there were sixty-six in which the sounds were like escaping steam, variously described by the patient as "hissing like a steam engine", "hissing like steam from a tea-kettle", "buzzing", "whizzing", or "fizzing"; or "pounding", "knocking", "hammering", "weaving", or the "rattle of machinery". In twenty-two, the noises sounded like the "ringing of bells", "tapping like a drum", or "ticking like a clock". Twenty-three had roaring sounds, "like the noise of the sea", "action of the surf", or "the sound heard when a sea-shell is brought close to the ear". Seventeen had continued noises, such as "humming like a fly or bee", "singing of voices or of birds", and various musical sounds. Finally, came the rarer forms of throbbing and pulsating; these terms being applied according to the degree of violence of the beat. The local disorders accompanying these cases were: first, thickening of the membrana tympani, alteration in the position of the handle of the malleus, generally caused by sinking (retraction) of the membrane from otitis media catarrhalis, subacute or chronic; of such was the largest number of the cases, *i.e.*, sixty. In the next class, the cause was otitis externa (impacted cerumen), which contained forty-five. The results of chronic catarrh of the middle ear formed a third class, in which there was also acute or chronic inflammation of the membrana tympani, with ankylosis of the articular surfaces, and thickening and hypertrophy of the mucous lining of the middle ear; of these there were seventeen instances. Lastly, there was the rarer form of throbbing and pulsating, with hyperacousis and dizziness; of these there were two throbbing and four pulsating. Some of this latter class required special mention; in Case No. 64, there was acute inflammation of the middle ear, with hyperacousis. In Case No. 193, there was an angioma cavernosum, involving the left auricle and supratemporal region, in which the pulsation was increased when lying down, or under extraordinary muscular efforts. In Case No. 225, the right ear only was affected, as the result of otitis media specifica catarrhalis, the membrana tympani as white as paper, the left handle of the malleus adherent, and the membrane retracted. There was throbbing in both ears of No. 283, the left one being affected with acute otitis media, accompanying periostitis, and with a small perforation. In two remarkable cases that he had recently seen (one sent by Professor Da Costa, the other by his son, Dr. Charles S. Turnbull), there was in both cases a peculiar whistling and puffing sound (aneurismal thrill), caused by an aneurism of the branches of the internal carotid and of the temporal branch. In two others, there was disease of the heart (valvular), accompanied by a tinnitus that was of a "jumping" or "roaring" character. The existence of mucus, serum, or pus in the midddle ear or Eustachian tubes often gives rise to noises of a gurgling kind. A *résumé* of this subject showed that the greater number of cases of tinnitus aurium result from some change in the membrana tympani, Eustachian tube, or middle ear. In only a few cases was the disorder of nervous origin, and in nearly all of these it was not primary, but reflex. In cases of true pulsating tinnitus, the trouble is not in the intracranial circulation, nor even in the labyrinthine vessels, as was for a long time believed, but it is due to pathological conditions outside of the brain proper. Adopting the etiological classification sustained by the careful investigations of Greene and Fisher, of Boston (commencing as early as 1832), and subsequently endorsed by Jurasz, Epstein, and Hemming, we have the the following: 1. Physiological murmurs in the internal carotid dependent upon partial stenosis of the carotid canal. 2. Pathological murmurs in the internal carotid, probably caused by reduced vascular tension, dependent upon disturbance in the vasomotor system. 3. Pathological murmurs from aneurism of the vessels of the head. As a symptom of cerebral disease, tinnitus occurs only rarely; out of 1,652 cases of ear-trouble, treated at the Massachusetts Eye and Ear Infirmary, at Boston, by Drs. Blake and Shaw, tinnitus aurium was found to be associated with brain-disease in only six. The fact that tinnitus can be produced by slight physical changes in the ear is also in favour of their direct production. Even swallowing with closed nostrils, by changing the degree of atmospheric pressure, and varying

the tension of the membrana tympani, will produce these noises, as was first shown by Massiat, and subsequently by Dr. J. P. Cassells. In the cases that he had reported, it would be seen that a large number had permanent change in the membrane, with collapse, adhesion of the membrane to the promontory, or disease of the middle ear. It also showed the great importance of the proper treatment of the upper air-passages, for in a large proportion of such cases, the mucous membrane covering the turbinated bones is so thickened, swollen, and hypertrophied as to prevent the air from reaching the Eustachian tube through the nostrils. In the comparatively rare forms of nervous tinnitus, which, as he had stated, are generally reflex or pathological in character, there not unfrequently occurs giddiness as a prominent symptom, and such cases have been called auditory, or labyrinthine vertigo. A very good illustration of this is found in a case given by Dr. Hughlings Jackson. The patient, three months prior to his admission into the London Hospital, was attacked by severe vertigo and vomiting. These attacks having recurred several times, he applied for treatment. He was not aware of any deafness, but testing the hearing showed that he was entirely deaf in the right ear. Syringing the canal brought away a piece of tobacco which he had soaked in rum and placed there twelve months before, to relieve an earache, and which he had subsequently forgotten. He had only one slight attack after the meatus was cleaned. Epidermic exuvial masses may in like manner impinge upon the membrane, and, limiting its motion, will give rise to both deafness and tinnitus. This has also been mentioned by Politzer, who refers to cases of this kind, that resisted medical treatment, but which were speedily relieved by dropping in the meatus some emollient, and subsequently syringing with warm water; the truth of which he had often had opportunities of confirming in his own experience.

The Forms, Causes, and Treatment of Tinnitus Aurium. By W. DOUGLAS HEMMING, M.R.C.S.E. (Bournemouth).—After a few general introductory remarks, Mr. Hemming gave, in a tabular arrangement, the various forms of tinnitus, with their respective causes. These were: 1. Tidal to-and-fro noises, caused by tobacco, chronic middle-ear catarrh, ending in undue contraction of the intrinsic muscles; 2. Humming or buzzing noises, caused by impacted cerumen, eczema, foreign bodies or parasites in the external meatus; 3. Gurgling or bubbling noises, caused by fluid in the tympanum or Eustachian tubes; 4. Rustling or crackling noises, caused by deficiency of cerumen, hair on the membrane or in the meatus, acute catarrh in its later stages; 5. Constant rushing noises, caused by venous congestion of the labyrinth; Pulsating noises, due to, (*a*) extra-aural causes, aneurism, anæmia, etc.; (*b*) arterial congestion of the labyrinth. He then reviewed these several causes in detail, considering first the extra-aural, and then the intra-aural, as situated in the external, middle, and internal ears respectively. Extra-aural causes are, narrowing of a vessel in the vicinity of the aural apparatus, aneurism of a neighbouring vessel or of the aorta, anæmia, bathing, mental excitement, overwork of the brain, depression of spirits, hysteria, hypochondriasis, gout, dyspepsia, obstructed portal circulation, exposure to blasts of cold air, explosions, artillery practice, the administration of quinine, childbearing and lactation, tobacco-smoking the infantile diseases (mumps, whooping-cough, and the exanthemata), cerebral disease, etc. Intra-aural causes are: 1. In the external ear: (*a*) inflammation, (*b*) impacted cerumen, (*c*) deficiency of cerumen, (*d*) hairs in the meatus or on the membrane, (*e*) dried pus on the membrane, (*f*) aspergillus, (*g*) any foreign body; 2. In the middle ear: (*a*) adhesive mucus on the membrane, in the tympanum, or the Eustachian tube, (*b*) a foreign body in the Eustachian tube, (*c*) acute catarrh or inflammation, (*d*) chronic catarrh resulting in contraction or paralysis of the intrinsic muscles; 3. In the internal ear: labyrinthine congestion, either (*a*) venous or (*b*) arterial. Two or more causes not unfrequently coexist. The treatment was then considered. Extra-aural cases require constitutional measures proper to the respective exciting cause, local measures being unnecessary. In intra-aural cases, for inflammation of the external meatus, the ordinary measures were mentioned; impacted cerumen was directed to be removed by means of the syringe and warm water only, while the necessity for the practitioner confining himself to the same instrument for the removal of foreign bodies was strongly insisted upon. In the conditions of the middle ear causing tinnitus, the use of the posterior nasal douche was advised where postnasal catarrh caused collections of mucus about the orifices of the Eustachian tubes. Vapour inhalations of benzoin, creasote, etc., forced into the ear by Valsalva's method, and the use of the Politzer bag, were advocated; internally, in catarrhal cases, chloride of ammonium. In acute tympanic catarrh, the treatment recommended included the aural douche, leeches, general constitutional measures according to the indications, and paracentesis of the membrane where there was much mucus in the tympanum. Contraction of the intrinsic muscles might be overcome by drawing out the membrane with the aid of Siegle's speculum; and muscular tone might be restored by electrical stimulation. If these fail, division of the tensor tympani might be resorted to, though in some cases, incision of the membrane without division of the tendon had given relief. In the treatment of labyrinthine congestion, hydrobromic acid, as recommended by Dr. Woakes, was advocated, the writer having obtained good results from its use.

Dr. TURNBULL (Philadelphia) said that his experience of the value of electricity was *nil* in most cases if it were employed alone, but in conjunction with other measures it had been valuable. He had used hydrobromic acid in at least twenty-five cases, and in some with good results; this had also been the case with hydrobromic ether inflated in the middle ear. The dose of the acid he used was fifteen drops three times a day.

Mr. DOUGLAS HEMMING (Bournemouth), in reply to the chairman, thought he had certainly obtained good results in some cases from the use of electricity. Hydrobromic acid had also been of use in his hands in doses of from fifteen to thirty drops. The use of this remedy was restricted, and we could only expect to obtain good results from it in cases where there was no local catarrhal or other condition in the middle ear, but only a congestion of the labyrinthine circulation.

Dr. EDIS (London) spoke as to the effect of lactation as a cause of tinnitus. When patients became weak and anæmic, and unable to provide milk enough, tinnitus was an early symptom, and a very frequent one. He had not noticed it in other cases of uterine diseases, unless there were great anæmia.

Dr. PIERCE (Manchester) had hoped to hear something new with regard to the causes of tinnitus. They might, he thought, be divided into two classes, vascular and nervous. Some of the statements as to cause he was at a loss to understand: *e. g.*, pressure on the mastoid was said to stop tinnitus: how could this be? Dr. Turnbull said that pulsating tinnitus was due to acute catarrh; if so, this somewhat simplified matters. He (Dr. Pierce) had had tinnitus aurium for five years; it came on after much use of the diagnostic tube when commencing the study of otology. In cases where after full inflation of the tympanum there was no improvement in the tinnitus, are we to conclude there was certainly ankylosis of the stapes? He had used hydrobromic acid in hundreds of cases, and considered it an extremely useful agent. Electricity he had not found of value, and he had almost abandoned its use.

Mr. LENNOX BROWNE (London) said that Dr. Pierce had suggested many thoughts. We owed much in regard to this subject to Dr. Woakes. In unilateral tinnitus, the cause was probably local; but in bilateral the cause was constitutional. In some cases, there was a relaxed condition of the membrane which was relieved by incision; in such cases the use of collodion might be of value. In chronic catarrh with perforation, tinnitus was a rare symptom. With regard to lactation, etc., there was a form of tinnitus connected with childbearing which was not due to anæmia. He (Mr. Browne) objected to putting water into the ear in applying electricity. He had found hydrobromic acid of great value in many cases, and in combination with quinine it had been useful in labyrinthine vertigo.

Dr. STORY (Dublin) asked why anæmia in the auditory nerve should cause noise.

Dr. WOAKES (London) said that if progress were to be made in this subject, we must get rid of certain ideas, and especially of the terms subjective and objective. In every case there was an objective cause. One heard constantly spoken of tidal noises like the sound produced when a shell was held up to the ear; what was the explanation of this fact? It was the shaking that did it; the vibration of the shell formed a means by which the circulation in the arm was propagated and heard in the shell. The labyrinthine circulation was quite distinct from that of the other parts of the auditory apparatus. Hydrobromic acid came in in cases where there was a want of vaso-motor control of the vertebral artery. When we laid our heads on the pillow and closed the jaws, there was tinnitus. Two explanations of this had been given. The first was that of the contraction of muscles, but this was doubtful; a better one was, that by clenching the jaws we put pressure on the vessels, causing obstruction of the artery, which produced a sound carried to the ear. We might get local contractions of arteries limited to small spots due to vaso-motor disturbance.

The following papers were taken as read.

On the Occurrence of Exostosis within the External Auditory Meatus in Prehistoric Man. By CLARENCE J. BLAKE, M.D. (Boston).

Ear-Diseases and Life-Assurance. By J. PATTERSON CASSELLS, M.D.

Note on Tinnitus Aurium. By S. SEXTON, M.D. (New York).

1. Inflation of the Middle Ear in cases of Cleft Palate, both before and after Staphyloraphy; 2. Chloroform-Vapour in Inflation of the Middle Ear. By C. S. TURNBULL, M.D. (Philadelphia).

On the motion of Dr. TURNBULL, a vote of thanks was passed to the Chairman.

On the motion of Dr. FITZGERALD (Dublin), a cordial vote of thanks was passed to Mr. Douglas Hemming, for having kindly acted as Honorary Secretary of the Subsection during the Meeting, and for the manner in which he had discharged the duties.

The meeting then adjourned to the Cork Ophthalmic and Aural Hospital, where Dr. WEBER-LIEL demonstrated the use of his "Koniontron" for intratympanic injections.

SECTION C.—OBSTETRIC MEDICINE.

Wednesday, August 6th.

THE Chair was taken by GEORGE H. KIDD, M.D. (Dublin), who delivered an address, which was published at page 240 of the JOURNAL for August 16th.

DISCUSSION ON INTRA-UTERINE MEDICATION.

Dr. W. S. PLAYFAIR commenced the discussion by drawing attention to the importance and interest of the subject, and insisted on the necessity of its careful study; since, like all powerful means of cure, it was capable, when injudiciously used, of doing considerable harm; while, in properly selected cases, there were few methods of treatment of greater efficiency. He then gave a sketch of the conditions of the uterus which called for, or admitted, intra-uterine medication, describing briefly the pathological changes generally observed in the affected parts; and insisting on the fact that, in the absence of accurate *post mortem* investigation, we had to depend mainly on symptoms and on the results of treatment. In describing endometritis, he dwelt on the difference between cases occurring after pregnancy and in the sterile and unmarried. He then proceeded to discuss the various methods of intra-uterine medication; the advantages and drawbacks of each; and the various agents used for the purpose. He concluded by considering the possible bad effects that might follow intra-uterine medication, dwelling especially on the question of the effects of the treatment on childbearing; and maintaining that, so far from rendering the patient sterile, as had been argued, in properly selected cases it often had the effect of removing acquired sterility.

Intra-uterine Medication. By LOMBE ATTHILL, M.D. (Dublin).—Dr. Atthill pointed out, in the first place, that the body of the uterus was the portion of the organ most frequently affected; and that the intra-uterine surface was specially prone to disease; and therefore that, to effect a cure, the part engaged should be specially treated. He next remarked that (excluding all cases in which tumours of the uterus or polypus existed, and those resulting from anæmia) it would be found that the symptoms indicating the necessity of intra-uterine medication were: 1. Derangement of the menstrual function, specially hæmorrhagia and dysmenorrhœa; 2. Uterine catarrh; 3. Pain, specially that caused by pressing the point of the sound against the fundus; one or more of these being present. With respect to the method to be employed in carrying out intra-uterine medication, Dr. Atthill objected to intra-uterine injections, and found ointment inefficient. He employed the following agents only—the fluids being applied by means of a probe, around the extremity of which cotton was wrapped, and the solids through a tube or *porte caustique:* carbolic acid in solution; tincture of iodine; iodised phenol; nitric acid; solid nitrate of silver; zinc points; crayons of iodoform. Carbolic acid was the agent Dr. Atthill recommended for ordinary use, being at once safe and efficient. Iodised phenol he recommended in cases requiring more energetic treatment, but considered it inferior to nitric acid; this latter agent, he pointed out, should never be applied to the intra-uterine surface, unless through a cannula or tube. This was a point on which he strongly insisted; and further, that the patient should be confined to bed for a day, or even more, subsequently; and he expressed his conviction that, if these precautions were adopted, no unpleasant results need be feared.

Intra-uterine Medication by Iodised Phenol.—By ROBERT BATTEY, M.D. (Rome, Georgia). The author said that, eight years ago, he was unfavourably impressed as to the results of intra-uterine medication by argentic nitrate and other escharotics. Seeking an eligible substitute, he discovered in carbolic acid a very powerful solvent for iodine; one part by weight of the latter dissolving perfectly in two parts of the former. This concentrated solution acts upon the tissues with vigour, and is employed to supplement the curette in attacking uterine cancer. For intra-uterine medication, a solution of one part of iodine in four parts of liquefied carbolic acid proved satisfactory. It had been used by Dr. Battey almost to the exclusion of other remedies. In February 1877, it was brought to the attention of the profession through the *American Practitioner*, and is now very generally employed in the Southern States. The solution is applied to the interior of the uterus by means of slender elastic hard India-rubber probes, wound with cotton-wool. The solution is not diluted; but its effects are regulated: (*a*) by the size of the cotton wrapping; (*b*) by the depth to which it is carried into the uterus; (*c*) by the number of probes successively employed; (*d*) by the length of time the medicated cotton is allowed to remain in the uterus—*i. e.*, whether a few minutes, or twenty-four or forty-eight hours. For the treatment contemplated, sponge and tangle-tents have been abandoned, and simple tents of soft cotton-wool substituted when dilatation is required. These have been found to be entirely free from accident. The results of the treatment are: 1. Perfect removal of cervical mucus; 2. Freedom from pain, due to the local anæsthesia produced by carbolic acid; 3. Rapid absorption of iodine into the circulation, evidenced by metallic taste in the mouth and throat; 4. Softening and dilatation of the cervix; 5. Temporary arrest of leucorrhœa; 6. Watery discharge, sometimes bloody; 7. Exfoliation of superficial layer of mucous membrane; 8. Healing of abrasions; 9. Disappearance of indurations; 10. Permanent arrest of leucorrhœa; 11. Removal of villosities without the curette; 12. Disappearance of subinvolution; 13. The menses become regular and healthy; 14. The appetite and digestion improve without medicine; 15. So freely is iodine absorbed, that alteratives are not required; 16. The form of the cervix and os are often completely changed, and assume even a virginal type; 17. Stenosis is not observed in any case; 18. Barrenness is overcome. Rapid, and at the same time satisfactory, cure is not obtained, nor is it expected of any method of treatment known.

On Intra-uterine Medication. By E. J. TILT, M.D. (London).—In the absence of information respecting the scope of the subject of discussion, Dr. Tilt understood it to refer to such intra-uterine treatment as was required for the cure of internal metritis, or chronic inflammation of the lining membrane of the body of the womb. Long practice led him to know that internal metritis was a common disease, that it was present in all bad cases of inflammation of the cervix, and was often cured unawares by such treatment as restores the cervix to a healthy condition. He therefore asserted that there would be little need of intra-uterine medication if inflammatory disease of the cervix were properly attended to; and he mentioned having been able to cure fifty cases of marked internal metritis associated with cervical inflammation, without any other intra-uterine treatment than the keeping free of the cervical canal. Dr. Tilt admitted, however, that intra-uterine medication was wanted in the following cases: 1. Incoercible blood-loss, resisting all remedies and menacing life; 2. When life or reason is menaced by the intensity with which internal metritis reacts on the system, rather than by the amount of purulent discharge to which it gives rise; 3. When internal metritis causes an aggravated complication of dysmenorrhœa by menorrhagia independent of ovaritis, and menacing life or reason; 4. Membranous dysmenorrhœa; 5. In habitual abortion, independent of syphilis and ovaritis, and seemingly caused by some morbid state of the lining membrane of the body of the womb. When internal metritis led to dangerous flooding, and in cases of membranous dysmenorrhœa, Dr. Tilt recommended intra-uterine injections with undiluted tincture of iodine. He deprecated the injection of a solution of nitrate of silver in such cases, and in other cases of internal metritis requiring intra-uterine treatment, on account of the severe pelvic diseases and death which had succeeded. In such cases, he preferred to place in the womb five or six grains of solid nitrate of silver; but, as he had seen this followed by severe peritonitis, and as he knew this to have caused death, he expressed himself ready to welcome a better plan of treatment. Dr. Tilt reminded the Section that their President, Dr. Kidd, was the first who had the courage to swab a greatly enlarged uterine cavity with fuming nitric acid; and that Dr. Atthill had strongly recommended the same kind of treatment for the cases under discussion; and he asked them to state how often they had done so, and with what results, fatal or otherwise, in order to be able to decide whether their plan of treatment be not the best for such cases.

Dr. GALLARD (Paris) said that, as a prelude to the discussion, and as a sequel to the important communications read, he had the honour of presenting to the Section two *brochures*, in which he had discussed the question. The first was entitled *Treatment of Internal Metritis.* He dealt therein with the various lesions which attack the interior of the uterine cavity, and which, therefore, required actual intra-uterine medication. He showed that cauterisations were of the first importance; and that, in order that they might exert their full effect, they must be applied in a fluid rather than in a solid form. He described the precautions necessary to avoid any unfortunate results. As regards vegetation of the mucous membrane, which could not be destroyed by the simple cautery, he pointed out those cases in which it might be useful to resort

to the curette, by the aid of an instrument similar to that of Recamier. In the second pamphlet, he related a case in which such an application of the curette by M. Richet was followed by marked success. He would not speak of the operations on the uterine cavity for the removal of fibrous tumours, just described by Dr. Tilt; for it was in those cases that operative measures were commonly resorted to, and they were described in most standard works. He endorsed the operative methods recommended and carried out by the President.

Dr. BARNES (London) said they had now a body of evidence on this important point, of extreme value, having heard a series of papers from, he might say, the representatives of all the different schools. Dr. Playfair appeared to have omitted to estimate properly the value of work done long before he was known in the science of gynæcology. Thirty years ago or more, Dr. Tyler Smith published a book, illustrated by Dr. Hassall with some beautiful drawings, against the hitherto dominant doctrines respecting the interior of the cervix and the appearance of the uterus, with a view to putting uterine anatomy on a physiological and scientific basis. He then showed, for the first time, that cervical leucorrhœa was a different and distinct affection from vaginal leucorrhœa. The method of intra-uterine medication which he (Dr. Barnes) had, by long experience, been brought to prefer was that of "swabbing" with cotton-wool dipped in medicated solutions. He had for many years used this appliance, and he believed that he was the first person who had contrived the probe now known as "Playfair's probe", which he did more than twenty years since. He had then used the local "swabber" in the way in which it had since come to be generally adopted, so that instrument was not a novelty. By using a speculum in the beginning of a case, the probe could always be directed in the line of the uterus, and the hand could then be admitted as far enough back as was required. In many cases, circumstances rendered the use of the speculum absolutely necessary. Another point was with reference to the inflammation of the parts, which was often found to be considerable; and the question arose as to the relative advantages attendant upon the use of leeches or scarification. Leeches would not bite when or where they were wanted; whilst, if scarification were adopted, the puncture could be made where required. The inflammation surrounding the little glands was thus relieved at once. As to the choice between iodine and carbolic acid, he had used both with considerable freedom; and he considered that each had its advantages. As to iodised phenol, he could not speak of it from experience. Iodine was absorbed from the part to which it was applied, and it acted constitutionally as well as locally. He thought its application to be the most ready way of curing all uterine affections arising from syphilitic contagion. Dr. Tilt represented what used to be the accepted mode of treatment, which they had now, however, gone far beyond. So many men had followed intra-uterine medication with admitted success, that it seemed unnecessary to combat his objections. It should be remembered, in clinical practice, that metrorrhagia was more often the sign of uterine disease, in which respect it differed from menorrhagia, which arose more ordinarily from constitutional causes. He did not encourage the use of nitric acid, but he used it pretty freely in many cases, sometimes as often as two or three times a month, and saw no bad effect from it. In fact, he looked upon it as harmless when applied as recommended by Dr. Atthill. It was the most superficial caustic that could be had, unless applied very strongly. He hoped that the discussion would lead to a proper understanding of those cases in which intra-uterine medication was considered to be necessary; and he believed that, if the surgeon wished to do any good, the remedies he had indicated should be used.

Dr. CORDES (Geneva) described an instrument which he used for the purposes of intra-uterine medication. It was a pencil tubulated in the centre, which was first passed into the uterus, and then a brush, dipped in nitric acid of the required strength, was introduced through the pencil, and so brought into contact with the part. He had both used it himself and had also heard it spoken of as being applied with great success by some French physicians.

Dr. MACAN (Dublin) said that, as far as his opinion went, there were two distinct classes of cases, which required different treatment: namely, the nulliparous and the multiparous classes. In the nulliparous cases, uterine disease arose from the closure of the external os, which retained the secretions, and caused a dilation of the cervix, rendering an incision of it necessary. In a case like this, almost at the first appearance of the affection, he applied nitric acid. He had adopted this course with success on several occasions; but in one case the patient died within forty-eight hours of the application. He had also seen a case of peritonitis follow immediately upon the introduction. He thought that the occurrence of these grave consequences in one case, and not in a similar one, was worthy of inquiry.

Dr. WALLACE (Liverpool) said that it appeared that there had been one great want in the method in which, and the conditions for which, treatment was applied. The pathology of disease had been only partly revealed. Uterine catarrh arose from many conditions; but the most frequent cases were those in women who had had children, caused by subinvolution of the uterus. Dr. Emmett of New York entirely discarded the violent method of treatment for this affection, and looked upon it as a constitutional malady, using for it constitutional remedies. In such cases, Dr. Wallace had great belief in hot douches of from two to four gallons of water, increasing from 98° to 120°. He had, by this treatment, effected complete cure without any intra-uterine medication. Where the method of Dr. Atthill had failed, he had adopted it with success. When it resisted these applications, there must be some other cause at work—generally gonorrhœa. These applications were also utterly futile in cases where the disease arose from syphilis. In these, he preferred the use of acid nitrate of mercury to nitric acid, as it acted constitutionally. He had seen a patient exhibit constitutional symptoms within twenty-four hours after an application of acid nitrate of mercury. There were cases of subinvolution of the uterus in which the cervix became thick and hard, cutting like a bit of cartilage. In the only case of this kind he had ever had, he dilated the cervix very freely, and applied a solution of nitric acid with such success that the patient, who had previously lived for many years in sterile marriage, gave birth to a child within the year. In applying carbolic acid, he formerly used Playfair's probe; but he had since adopted, as a better instrument, a piece of copper-wire wound about with cotton-wool. When inserting the probe, he also always found it better to use the speculum. Nothing struck him more with regard to the question of intra-uterine medication than the cases of patients, who told him that they had been under treatment for years, being subjected to intra-uterine medication without any alleviation of their sufferings. He had seen this occur twice with the carbolic acid treatment, and once with the treatment of perchloride of mercury.

Dr. MALINS (Birmingham) concurred with the mode of treatment recommended by Dr. Wallace. Experience had taught him that the application of intra-uterine medication was not required as much as some said. He thought the distinction drawn by Dr. Macan between nulliparous and multiparous cases was a very wise one, and he believed that in the multiparous uterus hygienic treatment was the best. He, however, did not dispute that it was sometimes necessary to apply intra-uterine medication, especially in the class of cases laid down by Dr. Atthill. At the same time, he thought that many cases could be cured by far less heroic measures than were recommended by some surgeons.

Dr. LOMBE ATTHILL (Dublin) said that the subject had taken a far wider range than he had anticipated. Dr. Macan had entered more extensively into the causation of uterine disease than he had anticipated in the few remarks he had made in his paper. He quite agreed with Dr. Macan and Dr. Tilt, that incision of the cervix was sometimes essentially necessary. He held that, where there was chronic endometritis, it was impossible to cure the patient without incision of the cervix. With regard to Dr. Wallace's remarks respecting the douche, he looked upon it as of the greatest value, and he used it very freely at the Rotunda Hospital; but it was by no means sufficient in all cases. Dr. Malins had very properly said that heroic treatment was useless and unnecessary in many cases; so was everything when carried to an extreme. At the same time, it was utterly impossible to effect a cure in the majority of cases by the milder line of treatment. Dr. Tilt had asked what had been the result of the treatment by nitric acid in his hands; and, in reply, he should say that he only remembered two fatal cases, in both of which an operation had been previously performed. He looked upon nitric acid as a perfectly safe remedy, when properly applied. He admitted that it should not be applied to one part of the uterus when we were satisfied that another part was diseased.

Dr. BYFORD (Chicago) believed that intra-uterine medication could be adopted in a great many instances with safety. When he applied it, he looked a good deal to getting the patient into a proper condition; made her live quietly for some time beforehand; and kept her in bed for two or three days after the application, which measures he found to secure success invariably. He thought that the application should be delayed after menstruation. He should hesitate to make an application of nitric acid to the uterus in a case where the canal and mouth of that organ was very much diminished in size; and he did not believe that these were the class of cases to which it was applicable. This treatment should be succeeded by more constitutional means. He used glycerine and extract of belladonna.

Dr. HENRY BENNET (London) said that, as regarded the application of fuming nitric acid, he could support Dr. Atthill's experience. With regard to what had been said by some of the speakers as to the practical difficulty they supposed to exist in applying any remedy that required a frequent examination of the patient to test its effects, he thought it was positively essential to examine frequently, as, without

doing so, it was impossible to know what was going on. Great importance should also be attached to the condition of the patient before the application. It was necessary to bring into a state of integrity all the regions where the operation was required.

SECTION D.—PUBLIC MEDICINE.

Thursday, August 6th.

THE Chair was taken by the President of the Section, T. W. GRIMSHAW, M.D., Physician to Dr. Steevens's Hospital, Dublin.

The International Congress of Hygiene.—Dr. PACCHIOTTI of Turin informed the meeting that the International Congress of Hygiene would be held in Turin in April next, and he gave a very warm invitation to as many members as possible of the British Medical Association to come to Italy and attend on the occasion. He said the King was very liberal, the Government gave money towards the Congress, and the Mayor and citizens of Turin would perform their duty in attending to the wants of any foreigners who might attend the Congress. [*Applause.*]

THE INFLUENCE OF DRINKING WATER IN ORIGINATING OR PROPAGATING ENTERIC FEVER, DIARRHŒA, DIPHTHERIA, AND SCARLATINA.

A discussion on this subject was opened by ANDREW FERGUS, M.D. (Glasgow). He said that he would confine himself almost entirely to cases of which he had personal experience. Until lately, Glasgow was supplied with river-water, which contained the drainage of several other towns higher up upon the river. In 1848, cholera prevailed universally in Glasgow. No district was specially exempt from the disease. In 1854, the south side of the city, inhabited by the working population or the lower middle class, had a supply of pure water; and when cholera again broke out in Glasgow in that year, the inhabitants of the south side suffered very little from the disease, although great numbers of them worked at the north side of the city, where cholera was rife. In the year 1866, all Glasgow was supplied with pure water, and though since then they had imported cases of cholera, it did not take any hold on the city whatever. Summer diarrhœa had also lessened. There was also a marked diminution in the prevalence of cases of diphtheria since Glasgow got a supply of pure water. He went once to a fine house in a beautiful part of the country in Lanarkshire, where three members of the family had typhoid fever; and, on investigating the case, he found that the cause of the outbreak of the disease was an impure well, from which the house was supplied with water. The same thing occurred in cases of diphtheria, and he (Dr. Fergus) had found many cases which were clearly traceable to impure water. On the return of several families to Glasgow from a watering-place, many of the members of the families were suffering from typhoid fever; and, an examination of the wells in the vicinity of the place being made, it was discovered that every one of the twenty-eight wells showed evidence of organic pollution, when Nessler's solution was used. This should always be tried before any house depending on a well-supply for water was taken. Water contaminated by sewage was not unpleasant to drink, as nitrates and carbonic acid were in excess, and rendered the water sparkling and cooling, and almost pleasant to the palate. Not alone should all communities be supplied with pure water, but all sources of impure water should be cut off. Dr. Fergus concluded by saying that, in some cases, it was hard to overcome the partiality they had for old practices; and, as an instance of that, mentioned how, in a case of a favourite well in Glasgow—the closing up of which would have caused a general outcry, because the people were in the habit of walking to it every morning and having a drink from it—the authorities got over the difficulty by turning the pure Loch Katrine water into the well, and the people went and drank out of it as before, not knowing the difference.

The Dual Requirements which are necessary for the production of Enteric Fever, and a consideration of the Fallacies which are based upon a Narrow View of the Germ-Theory. By ALFRED CARPENTER, M.D., C.S.S.Camb. (Croydon).—The author pointed out that some writers assume that, if an enteric germ find admission to a pure water-supply, it retains its vitality. He remarked upon the fallacies contained in this idea, as also in the beliefs which are often expressed, that there is no limit to the distance which the contagia of disease may not be transmitted underground; also that filtration will not alter the contagious nature of the particles themselves; and that neither microscopical nor chemical analyses are able to prove the absence of such contagious particles. These fallacies have been promulgated in districts supplied with water from deep wells, especial reference being made to those from the chalk formation. It has been stated that zymotic diseases of every kind which have arisen in those districts, have been caused by the water alone, independently of importation, contagion, or local nuisances, although the water has been found chemically pure. These fallacies are used by engineers and others for the purpose of assailing the character of the deep well-water, and for resisting the establishment of waterworks, which are urgently required for the people. It is argued by the authors of the fallacies in question, that water which may have been polluted by mischance or accident is not fit for use as a public water-supply; because (say they) there are no safe provisions in nature for restoring it to a state which fits it for drinking. The writer of this paper, however, was of opinion that the schemes proposed to take the place of the deep well waters are open to all the defects which have really led to present pollution of the waters in question, whilst they would only avoid causes which are infinitesimal in their character, and which may be guarded against by simple precautions. He pointed out that the fallacies are based upon admissions by authorities such as were made at the conference on national water-supply at the Society of Arts in May last, viz., that it was possible that certain waters which had produced disease might have been chemically examined, and yet have given satisfactory results; it was also said to be possible for disease-germs to be carried underground for long distances without being destroyed, as was shown at Lausanne in 1875. Dr. Carpenter produced evidence based upon personal experience as well as the observations of others, to show that these ideas, though based upon a modicum of truth, are really dangerous fallacies when used in a broadcast manner. He pointed out that there are two causes generally at work in the establishment of an epidemic of enteric fever; first, that there is always a marked departure from the first sanitary law, by means of which the houses of the sufferers are exposed to the results of sewage change; and secondly, that the water-services are in immediate connection with the same system, by means of which an interchange of material takes place, and typhoid germs with their attendant matters gain admission to the water-supply. He denied that there is any proof of water, which the chemist has shown to be pure, ever having caused an epidemic of typhoid. He also denied that the severity of the disease will depend upon the size of the dose, but was of opinion that a small dose, falling into a capable soil, will naturally grow into a bad case. He showed that there are conditions in the nature of things which tend to purify underground streams as well as atmospheric air. He also pointed out that, if a given water-supply be not supersaturated with bicarbonate of lime, it will be impossible for enteric germs to increase and multiply in the water, because the conditions are absent upon which multiplication depends. Particulars were given upon these points, and evidence produced from various authors, which went to prove that the views of the writers, who support the fallacies mentioned, are not based upon scientific foundations, and that, in all cases of typhoid epidemic, there is required a fitting soil as well as an enteric germ, and that the fitting soil is generally produced by defective sewerage arrangements. The writer was opposed to Pettenkofer's idea, that such material increases and multiplies in the soil without reference to the bodies of the patients. He was of opinion that, without those bodies and their excreta, there will be no multiplication. The sum of his conclusions was, that an occasional enteric germ may find its way into water, but, if that water be pure, it cannot multiply, and will not retain its vitality for any period. Should it find entrance into any human body, if the recipient be healthy and have not been exposed to miasma from decomposing animal matter, it will abort, and will not set up a true attack of enteric fever. The basis of the argument was founded upon evidence connected with the epidemic of typhoid which arose in Croydon in 1875, and concerning which a paper was published in the BRITISH MEDICAL JOURNAL on November 20th, 1875, and which the experience gained during the past four years had shown to be perfectly correct.

Chemical Analysis in regard to Water in Infectious Diseases. By J. LANE NOTTER, B.A., M.D. (Netley).—Dr. Notter said that chemical analysis had been the subject of much criticism, and, until the poison of enteric fever was isolated, he claimed consideration for water-analysis. It was true that chemical analysis could not specify the causes of such disease. It could only tell us of certain conditions to which it was collateral. By chemical analysis, the nitrogenous compounds in water could be estimated; and where these existed, care must be taken lest the specific germ be present. If the *materies morbi* of these diseases had a *habitat* amid the common putrefactive changes of dead organic matter, it was hardly possible for it alone to contaminate water without also introducing an element with which its development was inseparably bound up, and which would be amenable to the test of chemical analysis. Under every condition throughout the globe, the laws of life for plant and animal were the same. The presence of a plant or animal in drinking-water was no more an evidence of impurity than was the existence of an oak or an elephant on land. On the contrary, the higher forms were a favourable sign. Living *cyclops* was seldom

or never to be found in bad water. There were certain forms of life associated with bad water, and in making an analysis, these should be carefully sought for. There was a remarkable immunity from animal life in highly ferruginous water; and this pointed perhaps, in some degree, to the advantages to be derived from spongy iron as a filtering medium. Again, chemical analysis was limited in its powers, and might, indeed, mislead. Dextrine and starch were isomeric bodies; when reduced to their primary elements, chemical analysis would not distinguish between the two; but, by the aid of the microscope, we could at once say which the substance was. So in relation to disease-germs; their separate elimination would seem equally to baffle chemical elimination, which would only enable one to detect albuminoid ammonia, or some other product probably of secondary combination. The only chance of gaining information would be by an accurate and scientific knowledge of microscopic appearances, as well as by chemical analysis. The latter would point out the main characters of the water; it was only by means of the former that one could distinguish between a harmless desmid or an infusorium of evil omen.

Observations on some of the ways in which Drinking Water may become polluted with the contagium of Enteric Fever. By EDWARD BALLARD, M.D., F.R.C.P. (London).—The author commenced with a formulation of his belief in the ancestral origin of the contagium of enteric fever as it is now met with; and, after quoting some remarks upon the subject by his colleague, Dr. George Buchanan, and paying tribute to the memory of Dr. John Snow as the father of the doctrine of the spread of bowel contagia through the agency of drinking water, he proceeded to narrate briefly some of the experiences of his colleagues in the Medical Department of the Local Government Board and of himself in relation to this mode of spread of enteric fever. The main object of the writer was to demonstrate the great difficulty which sometimes attends the attempt to trace the ancestry of the contagium, and the necessity of untiring patience on the part of the nivestigator. The outbreaks of fever to which he referred were the following. 1. The recent outbreak of fever at Caterham and its neighbourhood, which was investigated by Dr. Thorne Thorne, and which was ultimately traced to the dropping of portions of infected dejections proceeding from a labourer employed while ill with the disease, into a well from which the Caterham Water Company drew part of their supply—the well being at the time under repair. 2. The outbreak of fever among the students of one particular and new wing of Caius College, Cambridge, which outbreak was investigated by Dr. George Buchanan. This outbreak was traced to the admission of sewer-air from a particular sewer into a local service which was presumably constant, yet which was discovered on particular days to have been intermitted. There were defects discovered in the water-closet arrangements which facilitated the occurrence of the accident. The sewer in question was found on inquiry to have received enteric fever dejection. The other cases narrated were outbreaks of fever which were investigated by Dr. Ballard himself. 3. An outbreak at the village of Nunney, near Frome, due to the use of the water from a foul brook, which water, however, did not occasion fever until a case of fever imported from a distance occurred on the summit of a gorge through which the stream flowed above the village. The infected dejecta were deposited at the edge of the gorge, and the outbreak in the village occurred ten days or a fortnight after rain such as would have washed some of them into the water. 4. A somewhat similar occurrence in the village of Hawkesbury Upton, in Gloucestershire; but here it was the case of water from the wells sunk side by side with privy cesspools in a fissured oölite rock, and thus habitually polluted, which was the means of spreading the fever. The first case imported from a distance occurred in a cottage at the upper end of the village, near the top of the slope on which the village stands; the infected evacuation thrown into the privy first infected the neighbouring well, and the infection spread from the well through human systems to cesspools, and from cesspools again to wells down the village and even into isolated country places, through children attending school and drinking water there. 5. An outbreak occurring in an isolated row of five cottages in the country near Birmingham; it was traced to the use of the water of a well at the rear of the cottages, across the corner of which passed a drain which carried slop-waters away from the cottages. No fever occurred until a laundress, occupying one of these cottages, washed there some linen soiled with the evacuation of a girl who was at that time ill with enteric fever at Moseley, one of the suburbs of Birmingham, and whom Dr. Ballard had himself seen in the course of an inquiry into an outbreak of fever in Moseley, which was due to infected milk. 6. Lastly, Dr. Ballard narrated briefly the conditions he found present at a dairy farm at Ascot, at which place and neighbourhood enteric fever, which he demonstrated clearly to have been spread by infected milk from the farm, continued to prevail epidemically for four years and a half. The fever was introduced into Ascot by some cases which formed part of the notorious milk epidemic at Marylebone in 1873. The evacuation from one of these cases were thrown into a hole in the sand (lower Bagshot sand) at the top of the hill. The suggestion made by Dr. Ballard, upon which he invited discussion, was that the infective material, washed down by the rain through the sand into the water-layer below, might have been carried in that water by its movement naturally in the direction of the dairy-farm, and actually drawn with water from the well at the farm, at the distance of about half a mile. To such as might feel startled by so bold a hypothesis, he suggested the consideration of the serious outbreak of fever at Lausen, in Switzerland, described by Dr. Frankland, where the contagium, originating in a valley, was carried in water through a mountain (and, as Dr. Frankland believed, filtered in its course) a distance of a mile, and infected the drinking water in another valley on the opposite side of the mountain.

Enteric Fever, Diarrhœa, Diphtheria, and Scarlatina originating from Drinking Water. By NORMAN KERR, M.D., F.L.S. (London).—A farmer's wife suffered from typhoid fever; the family had never been without diarrhœa; scarlatina had affected two children, and diphtheritic sore-throat one. The well from which the supply of drinking-water had been obtained was found to have a drain from the pigstye and cattle-shed opening into it. As soon as the water from this well was abandoned, these diseases ceased to harass the household. After thorough sanitary rectification, the old well was once more resorted to, but no bad effects ensued. In the adjoining mansion, sore-throats, diphtheria, and typhoid diarrhœa were traced to the leakage of house-drains, through the porous soil, into the well in the courtyard, the leaks being caused by rats. After reconstruction, the family were freed from all the former troublesome and constant symptoms. Three fatal cases of diphtheria in a gentleman farmer's family were traced by Dr. Kerr to the contamination of the water used for drinking purposes. In an old county family, the father and son had suffered from repeated attacks of diphtheritic sore-throat and typhoid diarrhœa respectively. On the water-supply being examined, it was found polluted by seven leakages from drains. As soon as these were remedied, the illness ceased. In the above cases, the milk-supply had been found blameless; there had been no similar cases of disease in the neighbourhood for a long time previously, and there had been no zymotic disease among the cattle. From these and other cases, the author could come to no other conclusion than that the same contaminated drinking-water might, without the presence of specific germs, give rise to different ailments, the poison manifesting itself as erysipelas, scarlatina, diphtheria, diarrhœa, or enteric fever. The poison was the same, but the physical state of the individual constitution, or some idiosyncrasy of susceptibility, or some differential surrounding condition, might be the factor in determining the special form of disease which the poison might assume in any particular case.

Surgeon-General CRAWFORD, in returning thanks to the gentlemen who had read the papers, begged to add the result of his experience of over thirty years, that various forms of fever occurred which could not possibly be traced back to water-supply. One case in particular presented itself to him, which occurred during his service in India. A distinguished cavalry regiment had three outbreaks of typhoid fever: one when quartered at Mhow, a second at Meerut, and a third at Umballa. His attention, and that of other able medical officers, was closely given to detect the origin of the outbreak, and in no case could they attribute it to the water-supply. He had seen a family nearly destroyed by diphtheria, which was supplied entirely with the same water as the regiment to which it was attached. He therefore thought that other sources of contamination should be closely watched.

Mr. VACHER (Birkenhead) was inclined to agree fully with Dr. Notter that examination of water by the microscope for morphological impurities was fully as important as, if not more so than, chemical analysis; and that to such impurities much of the zymotic diseases might be traced. He also thought that microscopical examination of the atmosphere was as necessary as of water, as floating in it would be found similar or analogous organisms. In examining a sample of milk lately, to which it was supposed an outbreak of fever might be attributed, he found nothing in the chemical examination of the milk which would lead him to think that it was wilfully adulterated; but examination with the microscope showed that some of the excreta of the cow had got into it; and, knowing the various diseases to which animals are subject, one might reasonably look to such a source as the cause of many forms of disease in the human body. In like manner, his attention having been drawn to an impure state of the water-supply by the authorities, he could find no source of impurity, except the contamination carried down from an atmosphere loaded with the emanations of numerous chemical works.

Dr. TAYLOR (Penrith) joined in thanks to the readers of the papers,

to which he had listened with much pleasure. The interest of these papers seemed to concentrate on the production of fever by the use of contaminated water. He would, in connection with this subject, say a few words on the question of milk as a source of disease. It was generally supposed that milk became contaminated by the use of water which, having been charged with poisonous matter, was used in washing the pans and vessels; but he traced the contamination to a more direct source. Thus, in two cases in which he was lately interested, the water-supply was above suspicion, being that of the town; but in each case, patients lay in adjoining rooms, in the one case ill of enteric fever, in the other of scarlatina. The milk was distributed and managed by the parties who nursed the patients; and in each case respectively, enteric fever and scarlatina followed amongst those who were supplied from those establishments.

Dr. LITTLEJOHN (Edinburgh) also made some remarks.

Dr. FERGUS said that he wished to make a few observations in reference to the remarks of Surgeon-General Crawford, who had raised a very important point. He (Dr. Fergus) and the other gentlemen who had spoken did not wish to indicate that those diseases did not arise from other sources of impurity than water. But he held that the diseases under discussion arose almost invariably—he might say invariably—by taking into the system, by air or by water, human excrement in a state of decomposition. The question was how those noxious gases were conveyed into houses so as to cause an outbreak of fever. The general opinion was that it was by tension of the sewers, or by suction power of the openings into the drains, that it was conveyed into the houses. His opinion was that one of the means by which those gases got into a house was this: when they could not escape through the water-closet under the ordinary sanitary arrangements, they were driven back through the supply-pipes into the cistern, which in many cases supplied the house with water for dietetic purposes.

The PRESIDENT said the question upon which Dr. Fergus had spoken was a very important one. As far as his (the President's) experience went, he knew two cases of typhoid fever which were caused by the noxious gases being absorbed into exposed cisterns after passing through pipes, thereby contaminating the drinking water. On one occasion, he attended six members of one family with typhoid fever, and the only cause that could be traced as leading to that outbreak was the contamination of the water in the way that Dr. Fergus suggested. In Dublin, they were supplied with the same sort of water as was supplied in Glasgow, as regarded its chemical constituents; yet typhoid fever was steadily on the increase in Dublin. That, in all probability, would point to the fact that typhoid fever owed its origin to some other cause than the supply of impure water alone. There was one other matter about which he would like to have heard a word, and that was as to the properties of hard and soft water in carrying disease. Many believed that soft water was dangerous from the facility with which it took up the diseased particles caused by decomposition, and that hard water was free from all that danger. A great deal might have been said on this question.

Thursday, August 7th.

The chair was taken by the President, T. W. GRIMSHAW, M.D., who delivered an address, which was published at page 242 of the JOURNAL for August 16th.

CONVALESCENTS FROM ACUTE INFECTIOUS DISEASES.

A discussion was opened by JOHN W. MOORE, M.D. (Dublin), on the question, "How are we to deal, by isolation or otherwise, with convalescents from acute infective diseases, so as to limit the spread of disease?" He had arrived at the conclusion that, to prevent the spread of disease, there must be perfect isolation of the convalescent patients. The questions to be considered were: for what epidemic diseases a convalescent home should be provided; next, what sort of a home it should be; third, what was the best plan for building, and what was the most suitable site for it; fourth, what funds would be required for the establishment of such a home, and how far it should be self-supporting; fifth, what might be the number, and what the system of management of the staff to work it. He thought the four diseases for which homes should be provided were small-pox, scarlatina, typhus fever, and measles. The next question was, whether the want should be provided in the shape of a large central home, or by establishing a number of small isolated houses duly licensed. He was in favour of the former plan. The home should be rural, and not more than a mile or two from the town, so as to facilitate the transit of patients. The site should be on an open space, ten or twelve acres in extent, so as to minimise the chance of infection in the neighbourhood, and to give the patients an opportunity of indulging in healthy exercise. He exhibited the plan of a convalescent home provided by Mr. Henderson, architect, and suited to a town of three hundred thousand inhabitants. There should be a central building for the resident staff, and four isolated pavilions in different parts of the grounds, one for each of the diseases mentioned. Each pavilion would have ten beds for public patients, and five for private patients. There should be a resident medical officer, and suitable servants. The private patients should pay from £1 to £1 10s. a week, with liberty of calling in their own medical attendants. The grounds should be handsomely planted; there should be a supply of good water, and all other sanitary provision. The institution should be separated on all sides by a road from the public. Private efforts could not be depended on; for, when lately tried in Dublin, the system failed. An income from the fees of the patients could not be relied upon; it would therefore be necessary in the end to rely upon the rates. The Sanitary Acts of England and Ireland contained ample provisions for the levying rates to supply funds for the construction and maintenance of epidemic houses. In conclusion, he hoped the matter would be seriously taken in hand, and that some good result would be obtained.

Mr. VACHER (Birkenhead) said that the law gave very little power; so that, though rules might be framed, it was uncertain whether they would be carried out. The majority of cases were not reported, and carried about with them the seeds of disease. He advocated compulsory notification of disease, which already existed in many places. The obligation should rest with the householder. The medical attendant should supply the necessary information on a form to be supplied by the medical officer of health. Information was of very little use unless there were power to deal with the cases and places which were provided for them. The failure in Dublin to raise funds showed that the work could not be left to private enterprise. The Charity Organisation Society were preparing a list of places where convalescents could go, which would be extremely useful. In the present circumstances, he would keep the patients in hospital until perfectly free from infection; and, for that purpose, he would set some special wards apart. He believed that the Government would be constrained to take action in this matter, because it was as much a matter of necessity to abridge the liberty of the convalescent patient until thoroughly recovered, as it was to deprive of liberty any other person whose presence was calculated to be injurious to society.

Dr. NOTTER, in the absence of Dr. Ransome (Manchester), read a portion of the latter gentleman's paper. He did not advocate quarantine in cases of convalescent patients, but he recognised the importance of pure water and good drainage in the case of typhoid fever. He considered that diphtheria was only slightly infectious, and that complete isolation should be resorted to in cases of scarlet fever only. He was not in favour of building large convalescent hospitals for infectious diseases, as, in his opinion, small hospitals, with well ventilated wooden walls, were the best kind of building to be used for such a purpose. In private cases, Dr. Ransome advocated Dr. Budd's plan, which was simply anointing the body with some camphorated or olive oil.

Dr. PACCHIOTTI (Turin) said that the subject brought forward by Dr. Moore was a very important matter. The view of procuring convalescent hospitals was one that would shortly receive practical realisation in every country in the world, because there was nothing more urgent.

Dr. STEWART (London) said that, thirty years ago, in a pamphlet which he published, he advocated this system of separation of convalescents, and thought it still a matter of great consequence to provide for the cases dismissed from hospitals. He could not coincide in the view that contagious diseases were incapable of being communicated during the period of convalescence; on the contrary, he looked on that period as the most dangerous. Many patients with slight fever attacks used to be admitted into the Glasgow Fever Hospital in 1840. They recovered from the slight attack, and were moved into the convalescent ward amongst recovered cases of typhus, and were soon infected with the disease, and had to be moved down again to the sick wards. Dr. Stewart believed that, in all these cases, the period of convalescence was so dangerous, that Dr. Moore's plan would be most valuable. About twenty-five years ago, he took up the cause, seeing many patients at the Middlesex Hospital suffering from the want of these institutions. He was pleased to find that the matter was being taken up in London, but agreed with Mr. Vacher that the erection of convalescent hospitals ought to be carried out at the public expense.

Mr. HENDERSON, C.E., had drawn up two plans on the best and cheapest system. The great cost of making a one-storied building induced him to advocate a two-storied building; and he recommended Dr. Moore to adopt this plan.

Dr. DARBY (Bray) suggested that, as there were difficulties in the way of convalescent homes, a Committee of the Association should be

appointed to consider the whole subject, and define at what period of convalescence they would consider a patient free from infection. He pointed out the difficulty of inducing a noble lady to send her child, who might have been affected with infectious diseases, to a convalescent home, or a noble lord sending his wife there; but as to the question of expense, he thought that difficulty could be easily got over.

Dr. LITTLEJOHN (Edinburgh) could not trust either to private bounty or to parochial authority. He would prefer the system of the local authorities of Edinburgh, which insisted on the isolation of the patients. The difficulty he found in Scotland was the delay in getting the power to act under the local authorities; but, when he could act on his own authority, he did so with success. There should also be compulsory power under the action of the police to move infectious cases to hospitals; and, further, to utilise the police in preventing communication with the patient in hospital. The construction of houses in Scotland was such as to give great obstacles to isolation. Power should be concentrated in the hands of the sanitary authorities, as committees would not act.

Mr. VACHER said he had recently visited the Fever Hospital in Cork; and he found that, out of forty-four beds for acute patients, twenty-four beds (in a different room) were set apart for convalescents; and he thought that a very good arrangement.

Friday, August 8th.

The chair was taken by the President, T. W. GRIMSHAW, M.D.

The Causes of Death in Ireland and in England. By H. J. C. TWEEDY, M.D. (Dublin).—Having enumerated the various causes of death in both countries, such as zymotic, constitutional, local, and developmental diseases, the author proceeded to give the result of a comparison between the Irish and English death-rates from various causes, and showed that the excessive death-rate in Ireland was due to constitutional and not to zymotic diseases. He proved, also, that consumption was one of the principal causes of death, and that this was in a great measure due to defective sanitation in various forms—such as impure air, overcrowding, bad drainage, insufficient food and clothing; and he alluded to the measures being adopted by the Dublin Sanitary Association and other bodies towards the amelioration of this evil in Irish towns.

Sanitary Arrangements of Dwelling-houses. By JOHN H. CHAPMAN, L.K.Q.C.P. (Dublin).—Owing to ignorance of the principles of house-sanitation, almost all dwelling-houses are sources of great danger to the health of their occupants, who are too heedless of the evil consequences of faulty arrangements. Householders should make certain that the sanitary arrangements of their houses are perfect, and not rest satisfied with the positive, though often reckless, assurances to that effect made by interested persons. Even recently built houses, with all the "modern improvements", are usually far from being in a satisfactory condition. Those who do not detect "bad smells", or who have for a considerable time escaped illness, are too prone to think their houses perfect, and to resent any insinuation to the contrary as a personal insult. House-drains should be constructed of earthenware pipes, and should be disconnected from the main sewer by an intercepting ventilating trap; the main sewer, too, should be ventilated. A water-closet soil-pipe should be the only direct connection with the house-drain; it should have a syphon-trap at the top, and it should be continued upwards (full bore) from a point external to the trap to a point well above the top of the house, in as direct a course as possible, to act as a ventilator for the house-drain. A soil-pipe should be wholly outside the house. Rain-pipes, waste-pipes from baths, lavatories, sculleries, housemaids' sinks, butlers' closets, and overflow-pipes of cisterns, etc., should be disconnected from house-drains or soil-pipes, and be made to discharge over well trapped gratings placed outside the house. House-drains should frequently be effectively flushed. This arrangement would convert properly constructed house-drains into safe open drains, and would effectually prevent the ingress of sewer-gas to the houses.

Reflections on a General Scheme for Improving the Sanitary Condition of Unhealthy Countries, having in view the Prevalence of Epidemics, the Productive Power of the Soil, and the Health and Prosperity of the Populations. By Dr. BONNAFONT (Paris).—The object of the paper was to shew how to improve the sanitary condition of those countries in which are produced toxic elements, which, at certain definite periods, decimate the populations. All the means employed till now applied only to man in health, whereas prophylactic measures are almost entirely neglected. We certainly cannot prevent the action of influences inherent to different climates, but what we can do is to instruct the people to protect themselves against those influences, as history teaches that it is precisely those who are the least civilised, and consequently those who leave the soil uncultivated, who are most exposed to epidemic influences. It must be admitted that the various governments have adopted certain prophylactic measures for the protection of their subjects; but what is wanted is the co-operation of the governments of the different countries to prevent the spread of epidemics. The subject should form part of the diplomacy of the governments, which should have a minister of public health, an officer much more important than the minister of war, the one being destined to protect human life, whereas the other is to destroy it. There should be an international arrangement between the different governments, not only with the view of adopting local sanitary measures for the suppression of endemic influences, but to prevent their spreading to other countries. The means proposed for the accomplishment of these objects consist in drying up the inundated soil by thorough drainage; or, where the inundation is continual, as where the land is below sea-level, the water should be dammed up, and in the case of rivers, it should not be allowed to flow into the sea; as, for instance, the mouth of the Ganges, the source of that most deadly malady, the cholera. Cultivation of the soil is another important measure that should be adopted, and the earth should not be turned up before it is thoroughly saturated by the rain.

The PRESIDENT said the members of the Section were very much indebted to Dr. Bonnafont for the valuable paper which had been read. It would be observed that Dr. Bonnafont's paper was very much in the direction of the principles advocated by their State Medicine Committee—that was, the arrangement of a permanent health department, with a minister of health, for each country.

Reasons why the Contagious Diseases Acts ought to be extended to all Seaports. By A. BERNARD, M.B. (Liverpool).—The author arranged his remarks under the following headings: 1. The prevalence of venereal, especially syphilitic, disease in seaports where the Acts were not in force among seamen and prostitutes; 2. The deficiency of hospital accommodation for women suffering from these diseases in ports not under the Acts, contrasted with the ample provision made by Government for their reception in ports where the Acts are in force; 3. The great reduction of disease in ports under the Acts, as shown by several parliamentary papers; 4. The great benefit of these Acts in diminishing prostitution, exterminating juvenile prostitution, and their moral and social benefits, as testified by clergymen and ministers. A parliamentary paper, containing replies given by the Rev. E. H. Wilkinson, vicar of Portsmouth, to questions addressed to him by Convocation, was distributed among the audience, and testified to the value of the Acts. A letter from the Rev. D. Webster of Cork was also read, in which the Acts were described as one of the greatest blessings ever conferred on this country. It was also shown that the Acts had been of incalculable benefit in reclaiming fallen women, restoring them to their friends, and in deterring others from commencing an immoral life.

Poor-law Medical Relief in the United Kingdom—its Anomalies and Deficiencies, with Suggestions for a Reform of the System. By JOSEPH ROGERS, M.D. (London).—Having referred to the injustices practised on the medical officers in Scotland and England in carrying out the medical Poor-law relief, with reference to Ireland he said that, as far back as the latter part of the last century, there was established pretty generally in Ireland a system of district dispensaries, at which the sick poor received gratuitous advice and medicines; these dispensaries were maintained partly by voluntary subscriptions, and partly by specific grants from the grand juries, and continued to afford material aid to the poor of this country up to 1847-48, when the potato famine and the fever which followed not only swept away about 2,000,000 people, but the subscribers as well, and the semi-voluntary system broke down. Something, therefore, had to be done. In 1851, the Medical Charities Act was passed, whereby the island was distributed into 719 dispensary districts, with 1,045 stations, some districts having two or more stations, the average population of each district not exceeding 7,000 persons. On turning to the annual reports of the Local Government Board, it was refreshing to find how thoroughly they had understood the fairness of giving to the dispensary medical officers something like an approximation to just remuneration. There was, however, one great blot in the Irish system, and that was the manner in which white dispensary and red visiting tickets were distributed. In the report for 1877-78, it was stated that 465,573 dispensary, 184,475 visiting tickets—total 650,048—had been issued, of which number only 566 were cancelled on the ground of an improper grant. The abuse of the power to give medical relief had been a subject of complaint among dispensary medical officers for many years; and the only way to check it was to deprive the committees of the power of granting orders, and to limit the same either to the relieving officers or to those officials who corresponded to English overseers. The medical relief arrangements of Ireland were so near an approximation to all that was attainable, that, with the exception of the point to which he had referred, there was hardly anything to seek

for. On several occasions, when addressing meetings of the Poor-law Medical Officers' Association and others, he had demonstrated by carefully collected statistics the economic advantages that had sprung from an efficient system of poor-law medical relief; and not only in the saving effected by the prevention of disease, but also of time in the earlier restoration to health of those who had been more or less under treatment. He would pass to the consideration of the means whereby the anomalies and deficiencies could be best remedied; and first as to Ireland. The writer of a letter which he read enumerated only three things which should be altered, viz.: first, the abuse in the issue of white, and notably of red, tickets; second, permissive superannuation; third, the modification of dispensary tickets, with a general advance of salary to an average of £200. As regarded Scotland, it was absolutely necessary that a complete rearrangement and reform of the system of medical relief should be made, which should be modelled on the principles embodied in the Bill brought in by Mr. Crawford. Lastly, as regarded England, it would be necessary to secure an extension of the dispensary system generally throughout the provinces; the rearrangement and curtailment of districts where excessively large; greater powers conferred on district medical officers of ordering food and stimulants, which they might consider to be necessary in the treatment of the sick; a compulsory, in lieu of a permissive, system of superannuation; the general introduction of efficient medical inspectors, such inspectors to be recruited from intelligent and deserving members of the Poor-law medical service, by competitive examination, etc. Dr. Rogers proposed that the respective reforms he advocated in the three countries should be briefly formulated, and means taken whereby every Poor-law medical officer, resident in either kingdom, should have two or more copies of the statement forwarded to him, with a request that he should take care to place them in the hands of every candidate at the next election for a seat in Parliament, in the county or borough in which he resided.

Dr. CARPENTER said that, if Dr. Rogers would kindly formulate something of the idea that he had sketched on his paper, and forward it to him, he would take care that it would be brought before the State Medicine Committee, which should be appointed that afternoon.

Dr. ROGERS promised to do so.

Convalescents from Infectious Diseases.—Dr. NOTTER proposed the following resolution, to be sent from the Section to the general meeting: "That this Section is of opinion that a committee of the Association be appointed to see how we are to deal, by isolation or otherwise, with convalescents from acute infectious diseases, so as to prevent its spread."

Dr. LITTLEJOHN seconded the resolution, which was adopted.

Vote of Thanks.—Dr. STEWART moved a vote of thanks to the president, Dr. Grimshaw, for his admirable conduct in the chair. [*Hear, hear.*]

Dr. CHAPMAN seconded the vote of thanks, which was passed amid applause.

Dr. GRIMSHAW said he was much obliged to them for the vote of thanks they had passed. He should be always glad to assist the Association in any way he could to promote the subject of Public Medicine.

MEMBERS PRESENT AT THE ANNUAL MEETING.

THE following list includes the names of the members and visitors attending the meeting at Cork, which were entered in the book provided for that purpose in the reception-room.

Abraham, P. S., Esq., Dublin; Adams, William, Esq., London; Alcock, A. M., Esq., Innishannon; Alcock, John, Esq., Burslem; Aldred, Henry A., M.D., London; Allbutt, Clifford, M.D., Leeds; Allchin, W. H., M.B., London; Allen, James H., M.D., Midleton; Anderson, Mrs. Garrett, M.D., London; Anderson, McCall, M.D., Glasgow; Andrew, E., M.D., Shrewsbury; Anthony, H., Esq., Dungarvan; Arthur, T. F., Esq., Waterford; Arthur, W. E., Esq., London; Ashe, Isaac, M.D., Dundrum; Ashford, E. C., Esq., Bath; Atkins, G. P., Esq., Cork; Atkins, Ringrose, M.D., Waterford; Atkins, T. Gelston, M.D., Cork; Atthill, Lombe, M.D., Dublin.

Baird, A., M.B., Perth; Baird, J. T. W., M.B., Congleton; Baker, J. W., Esq., Derby; Baker, R. L., M.D., Leamington; Balding, D. B., Esq., Royston; Ball, B., M.D., Paris; Barker, A. E., Esq., London; Barnes, Fancourt, M.D., London; Barnes, J. W., Esq., London; Barnes, R., M.D., London; Barr, J., M.B., Liverpool; Bartlett, E., Esq., London; Barton, J. K., M.D., Dublin; Bartrum, J. S., Esq., Bath; Baylie, J. J., Esq., Bandon; Beamish, W., M.D., Cork; Beard, G. M., M.D., New York; Belcher, W., Esq., Bandon; Bennet, H., M.D., London; Bennett, E. H., M.D., Dublin; Bernard, A., M.B., Liverpool; Bodington, G. F., M.D., Kingswinford; Boggs, A., M.D., Paris; Boileau, J. P. H., M.D., Netley; Bonnafont, Dr., Paris; Booth, P. L., Esq., Barrow-in-Furness; Borchardt, L., M.D., Manchester; Bradley, M. M., M.D., Jarrow-on-Tyne; Brailey, W. A., M.D., London; Bride, John, Esq., Wilmslow; Bridgman, I. T., Esq., Berkeley; Broadbent, S. W., Esq., Sunderland; Brodie, M., M.D., Limerick; Brodie, T., M.D., Cork; Brown, C. F., Esq., Leamington; Brown, G., Esq., London; Browne, Lennox, Esq., London; Bull, J. E., Esq., Blackrock; Burke, R. J., M.D., Douglas, county Cork; Burton, J. M., Esq., Blackheath; Byford, W. H., M.D., Chicago.

Cagney, D., Esq., Charleville, Blarney; Carmichael, A. H., Esq., Liverpool; Carter, C. H., Esq., Pewsey; Carpenter, A., M.D., Croydon; Cassells, J. P., M.D., Glasgow; Chambers, Thomas, Esq., London; Chaplin, S., Esq., Kildare; Chapman, J. H., Esq., Dublin; Charcot, Dr., Paris; Charles, J. J., M.D., Cork; Clark, Andrew, M.D., London; Clarke, R., Esq., Newtownards; Clubbe, W. H., Esq., Lowestoft; Colahan, N. W., M.D., Galway; Collins, W. J., M.D., London; Collins, W., jun., Esq., London; Cooper, Charles, Esq., Needham Market; Cooper, Charles H., Esq., Bandon; Cooper, W., Esq., Widnes; Corbett, R. Delacour, Esq., Cork; Corbin, M. A. B., Esq., Guernsey; Corby, H., M.D., Cork; Cordes, A., M.D., Geneva; Corley, A. H., M.D., Dublin; Cornwall, James, Esq., Fairford; Cossar, T., M.D., Edinburgh; Coupland, S., M.D., London; Crawford, Surgeon-General T., M.D., Dublin; Cremen, P. J., M.D., Cork; Cresswell, P. R., Esq., Dowlais; Crickmay, E., Esq., Laxfield, Suffolk; Cronin, J., M.D., Queenstown; Crowley, T., M.D., Cork; Cullingworth, C. J., Esq., Manchester; Cuming, James, M.D., Belfast; Cummins, W. J., M.D., Cork; Curtis, James G., M.D., Cork.

Daly, M. C., M.D., Cork; Darby, T., Esq., Bray; Davies, H. N., Esq., Cymer, Pontypridd; Deighton, C., M.D., Clapham, Yorkshire; Delany, B., M.D., Kilkenny; Dempsey, A., M.D., Belfast; Denton, E. R., Esq., Leicester; Dewes, E., M.D., Coventry; Dill, R. F., M.D., Belfast; Dodd, W. H., Esq., Killorglin; Donovan, D. D., Esq., Cork, N. M.; Donovan, J. I., M.D., Ballincollig; Donovan, D., M.D., Skibbereen; Dorman, E.B., M.D., Kinsale; Dow, W. B., M.D., Dumfermline; Dowse, T. S., M.D., London; Duffey, G. F., M.D., Dublin; Duke, E., Esq., Pontypridd; Duncanson, J. J. Kirk, M.D., Edinburgh; Dyer, S. S., M.D., Ringwood.

Eagles, W., Esq., Aylesbury; Eames, J. A., M.D., Cork; Eames, T. B., Esq., Manchester; Eames, W. J., Esq., H.M.S. *Royal Adelaide;* Eaton, J., Esq., Ancaster, Grantham; Edis, Arthur W., M.D., London; Eddowes, A., M.D., Market Drayton; Elias, D., M.D., Southport; Ellerton, J. F. H., Esq., Chard; Elliot, John, Esq., Kingsbridge; Elliot, Robert, M.D., Carlisle; Evanovitch, G., Esq., Philadelphia; Evans, Thomas, Esq., Cardiff; Everett, D., Esq., Worcester.

Fagan, John, Esq., Belfast; Fahie, C. J., Esq., Rush; Falconer, R. W., M.D., Bath; Falvey, F. J., Esq., Tralee; Farrar, Joseph, Esq., Morecambe; Fegan, R., M.D., Old Charlton; Felce, S., Esq., London; Fergus, A., M.D., Glasgow; Fiddian, A. P., M.B., Cardiff; Fielden, S., Esq., Shildon; Filson, A., M.D., Portaferry; Finny, J. M., M.D., Dublin; Fitch, F., M.D., Kidderminster; Fitzgerald, E., Esq., Mallow; Fitzgerald, C. E., M.D., Dublin; Fitzmaurice, E., Esq., Douglas; Ford, James, M.D., Eltham; Forster, J. Cooper, Esq., London; Foster, B., M.D., Birmingham; Frazer, H., Esq., Armagh.

Gallard, E., M.D., Paris; Garde, H. W., M.B., Timoleague; Gill, H. E., Esq., York; Glaister, J., Esq., Glasgow; Golding, J. V., M.D., Cork; Gooding, J. C., M.D., Cheltenham; Gosling, S. F., Esq., Biddulph; Goss, T. Biddulph, Esq., Bath; Goyder, David, M.D., Bradford; Graham, A. F., M.D., Liverpool; Grattan, N., M.D., Cork; Gray, J. H., M.B., Wandsworth; Greenwood, J. W., Esq., Ossett; Griffin, L. T., Esq., Killarney; Grimshaw, T. W., M.D., Dublin; Gueneau De Mussy, N., M.D., Paris; Gwynne, C. N., M.B., Sheffield; Gwynne, George, Esq., Ovens.

Hackett, J. B., Esq., Kilkenny; Hadden, John, M.D., Horncastle; Hadden, R. E., M.D., Skibbereen; Hamilton, W., M.D., Tarbert; Harker, John, M.D., Lancaster; Harkin, A., M.D., Belfast; Harley, H., Esq., Carrignavar; Harris, A. E., Esq., Gosport; Harrison, Reginald, Esq., Liverpool; Hart, Ernest, Esq., London; Harthan, Isaac, Esq., Manchester; Harvey, C. A., M.D., Cork; Harvey, J. R., M.D., Dublin; Harvey, R. J., M.D., Dublin; Haughton, E., M.D., Norwood; Hayden, T., M.D., Dublin; Hayes, J. R., M.D., Tralee; Hayes, H. R., Esq., Basingstoke; Hayes, P. J., Esq., Cork; Hefferman, W. K., Esq., Killenaule; Hemming, W. D., Esq., Bournemouth; Henry, Alexander, M.D., London; Herbertson, R. G., Esq., New Cumnock; Hirschberg, Dr., Berlin; Hobart, N. J., M.D., Cork; Hodgen, J. F., M.D., St. Louis; Holdsworth, S., M.D., Wakefield; Holland, J. C., Esq., Ardmore; Hollings, R., M.D., Wakefield; Holmes, N. H., Esq., Cork; Horan, John, Esq., Sunderland; Howard, J. F., M.D., Sheen; Howe, J., Esq., Llanidloes; Hughes, R. H., M.B., Plymouth; Hughes, William H., Esq., Ashton-under-Lyne; Humphreys, J. R., Esq., Shrewsbury; Husband, W. D., Esq., York; Hutchinson, T. S., Esq., Newington.

Jackson, A., Esq., Sheffield; Jackson, John, Esq., Great Usworth; Jacob, A. H., M.D., Dublin; Jagielski, V., M.D., London; Jennings, W., M.D., Skibbereen; Jepson, E., Esq., Durham; Jepson, O., M.D., Dartford; Jessop, C. M., Esq., Kingstown; Johnston, James, M.B., Birmingham; Jones, Evan, Esq., Aberdare; Jones, H. Macnaughton, M.D., Cork; Jones, Talfourd, M.B., Brecon; Jones, Thomas, M.B., Manchester; Joubert, C. H., M.B., Calcutta.

Keetley, T. B., Esq., Grimsby; Kelly, P. G., Esq., Leeds; Kennedy, M. S., Esq., Tipperary; Kerr, Norman, M.D., London; Kersey, R. C., M.D., Dover; Kershaw, A., Esq., Farnworth, Manchester; Kidd, G. H., M.D., Dublin; Kilner, C. S., Esq., Bury St. Edmunds; Knott, C., Esq., Portsmouth.

Laffan, P. M., Esq., Tara; Laffan, T., Esq., Cashel; Laird, John, Esq., Sligo; Lane, Joseph, London; Lawlor, W. H., M.D., Tralee; Lawton, M., Esq., Midleton; Leader, R. R., M.D., Millstreet; Leech, D. J., M.D., Manchester; Leigh, T. D., Esq., Liverpool; Ley, H. Rooke, Esq., Prestwich; Limrick, O. E. B., Esq., Liverpool; Lindsay, J. M., M.D., Mickleover; Little, D., M.D., Manchester; Little, James, M.D., Dublin; Littlejohn, H. D., M.D., Edinburgh; Lockie, S., M.D., Carlisle; Longmuir, James, M.D., Bathgate; Loos, James, M.D., Ceylon; Lowe, W. G., M.D., Burton-on-Trent; Lucas, S. A., Esq., Kirkdale, Liverpool; Lunn, W. J., M.D., Hull; Lush, W. V., M.D., Weymouth.

Macan, A. V., M.B., Dublin; McClelland, R. B., M.D., Banbridge; Mac Cormac, W., Esq., London; McDonnell, M. A., M.D., Liverpool; McDonnell, R., M.D., Dublin; McDonough, J., Esq., Killarney; Macewen, W., M.D., Glasgow; McIntyre, John, M.D., Odiham; Mackenzie, Morell, M.D., London; Mackesy, G. I., M.B., Waterford; Mackesy, W. L., M.B., Waterford; McKeown, W. A., M.D., Belfast; Madden, T. More, M.D., Dublin; Madras, R. C., M.B., Dripsey; Major, Herbert C., M.D., Wakefield; Malins, E., M.D., Birmingham; Maning, J. O., Esq., Halifax; Mapother, E. D., M.D., Dublin; Martin, J., Esq., Portlaw; Martin, W. Y., Esq., Bolton; Martin, A. H., Esq., Evesham; Mason, F., Esq., Bath; Massey, Isaac, M.D., Nottingham; Mathias, A., Esq., Bridgnorth; Matthews, Joseph, Esq., Liverpool; May, J., Rathfriland; Meldon, A. S., Esq., Dublin; Mitchell, J., M.D., Barnard Castle; Miller, H., M.D., Glasgow; Monks, E. H., Esq., Wigan; Montgomery, J. B., M.D., Penzance; Morgan, G. B., Esq., Sunderland; Morgan, T., Esq., Montgomery; Moore, J. W., M.D., Dublin; Morley, John, Esq., Barton-on-Humber; Morris, W. J., Esq., Portmadoc; Morrogh, G., M.D., Dublin; Moss, H., M.D., Congleton; Mould, G. W., Esq., Cheadle; Moynihan, T., Esq., Cork.

Napper, A. A., Esq., Cranleigh; Nettleship, E., Esq., London; Newton, G., Esq., Dukinfield; Nicholson, R. H. B., Esq., Hull; Nolan, Wm., Esq., Castleisland; Norris, Richard, M.D., Birmingham; Notter, J. L., M.D., Netley; Nunan, J C., Esq., Kinsale.

Oakes, C., M.B., Leamington; O'Brien, R. R., M.D., Tipperary; O'Callaghan, R. T. A., Esq., Cork: O'Connolly, J., Esq., Bantry; O'Connor, A., M.D., Blackrock; O'Connor, D. C., M.D., Cork; O'Connor, D. C., jun., Esq., Cork; O'Donoghue, P., Esq., Loughrea; O'Farrell, G. F., M.B., Boyle; O'Flynn, D. B., M.D., Glanmire; O'Keeffe, J. M., Esq., Widnes; O'Keeffe, P., M.D., Spike Island; O'Keeffe, W., M.D., Mallow; O'Leary, W. H., Esq., Dublin; Oliphant, J., M.D., Leicester; O'Ryan, J. F., Esq., Tipperary; O'Reilly, R., M.D., Lismore; O'Sullivan, C. J., Esq., Cork; O'Sullivan, D., Esq., Tralee; O'Sullivan, D. A., Esq., Burnley; O'Sullivan, J. J., Esq., Killarney; O'Sullivan, S., M.D., Cork; Owen, Edmund, Esq., London.

Pacchiotti, G., M.D., Turin; Parke, R. C., Esq., Newtownards; Parker, N. D., M.B., Carrigrohane; Parker, R. W., Esq., London; Parkes, C. T., M.D., Chicago; Parsons, Chas., M.D., Dover; Parsons, F. H., M.D., Hastings; Partridge, T., Esq., Stroud; Patton, A., M.B., Finglas; Pearse, W. E. G., Esq., London; Pearson, C. Y., Esq., Cork; Pearson, W. W., M.D., Carrigaline; Philipson, G. H., M.D., Newcastle-on-Tyne; Picard, P. K., M.D., London; Pickles, J. J., Esq., Leeds; Pierce, F. M., M.D., Manchester; Pollock, James F., M.B., Dublin; Popham, John, M.B., Cork; Powell, S. K., Esq., Faversham; Power, H., Esq., London; Prichard, A., Esq., Clifton; Prosser, R., Esq., Bromsgrove; Puzey, C., Esq., Liverpool.

Ramsden, W. T., Esq., Ravensthorpe; Rankin, P., M.D., Airdrie; Rayner, H., M.D., Hanwell; Rees, H., Esq., Cwm Ammon; Reid, W. L., M.D., Glasgow; Renfrew, R., M.D., Glasgow; Riordan, P. A., Esq., Killeagh; Riordan, T. F., M.D., Cork; Ritchie, James, Esq., Muirkirk; Roberts, R., Esq., Portmadoc; Robertson, R., Esq., Adelaide, Australia; Robinson, C. H., Esq., Dublin; Robson, E. S., Esq., Durham; Rodger, R., M.D., Manchester; Rogers, Joseph, M.D., London; Rooke, T. M., M.D., Cheltenham; Rowan, J. F., Esq., Kilkee; Royds, W. A. S., Esq., Reading.

Samuels, A., M.D., Liverpool; Sandham, W. H., Esq., Cork; Sandiford, J. O. G., M.D., Cork; Savory, W. S., Esq., London; Sayre, C. H. H., M.D., New York; Sayre, Lewis, M.D., New York; Scatliff, J. P., M.D., London; Scott, A., Esq., Wadingham; Seaton, Joseph, M.D., Sunbury; Seguin, E., M.D., New York; Sheedy, M. M., Esq., Kilmallock; Shinkwin, T. C., M.D., Cork; Sigerson, G., M.D., Dublin; Sinclair, R., Dundee; Sisk, J. O'N., M.D., Fermoy; Smailes, Thomas, Esq., Huddersfield; Smith, H., Esq., Chorley; Smith, John, M.D., Dumfries; Smith, R., M.D., Durham; Smith, Thomas, M.D., Cheltenham; Smith, Walter, Esq., London; Smith, Walter G., M.D., Dublin; Smith, W. H. M., Esq., Croydon; Smith, W., Esq., Redditch; Solomon, J. Vose, Esq., Birmingham; Southey, R., M.D., London; Spanton, W. D., Esq., Hanley; Spedding, B. H., Esq., Belfast; Spratly, S., M.D., Birkenhead; Squire, Wm., M.D., London; Stainthorpe, T., M.D., Hexham; Starkey, W., M.D., Ballyhooly; Starkie, R. F., M.D., Clonakilty; Steele, Chas., Esq., Clifton; Stevens, G., Esq., Bury St. Edmunds; Stevens, W. G., Esq., Renfrew; Stewart, A. P., M.D., London; Stewart, J., M.D., Bristol; Stewart, W., Bacup; Stocker, A. H., M.D., London; Story, J. B., M.B., Dublin; Stowers, J. H., M.D., London; Swan, R. L., Esq., Dublin; Swanzy, H. R., Esq., Dublin.

Tanner, C. K. D., Esq., Cork; Tanner, W. K., M.D., Cork; Taylor, M. W., M.D., Penrith; Taylor, W., M.D., Cardiff; Teevan, W. F., Esq., London; Thin, George, M.D., London; Thomas, Jabez, Esq., Swansea; Thomas, R., Esq., Rawdon, Leeds; Thompson, Jas., M.D., Leamington; Thompson, John, M.D., Bideford; Thompson, D., M.D., Philadelphia; Thomson, W., M.D., Dublin; Tibbits, E. T., M.D., Bradford; Tilley, S., Esq., Cranford; Tilt, E. J., M.D., London; Tolerton, W. R., M.D., Sherston Magna; Tomkins, H., M.D., Manchester; Townsend, E. R., M.D., Cork; Townsend, N. R., Esq., Cork; Townsend, W. C., M.D., Cork; Travers, R. B., Esq., Aghada; Trollope, T., M.D., St. Leonards-on-Sea; Turnbull, G. W., M.D., Exmouth; Turnbull, L., M.D., Philadelphia; Tweedy, H. J. C., M.D., Dublin.

Vacher, F., Esq., Birkenhead; Vance, W. J., Esq., Woolwich; Vickery, George, M.D., Kinsale.

Wade, W. F., M.B., Birmingham; Walker, G. E., Esq., Liverpool; Wallace, J., M.D., Liverpool; Walter, W., M.B., Manchester; Warrington, F. W., M.D., Congleton; Waters, Edward, M.D., Chester; Watkins, R. W., Esq., Towcester; Waugh, A., Esq., Bath; Weber-Liel, Dr., Berlin; Webster, T., Esq., Bristol; Webster, T. J., Esq., Merthyr Tydfil; Welsh, A., M.D., Whitworth; Wetzel, H. A., M.D., Detroit; Wheeler, W. I., M.D., Dublin; Wheelhouse, C. G., Esq., Leeds; White, T. C., Esq., London; Williams, D. M., Esq., Liverpool; Williams, J. T., Esq., Barrow-in-Furness; Williams, John, Esq., Pontypool; Wilson, Sam., Esq., London; Wilson, Thomas, Esq., Wallsend-on-Tyne; Wise, R. S., M.D., Banbury; Woakes, E., M.D., London; Wolfe, J. R., M.D., Glasgow; Woods, O. T., M.D., Killarney; Worswick, F. H., M.D., Manchester.
Yandell, L. P., M.D., Louisville, Kentucky.

OUR CONFESSIONAL.

MAGNO INGENIO, MULTAQUE NIHILOMINUS HABITURO, CONVENIT ETIAM SIMPLEX VERI ERRORIS CONFESSIO; PRÆCIPUÈQUE IN EO MINISTERIO, QUOD UTILITATIS CAUSA POSTERIS TRADITUR; NE QUI DECIPIANTUR EADEM RATIONE, QUA QUIS ANTE DECEPTUS EST.—(Celsus *De Medicina*, Liber viii, cap. 4.)

A WARNING AGAINST TIMIDITY.

IN your Confessional columns of the 21st instant there appears a communication entitled "A Warning against Timidity". It is the narrative of the treatment of a case of accidental hæmorrhage in the case of a primipara, and my mind has been somewhat perplexed in endeavouring to discover the reason for adopting such a heading to the letter of "G. P." Evidently the author wishes to be understood that he erred in not removing the plug from the vagina entirely, and he apparently wishes to fasten the blame of the fatal result on this fact principally. However, the conclusion is almost forced upon one that the cause of death was inflammation of the womb at its lining membrane, caused by contact with the tincture of the perchloride of iron, and the symptoms point to such. So many fatal cases have followed this line of practice—injection of the tincture of the perchloride of iron—that few practitioners now-a-days care to take the responsibility of its practice. I cannot see how, by any possibility, the mere retention of a portion of a plug in the vagina of this woman could have acted in the deleterious manner ascribed to it.—I am, etc.,

JOHN COCHRANE, L.R.C.P. & L.R.C.S.Ed.

1, Gillespie Street, Edinburgh, June 24th, 1879.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

STRUTT'S ABSORBENT WOOL.

MESSRS. W. G. and J. STRUTT, of Belper, have forwarded to us a specimen of cotton-wool prepared in a manner which will at once commend it for general medical and surgical uses as far superior to the ordinary cotton-wool now in use. Valuable as this is, by reason of its softness, elasticity, and relative absorbent power, it is far inferior to the specimen before us, which by some new process has been rendered so absolutely pure and free from grease of any kind, while it possesses a power of so rapidly absorbing moisture, that if it be thrown on water it at once sinks instead of floating, as does ordinary cotton-wool. The advantages of a cotton-wool which is thus pure and strongly absorbent will immediately present themselves to the minds of all medical and surgical practitioners; and this new material will, we believe, rapidly attain extensive popularity.

SPOROKTON.

UNDER this name has been introduced a disinfectant, prepared by Professor Tuson of the Chemical Laboratory of the Veterinary College, which has much to recommend it, inasmuch as it consists essentially of a solution of chloride of zinc saturated with sulphurous acid gas, one pint of the liquid containing ten gallons of gas. Chloride of zinc is an admirable antiseptic, and sulphurous gas is well known to be a very valuable atmospheric purifier and disinfectant. The idea is therefore a very good one. We some time since recommended the adoption of a saturated solution of alcohol with sulphurous acid gas as capable of being very useful in confined spaces: and Messrs. Herring and Co., acting on the hint, have brought out a solution of the kind. The employment of chloride of zinc for the purpose has many obvious advantages, since that substance is itself moderate in price and has well known antiseptic properties. It is stated that this solution will not stain or in any other way injure woollen or cotton goods, and it is therefore an useful and handy material for the disinfection of underclothing, sheets, blankets, etc., confined within a suitable chamber; for it must never be forgotten that, in order to disinfect any atmosphere effectually, or any substance which is exposed in that atmosphere, the air must be so saturated that the gas has to be wholly irrespirable. We should doubt, therefore, the utility of this or any other gaseous disinfectant in rooms occupied by living beings; but, under suitable conditions, and where it is possible completely to saturate the atmosphere, this will be found a very ingenious and convenient disinfectant. The doubt, however, will still remain, whether the same purpose might not be served much more cheaply by the ordinary method of burning a little roll sulphur upon a piece of hot iron.

ZOEDONE.

AMONG the various medicinal and other exhibits at the recent meeting of the Association at Cork, to some of which we shall hereafter direct attention, there was one which, to our own judgment, bore away the palm. We refer to the aërated and phosphorated iron beverages which Messrs. Evans and Co. of Wrexham manufacture for David Johnson, Esq., F.C.S., the patentee.

We had ample opportunities of testing its refreshing and invigorating qualities during our sojourn in the fair city of the extreme south-west; and we can confidently recommend it to the attention of physicians and others who are occasionally at a loss what to direct their patients to take when parched by feverish thirst or depressed by exhausting ailments—notably in cases where alcoholic stimulants would be prejudicial. We feel that it would be found exceedingly useful in mitigating the discomfort ofttimes experienced by those suffering from the thirst, loss of appetite, and general *malaise* connected with the last stage of phthisis and chronic bronchitis.

We would also, from our observations and experience, advise its introduction into clubs, taverns, and places of public amusement, where it would judiciously supersede vinous and alcoholic stimulants, seeing that it contains, as its name implies, life-giving ingredients in a form easily assimilated.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, AUGUST 30TH, 1879.

THE VICTORIA UNIVERSITY.

WE have been so much occupied by the affairs of the Association and its annual meeting, as to have been unable to devote as much space as it merited to the consideration of the recent decision of the Privy Council not to include the power of granting medical degrees in the charter of the new northern University. The result is one which we think deplorable in itself and in its consequences.

From all the facts which have come to our knowledge, we feel that the interests of the public and profession alike have been sacrificed to individual interests, narrow prejudices, and hasty and biassed conclusions drawn without sufficient consideration, but which have yet sufficed to impose upon the understanding of a number of gentlemen entitled and accustomed to be ranked among the "leaders of the profession". Confronted with a document signed by the principal teachers of every metropolitan school and of a number of provincial schools, which besought them not to grant the faculty of conferring medical degrees to the Northern University, the Privy Council, who have no longer a medical adviser, and who are dependent upon many singular chances and much private aid for confirmation or refutation of any views submitted to them on medical subjects, could hardly take any other course than to withhold that privilege. Yet a few moments' consideration might have satisfied any of the signatories, or the authorities at the Privy Council Office, that the statements in the petition were not only incorrect, but absurdly wrong on many points, and entirely without foundation; and that the machinery set in motion to procure such a petition, and the haste with which the document was framed, were alike suspicious.

This petition gravely set forth that the graduating facilities in medicine are already sufficient, and even excessive, in England; and it cited the well-known "nineteen examining bodies" as a ground why the twentieth should not be added. It was added that the permission to the Victoria University to grant medical degrees would tend still further to degrade the standard and increase the difficulties of medical education. It is impossible that more than a very few of those who signed this remarkable document could have given any thought to the real facts which lie hidden under those plausible words, or they would hardly have chosen such statement as the grounds on which to base their opposition, however much they might feel desirous to prevent the unquestionably disagreeable results to individual schools which might have resulted, under existing conditions, from granting graduating facilities in medicine to a Northern University, which would have fulfilled the duties which the London University at present neglects. Let us look at the figures. Anyone who will consult the documents laid before the General Medical Council will see at once that, of the metropolitan students passed through examination, graduating facilities are so absurdly small that only 45 out of 893 obtain degrees from the London University; that is to say, that not more than 5 per cent. are able to graduate. Compare this with the enormously greater facilities afforded to the students of Scotland and Ireland, where the majority of them are enabled to graduate cheaply and with honourable diplomas and an university status, after courses of study and examination hardly, if at all, superior to those of the ordinary London and provincial student; and it will be seen that the action of the metropolitan schools, in interfering to prevent the Northern University from granting medical degrees upon adequately stringent examination, was of the dog-in-the-manger type, and that the statement as to the "nineteen examining bodies" was pure clap-trap. All but one of the Universities among the "nineteen examining bodies" in question require residence for University diplomas in their own colleges, and thus the provinces and the metropolis are alike excluded.

The fear that the standard of examination should be degraded was surely a slender, silly, and timid apprehension. If solid or well based, what easier or more rational than to have made the appointment of government assessors, and adhesion to a scheme of preliminary "conjoint minimum examination", a condition of the charter? It is well known that any such guarantee would have been cheerfully accorded.

The unwisdom of the authorities of Owens College was, we think, shown in a want of liberality in the arrangements which they proposed as to graduating students of other schools, where certain courses which they think necessary are not given. All that was reasonably necessary was to lay down the curriculum of teaching required, with the assent of the Government and the General Medical Council, and to throw to the wind the question of residence. By a more narrow course they roused the hostility of the Liverpool school, which saw its interests menaced. Other provincial schools joined the cry; the London schools which, but for their initiative, would have had no *locus standi* in the matter, joined their voices, and in forty-eight hours such an array of hostile interests was brought into line as would have terrified any minister not sufficiently well advised to see the emptiness of the clamour. The decision can hardly be final: the voice was not the voice of reason, or of the profession. The whole question must at no distant date be inevitably revived; and when it is revived, we have little doubt that the decision will be revised; that the inauguration of a more liberal policy in the North will lead to like changes in the South; and that, instead of five per cent. of English graduates in medicine, we shall have fifty per cent.

THE ADMINISTRATION OF ALCOHOL IN ST. GEORGE'S UNION INFIRMARY.

WE have been furnished, by the courtesy of the Vice-Chairman of the Board of Guardians of the above union, with further copies of the report of the medical officer, to which we have already referred, as one of particular interest. Dr. Webster, on taking medical charge of this new pauper hospital about a year ago, was presented with a copy of the report of the Lords' Committee on Intemperance, to which we have already directed attention, and was asked whether it was possible to limit the consumption of stimulants in the infirmary. Dr. Webster's own convictions being already formed in this direction, he entered on his work with alacrity, and the following are the results. From Lady-day 1878 to Lady-day 1879, 2142 patients were admitted into the hospital, and the cost of alcoholic drinks of all kinds, as we understand the report, including wine, spirits, and beer, was £8 sterling. There were 313 deaths during the year, being a percentage of 12½ nearly, or 1 in 8. Of this number, however, 105 were over 70 years of age, and 63 of the remainder were between 60 and 70 years of age. We have no means of comparing these figures with those showing the ages of those who died as inmates of other pauper hospitals; but it will be seen that more than half the deaths occurred among patients over 60 years of age; while, according to the report, eight deaths occurred within twenty-four hours of admission. The average age at death was 58 years—a fact in keeping with the custom of paupers of finishing an useless old age in the union hospital after too often wasting youth in thriftlessness. Comparing the St. George's mortality with six other London union hospitals, it is found to be just under the average; but on comparing the wine-bill for the different unions, the most startling divergencies appear. Thus at Poplar and Stepney Sick Asylum the average number of inmates was 450, and the wine-bill for the year £625; at

the Central London Sick Asylum, Highgate, the figures are 446 inmates and £612; at Lambeth, 540 inmates, and £564 for wine, ale, and spirits; at Chelsea, 240 inmates and £349; at the Central London Sick Asylum, Cleveland Street, 226 inmates and £278; while at St. George's Union Infirmary there were, on an average, 559 inmates last year, and £8 was spent on ale, wine, and spirits. There may, of course, be reasons for these differences, which do not appear in this report, but at first sight they are certainly very remarkable; and though it would not be fair to make too close a comparison unless we knew more about the details of the working of each hospital, the question is still forced upon us, on reading these figures, whether the administration of stimulants follows any scientific law, or whether it does not rather depend on the individual feelings of different medical men. It is to be expected, though we do not know the facts, that pauper infirmaries will admit, as a rule, the same class of cases. There is no reason to suppose that St. George's Union Infirmary patients are stronger or better able to do without stimulants than those of other London workhouse hospitals. We know that the inmates of the last named hospital were composed, to a large extent, of very old people, who, as a class, do not abstain from alcoholic stimulants; and yet we find one hospital with patients, fewer on an average by 25 per cent. than those of the St. George's Union Infirmary, spending £625 as against £8 spent by the latter! If the patients had been as numerous in the former as in the latter, instead of being less by about a quarter, and if alcoholic stimulants had been given at the same rate as for the three quarters, the figures would have appeared as £776 against £8—a most wide and unexplained difference, which we should like to see accounted for.

One of the most striking facts brought out by this report is the following. "Prior to their removal to St. George's Infirmary" (we quote from the report), "more than thirty old women had been bed-ridden for various spaces of time, ranging from one to seventeen years. They had all been supplied daily with brandy or beer, or both. The whole of them are now able to leave their beds: many are able to walk about, some to work. Appetites have been developed for solid material; and an interest is once more taken in the 'surroundings'. I am compelled to ascribe this amelioration of condition", says Dr. Webster, "to the altered moral state, greater physical energy, and improved food assimilation, brought about by the withdrawal of alcohol." These are interesting words, and very suggestive; but they seem so far—pending, of course, further explanation, which ought to be forthcoming if it can be given—to rest on a solid foundation of fact.

Is there any economy effected in maintenance by disallowing stimulants? There do not seem to be precise data for answering this question. The only satisfactory reply would be a careful and laborious comparison, one with another, of the cost of maintaining patients, as far as possible similar and similarly situated, with and without the administration of alcohol. This comparison would have to take account of age, sex, disease, and its duration, former mode of life, cost of maintenance *per diem* in hospital (it being admitted that patients on a non-alcoholic diet sometimes consume more food than those to whom beer is allowed), and finally the length of time spent in hospital, with a deduction for work, if any, done upon an alcoholic or non-alcoholic diet. Such an investigation would require skill, care, and time, but would not fail to be interesting if well done.

The author of the report is of opinion that economy is effected by disallowing alcohol in the case of malingerers, saying very truly that patients of that kind do not care to remain under supervision and put up with all the annoyance of surveillance unless they are supplied with beer. We have observed with satisfaction that the author of the report, though expressing his views strongly, as he believes his data warrant him in doing, is nowhere fanatical or prejudiced, contending for the necessity of giving brandy in certain cases, particularly in exhaustion after admission to the infirmary. The small quantity so administered is shown by the small amount of money expended; but the admission of the principle shows that the medical officer is capable of a judicial discrimination not always to be found in those who advocate these views. A fuller comparison and a wider induction will, no doubt, in time lead to a settlement—much to be desired in the present state of opinion—of the principles which should determine the giving or withholding of alcoholic liquors to the sick and other poor.

THE annual meeting of the French Association for the Advancement of Science takes place this year at Montpellier, during the week from August 28th to September 4th. The President is M. Bardoux.

THE Société de Biologie in Paris has opened a subscription-list for the purpose of erecting a monument to Claude Bernard. It will take the form of a statue, which, by permission of the Muncipal Council of Paris, will be placed opposite the chief entrance of the College de France.

DURING the past eight weeks of the current quarter, the death-rate in London has averaged but 18.1 per 1,000, against 20.2 and 24.1 in the corresponding eight weeks of 1877 and 1878. The low rate of mortality in recent weeks has been mainly due to the unusually slight fatality of infantile diarrhœa.

A CALCUTTA telegram, under date of August 24th, reports that there is little news from Afghanistan this week. Cholera appears to be increasing at Cabul, especially among the soldiers. The deaths in the regiments which have recently returned from Herat are variously estimated from one hundred to three hundred and sixty-five.

THE new catalogue of the library of the Faculty of Medicine in Paris, which has been nearly two years in preparation, has been recently completed; and the books have been arranged in order on the shelves. The library contains from 55,000 to 59,000 volumes, more than 20,000 of which had been lying for years, covered with dust, in obscure places.

DR. PYE-SMITH's admirable vindication of the aims, methods, and results of experimental physiology, before the British Association, has attracted deservedly much attention; and will, no doubt, when the full text is extensively circulated, as it deserves to be, become of great value, in explanation of a subject which is the habitual theme of calumnious declamation by enthusiastic and imperfectly informed persons, often highly placed and of considerable authority in the Church and the State.

THE correspondent of the *Times of India* writes from Peiwar that: "One class of officers with the Afghanistan force have been particularly hardly dealt with—the officers of the Indian Medical Department. Some who have been employed during the whole campaign and have performed very arduous duties receive only unemployed pay. The matter is one which will cause serious discontent, and is very likely to affect the supply of candidates for the Indian medical service. It is to be hoped that their really hard case will be treated in a liberal spirit by Government."

A WRITER in the *Calcutta Englishman*, while giving some appalling details of the famine in Kashmir, describes the good work being done by the Punjaub Medical Mission at Srinagar. The poor-house, as it is called, organised and kept up by the energy of Dr. Downes, had rescued from death by starvation three hundred children. There would be three thousand if funds admitted of the extension of the boon to many of the perishing children, who, according to all accounts, have only death by starvation before them.

MULTIPLE BIRTH.

A WOMAN, the wife of a labourer at Kettwig in Germany, was delivered of five children—four boys and a girl—at one birth on August 12th. They lived only a few hours; although very small, they were well-formed. The mother made a good recovery.

POISONING BY CARBOLIC ACID.

DR. KOTTMEIER of Bremen reports, in the *Berliner Klinische Wochenschrift* of August 18th, a case of poisoning by carbolic acid, very similar to that described at page 743 of the last volume of this JOURNAL (May 17). The subject was a child aged 3, to whom enemata had for some time been administered, without success, for the removal of ascarides. Dr. Kottmeier ordered an injection of a 0.5 per cent. solution of carbolic acid. The administration of it was entrusted to the mother; and there was believed to be little danger of toxic effects, as the child had usually expelled the enemata very soon. When about half the contents of a moderate-sized elastic bag had been injected, the child suddenly became pale and unconscious. The mother immediately injected warm water in abundance, which partly again escaped, without the child being able to expel it. When Dr. Kottmeier saw the child about half an hour later, it was still quite collapsed, cold, with thready pulse, and only slight indications of returning consciousness. While he was having some ether brought from the nearest druggist for the purpose of subcutaneous injection, the child's condition improved so far that he was able to administer a quantity of sherry. He then washed out the rectum with lukewarm water, adopted means for artificially warming the body, and gave wine and hot tea in moderate quantities, until, at the end of about twenty minutes, the pulse regained its strength and consciousness was completely restored. Recovery then took place without interruption. The urine, passed spontaneously two hours after the toxic symptoms appeared, showed the dark colour usual in carbolic acid poisoning.

DEATHS FROM DIARRHŒA.

THE deaths referred to diarrhœa in the twenty largest English towns rose to 258 last week; but, in the corresponding weeks of the three years 1876-7-8, the fatal cases were 756, 452, and 709 respectively. Diarrhœa was proportionally most fatal last week in Leeds, London, and Leicester. In London, the deaths from diarrhœa, which had risen from 25 to 127 in the four preceding weeks, further rose to 174 last week, but were 73 below the average; in the corresponding week of the last three years, the recorded fatal cases of diarrhœa were 198, 158, and 195 respectively. The 174 deaths last week, of which 128 were of infants under one year of age, and 34 of children aged between one and five years, were equal to an annual rate of 2.5 per 1,000; the death-rate from diarrhœa ranged from 1.8 in the south to 3.6 in the east groups of districts. Thus, diarrhœa was proportionally just twice as fatal in East as it was in South London.

THE LONDON WATER-SUPPLY.

DR. FARR and Mr. EDWIN CHADWICK, having fully investigated the metropolitan water-supply, and the terms for the public purchase of the undertakings of the trading companies now supplying the metropolis with water, have embodied their suggestions in a report recently presented to the Council of the National Association for the Promotion of Social Science. The report states that, by the evidence of competent witnesses, the greater part of the present companies supply water of inferior quality. London (inner circle), according to Dr. Frankland's testimony, was supplied during the past year by eight companies with a daily average of 129,657,848 gallons of water. Of these 65,063,839 gallons were often much polluted with organic matters of animal origin; 56,501,022 were occasionally so polluted; while only 8,092,987 gallons were uniformly in a pure and wholesome condition. Parliament has given the water companies a monopoly under which they have the power to supply the metropolis with bad water, and to levy rates in the metropolis, which would return 10 per cent. on their share capital. The terms of purchase already settled by Parliament in the case of provincial water companies are twenty-five years' purchase on the highest net dividends earned, with an allowance for compulsory purchase, and also, on arbitration, an allowance for prospective advantages. The defects of the present system are briefly summarised :—First, in the defective conditions of intermittent supply and delivery by stagnant detentions in cisterns and butts in close places, where the water is de-aërated of the air at the source, and absorbs the gases of putrefaction of cesspools, bad drains, sewers of deposit, and of middensteads, and is, besides, elevated in temperature. This renders the water repulsive and unpotable, and, as a general fact, water so delivered is not habitually drank as it might be by the wage classes of the community. The inference to be drawn from this is that they drink beer, and thus the bad water supply and storage becomes a direct incentive to drunkenness. Secondly, in the present condition of delivery there is a waste of upwards of three-fifths of all the water pumped into the metropolis; and, lastly, the conditions of the distribution on the intermittent system for a trading profit, and not as a public service, obstruct the due provision by means of hydrants, under the charge of the police, for the prompt extinction of fires, occasioning nearly threefold greater losses of life and property in the metropolis than in such large provincial cities as Manchester, Liverpool, and Glasgow, where improved systems on a public footing have long obtained. By the purchase of the companies, an economy of upwards of £100,000 per annum in the expenses of administration, derivable from consolidated management on a public footing, would be effected; and from this it is estimated the requisite house services might be altered to receive the constant supply, and the streets hydranted completely for protection against fire and cleansing the streets, without any additional charge to the ratepayers. The report concludes by urging the purchase without further delay. In 1850, the works might have been purchased for £6,000,000. An improved system of extended distributory apparatus for the whole of the metropolis in its present magnitude is estimated at £8,000,000; but the present cost of the undertaking is estimated at £26,000,000; and at the same rate of progress, it will, in another decade, amount to £37,000,000.

THE RECOIL THEORY OF THE HEART'S IMPULSE.

DR. GUTTMANN of Berlin, in Virchow's *Archiv*, vol. 76, 1879, rectifies a literary injustice done by Skoda to our countryman, Sir James Alderson. Skoda, in his work on *Auscultation and Percussion*, adopts, as explanation of the cause of the heart's impulse, what he calls the theory of Dr. Gutbrod—a theory founded on the back-movement, as exhibited in "Barker's Mill". Dr. Guttmann, referring to published documents, shows that this theory of the impulse of the heart was first proposed by Dr. Alderson in 1825, in the *Quarterly Journal of Science*, etc., vol. 18, p. 223; and that it was adopted by Skoda as "Gutbrod's theory" in 1837 (*Medic. Jahrbuch. des Oesterreich.*, vol. 13, p. 234). Dr. Gutbrod, it appears, never published anything on the subject. Dr. Guttmann complains that the Viennese Professor continued in the later editions of his work to publish the theory as Gutbrod's long after the prior claim of Dr. Alderson had been publicly proved. He considers it, he says, "a scientific duty to rescue from oblivion the almost unknown work of Dr. Alderson. This theory," he adds, "ought in future, if an author's name be attached to it, to be called 'Alderson's Recoil or Back-stroke Theory'."

THE CASE OF MR. JAMES PATRICK MURRAY.

MR. JUSTICE STEPHEN sat as the vacation judge in Lincoln's Inn on Wednesday, when a motion was made *ex parte* on behalf of Mr. James Patrick Murray of Manchester, for a rule *nisi* calling on the Council of the King and Queen's College of Physicians and the Royal College of Surgeons of Ireland to show cause why a *mandamus* should not be issued against them calling on them to restore his name to the *Medical Register*. Mr. Glenn, in making the motion, submitted that the Medical Council had no power under their Acts to remove Mr. Murray's name without removing his qualification. If the name remained on the *Register* without the qualification, Mr. Murray could not be prosecuted if he practised. At present, he could be. Under the twenty-ninth section of the Medical Act, the Council had power to hold an investigation before they struck a name off. In the present instance, no investigation had been held. The Council had no power to strike Mr. Murray's name off the *Register* without hearing him in self-defence. The affidavit which Mr. Murray had filed first of all set out his professional titles and qualifications. The next paragraph set out that he

was eminently qualified to practise. Then came the circumstances under which his name had been struck off the registers of the Colleges. He had been in Victoria, and, after leaving there in 1871, he proceeded to Fiji, intending to engage in cotton-planting. He opened negociations for the obtaining of land in the New Hebrides, and proceeded to Api to get labour. When there, an unprovoked attack was made on the ship, and he was wounded by a poisoned arrow. As a reprisal, the party with him seized some of the natives and carried them away. Mr. Justice Stephen: I think that a gentleman who had engaged in such an expedition was properly struck off the *Register*. Such a person could hardly be fit to be entrusted with the interests of families. Mr. Glenn: Mr. Murray is still on the *Register* as a surgeon-dentist. Mr. Justice Stephen: This is a matter of great public importance, and there is no necessity for hurry. This application for a *mandamus* must stand over until after the vacation. Mr. Glenn: If the application stand over, Mr. Murray may be ruined in his practice. Mr. Justice Stephen: Do you think the publicity given by this motion will help his prospects in practice? If I granted a rule *nisi*, I should not make it returnable in the vacation. Mr. Glenn: But you will let him be registered in the meantime. Mr. Justice Stephen: No, I should not.—The application was then ordered to stand over until the sittings in November.

ACCIDENTS FROM PARTAKING OF THE FLESH OF DISEASED ANIMALS.

THE *Revue des Sciences Médicales* for July 15th, 1879, publishes an account of a series of accidents, caused by eating some ox-beef from an animal which had been ill with malignant pustule. Two hundred and thirty-three individuals were taken ill with violent headache, vomiting, diarrhœa, colic, and syncope. Eight of the patients have since died. Ninety-four persons partook of raw meat; of these, thirty-eight became seriously ill; twenty-nine presented milder dangerous symptoms; and four died. Of fifty individuals who ate the meat stewed, one was dangerously ill, four were less seriously so, and forty-five presented only slight symptoms of poisoning. Thirty persons were taken ill after eating sausages which had been prepared with the blood and liver of the diseased animal; four of these were very seriously ill, three seriously, and twenty-three only slightly indisposed; two died. Twenty-seven individuals ate the meat roasted; eight of these were very ill, and nineteen only indisposed. Three persons were poisoned by partaking of smoked sausage; two of these were dangerously ill. The same meat, salted and then boiled, only produced slight symptoms of indisposition in two individuals.

TELEPHONES IN HOSPITALS.

THE Children's Hospital at Pendlebury, near Manchester, has recently been fitted with a system of telephones. By this means, the lady-superintendent's room is connected with each of the six wards, the kitchen, and the pantry. As the hospital consists of six pavilions opening into a long corridor, the most distant pavilion being about one hundred and twenty yards from the administrative block, it is obvious that much time and labour in running to and fro is saved by this convenient method of communication. It is especially convenient in communicating with the fever-ward, thus avoiding the risk of conveying infection to other parts of the hospital. The instruments were the gift of W. P. Henderson, jun., and G. B. Dewhurst, Esqrs., of Manchester. They are in constant use, and give great satisfaction.

FLOGGING IN THE HONGKONG GAOL.

WE have before us some rather remarkable official reports on this subject. The Governor of Hongkong recently appointed a Medical Committee to inquire into the effects of flogging the Chinese on the back in the Hongkong Gaol. This investigation was rendered desirable by the fact that one or two prisoners who had been flogged on the back with the "regulation cat" had afterwards become phthisical. It appears from the evidence taken by the Committee, that the criminal class of Chinamen are not so strong or so muscular as the same class in European countries, that their wounds take a long time to heal, and that they frequently suffer from congestion of the lungs after they have received a flogging on the back. There was, therefore, good reason to inquire into the subject; and, when the inquiry was once set on foot, it included in its range various collateral matters. Thus, it was found that the floggings which had been attended by such serious consequences had been illegally inflicted, and that the total number of floggings was out of all proportion to the number of criminals. The prison discipline was, in fact, very defective, and the lash was resorted to on slight occasions. The serious illness of one or two prisoners has, therefore, led to a review of the whole system. The head turnkeys are in future to be experienced Englishmen, the prison dietary is to be improved, and flogging on the back is to be abolished altogether; the only flogging which will hereafter be employed will be with a rattan on the breech, and even this will be reserved for cases of crime which, by their violence or atrocity, disclose a brutal or intractable nature.

MORTALITY AMONG MEDICAL OFFICERS IN INDIA.

DURING the past three months, the hand of death has dealt heavily with medical officers of the British and Indian Service, no fewer than nine having succumbed to the effects of cholera, dysentery, or fever, principally the result of overwork and fatigue during the Afghan campaign. In the orders by Colonel Frazer, commanding the Khyber brigade, dated Lundi Kotul, July 17th, 1879, appears the following testimony to the worth of a British medical officer: "Surgeon-Major John Wallace, M.D., 12th Foot, died last evening of cholera. In charge of the field hospital, Lundi Kotul, during a most trying and arduous time, he devoted himself to his duties with an energy which was ceaseless and untiring, and with a skill and kindness which will be remembered with gratitude by many a British soldier in this garrison. Thinking always of others, he took no heed of himself; but working on in sickness as he had done in health, he laid himself open to the attacks of the disease which has stricken him down, and has robbed his profession and his regiment of an honour to both." Dr. Wallace passed the greater part of his service in the 12th regiment, by whose officers and men he was much loved. Among the medical officers invalided to the Hills are Surgeons-Major N. Yollett and McNulty. Surgeon Ward, of the Indian Medical Department, died of cholera at Kandahar, and the Surgeon-Major of the 25th Native Cavalry, of dysentery, at Rawul Pindi.

A NEEDLE IN THE HEART.

AT a *post mortem* examination in a lunatic asylum in Saxony, a needle was found sticking in the heart. It had passed through the posterior wall of the left ventricle. The patient, a man aged 25, had died of peritonitis; he had always felt well previous to his last illness, and never complained of any cardiac troubles. In what way the needle entered his heart remains unknown.

BABY-FARMING.

THERE is frequent reason to deplore that the House of Commons persisted, notwithstanding the earnest remonstrances of Mr. Ernest Hart before the Select Committee, and at a later stage, in maiming the Infant Life Protection Bill, by depriving children farmed out to baby-farmers of the protection afforded by registration and inspection, except where *more than two* are taken at once. As was then pointed out, this exception offered facilities for the ill-management of children "in single file"; but yet in constant succession, from time to time, inquests occur which remind us of this evil state of things. One is reported again this week. Mr. Biggs, one of the coroners for Somerset, on Saturday, held an inquest on the body of an infant, aged three months, the child of a domestic servant named Dorcas Walters, which had died at the house of Mrs. Dyer of Totterdown, Bristol, who had received a large number of children to nurse; an inquest on two of whom was held last week by the Bristol coroner. At the commencement of the proceedings, it was stated that Mrs. Dyer had attempted to commit suicide by taking two doses of laudanum, upon which charge she had been arrested by Superintendent Drewett. She was too unwell in consequence to be able to be in attendance. A daughter of Mrs. Dyer, aged sixteen, stated that her

mother was in the habit of advertising in local and other papers for children to nurse, and had received infants for the past two years, seven of whom had died during the past eighteen months, independently of two of her own. The other evidence was similar to that given last week before the Bristol coroner; and the jury returned a verdict of "Death from natural causes", adding that they considered Mrs. Dyer deserving of severe censure for the manner in which children in her care had been treated.

BALDNESS FROM FRIGHT.

A CURIOUS case of complete alopecia is reported in the *Gazette des Hôpitaux*, No. 83, 1879. A girl, aged 17, who had always enjoyed good health, had one day a narrow escape from being crushed by a floor giving way beneath her. She was very much frightened; and the same night began to complain of headache and chills. The next morning she felt restless, and had itching of the scalp. During the following days, she steadily improved, with the exception of the itching. One day, in combing her hair, she noticed that it came out in great quantities. Three days later, she was perfectly bald; and in two more days she had lost every hair on her body. Her general health was good. The patient remained bald, and was still so when seen two years later by the reporter.

RETROGRESSION AND HYPNOTISM.

WHEN cold is applied to the skin of the back of the neck in cats and rabbits, they run forward and leap up in the air; when to the same spot in pigeons, they exhibit retrograde movements, alternating with fits of stupor. How to explain these phenomena, is the subject of a short paper by Dr. Isaac Ott, analysed in the *Philadelphia Medical Reporter*. His suggestion is as follows. "The sensory fibres do not decussate in pigeons; and if an irritation be made on one side of the median line, the impression ascends on the same side, and calls the retrogressive ganglia of that only into activity, which activity is expressed on the opposite side of the body, due to the motor decussation. Now, the retrogressive ganglia are in power over one side of the brain, while the other side of the brain, under the influence of the cerebrum, is disposed to move the opposite side of the body forward; hence the bird cannot go directly forward, but deviates to the side where the retrogressive ganglia have shown their activity—the bird moves in a circle. The action might be compared to that of driving a horse forward and at the same time strongly pulling one of the reins, the checking rein corresponding to the side of the brain under the influence of the retrogressive ganglia. If, now, the skin on both sides of the median line be irritated, then the retrogressive ganglia on both sides of the median line are dominant, and the bird moves backward, notwithstanding all efforts to prevent it. It might be compared to a horse pulled on his haunches by two strong check-reins." The hypnotic state can be explained by sensory irritation, produced by the bisulphide of carbon, calling ganglia at the base of the brain into activity, which ganglia have an inhibitory power.

DISPENSARIES IN CENTRAL PROVINCES OF INDIA.

DURING the year 1878, there was an increase of one in the number of the Government charitable dispensaries in the Central Provinces: from seventy-seven the number rose to seventy-eight; and in the same way the number of inmates in these institutions multiplied from 8,601 in-door patients and 401,309 out-door patients in 1877 to 10,440 in-door patients and 426,990 out-door patients in 1878. The great increase in the number of in-door patients is said to have been largely due to the fact that starving persons were indiscriminately admitted into many of the dispensaries; yet the presence of a certain abnormal amount of disease in the provinces, caused from starvation, must be taken to account for the large increase also observable in the number of out-door patients, who received nothing from the dispensaries but medicines. The attendance of women at the dispensaries seemed to be keeping pace with the general increase in numbers; and a class for the instruction of women in midwifery, which has been recently organised, will probably tend to increase the confidence of the sex still further in European doctors and the European methods of cure. One noticeable circumstance in connection with the attendance at the dispensaries is that, as compared with Hindoos, Mahomedans manifest a marked preference for these institutions. The census returns of the provinces show the Mahomedans to stand in the relation of 3.7 per cent. only of the Hindoos. In the dispensaries their numbers were 39.6 per cent. of the Hindoos. The cost of maintaining the dispensaries was Rs.179,479, while the income was Rs.179,528, of which sum the Government contributed 58.54 per cent. A large portion of the balance of income, that is, over Rs.20,000 was subscribed by natives, and it is a cause of regret to the Chief Commissioner that no more than Rs.4,187 was obtained from Europeans.

SUDDEN DEATH DURING THE EXTRACTION OF A TOOTH.

DR. A. POULET, in his treatise on *Foreign Bodies in Surgery*, mentions several cases where a tooth slipped into the larynx while it was being extracted, and gave rise to very dangerous symptoms. Two of these cases proved fatal. It is noteworthy that in these latter cases the patients had been rendered insensible by nitrous oxide. A few weeks ago, a similar deplorable accident took place at a dentist's in Paris. The patient was a child, aged 7, who was having a molar tooth extracted. The child struggled violently, and the tooth slipped from the forceps into the larynx. The patient died on the spot, of suffocation. This case is not unlike one described by M. Rigaud, who saw a child upon whom he was operating for hare-lip die under his hands. The necropsy revealed a milktooth sticking in the rima glottidis, and completely obstructing the opening.

THE LEPER ASYLUM AT DEHRA.

THE Leper Asylum has been declared open, and it has already eighty inmates. By dint of unwearied exertions, extending over four or five years, the civil surgeon of Dehra has succeeded in collecting a sum of nearly Rs.12,000. A fine range of buildings has been erected on an airy, open, healthy spot near the racecourse; the land being given for the purpose by the Mahant of Dehra. A large portion of the funds subscribed has been absorbed by the building; and, as Government has declined to give any assistance whatever to the institution, it will have to be supported by voluntary contributions. The Dehra and Mussoorie municipalities give an annual grant to the asylum, and a sum amounting to several thousands of rupees has been invested, which secures an income of Rs.650. The present available income of the asylum is altogether Rs.1,250, and it will require another Rs.1,250 to keep it up. It will not be out of place to mention that, but for the liberality of Mr. F. Wilson, the whole project would have fallen through. He has given a donation of Rs.2,600, and a monthly subscription of Rs.30; and in addition to this, he is in November going to give a sum which will, when invested, secure this Rs.30 in perpetuity. We hear that, although Government has, in view of the present necessity for retrenchment, been unable to support the institution, yet his Honour the Lieutenant-Governor of the North-Western Provinces, highly approves of the project and of the liberality displayed by Mr. Wilson towards the afflicted of the people amongst whom he has made his fortune.

PAYMENT AT HOSPITALS.

THE *Charity Organisation Reporter* publishes the following letter, relating to the Toronto General Hospital, and written by one of the Board of Management of the Hospital.

"Toronto, July 4th, 1879. As our Hospital has only a limited Endowment Fund, we are obliged to make as many patients *pay* as possible when first admitted. Should a patient belong to Toronto, he must obtain an order from the Mayor at rate of 40 cents a day, so that the city pays for him if he be unable to pay for himself. Should the patient come from the country, the same rule is applied, viz., he must get an order from the *Reeve* of his township or pay for himself. A large number of patients are able to pay a few dollars on admission, but not able to keep paid up, so in cases of this kind we place them on the free list, which is generally kept full by patients in arrears. Free and paying patients all occupy the same wards, at rate of 40 cents a

day. For 5 dollars a week a patient can have a small ward to himself, and for 8 dollars a large well-furnished ward. Patients who have money would rather pay for hospital themselves than obtain certificates required by the mayor before granting a city order. When it is well known as to payment of hospital fees, but little trouble will be found, as patients will either pay for themselves (if they have the money) or obtain the necessary guarantee before presenting their application at the hospital. A very large revenue can be insured by making the rule very strict (except, of course, in cases of emergency). In Hamilton, I held the position of house-surgeon for nearly nine years, and we did not enforce the paying system; the result was that we got very little money from patients because they knew they could be *admitted*, just as well as '*paupers*'. I think the English poor are so well looked after, that you will have very hard work to educate them to take care of themselves. When they come to hospital here, we find them very independent, and almost insolent at the idea of paying for hospital treatment, which they say is almost showered on them in England. Lying-in cases, and eye and ear cases, are all treated in the same way as regards admission. We have 320 beds, and about 250 medical students. The hospital block contains seven acres of land."

A similar rule prevails, we are informed, in the hospitals of Vienna.

YELLOW FEVER IN AMERICA.

FROM August 6th to August 12th, inclusive, the number of new cases of yellow fever in the city of Memphis was 161, and the number of deaths 32. The whole number of cases for this year to August 13th was 422, and the whole number of deaths 106. By order of the Secretary of War, 500 army tents have been forwarded for the use of fever refugees in camp. The Howard Association have had six physicians on duty, and have furnished nurses, medicines, stimulants, and food. The disease has extended beyond the immediate neighbourhood where the first cases developed in July, and cases have been reported and deaths have occurred in so many different localities in the city, that the Board of Health, on August 9th, made a formal declaration of a general epidemic. In New York, a few new cases have been received at the hospital on Dix' Island. All the patients have been discharged. One fatal case has occurred in Brooklyn. A very severe epidemic is reported from Tampico, Mexico. An order which assigned two medical men to duty as volunteer surgeons for yellow fever service, under the direction of the National Board of Health, has been revoked, neither having had the fever. Medical-Inspector Somerset Robinson, of the Navy, and Dr. Daniel M. Burgess, a resident of Havana, have been assigned to duty at Matanzas and Havana respectively, to perform the duties of inspectors.

BURMESE YOUTHS IN INDIAN MEDICAL COLLEGES.

MUCH difficulty having been experienced during the last ten years in procuring medical subordinates for service in British Burmah, and this difficulty having, to a certain extent, been aggravated by the formation of a distinct class of civil hospital assistants for each province, the Chief Commissioner of British Burmah applied to the governments of Bengal and Madras to ascertain whether these governments would undertake the training of Burmese youths for service in Burmah. In reply, both the governments of Bengal and Madras expressed their readiness to assist in the matter. The Bengal Government stated that it would receive as many Burmese students as are fit to benefit by the instruction so long as no extra expense is entailed on the government, and stipulated that the students should be fairly advanced in English. The Madras Government stated that it was in a position to receive annually five Burmese students if they join at the opening of the session of the Medical College in October of each year, and that each student should pay annually a fee of fifteen rupees for attendance at lectures in college, and ten rupees *per annum* for practising in the General Hospital. The Local Government has requested the Chief Commissioner that, besides satisfying himself as to the character and physical fitness of the young men, the education of students be of a certain standard. The Chief Commissioner thanked the Governments of Bengal and Madras for their readiness in being willing to undertake the medical education of Burmese youths, and he is now making arrangements for sending out Burmese students to Calcutta and Madras on the conditions specified in the correspondence. In his last administration report, from which we glean many of the facts alluded to above, Mr. Aitchison makes frequent reference to the want which, it is hoped, will now be supplied.

POSTURE AND TEMPERATURE.

IT has long been known that the different positions of the body have a great influence on the distribution of the blood, and consequently on nutrition and the production of heat, etc. On this knowledge are founded the American method of treating dysentery by raising the pelvis by a pillow under the sacral region; Nélaton's method of restoring patients that are in danger of being asphyxiated through chloroform by lowering the head, etc. Perhaps the fact that the right leg is generally more developed than the left may be explained in the same way; the majority of people sleep on their right side, therefore the flow of blood must be more considerable to the right leg than to the left. In 1854, Brown-Séquard observed that animals that had been suspended with their head downwards showed a considerable increase of sensibility. Later on, Regnard proved by experiments on rabbits, and Salathé by experiments on dogs and rabbits, that, when the head is held perpendicularly upright, the sensibility of the animals decreases considerably, the respiration and cardiac action become weaker, and death ensues. More recently, the experiments of Tarchanoff have shown how great an influence a temporary change in the circulation in the brain has on the irritability of the psychomotor centres; an increased flow of blood heightens the irritability, anæmia lowers it. A physician in St. Petersburg, Dr. W. Kernig, showed that a changing from the recumbent to the sitting position produced a difference of a few decimals in the temperature. In 1878, Dr. Wolff found that by raising the arm and letting it fall again, a difference of 41° to 54° Cent. arose in the temperature. Dr. Jassezky (*St. Petersburg. Medicin. Wochenschrift*, No. 20, 1879) has recently endeavoured to elucidate the following points. 1. What influence have the different positions of the body on the temperature of its various parts? 2. What changes are wrought in this influence either by fatty degeneration of the heart or by other affections of the heart, the lungs, and the blood-vessels? The experiments were conducted in the following way. The patient was lying on his bed in a horizontal position, with his arms and legs stretched out straight, and dressed in his underclothing. His temperature was then taken simultaneously in the rectum, the axilla, the mouth, both clenched fists, between the first and second toes on both feet, and in the ear; for the two latter purposes, the thermometer was wrapped up in cotton-wool. After twenty minutes, the thermometers were taken out, and the patient, still lying on his back, lifted up both arms; the thermometers were then again introduced, and allowed to remain twenty minutes as before. The frequency of the pulse and the respiration were also counted twice in both positions. The experiment was repeated two hours later. The individuals on whom the experiments were made were either healthy or suffering from recurrent fever, cardiac affections, catarrhal pneumonia, arterial sclerosis, chronic gastritis, and follicular enteritis. The total number of the experiments was one hundred and two. The results which were obtained may be summed up as follows. Raising of the arms or legs produces an acceleration of the pulse and the respiration, while the temperature falls in the raised parts. The changes in the temperature, pulse, and respiration were more striking in all cases where the circulation had greater obstacles to overcome. Thus, *e.g.*, raising the legs produces a much greater difference in the temperature, etc., than raising the arms, probably because the legs being larger than the arms a greater quantity of blood is thrown back upon the body. In comparing the results obtained on patients and on healthy individuals, it was found that in the latter the differences of temperature were much less striking than in the former. Typhoid fever patients offered the most pregnant differences of temperature, pulse, and respiration, which increased as long as the febrile process rose, and decreased as soon as apyrexia set in. Next to typhoid fever patients, come patients suffering from cardiac affections; then phthisical patients. Patients suffering from gastric affections present the slightest differences.

SCOTLAND.

PUERPERAL FEVER IN THE GLASGOW LYING-IN HOSPITAL.

ANOTHER outbreak of puerperal fever has occurred in the Glasgow Lying-in Hospital; and, in the circumstances, the directors have resolved to close the hospital for some time, in order that infection may be avoided.

DIPHTHERIA AT BARRHEAD.

SEVERAL cases of diphtheria have occurred in the east end of Barrhead lately; most of them have done well, but at least one terminated fatally.

ROYAL INFIRMARY, EDINBURGH.

THE scheme for furnishing the wards of the new Infirmary is making steady progress in various directions. Among the most notable of the late subscriptions is one of £22 10s. from the Police force of the city, to which all the men contributed.

HEALTH OF EDINBURGH, GLASGOW, AND LEITH.

THE mortality in Edinburgh last week was as low as 15 per 1,000. There were eight deaths from zymotic diseases, of which six were due to whooping-cough; all of them occurred in the Old Town. In Glasgow, the mortality was at the rate of 17 per 1,000, an increase of two on the preceding week. In Leith, the mortality was 24 per 1,000.

LECTURESHIP ON NATURAL SCIENCE, ABERDEEN.

PROFESSOR MCKENDRICK of Glasgow University has been appointed Lecturer in Natural Science and Theology for the session 1879-80, in the Free Church College, Aberdeen, under the Banchory bequest. He succeeds Dr. Lauder Brunton, who has held the lectureship during the session 1878-79.

WATER-SUPPLY.

THE monthly report on Loch Katrine water, as supplied to Glasgow, has been issued by Professor Mills. The results obtained, from the analysis of 100,000 parts, show that total solid impurity amounted to 3.04; organic carbon, 0.139; organic nitrogen, 0.017; ammonia, 0.000; nitric nitrogen, 0.008; total combined nitrogen, 0.025; chlorine, 0.65; hardness, 1.10.—The Burntisland Corporation have now completed the necessary waterworks, and the town is now abundantly supplied with good water. The gathering ground extends over 1,200 acres; the main reservoir covers 43 acres; and the distributing reservoir can contain 1½ days' supply. The supply is equal to 70 gallons per head (per day) of the population; this compares favourably with the previous limited supply, which, at its best, was only 16 gallons per head. The total cost of the Dour scheme has been £25,000.

IRELAND.

DR. CHRISTAL has resigned the appointment of medical officer of Callow Dispensary District, owing to the insufficient salary attached to the post.

DURING the year ending September 29th, 1878, thirteen medical officers received superannuation, of whom ten were attached to dispensaries; the total sums granted amounting to £1,225 11s. 11d.

THE recent amendment of the Public Health (Ireland) Act (1878) having placed Dublin in a position similar to that of English towns as regards loans for sanitary purposes, the Public Health Committee of the Corporation, the local sanitary authority, has resolved to apply to the Local Government Board for the sum of £100,000 for the purpose of completing the paving of the city.

ASIATIC CHOLERA: ITS PREVENTION AND TREATMENT.

THE occurrence of Asiatic cholera among our soldiers in certain parts of India has directed attention to this disease, and recently Dr. Henry Mac Cormac, Consulting Physician to the Belfast Royal Hospital, has publicly advocated the administration of diluted sulphuric acid as a prophylactic. He states, as an example of its efficacy, that in 1854 cholera broke out in an institution to which he was attached, and that fifty cases occurred almost simultaneously, of which seventeen presently died. At once, he placed the entire establishment, consisting of three hundred or four hundred persons, under the daily use of the acid, and no other case of the disease took place.

BELFAST WORKHOUSE INFIRMARY.

IN consequence of overcrowding, the guardians have proposed to make an addition to the workhouse infirmary. Plans are being prepared for erecting a building to accommodate one hundred and fifty persons, and which will involve a cost of about £1,000.

MEDICAL OFFICERS OF HEALTH.

AT a recent meeting of the Belfast Board of Guardians, a circular was received from the Local Government Board, accompanied with copies of a sanitary order which they had issued under the Public Health (Ireland) Act, 1878. The circular stated that, under the eleventh section of the Act, every medical officer of a dispensary was now a medical officer of health, and was entitled to receive such additional salary as the sanitary authority might determine with the approval of the Board and the Commissioners of Her Majesty's Treasury. The Local Government Board are advised that medical officers of health were not included among the officers of sanitary authorities appointed under the Public Health Act, 1874, and who were referred to in the two hundred and eightieth section of the Public Health Act, 1878, as entitled to continue to hold their several offices and employments on the same terms, and subject to the same conditions as they would have held them if the Act of 1878 had not been passed. It will, therefore, be necessary for the sanitary authority to take the subject of the salaries of the medical officers of health into consideration, and to state the amount of additional salary which they think should be paid to each dispensary medical officer within the sanitary district for the duties imposed on him as medical officer of health by the Public Health Act, 1878.

INFANT MORTALITY IN DUBLIN WORKHOUSES.

IN both the North and South Dublin Union Workhouses, the custom prevails of placing the deserted infants and orphans in the charge of women living in the country, by whom they are nursed. Considerable difference of opinion naturally exists as to the wisdom of this course; and the subject has lately been again brought prominently under notice by a report of Dr. M'Cabe, the Local Government Board Inspector, to the Guardians of the North Union. In this report, the Inspector calls attention to the exceedingly high rate of mortality for some time past amongst the orphan and deserted children sent out to nurse. His investigation into the subject was attracted by the fact that during the preceding six months six infants of the class referred to were sent out to nurse; and of these three died. From a return of the number of children under twelve months old sent out from the workhouse during the past five years ending June 30th, 1879, it appears that 79 went out during that period, and 31 of them died; the rate of mortality being thus 39.24 per cent. Amongst the causes which probably lead to this excessive death-rate, Dr. M'Cabe thinks must be included the practice of confiding these children to wet-nurses. The guardians, evidently prompted by motives of humanity, have naturally thought that, in sending out these deserted infants to country air and to be wet-nursed, they were placing them in the most favourable condition for preserving their lives. But as they are placed in charge of mothers having children of their own to suckle, Dr. M'Cabe points out that very few women indeed can wet-nurse two infants; and hence the foster-child suffers. Dr. M'Cabe states very forcibly his opinion that these children are starved. It will be found, he believes, that the greater part of the deaths recorded are attributed to atrophy and convulsions. Now, atrophy or wasting under such circumstances means, in plain English,

insufficient nourishment; and infantile convulsions very often arise from improper feeding. Of twenty-five children over twelve months of age placed out to nurse during the first six months of the year, there have been no deaths. Pending the receipt of a report from the medical officers of the North Dublin Union, or the desirability of bringing up children on bottle-feeding in the house and elsewhere instead of sending them out to wet-nurse, the further consideration of Dr. M'Cabe's timely report was deferred. A return showing the number of infants under twelve months chargeable to the South Dublin Union, and the mortality among them for the past five years, has been called for by the governors of that institution.

BRITISH ASSOCIATION.

DR. PYE-SMITH ON VIVISECTION.

IN the Department of Anatomy and Physiology, the opening address was delivered by the President, Dr. PYE-SMITH.

He said, with regard to the endowment of research in biology, he must confess that he should be sorry to see it undertaken by Government funds. That such investigations were of public interest; that they were difficult and expensive; and that at present they languished for want of public support, was all true. But this country was not so poor, nor our countrymen so wanting in public spirit, that they need appeal to the national purse to supply every ascertained want. Great as was the national importance of science, the nation was more important still; and even if that were the alternative, he would rather that we should indefinitely be dependent on Germany for our knowledge than give up the local energy, the unofficial zeal, which had made England what she is. Far better for the strength and the civilisation of the nation that a thousand pounds were raised every year for the endowment of unremunerative researches in that wealthy town of Sheffield, than that ten thousand were paid them by a paternal monarch or an enlightened department. Whatever might be thought of the duty of the State directly to encourage the pursuit of animal and vegetable physiology, one would have supposed that at least what diplomatists call a benevolent neutrality would be shown to a pursuit so laborious and costly, which demands trained workmen and the devotion of a lifetime, which is so important for the national health and wealth, and which, by reason, by experience, and by testimony, they knew to be the only guarantee for advance in the various branches of the healing art. Why was it, then, that institutions which owed nothing to Government assistance, and men who spent their time and talents in self-denying and unremunerative service for the public good, were not suffered to pursue their beneficent work in peace? They knew that certain persons who professed to be shocked by the methods of physiological research had succeeded in placing this branch of science under as great disabilities as that sense of humour would allow which so often redeemed British ignorance from its most mischievous results. The method that had given rise to so much excitement was the performance of experiments upon living animals. Now, if this were injurious to the greatest good of the greatest number of the community; or if freedom to perform these experiments interfered with the freedom of other persons to abstain from them; or if such experiments were forbidden by any religious or moral authority—by the Ten Commandments, or by Mr. Matthew Arnold—of course they must be given up; but equally, of course, the science of physiology must also come to a stop; and the farmer, the cattle-breeder, and the physician must be content with such knowledge or such ignorance as he at present possesses. What was asserted was that, within restrictions which all humane persons impose upon themselves, it is lawful to inflict pain or death upon animals for profit or for sport, for money or for pastime; that property and sport are in England sacred things; but that the practices which they justify are unjustifiable when pursued with the object of increasing human knowledge or of relieving human suffering. He then proceeded:

Of those persons who answer that they consider vivisection for the sake of sport to be almost as detestable as vivisection for the sake of duty, I would only ask, first, that they should deal impartially with both offences; and, secondly, that since in the one case their opinions are opposed to the practice of genteel society, and in the other to the convictions of all who are qualified to judge, they should at least contemplate the possibility of being mistaken. Putting the question of field sports altogether aside, you know perfectly well that in every village in England an extremely painful mutilation is constantly performed upon domestic animals in no registered laboratory, under no anæsthetics, and with no object but the convenience and profit of the owner. You remember how, when an epidemic threatened the destruction of valuable property, every booby peer now eager to stop, so far as in him lay, the advance of knowledge, was no less eager to have carried out at the public expense any slaughter and any experiments, painful or otherwise, which would save his pocket. But you will say, All this seems reasonable enough"; but if so, how do you account for the prejudice against you; what has induced so many amiable and otherwise sane persons to join in the outcry against physiology? First, I answer, it is due to the most frequent cause of folly—ignorance. Many persons supposed to be educated are so destitute of the most ordinary conceptions of natural science that they do not understand the necessity for experiments. So little do they appreciate the difference between formal knowledge and real knowledge, that a distinguished statesman once assured me that he would as soon have his leg set by a man who had gained what he called his knowledge from books as by one who had "walked the hospitals". Next, there is the vulgar dislike of whatever is not obviously and immediately useful. When knowledge for its own sake is in question, those of the baser sort are always ready to cry, with equal ignorance of literature and of science, "*Cui bono?*" In another class of persons, less ignorant and less stupid than these two, opposition to physiological experiments appears to spring from what may fairly be stigmatised as sentiment—that is to say, excitable, rather than deep feeling, uncontrolled by reason. This sentiment is, I admit, the degradation of just feeling. To many unaffectedly compassionate hearts there is a peculiar pang in thinking of suffering which is deliberately inflicted, with only the justification of duty, instead of the excuse of ignorance or passion. They see in the helplessness of the dumb animals an appeal for pity, almost like that of childhood, and are justly indignant with the selfish cruelty so often exercised upon them. All honour to the efforts which have banished so many cruel sports from England; all honour to the society which seeks to prevent cruelty to animals. If it can point to any additional means by which the sufferings of animals in the cause of science can be diminished, we shall be anxious to adopt them. If it can point to any abuse in one of our laboratories, we will hasten to correct it. This society has honourably declared that they knew of none. That physiologists have been heedless, or even callous, in their experiments upon animals in past times, when men were strangely insensible even to human suffering, or in countries where a healthy result of Christian civilisation had not yet been seen in habitual gentleness to animals, I need not deny. Such cases have been eagerly sought and sometimes most unfairly judged. Only lately a learned body felt itself not strong enough to retain the admittedly invaluable services of an eminent foreigner who had once admitted that, when absorbed in scientific and beneficent researches, he lost sight of any pain that might be inflicted. Is not this the very excuse which is held valid in the case of sport? Doubtless we ought to be ever mindful of every branch of duty; but such occasional forgetfulness does not show hardness of heart. It is an excusable weakness for a student of medicine to shudder or to faint at the sight of blood; but he learns that this merely physical sensibility becomes selfish and mischievous if indulged; he is taught to suppress all such exhibition of emotion, and to let it stimulate without interfering with his efforts to relieve. But no one surely would think the hysterical youth more truly humane than the surgeon whose compassion is shown in the very firmness with which he inflicts a temporary pain for an ultimate good.

I have hitherto rested the whole argument upon the lawfulness of inflicting pain and death upon the lower animals for the sake of science and humanity; but, as a matter of fact, I may again assure those who, while assenting to the justice of the plea, yet shrink from what it may involve, that the great majority of experiments upon animals are rendered painless, and that the remainder are mostly those experiments which are most immediately and directly subservient to medical art, and which, happily, are generally productive rather of discomfort than of pain. Let me give you an example of such a vivisection, far more painful than the immense majority of those of the laboratory. Suppose a country surgeon were sent for late at night to some case of urgent peril: knowing that his ride is for life or death, and unsparing of himself or his horse, he rides him to the utmost limits of endurance, and beyond. Who would not applaud the action? Those only who appear deliberately to believe that our life is worth less than that of many sparrows; those legislators only who look forward to the time when wars will cease, not because of human slaughter, of devastated homes, of all the horrors which the world has endured for centuries, but because of the cruelties to which the horses in the artillery are subjected. We, who are familiar with human suffering and sorrow, which our knowledge is all too feeble to prevent, best understand how, in testing some new remedy on a less precious fellow-creature than a man, one who is truly humane may be tempted to forget the comparatively trivial suffering of a rabbit or a frog. There is, I fear, another reason which

animates much of the opposition to physiological experiments. It is nothing else than aversion from the methods and the results of science. It may be that an excuse for this dislike has been furnished by the pretence of false science and the arrogance of much even which is true. But surely no reasonable creature, from such trivial irritation, can deliberately wish to check the progress of accurate knowledge by observation and experiment. The whole history of this controversy is melancholy, but instructive. To those of my audience who wish well to science, I hope that I may have made more clear the grounds on which vivisection is necessary and right, and thus fulfilled one of the chief objects of the Association—"to obtain the removal of any disadvantage of a public kind which impedes the progress of science". To those working physiologists who have honoured me by their presence, I would express the assurance that they have the confidence and the gratitude of the medical profession—witnesses at once competent and impartial; and as to present discouragements, looking back to the obstacles which so long retarded the progress of our kindred science, anatomy, I may say,

"O passi graviora, dabit Deus his quoque finem."

When, in the earliest years of the Royal Society, Sir Christopher Wren and Dr. Lower made those experiments on transfusion of blood, which have at last proved so beneficial, there were not wanting shallow witlings who scoffed at their researches. It was of them that Cowley wrote with a just indignation—

"Whoever would deposed truth advance
Into the throne usurped from it,
Must feel at first the blows of ignorance
And the sharp points of envious wit."

Professor ST. GEORGE MIVART, President of the Section, moved a vote of thanks to Dr. Pye-Smith, who had put before them with great clearness the issue which had been raised between science on the one hand, and ignorant sentimentality on the other. He was, perhaps, the only person on the platform who could give his testimony on this subject without the suspicion of being prejudiced. He had never performed an act of vivisection, and he did not suppose he ever should. He concurred in all that had been said, that there should be nothing in the way of cruelty tolerated; but it seemed to him that many failed to distinguish between two things which were very different. It was fool's folly which had been so often referred to as producing cruelty and pain; and the greater the facility given for sensible study, the less would be the amount of pain of which they complained. There was no danger in this country of any carelessness or cruelty occurring in the performance of these experiments, which were considered necessary to further the science of physiology. He remarked that different people had different tendency to feel pain. It was said of the late Sir R. Peel that he was particularly sensitive to pain; and there could be no doubt that suffering was intellectual. Every one would be better able to undergo pain if they refrained from anticipating it, and were able to lose the recollection of it. Our lower fellow-creatures thought less of the future and of the past than we did, and, therefore, did not experience the mental agony which was felt by the more intellectual. He knew that these considerations would be of little avail to those who, perhaps, felt more kindness for their domestic pets than they felt for their fellow-creatures. Science, however, had a duty to perform, and it would not be deterred by the sentimental objections which some people entertained.

Professor ALLMAN said all in the room would feel that his friend had in a great measure succeeded in removing a great misconception.

The vote of thanks was then warmly accorded.

ASSOCIATION INTELLIGENCE.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES.

THE autumn combined meeting of the East Anglian and of the Cambridge and Huntingdonshire Branches will be held on Friday, September 12th, at Cromer, Norfolk, under the presidency of J. KILNER, Esq., F.R.C.S., Bury St. Edmunds, Senior Surgeon to the Suffolk County Hospital.

Members intending to read papers, or to dine, or take luncheon, will please communicate with one of the Honorary Secretaries, on or before September 4th.

Dinner tickets, including wine, 12s. 6d. each; Luncheon tickets, 5s. 6d. each.

W. A. ELLISTON, M.D., Ipswich
B. ANNINGSON, M.D., Cambridge } *Hon. Secs.*
J. B. PITT, M.D., Norwich

August 27th, 1879.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held at the Belfast Royal Hospital, on Friday, September 5th, 1879, at 12 o'clock noon.

Members intending to read papers or to bring any subject before the meeting, will please communicate with

JOHN MOORE, M.D., *Honorary Secretary.*

2, Carlisle Terrace, Belfast, August 11th, 1879.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held at Durham, on Tuesday, September 23rd.

Members desirous of reading papers, or making other communications, are requested to give notice to the Secretary at their earliest convenience.

T. W. BARRON, M.B., *Honorary Secretary.*

10, Old Elvet, Durham, August 26th, 1879.

WEST OF IRELAND BRANCH: ANNUAL MEETING.

THE first annual meeting of this Branch was held at the Queen's College, Galway, on Wednesday, July 24th. Ten members were present.

In the absence of the President (Professor BROWNE), owing to ill-health, the chair was occupied by Professor KINKEAD.

Letters were read from the President and a number of the members, expressing their regret at not being able to attend the meeting.

New Members.—The following gentlemen were elected members of the Association and Branch: Dr. William W. Brereton, Dr. John Hegarty, Dr. F. Grealy, and Dr. John Burke, B.A.

Officers and Council.—The following were elected: *President:* R. J. Kinkead, M.D. *President-Elect:* C. J. Payne, M.D. *Vice-Presidents:* E. McGuire, M.D.; W. W. Brereton, L.K.Q.C.P. *Honorary Secretary and Treasurer:* J. L. Lynham, M.D. *Council:* J. V. Browne, M.D.; N. G. Clayton, L.R.C.P.Ed.; N. Colahan, M.D.; R. V. Fletcher, L.R.C.P.Ed.; N. Grealy, L.R.C.P.Ed.; J. Hegarty, M.D.; W. F. Lambert, M.B.; — McDonnell, M.D.; J. O'Kelly, M.D.; J. P. Pye, M.D.; W. Rutherford, M.D.; M. Walsh, M.D.

Resolution.—After some discussion, Dr. WALSH moved: "That, in future, the voting at the election of office-bearers be by ballot." This motion was seconded by Dr. NALLY, and agreed to by the meeting.

A discussion having arisen on the subject of proxy-voting, Dr. NALLY proposed, and Dr. O'KELLY seconded, the following resolution: "That only those members who shall be present at the annual meeting shall have the privilege of voting at the election of office-bearers."

Dr. MCGUIRE moved the following amendment, which was seconded by Dr. BRERETON: "That every member of the Branch Association, whether present or absent, have the privilege of voting."

This amendment having been put to the meeting, was negatived; upon which the original motion was put, and carried by a majority.

Dinner.—After the meeting, the members dined together at the Railway Hotel. The arrangements were most satisfactorily carried out, and the evening passed off very agreeably.

WEST SOMERSET BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at Dunster, on Thursday, July 24th, 1879.

Luncheon.—By invitation of the President-elect, THOMAS CLARK, Esq., the members first assembled at his house at one o'clock, and partook of luncheon.

Excursion.—After the luncheon, his guests were conducted by Mr. Clark through Dunster park and grounds up to the Castle, where they were met by the resident proprietor, G. F. Luttrell, Esq. After looking round the Castle, viewing the numerous objects of attraction it presents, and admiring the picturesque scenery displayed from its summit, the party walked to the beautiful church of St. George, and thence to the Dunster Cottage Hospital, both of which were inspected with great interest. Mr. Clark then took the party a drive of about three miles, through Minehead, to an elevated sheltered valley, which he was very anxious to show the members of the Branch, as being a spot which he considered peculiarly adapted as a site for the temporary or fixed residence of persons of weak constitution, particularly those predisposed to chest-complaints.

The Meeting.—Returning from a most pleasant excursion to the Luttrell Arms Hotel, soon after five o'clock, Mr. Clark took the Chair as President for the ensuing year, and the business of the day was proceeded with, eighteen members being present.

Letters and verbal messages from several members accounting for their absence, were submitted to the meeting.

Report of Council.—The Honorary Secretary read the annual report, as follows: "In presenting the thirty-sixth annual report of this Branch, your Council feel much satisfaction in being able to inform you that, during the past year, 1878-79, five new members have been added to the Branch. It is with painful regret, however, your Council reports that death or removal has deprived this Branch of several members, notably that of Dr. Mackay of Wellington, who held the rank of Honorary Surgeon to the Queen, and died, after a short illness, on April 26th last. Another old and esteemed Wellington member, Mr. Kidgell, sent in his resignation at the end of 1878, from inability to attend with regularity our meetings. Four other members have withdrawn their names, in consequence of having removed into other districts, or for other reasons. Your Council regret that the loss is one in excess of the gain, and this year the Branch numbers sixty instead of sixty-one, as at the last annual meeting. It is only to mention this, and your Council feel convinced it will be the earnest endeavour of every member of the Branch to influence those of the profession who are still without the pale of the Association, that, by joining this Branch, the good and scientific objects of our noble profession may be advanced, and the mutual and social well-being of its members be maintained and cherished.

"The autumnal and spring meetings, at which the subjects of typhoid fever and diphtheria were discussed, may be referred to as having been two of the most successful ever held; and it is a source of great gratification to your Council that the subjects chosen for discussion excited such interest, and elucidated many important matters of opinion. It should also be mentioned that, besides the questions discussed, there were read several interesting papers, viz.: Notes on Iron in Medicine, by Dr. Meredith; Some Cases of Puerperal Septicæmia and Erysipelas, by Mr. Todd; Notes of two Cases of Rupture of the Uterus, by Mr. Alford; A Case of Poisoning by Belladonna Successfully Treated, by Mr. Parsons.

"The Treasurer's statement of accounts will be presented as usual, and it will appear from them that he has a satisfactory balance in hand, amounting to £6 4s. 5d.

"Your Council, ever mindful of the interests of the profession, submitted to the meeting, in April last, a petition in favour of the Medical Act, 1858 (No. 2) Bill, which was signed by many members of this Branch of the Association, and duly presented to the House of Commons by Mr. Arthur Mills."

Treasurer's Accounts.—The Treasurer read his balance-sheet for the past year, and submitted his detailed accounts, which had been audited by Mr. R. B. Robinson.

Votes of Thanks.—The report of Council and the Treasurer's accounts were received and adopted, and the thanks of the meeting were duly accorded to the Council and the Treasurer by special resolutions.

President-elect and the Next Annual Meeting.—It was resolved that John Meredith, M.D., Wellington, be President-elect; the time and place for holding the annual meeting in 1880 to be settled by the Council.

Intermediate Meetings.—It was resolved that the Council be requested to arrange for holding an autumnal and a spring meeting, as usual.

Council of the Branch.—It was resolved that the following, with the President, Past-President, President-elect, and Secretary, be the Council for the ensuing year, viz.: J. Prankerd, Esq.; G. W. Rigden, Esq.; W. J. Todd, Esq.; H. W. Randolph, Esq.; H. J. Alford, M.D.; and Walter Edwards, Esq.

Secretary and Treasurer.—W. M. Kelly, M.D., was re-elected Secretary and Treasurer.

Representatives in the General Council.—It was resolved that the following be the representatives of the Branch in the General Council during the ensuing year, viz.: F. J. C. Parsons, Esq.; T. Clark, Esq.; and W. M. Kelly, M.D. (Secretary).

President's Address.—Mr. CLARK, after some introductory remarks appropriate to his assuming the Chair, delivered an address, taking as his subject the feeding of infants.

A Vote of Thanks to Mr. Clark was carried by acclamation.

India-rubber Bandages.—Mr. W. A. Hunt of Yeovil began a communication on the use of India-rubber bandages, with illustrative cases to show the remarkable results obtainable, especially in varicose diseases of the leg; and to read a letter which he had recently received from Dr. Martin of Boston, United States; but the announcement of "dinner" prevented his concluding the remarks which he wished to make. Dr. Martin's letter referred back to the one which appeared in the JOURNAL of October 26th, 1878, containing full directions for using the bandage; and as regards the bandage itself, he laid the greatest stress on the necessity of its being made of the purest rubber, and with the least possible quantity of sulphur, for ensuring the best results. He considered that English manufacturers had not at present paid sufficient attention to these points.

Dinner.—At the dinner, some of the neighbouring clergy and gentry were present as guests of the President.

CORRESPONDENCE.

THE TEACHING OF PSYCHOLOGICAL MEDICINE.

SIR,—I am sure that not only the profession, but also the public, owe a debt of gratitude to Dr. Eames for his able remarks on the teaching of psychological medicine.

Recent events have proved that the public regard with much jealousy the power, placed in the hands of medical men, of depriving Her Majesty's subjects of their liberty—a power possessed by the members of no other profession.

I believe I am correct in stating that one-half of the certificates of lunacy signed by qualified practitioners are returned by the Commissioners as being incorrectly filled up, and this not unfrequently in regard to some important detail. Were these facts more widely known by the public, it is possible that some sensational society would be founded with the object of altogether depriving medical men of the privilege of signing away that which is dearest to the heart of every Englishman.

With the exceptions of the College of Physicians and the University of London, no steps are taken by the examining bodies to ensure a proper knowledge of the diagnosis of mental diseases. No provision is made to prevent a qualified medical man, on the one hand, from letting loose a dangerous maniac on society; or, on the other, from incarcerating a patient who is in a healthy state of mind.

Dr. Eames points out, in his able address, that no medical man can avoid coming into contact with insanity in his practice; and he also demonstrated the absurdity of ignoring it as a disease because it chiefly affects one organ—the brain—and that a most important organ.

The question to be solved appears to be this. What amount of knowledge of insanity ought to be required by the examining bodies? The answer to this question must be considered under two heads: first, the minimum that should be required of every student; secondly, the maximum, which should only be demanded of those who intend to practise this branch of the profession as a speciality.

1. Ignoring, for the present, the treatment of insanity, it appears to me that the least that could be asked of a student would be to insist upon his correctly diagnosing and certifying six persons as to their state of mind. This could be easily done, either at an asylum, or by having harmless patients brought to the hospitals on certain days for examination. I would have persons of *sound* mind also examined; so that the student might recognise the fact that, when patients are brought to him for examination in after-life, it is his *opinion*, and not his certificate, which is sought for.

2. Having gained this point with the examining bodies, I would endeavour to persuade them to insist upon a student answering certain questions as regards the etiology, diagnosis, prognosis, and treatment of insanity. Knowing, as we all do, that already there are too many subjects to be mastered in a short hospital career, I would imitate the mode so successful in the Natural Science School of Cambridge; and have a schedule of questions drawn up which, if the student could answer satisfactorily, would pass him, no further knowledge of the subject being required, at least for the ordinary practitioner.

3. I would allow such an one to substitute, as at present is done by the College of Physicians, a three months' course of study in an asylum for the same period in a general hospital.

4. Since a diploma can now be obtained in hygiene, I can see no reason why a similar honour should not be granted to the speciality of psychology. For this, a residence of at least six months in some asylum recognised by the examiners should be insisted on.

5. And, in addition to this practical knowledge of the subject, an examination, as exhaustive as those in London and Cambridge for degrees in State Medicine, ought to be instituted.

There is no lack of material at hand. Teachers, students, and lunatics abound, all of whom would be benefited should some such scheme as I have suggested be carried out. But it must first be made compulsory by the examining bodies.—I am, sir, your obedient servant,

H. SUTHERLAND.

MEDICAL NEWS.

UNIVERSITY OF ABERDEEN.—At the recent graduation ceremony, degrees in Medicine and Surgery were conferred on the following candidates.

Doctor in Medicine.—Alexander P. Torry Anderson, M.B., C.M., London; James Anderson, M.B., C.M., Aberdeen; Henry Bartlett, M.B., C.M., London; George Pearson Bell, M.B., C.M., Leicester; Arthur Bennett, M.B., C.M., Stawell, Victoria; Samuel D. Clippendale, M.B., C.M., St. George-in-the-East; Alexander Craigmile, M.B., C.M., Seacombe, Cheshire; James Cran, M.B., C.M., Great Harwood, Lancashire; Robert Cran, M.B., C.M., North Lakhimper, India; Frederick William Evans, M.B., C.M., Cardiff; Benjamin Evers, M.B., C.M., London; William Fergusson, M.B., C.M., Fraserburgh; Robert Aikman Gray, M.B., C.M., Montrose; James Gordon, M.B., C.M., Walsall; Robert Keith Guild, M.B., C.M., Kokstedt, South Africa; James Heeles, M.B., C.M., London; Alexander Milne Henderson, M.B., C.M., Highgate, London; John Charles Huxley, M.B., C.M., Edgbaston, Birmingham; Henry Mason Jay, M.B., C.M., Chippenham; Alexander Gibson Macgregor, M.B., C.M., Canisbay, Wick; John Mackay, M.B., Dunkeld; Alexander Morrison M'Aldowie, M.B., C.M., North Staffordshire Infirmary; Patrick Brodie H. M'Leod, M.B., C.M., New Deer, Aberdeenshire; Hotham George Orlebar, M.B., C.M., London; George Washington Smith, M.B., C.M., Methlick; William Robert Smith, M.B., C.M., Broomhill, Sheffield; William Lemmon Stewart, M.B., C.M., Keith; George Shewan Trail, M.B., C.M., Strichen; James William Helenus Trail, M.B., C.M., Aberdeen; and George Watt, M.B., C.M., Saltburn-by-the-Sea, Yorkshire.

Bachelor of Medicine and Master in Surgery.—Lewis Daniel Alexander, M.A., Aberchirder, Banffshire; George Arthur Batchelor, London; Ernest Brumwell, Kendal; Alfred Henry Burton, Sevenoaks; John Kerr Butter, Forfar; William Clarke, M.A., Deskford, Cullen; Thomas Joseph Compton, Aberdeen; George Coutts, Kincardine O'Neil; Morgan Davies, Llangwyryfon, Cardiganshire; Arthur Symons Eccles, Plymouth; Heber Dowling Ellis, Eastbourne; Frederick John Fehrsen, Cape of Good Hope; William Balfour Fergusson, Doune, Perthshire; Ernest Field, Bath; Donald Manson Fraser, M.A., Invergordon, Ross; Francis Carteret Gayton, Great Hadham, Herts; Heneage Gibbes, New Wandsworth; Charles Glass, M.A., Glenrinnes; Alfred Paul Hart, Norwich; Charles Hoar, London; Ho Kai, Hong Kong; George Alexander Legge, M.A., Huntly; Charles Low, Dundee; Alfred de Courcy Lyons, Bristol; Peter William Macdonald, Glenlivet; William Mackie, M.A., Fyvie; William Adam Michie, Aberdeen; James Thomas Mitchell, Adelaide, South Australia; Bonner Harris Mumby, Gosport, Hants; Forbes Robertson Mutch, Udny; Joseph Needham, London; Henry Tolver Preston, Bournemouth; Arthur Purkiss, London; George Rae, M.A., Aberdeen; Archibald Reid, Glenbucket; Charles Reid, Auchindoir; William Reid, Beauly; George Jolly Shand, Aberdeen; Charles Carter Shepherd, Barbadoes; David Skinner, M.A., Inverurie; Ernest Barratt Smith, London; James Murray Smith, Forfar; Frederick Henry Spooner, Plymouth; William Stericker, Brompton, Yorks; William Tawse, Logie-Coldstone, Aberdeenshire; George Taylor, Ladiesford, Tyrie; Henry Thomson, Aberdeen; Lavington Grey Thomson, Tasmania; Winckworth Tonge-Smith, London; John Lawrence Van-Geyzel, Ceylon; James Hutchison Walker, M.A., Peterhead; John Coatsworth Watson, Barnard Castle; George Alexander Wilson, Huntly.

Bachelor of Medicine.—Arthur George Blomfield, King's Lynn; Walter Brown, Tetbury; Gerald Samuel Harper, London; William Henry Neilson, Bath.

Master in Surgery.—William O'Neil.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BIRMINGHAM GENERAL HOSPITAL—Assistant Physician. Salary, £100 per annum. Applications on or before September 29th.

*CUMBERLAND INFIRMARY—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, not later than September 23rd.

*DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich — House-Physician. Salary, £75 per annum; House-Surgeon, £50 per annum, with board, furnished rooms, and attendance. Applications on or before September 10th.

EAST LONDON HOSPITAL—Resident Clinical Assistant. Applications on or before September 8th.

HOSPITAL FOR DISEASES OF THE THROAT AND CHEST—Physician. Applications on or before September 1st.

JERSEY GENERAL DISPENSARY—Resident Medical Officer. Salary, £120 per annum, with apartments, attendance, etc. Election early in September.

LONDON FEVER HOSPITAL—Resident Medical Officer. Salary, £200 per annum, with residence, coals, gas, and attendance. Applications on or before September 6th.

*MANCHESTER ROYAL INFIRMARY, DISPENSARY, and LUNATIC ASYLUM—Honorary Assistant Surgeon.

PARISH OF ST. JOHN'S, Hampstead—Medical Officer of Health. Salary, £125 per annum. Applications on or before September 1st.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road—Resident Medical Officer. Salary, £60 per annum, with board and residence. Applications on or before September 1st.

ROYAL HANTS COUNTY HOSPITAL—House-Surgeon and Secretary. Salary, £100 per annum, with board and lodging. Applications to be made on or before September 10th.

ROYAL UNITED HOSPITAL, Bath—House-Surgeon. Salary, £60 per annum, with board and residence. Applications on or before September 6th.

SHILLELAGH UNION—Medical Officer for Hacketstown and Coolkenno Dispensary District, at a salary of £100 a year, £15 yearly as Sanitary Officer, together with Registration and Vaccination Fees. Election on September 1st.

*TEIGNMOUTH, DAWLISH, and NEWTON INFIRMARY—House-Surgeon. Salary, £65 per annum, with board, lodging, and washing. Applications on or before September 12th.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay—House-Surgeon and Dispenser. Salary, £100 per annum, with board, lodging, and attendance. Applications not later than September 9th.

WESTMINSTER HOSPITAL—Pathologist and Curator of the Museum. Remuneration, £52:10 per annum. Applications on or before September 13th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CLARK, Annie E., M.D., appointed Assistant Resident Surgeon to the Children's Hospital, Birmingham.

HODSON, H. Algernon, L.R.C.P.E., appointed Certifying Surgeon, under the Factory Act, to the Bovey District.

LEESON, John R., M.R.C.S.Eng., appointed Resident Clinical Assistant to the East London Hospital for Children and Women, *vice* R. Moore, M.R.C.S., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

SMITH.—On the 25th instant, the wife of *Heywood Smith, M.D., of a son.

MARRIAGES.

ALLAN—HEAFIELD.—At St. James's Church, Toxal, Whaley Bridge, on August 20th, by the Rev. W. Whitworth, M.A.Cantab., Hector Allan, M.B., C.M., to Sarah Ann, eldest daughter of the late Rev. R. J. Heafield, M.A., Vicar of St. Luke's, Bilston, Staffordshire.

PARSONS—WELLS.—On August 27th, at the Parish Church, Armin, Yorkshire, Henry Franklin Parsons, M.D., of H. M. Local Government Board, to Louisa Anne, eldest daughter of the late John Wells, J.P., of Booth Ferry House, Howden, Yorkshire.

DEATH.

THOMAS, John Henry, M.D., M.R.C.P., of Cyfarthfa, Merthyr Tydfil, on August 24th.

AMBULANCE CLASSES.—During the past week, Major F. Duncan, R.A., D.C.L., the Director of the Ambulance Department of the Order of St. John, opened ambulance classes in connection with the St. John Ambulance Association, at the Whitechapel, Stepney, and Blackheath Road Police-stations. The course of instruction, which consists of five lectures, followed by an examination for certificates of proficiency, embraces the proper preliminary treatment of those cases of sickness and accident most frequently met with in everyday life, and includes instruction more especially suited to members of the police-force, such as how to distinguish between drunkenness and apoplexy, and "stretcher-drill"—teaching the method of handling and carrying the sick and injured. Police ambulance classes have also been reopened at Scotland Yard, and formed at the Carter Street station, Walworth.

PUBLIC HEALTH.—During last week the mortality from all causes in London and twenty-two other large towns of the United Kingdom, was at the average rate of 18 deaths annually in every 1,000 persons living. It was 15 in Edinburgh, 17 in Glasgow, 19 in London, and 23 in Dublin. The annual rates of mortality in the twenty English towns were as follows:—Portsmouth, 13; Birmingham, 14; Hull, 15; Bradford, 15; Nottingham, 15; Bristol, 15; Sheffield, 16; Oldham, 16; Wolverhampton, 17; Manchester, 18; Plymouth, 18; Brighton, 18; Sunderland, 18; Newcastle-upon-Tyne, 19; Norwich, 19; London, 19; Leicester, 19; Leeds, 20; Liverpool, 20; and the highest rate, 21, in Salford. The annual death-rate from the seven principal zymotic diseases averaged 3.9 per 1,000 in the twenty towns, and ranged from 0.0 in Plymouth, and 0.7 in Newcastle-upon-Tyne and Hull, to 5.1 and 5.4 in London and Leicester. In London 1,322 deaths were registered, or 186 below the average; and the death-rate was 19.1. The 1,322 deaths included 4 from small-pox, 42 from measles, 61 from scarlet fever, 11 from diphtheria, 40 from whooping-cough, 19 from different forms of fever, and 174 from diarrhœa; or 351 deaths in all from these diseases, being 68 below the average, and giving a zymotic death-rate of 5.1 per 1,000. The deaths from diseases of the lungs were 165, or 32 above the average. Different forms of violence caused 52 deaths; 41 were the result of negligence or accident, including 10 from drowning. There were 11 deaths from suicide, the corrected average being less than 5. At Greenwich, the mean temperature of the air was 58.7°; and 2.8° below the average. The mean degree of humidity of the air was 94; the air was, therefore, damp. The general direction of the wind was south-west. Rain fell on each day of the week to the aggregate amount of 2.98 inches. The duration of registered bright sunshine was equal to 18 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FACTORY SURGEONS.

SIR,—Would any of your readers kindly inform a novice what steps to take to become factory surgeon, and if influence and its kind is required, in an early issue; also, the name of a small and good work on Cottage Hospitals: their systems and management.—Yours, etc., ZULU.

WHAT DOES IT MEAN?

OUR attention has been called to the subjoined advertisement, which lately appeared in the *Standard*.

"Diploma wanted: Registerable.—L.S.A., 22, Litchfield Road, Old Ford, Bow, London, E."

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE MURCHISON MEMORIAL.

The following additional subscriptions have been received.

	£	s.	d.
Dr. Morehead, Edinburgh	5	5	0
The Dean of Lichfield	1	1	0
Dr. Lockie, Carlisle	2	2	0
Dr. Vereker Bindon, London	1	1	0
Dr. Cleghorn, St. Andrew's	1	1	0
Surgeon-Major Alexander Grant	1	1	0
Professor Gairdner, Glasgow	5	5	0
Professor Smith-Shand, Aberdeen	1	1	0
Dr. Moir, St. Andrew's	5	5	0
Dr. H. Gueneau de Mussy, Paris	10	10	0
Dr. Struthers, Leith	2	2	0
Rev. Dr. Nolan	1	1	0
Berkeley Hill, Esq.	3	3	0
Dr. J. Risdon Bennett, F.R.S.	3	3	0
Rev. J. Wale Hicks, Cambridge	1	1	0
Dr. Andrew Fyfe	1	1	0
Dr. G. C. Child-Chaplin, Arbroath	1	1	0
Professor Charcot, Paris	3	0	0
Surgeon-Major Stewart, Secunderabad	1	1	0
Messrs. Harper and Jackson, Barnstaple	1	1	0
John Rae, Esq., LL.D.	1	1	0
C. Falconer, Esq.	25	0	0
Miss L. Milne	5	0	0
Alexander Shaw, Esq.	10	10	0
Dr. F. J. Mouat	1	1	0

GERMAN BEER.—Associate wishes to know where the above can be obtained; what its composition is; and whether it can be substituted for English beer in cases where the latter produces biliousness?

HYDROPATHIC ESTABLISHMENTS.

SIR,—It is satisfactory to notice, in your advertising columns of to-day, an announcement that Dr. Grindrod of Malvern is prepared to receive into his hydropathic establishment patients bringing prescriptions from their medical attendants, and to co-operate (as I believe he has always wished to do) with the latter in their treatment of the former.

It will be remembered that, in his *Confessions of a Water-Patient*, Sir E. B. Lytton advises his readers not to consult their doctors, but to go straight to a hydropathic establishment, and there judge for themselves; for, he adds, it is not to be supposed that doctors of drugs will look upon doctors of water other than as quacks! This advice was tendered nearly thirty years ago, during which time hydropathy has been fairly tested, and not, apart from its quackish associations, found wanting. Indeed, as you well observed in a recent issue of your JOURNAL, in reply to a correspondent, hydro-therapeutics, legitimately practised, are a valuable addition to the remedial measures of the physician; and I can conceive no more delightful spot where the principles of hydropathic treatment may be carried out than at Malvern. For the purity of its air and water, Malvern is unrivalled; its climate is remarkably healthy, as shown by the death-rate being lower than that of any other inland watering-place in the United Kingdom; and its scenery is simply charming. There are two or three hydropathic establishments of well-earned celebrity at Malvern, but Townshend House (Dr. Grindrod's) is unique in its retirement, and the soothing softness of its surroundings. I have known it for many years, and believe it to be especially well adapted to the nerve-jaded Anglo-Indian, after long residence and hard work in a tropical climate, with perhaps exposure to malarious influences.

In the present day, when, in view to greater pecuniary results, the tendency to graft the "hotel" and "boarding-house" upon the hydropathic system, is becoming too prevalent (I say too prevalent, for, in the matter of diet and general hygiene, such an amalgamation can hardly conduce to the welfare of the patients), it is satisfactory to feel that, in Townshend House, the strictly hygienic character of a hydropathic establishment is adhered to.—Faithfully yours,

Sutton, Surrey, August 23rd, 1879. C. R. FRANCIS, Surgeon-General.

THE MILLERCHIP FUND.

SIR,—Please acknowledge receipt of the undermentioned sums.

	£	s.	d.
Dr. Miller, Eye, Ipswich	1	1	0
Dr. Smith, Pershore	1	1	0
Mr. Buckell, Winchester ..	0	10	0
Mr. Bentham, Southsea ..	0	5	0

The total amount forwarded to me amounts to £65 7s. 0d. I have promises standing out, and I shall be obliged by your permitting me to state to intending subscribers that I am anxious to bring the matter to a close. Sixty pounds have now been sent to the Rev. F. M. Beaumont, vicar of Holy Trinity, Coventry, to be expended as I have directed for Mr. Millerchip's benefit.—I am, yours obediently, JOSEPH ROGERS.

33, Dean Street, W., August 25th, 1879.

THE STOCKER TESTIMONIAL.

SIR,—We trust that you will allow us to make public through your columns the following statement concerning the testimonial raised in memory of the late Mr. James Stocker, who for many years acted as resident medical officer and apothecary at Guy's Hospital. The subscriptions amounted in all to £406 14s. 6d.; the cost of printing and posting circulars to £17 18s. 7½d.; leaving a balance of £388 15s. 10½d. Of this, a cheque for £50 was forwarded, on June 5th, for Mrs. Stocker's immediate use. The remainder, at the desire of many of the subscribers, will be placed in the hands of Mr. Stocker's executors, to be invested for Mrs. Stocker's use during her lifetime, and afterwards to be divided equally for the benefit of the Misses Stocker and Mr. Henry Stocker, who is an invalid. A complete list of subscribers will appear in the September number of the *Guy's Hospital Gazette*.—We are, sir, faithfully yours, R. CLEMENT LUCAS, H. E. WADDY, *Hon. Secs.*

August 26th, 1879.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

MODIFIED ANTISEPTICISM.

SIR,—Perhaps the following case may be read with interest by some of the members of the British Medical Association who heard or have read Mr. Savory's Address on Surgery at the Cork meeting, as it illustrates the antiseptic treatment practised at St. Bartholomew's Hospital within a year at least.

A few months ago, on coming to a bed in one of the wards of the above hospital, in which lay a patient whose foot had been amputated a few days previously, the surgeon said to those accompanying him on his visit, myself amongst others, that this was an antiseptic case, and that he intended to dress it that day. Fresh antiseptic dressings were accordingly prepared, and the spray got ready. This latter was a small hand one, the efficiency of which can be judged without comment by me, when I say that the nearest approach to spray that it would produce was a few fine jets of carbolic acid solution. Everything being ready, the bedclothes were removed, and the limb displayed swinging in a cage. Under the stump, however, what was to be seen? A flat porcelain dish containing discharge which had percolated through the dressing, and was falling off it in drops! The dish and cage being removed, the spray (if it could be called one) was faithfully applied, and the soiled dressing removed. I need hardly state that the putrid smell from the wound could be perceived even at some distance, so there was no necessity to smell the dressings to ascertain the state of the discharge, although that was done also. The wound was then washed with carbolic solution, and the fresh dressing applied. During the time the wound was exposed, the spray stopped for a few seconds on several occasions. The hands of the gentleman who dressed the case were never purified, and none of the precautions usually attended to in cases where Professor Lister's method is adopted were taken. After the dressing was completed, the limb was again swung, and a clean dish carefully placed under it. In commenting on the case, the surgeon said it was going on very well, but that the wound did not seem to be healing any better or faster than those of the other cases in the ward, which were not antiseptic. I simply confine myself to narrating the case, allowing your readers to form any conclusion they choose from it. I may add that I am unable to say whether, within the last few months, Professor Lister's method has been tried at St. Bartholomew's Hospital; most probably not, as they seemed highly satisfied with their own method. It would be interesting to know whether Mr. Savory bases what he says regarding antiseptics in his Address upon St. Bartholomew's antiseptics, or upon the method used by Professor Lister and his followers.—Yours, etc., A SURPRISED VISITOR.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.

SIR,—Being a member of the British Medical Association, the British Medical Temperance Association, and the United Kingdom Alliance, I ask for space in the BRITISH MEDICAL JOURNAL to make the following suggestions.

It is generally supposed that an early dissolution of this present Parliament is near at hand. All political parties appear to be on the alert to return to the next House of Commons members who will support their own views upon various subjects.

May I be permitted to throw out to my fellow members the proposition of all belonging to the British Medical Association and the United Kingdom Alliance forthwith joining the ranks of the British Medical Temperance Association, and energetically and unconditionally supporting only candidates for Parliamentary honours who will, without compunction or any condition whatever, vote personally and influentially for local option and Sunday closing in their several spheres and places.

Doubtless, there are many members of the above who are total abstainers from alcoholic beverages, who have not yet thrown in their lot with their abstaining brethren; let them do so at once, to their own credit and satisfaction, and to the lasting welfare of their patients, friends, and acquaintances.

Let the subject I am now advocating be more thoroughly ventilated in our weekly and other professional, scientific, and general literature. The three learned professions, as they are usually termed—"those of Divinity, Law, and Physic or Medicine"—have a vast field for doing good towards all other classes, if their members will embrace the opportunities afforded them from time to time: for instance, those of the clerical profession can point out forcibly and with very considerable effect the sin and consequences, both by their precept and example, of intemperance in any form, and the advantages of abstinence from those things which are evil; our law-makers and those who administer the laws, if they will always put aside party bias, ties, or considerations, can form and carry into effect those statutes which tend only toward the general welfare; and those individuals who have adopted the profession of medicine can, both by their words and actions, point out to those around them the injurious consequences of taking internally alcoholic or other stimulating beverages; they can disabuse the public mind of the necessity of taking alcohol, tobacco, opium, and such like substances, upon any ground whatever; they are competent to prove fully that life and health are prolonged by total abstinence from them; and they are fully justified, if they will only see fit to do so, in preventing their use, either in public, private, or general practice, of course including all kinds of practice. Those who disagree with this remark should try the experiment for a fixed reasonable time.—I remain, sir, your obedient servant, T. J. EAMES BROWN.

Llanbister, August 4th, 1879.

SUPERFLUOUS HAIR.

SIR,—Would any of your readers kindly inform me if there be any remedy that would permanently destroy superfluous hair on the face or hands without at the same time injuring the skin?—I am, etc. MEDICUS.

MR. H. H. MUGGERIDGE (Seaford).—The office of coroner is one which is bestowed by the votes of the county freeholders; and to obtain it they must be addressed, canvassed, and polled as for a political election; and usually, we believe, in the case of a contest, the services of a political agent, accustomed to parliamentary contests in the county, need to be engaged. The mode of election is costly and absurd, and the results are often disastrous.

A. B. D.—There are excellent precedents for giving the title of Dr. to an M.B. of an university. Among the graduates thus called are Dr. Handfield Jones and Dr. Lionel Beale. Our correspondent, being a London M.B. in honours, stands in the same position.

MR. R. T. CÆSAR (Shirley).—Short notes of such a case deserve to be placed on record.

A PHYSICIAN (Reading).—We see nothing in the cutting forwarded which goes beyond the self-laudatory statement of credentials usual under such circumstances; but we think that such statements on the part of intending candidates for hospital appointments should be addressed only to those "whom they may concern"—that is, to the governors—by circular, and not to all and sundry by public advertisement in the newspaper.

DR. HORTON (Devonport).—We quite agree with our correspondent that the statement in question is an ignorant and mischievous misstatement, and one which Messrs. Cleaver ought not to allow to be circulated in connection with their really valuable terebene soap. We have forwarded the copy addressed to us to a gentleman whose name is mentioned on the leaflet in connection with terebene.

CHRONIC ECZEMA OF THE LEGS AND THE INDIA-RUBBER BANDAGE.

SIR,—As, probably, the efficiency of India-rubber bandages is being extensively tried in all parts of the kingdom, perhaps the following case will be interesting and suggestive to those who have not already employed this particular method of treatment.

An elderly man, aged 66, came to me on July 14th with an extensive dry eczematous condition of the skin, with redness and swelling covering the greater part of the surface of both legs. The veins of both legs and thighs were very varicose, but more especially on the right side, and the right foot was somewhat œdematous. Though not a strong man, he had enjoyed very good health all his life, and there was no sign or symptom of constitutional disease. His employment keeps him constantly on his legs, and he is accustomed to carry heavy weights. Lately, however, the pain and aching of his legs compelled him to desist from work, and, though resting and keeping his legs in a horizontal posture, he is no better. He has tried various lotions and ointments for six years, and has also used an elastic stocking, but all without benefit. With these facts before me, I put a Martin's bandage on the right leg as high as the knee, and made him wear it constantly during the day, but allowed him to remove it at night. The skin soon became moist, the pain was eased, the swelling went down, and the surface assumed a better aspect. A week afterwards, he was allowed to walk about and go out of doors. At the end of three weeks, the surface was perfectly smooth, though the colour was darkened from chronic congestion, and he was entirely free from pain. After having had it on for a month, he went to work again, when the leg was perfectly healed up, and entirely free from any discomfort. I have now advised him to wear the bandage during the day for several months to come, with the hope of improving the condition of the veins. A week ago, I put a bandage on the left leg, and that is now going through the same satisfactory stages through which the right leg passed.

This is certainly a rapid cure in a very chronic case; but of course, so long as the varicose state of the veins remains, the eruption is liable to return upon leaving off the bandage. Any improvement in this respect, however, must be a work of time; but, from the already diminished size of the veins, I have hopes of material benefit. The action of the bandage appears to be through counteracting the abnormal circulation, peripheral and venous, brought about by the varicose condition of the veins, and thus allowing the restorative powers of the economy to come into fair play and effect a cure.

Whatever theories may be offered to explain the method of cure, the fact remains, as I have several times proved, that these bandages are of extraordinary advantage in eczematous, ulcerated, and varicose condition of the veins of the leg. —I have, etc., T. FREDERICK PEARSE, M.D.

Bramshot, Hants.

THE DISPENSARY SYSTEM, PROVIDENT AND OTHERWISE.

SIR,—It appears to me desirable to invite the attention of your readers to the paragraphs in the report of the Council of the Metropolitan Counties Branch, relating to so-called "Provident Dispensaries", kept by private members of the profession.

Is it against the practice of advertising by cards, handbills, etc., that the resolution of the Council is directed? or is it aimed against all who have any connection with a dispensary now working on the provident system?

The wording of the resolution is not clear; and it is unfortunate that, while attempting to purge the profession of its impurities, the practice of advertising in any way or under any pretext whatsoever, was not more clearly denounced.

Again, to call things by their right names is, beyond question, highly desirable, and it cannot be seriously contended that a dispensary which is not established on the provident system can be a provident dispensary; but for the Council, in solemn conclave assembled, to pass a resolution that thus to misapply the term "provident", or to be connected with a dispensary to which that term is misapplied, constitutes the most grievous of professional sins, is truly a solemn farce.

Whether the provident system (*i.e.*, equal payment in health or disease) be really the best method of providing medical attendance for the class one grade above pauperism, is a question which admits of honest difference of opinion. From the Charity Organisation platform, the system is proclaimed to be perfection, but what is the general practitioner's view of the question? Having for some years acted as medical officer to some of "those most useful institutions", I am able to assert that the position I occupied (an exceptionally fortunate one of the kind) was the reverse of an elysium. These appointments are miserably underpaid, and it is not pleasant to be made to feel that you are regarded on all sides as a slave of the lamp, and that, through circumstances beyond your control, you are liable to be summoned before some committee, perhaps in a public-house, to meet some frivolous charge of neglect. To refute such charges is often inconvenient, rarely agreeable, and often not easy. I say nothing of the new crime of manslaughter *in absentiâ*, but that is another sword of Damocles to terrify medical officers of provident dispensaries and parishes.

For these reasons, I advise all my medical friends to eschew parish and provident dispensary work, and I fail to see harm in a well conducted dispensary, provided there be no deception, no advertising, no quackery, and no humbug.

Hitherto, the profession has only spoken on this question through distinguished members, who have had no personal experience in the matter; possibly the insertion of this letter may lead to some expression of opinion from those who have. —Yours faithfully, A MEMBER OF THE METROPOLITAN COUNTIES BRANCH.

London, August 7th, 1879.

PERIODICAL ERUPTION IN AN INFANT.

SIR,—The following case may be of interest to some of your readers. I do not remember any similar case being reported.

Fifteen months ago, I attended a lady in her second confinement. She was safely delivered of a fine, healthy little girl. The child was nursed from the first, and, except that the mother had an unusual abundance of milk, nothing occurred till the seventh month, when the catamenia reappeared. At the same time, a number of pimples appeared on the child's body, arms, and legs. For a day or two, the child was very fretful, but she soon returned to her usual health. At the next period, and the next after that, the same papular eruption appeared on the child. Nursing was then discontinued; and the same kind of eruption has ap-

peared at regular intervals, coinciding to the very day, with the appearance of the menstrual flux in the mother.

Every care has been taken with the child's diet, but, beyond a little cooling medicine, and a lotion to allay irritation, no treatment has been adopted.

I believe it will turn out to be a case in which menstruation will appear early. Her mother first became unwell at the age of eleven years.—I am, sir, yours faithfully,

J. BAIN SINCOCK.

Bridgwater, July 14th, 1879.

CONGENITAL TORTICOLLIS.

SIR,—As no one has answered Mr. H. E. Price's inquiries (see BRITISH MEDICAL JOURNAL, July 19th, 1879) about the treatment of a child seven weeks old suffering from congenital torticollis, I take the liberty of giving my own experience.

I divided the sternal insertion of the left sterno-mastoid muscle in a boy six years old, the subject of congenital torticollis, last Friday (August 1st), the clavicular insertion not being contracted, or rather I should say almost wasted away. The patient was kept in bed till yesterday (August 3rd), viz., two days; when he sat up, with the head in a good position, without the slightest pain; there was no tenderness over the incision in the skin (apparently healed by first intention under the lint saturated with collodion), or anywhere along the muscle operated upon. The sharp-pointed tenotome was introduced about three-quarters of an inch above the sternum to the outer side of the tendon; it was then replaced by the blunt-pointed tenotome, and the tendon divided from behind forwards; a distinct snap was heard and felt when the tendon was fairly cut. A drop or two of blood only was shed. The muscle became quite soft and relaxed; whereas, before the operation, it felt very hard and firm. The patient was violently sick, and vomited several times on recovering from the effects of the chloroform; but he experienced no pain. To-day (August 4th) the patient walked about, with the head in a perfectly good position as long as he thought about it.

I would recommend Mr. Price to try what passive manipulation would do in the first instance; in the above case, the head was flexed laterally to the left and rotated to the right, so probably, as the same—viz., left—muscle is affected in Mr. Price's baby, the head should be gently rotated to the left and bent laterally to the right by the surgeon's hands placed on each side of the head while the shoulders are fixed by the nurse, the child lying on its back. No jerk should be employed; but, while endeavouring to place the head into its right position, a vibration should be given to the movement. This should be done for ten to fifteen minutes once or twice daily. A proper position of the head may be aided by having a suitable hollow made in a mattress, into which the child can be laid, so that the head and shoulders may remain in a good position as long as the baby can be left lying. If this treatment do not effect some improvement in a few weeks, tenotomy would certainly be justifiable, as, if it be at all a severe case, there is considerable danger of a want of symmetry of the two sides of the face, produced by the oblique position of the head, the lower (left) half becoming less developed and smaller than the upper (right) half of the face, which unfortunately is the case with my patient.—Yours, etc.,

Brighton, August 4th, 1879. BERNARD ROTH, F.R.C.S.

MEDICAL DEGREES IN GERMANY.

SIR,—In looking over the JOURNAL for July 19th, I was extremely surprised to read Sir Dominic Corrigan's evidence before the Select Committee of the House of Commons on the Medical Act (1858) Amendment Bill (No. 3), concerning German Medical Degrees, and beg you will give my letter, contradicting his unwarranted assertions, a place in an early number of the JOURNAL. Sir Dominic, according to the report, stated, in reply to Dr. Cameron, that "in Germany degrees were conferred upon certificates of attendance at lectures, and the result was a great deal of quackery in Germany"; also, that "he did not know of any University in Germany which insisted upon examination". With regard to the first of these assertions, I challenge Sir Dominic Corrigan to produce proof of its veracity; and, in the meantime, beg to inform the public that it is utterly incorrect to state that medical degrees can be obtained after this manner in Germany. With regard to the second assertion, I can only say that I am not astonished to find, after what he has already said, that Sir Dominic Corrigan is, according to his own showing, totally ignorant of the German University examination regulations. I defy Sir Dominic to name a single German University which grants a medical degree without examination, not including, of course, those degrees granted *honoris causâ* to eminent medical men. I am not speaking without authority, and am prepared to produce ample evidence of what I say, which evidence I have already published in my *Guide to European Universities*. In conclusion, I think that it would be only fair if the Select Committee of the House of Commons were to take the evidence of some general practitioners possessing foreign degrees before finally making up their minds to believe the erroneous accounts they hear about foreign medical examinations.—I am, sir, yours, etc.,

H. J. HARDWICKE, M.D.

Sheffield, July 21st, 1879.

CONSANGUINEOUS MARRIAGES.

MR. W. H. LATHROP writes in the *Boston Medical Journal*. "At a recent meeting of the New England Psychological Society, the subject for discussion was Consanguineous Marriages, with Special Reference to Progeny. With a desire to obtain some original data for use at that meeting, I corresponded with the members of the North Middlesex District Medical Society, asking (1) how many marriages of near relatives had come within their knowledge? and (2) how many of these had resulted in offspring of unsound mind? In reply, I received accounts of twenty-five such marriages, resulting in the birth of one hundred and seven children. Of these, ninety-two were sane; four insane; and eleven idiotic. Of the fifteen whose minds were unsound, nine became so from known causes other than the consanguinity of parents. Only six, then, of the one hundred and seven children could have been made insane by the near relationship of their parents, and even in these cases there may have been other causes. This, I am aware, is but a trivial contribution to this subject; but it tends to show that the danger of such marriages is often exaggerated."

SEVERE CASE OF SCALDING OR ECZEMA INTERTRIGO IN AN INFANT.

SIR,—A Member would gladly receive any suggestion from members of the British Medical Association as to the treatment of an obstinate case of scalding. Ointment spread on slips of lint and placed between the opposed surfaces (in the perineal region in this case) have been used, inclusive of zinc ointment; calomel, zinc, and camphor ointment; citrine ointment. Dusting powders, including violet powder, prepared Fuller's earth, starch, bismuth, oxide of zinc, and lycopodium have been tried in a variety of ways: dusted on, rubbed on, and applied on slips of lint. Lotions of carbolic acid, and gurjun oil and lime-water, have been tried; also milk and water. No soap is used, and as little water as possible, on the affected part: simply rubbed clean with soft towel and violet powder. The pain is considerable; and the moist treatment by lotions and ointments has only exaggerated the evil. On the whole, the slips of lint well rubbed with lycopodium have done most good. The child is brought up on the bottle, is four months old, and is in fair health with the exception of this tenderness of skin, which, I may remark, is not confined to the perineal and scrotal region, but occurs in any of the flexures very readily if not kept scrupulously clean and dusted. The infant is by no means a stout fat child. When the surface is wiped firmly, it bleeds at times. As to internal remedies, antacids, such as bicarbonas potassæ, magnesia, and lime-water are given at times. Neither arsenic nor cod-liver oil has been given as yet. FAR NORTH.

EVIL COMMUNICATIONS.

SIR,—"Labouring in my vocation", I proceeded one day last week, by a newly opened line of railway, to a thriving village not far from Brentford. There, while strolling about awaiting my return train, I observed a somewhat ancient hostelry, in the corner of the forecourt of which is a primitive convenience for the relief of customers and passers-by of the male sex. Five feet from this is a pump, at which was a small damsel with a jug carrying away the savoury fluid it yields—no doubt for family use. Nearly opposite is a "brand-new" building of Kentish rag and sandstone; and over the portal thereof is engraven "Local Board of ——". To the customers of the said inn who imbibe its gin and (water?), we may well apply the legal axiom, *Caveat emptor;* and perhaps to the public aware of the two sources from which the pump derives its supply, *Volenti non fit injura*. But, then, what about the grand building over the way? *Cui bono?*—I am, etc.,

August 1879. V. POULAIN, M.D., M.R.C.S.

ANTI-FAT.

SIR,—A gentleman seeking advice respecting diet in corpulency, gave me the following note of his case: "I have been taking the Fucus Vesiculosus for a month without any effect, and I want to rid myself of seventy or eighty pounds of too solid flesh, my weight being seventeen and a half stone, and my height five feet three inches.

I send you the gentleman's name and address, and remain, yours truly,

2, Bissborough Street, August 22nd, 1879. ALFRED W. MOORE.

SIR,—Much is written and said about "anti-fat", but a more efficacious remedy is to be found nearer home than this American solvent. A ride on the Metropolitan District Railway will soon reduce substance to shadow, for on weighing at the Charing Cross Station before entering a carriage, and weighing when I left it at Earl's Court Station, I found in fifteen minutes I had lost seven pounds. So much for "improved patent weighing-machines".—I am, sir, your obedient servant,

August 1879. H. HALFSTONE.

COLLEGIATE INFLUENCES.

SIR,—I beg to enclose an advertisement which appeared in to-day's issue of the *South London Record*. The advertiser is qualified (M.D. St. And., 1862; L.F.P.S. Glas., 1862; M.R.C.S.Eng. & L.S.A., 1863) and registered.—Yours truly,

London, August 19th, 1879. M.B. & M.A.

"Mothers should give their children Dr. Sargent's Teething Powders. Sold in packets, 1s. 1½d. and 2s. 9d. each.—Blotches, spots, pimples, pustules, boils, carbuncles, scalded head, sore eyes, itch, scurf, discolorations of the skin, humours and diseases of the skin, of whatever name or nature, are literally carried out of the system in a short time by the use of Dr. Sargent's Curative Ointment. A valuable remedy for the cure of scalds, burns, black heads, chapped hands, chilblains, sore and inflamed eyes, nose, or lips, bad breasts, wounds, sprayed face, sprayed hands, tetters, sprains, hæmorrhoids or piles, fistula, frost-bite, chronic and troublesome sores or eruptions of the skin, ringworm, eruptions or sores on the head, the face, the body, behind the ears, and other unsightly maladies that affect the face and other parts of the body. Dr. Sargent's Aperient Pills might be judiciously taken during the application of the ointment as an aperient, or in half or quarter the dose as a laxative or alterative. See testimonials from persons restored to perfect health through the use of these invaluable remedies. Prepared only by Dr. Sargent, 9, Dorrell Place, Brixton Road, London, England. Price of the ointment, 1s. 1½d. and 2s. 9d. per pot. Price of the pills, 1s. 1½d. and 2s. 9d. per box. Either sent carriage free to any part in the United Kingdom on receipt of 1s. 1½d. or 2s. 9d. in postage stamps or post-office order. Sold by chemists, druggists, and patent medicine vendors throughout the world. The 4s. 6d., 11s., 22s., 33s., and 60s. sizes can be obtained."

*** In their evidence before the Select Committee of the House of Commons recently, Mr. Simon and other witnesses laid great weight on the affiliation of all medical practitioners to an university or college, by reason of the power which the colleges thus acquire of exercising disciplinary influence, in the case of breaches of propriety of this kind. Here is a tolerably strong case in which several licensing bodies have the desired privilege, and, therefore, the accompanying duty. It would be very interesting to learn that they have done so, in this or in any other case.

THE TREATMENT OF BLUSHING.

SIR,—"Scarlatina" will find what he wants in Eulenburg's *Lehrbuch*, second edition, vol. i, p. 290 ff. The case he describes appears to be one of "essential" or "angioneurotic" blushing. This phenomenon is usually observed in young men, otherwise healthy, and not markedly emotional. It is often distinctly traceable to a congenital, and occasionally hereditary, predisposition.

The tendency of "essential" blushing is to diminish with advancing age. Its therapeutics are hitherto merely symptomatic. Eulenburg has found ergotine, subcutaneously administered, useful, with digitalis; the bromides in largish doses—thirty grains or more—may be tried; so may Chapman's bags; and the process known as "galvanisation of the sympathetic".—I am, etc.,

A. DE WATTEVILLE.

13, Old Cavendish Street, Cavendish Square, W., August 25th, 1879.

AMBULANCES.

SIR,—I shall be glad if any of your readers can give information as to the best ambulance upon wheels that can be drawn by two men upon a fair road a distance of a mile.—Your obedient servant,

THOMAS GODFREY.

Mansfield, August 27th, 1879.

DEATH FROM CHLOROFORM.

WITH reference to a statement in the JOURNAL of July 19th (page 97), that a death from chloroform had occurred in St. Leonard's Cottage Hospital at Mildenhall, in Suffolk, the honorary secretary of the hospital, Mr. F. H. Harris, writes to us that no death from chloroform has occurred in the Mildenhall Cottage Hospital, nor has any case been admitted similar to that described.

WILL you, or any of your numerous readers, tell me which is the easiest and simplest way of detecting arsenic qualitatively on wall-papers.—RUSTICUS.

DR. COTTER (Ballincollig).—MS. on Typhoid Fever received.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161A, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

VIVISECTION.

SIR,—The able, logical, and vigorous address of Dr. Pye-Smith, in vindication of the scientific pursuit of physiology, should not, I venture to submit, be allowed to rest in the archives of the British Association.

It certainly deserves to be reprinted and freely distributed throughout the length and breadth of the land, for very many good reasons, but chiefly because of the utter ignorance which seems generally to prevail on the subject of physiology. I would have a copy of the paper sent to our law-makers, that is, to the members of both Houses of Parliament, most of whom require educating on the scientific method of teaching physiology. This just now appears the more necessary, since, either from ignorance, supineness, or an inherent love of killing in sport, not more than about eighty members out of the eleven hundred and twenty-seven composing the two Houses, were found to vote against the barbarous cruelty of "flaying men alive", and a much smaller number were ready or willing to utter a word against placing science in fetters; imposing a penal enactment upon an enlightened profession, at the bidding of a set of ignorant and crazy fanatics.

I would also have the address sent out broadcast to those regarded as the "educated classes of society", because they have largely banded themselves together for a purpose, that of raising money and lavishing it in denouncing the medical profession, in hindering a work of Christian charity, and in an imprudent and ignorant outcry against teachers and students of science. As an example of the way in which those who call themselves Anti-Vivisectionists are spending their money, during the past week several printed handbills have been found in my letter-box, containing an appeal to subscribers and supporters of University College Hospital to withhold their support from this charity, on the iniquitous plea that "Mr. Schäfer has obtained a licence to inflict torture upon animals". I think this plainly shows that we must no longer treat this question with supineness or indifference. An association should be formed for the purpose of printing such addresses as those of Dr. Pye-Smith and Dr. Andrew Clark, and disseminating sound information on the teaching of physiology, and for taking such other means as may be necessary to counteract the anti-vivisectionist craze, and for obtaining from the next Parliament "the removal of any disadvantage of a public kind which impedes the progress of science". I need hardly add that it will give me pleasure to subscribe my mite to such an association, or otherwise place my poor services at its disposal.—I remain, sir, your obedient servant, JABEZ HOGG.

1, Bedford Square, August 26th, 1879.

*** Two similar handbills to those mentioned by Mr. Hogg have lately come into our hands. They refer to King's College and St. Thomas's Hospitals.

INFANTILE DIARRHŒA.

SIR,—Some communications on this sometimes very intractable ailment, in recent issues of the BRITISH MEDICAL JOURNAL, call to my recollection a case in every way similar, wherein condensed milk played a most conspicuous part.

Three years since, I had great difficulty in guiding through her infantile stage of existence the female child of a lady, owing to the frequent recurrence of diarrhœa, on many occasions very obstinate, and prostrating my little patient. Every care was taken of the feeding-bottle, etc., by a most intelligent and painstaking mother. In February 1878, this lady presented to her husband a fine son, and subsequently succumbed to septicæmia, leaving her little one to be brought up by bottle-feeding; and, as had been previously the case in his little sister, he soon began to suffer from diarrhœa, which on two or three occasions prostrated him very much. In each of these cases, a well-cleansed bottle was in the habit of being sent with the dairy-man, in order that the milk of one cow might be procured. As my little patient advanced to about three months, after trying everything I could think of, I advised spoon-feeding with no better result. The child, about this time, having to be removed from the care of his grandmother, was entrusted to a nurse, who, finding the milk arrangements inconvenient, placed the child on condensed milk, with immediate improvement of all symptoms. The diarrhœa rapidly disappeared, and the child continued to do well until cut off at the age of twelve months by croup. Whatever power condensed milk may prove to have over infantile diarrhœa, or however far it may be useful in these cases, remains for future experience to determine. That it was of great service in this case, as also in other reported cases, is, I think, pretty certain, and sufficient to commend it for further observation.—I am, etc., JOHN MARTIN, L.K.Q.C.P.I., L.R.C.S.I.,
Senior Medical Officer, Belfast Dispensary.

Clarence Place, Belfast, August 9th, 1879.

CONSULTING PHYSICIANS AND SURGEONS.

SIR,—In reply to a Member who wishes to know the usual fees of consulting surgeons and physicians in the midland counties, I write simply my own experience as a general practitioner.

1. By consulting surgeon is meant a surgeon to a hospital, or one who by common consent is called in by the public and his brethren. Such surgeons take fees varying from 3s. 6d. a visit to 10s. In consultations, they charge a guinea every third or fourth mile. Most of them dispense medicine, and all, with few exceptions, attend midwifery.

2. By physician is meant one attached to a hospital, or a M.D. who is called in consultation to see medical cases. They are various in their charges, but their fees usually range between five shillings and a guinea. Some dispense medicine. Some take a fee of 10s. 6d. in consultation in the case of people who cannot well afford to pay more; but all would like the guinea when they can get it.

You may be disposed to say that these charges are too little; but the exigencies of life demand (unless the physician be a rich man) that he should work at a market's price; and it must also be remembered that the good done is not always to be measured by the money paid.

If general practitioners will ask for a second opinion more frequently, and pay well for it through their patients, they will do much not only to raise themselves, but the consulting practitioner, in the estimation of the public. Such a thing as a pure surgeon may then be found, even in the midland counties.—I remain, sir, truly yours,
A GENERAL PRACTITIONER.

MENTHOL: AN ANTINEURALGIC.

SIR,—Allow me to mention that in neuralgia of the face I have several times applied a solution of menthol, a solid derived from the Chinese or American oil of peppermint, elsewhere referred to as a powerful antiseptic and theoretically antineuralgic agent. The solution used was, on a first trial, one of the melted crystals only; but, to avoid the irritation of the eyes from the great volatility of the remedy, I afterwards used a mixture of menthol gr. i; rectified spirit of wine ℥50; and oil of cloves ℥10—shaken, and then painted over the affected tract. Relief was had in from two to four minutes; and within one or two minutes at most after this the then existing attack was cured. This, I think, goes far to show that the Chinese custom of painting with oil of peppermint in neuralgic cases owes its reputed efficacy to menthol as its active constituent, especially in view of the fact that the English oil, from which little or no menthol can be obtained, is totally inefficacious.

In cases of toothache, I have cleaned out the cavity of the tooth with a little cotton-wool; then I placed a single crystal on another small piece of the wool and inserted it; and the pain disappeared within a few seconds.

I would recommend in sciatica a trial of the crystals melted with a very small quantity of an essential oil applied over the back of the thigh, and, if necessary, over the area of the popliteal and posterior tibial nerves and their branches. And we may extend the action to intercostal neuralgia and brachialgia, on the principle that nerve-pains generally are probably relieved by the use of menthol.—I am, etc.,
A. D. MACDONALD, Stud. Med. Edin.

Braco, Perthshire, August 5th, 1879.

VOMITING IN PREGNANCY.

SIR,—Surely gentlemen might inform themselves as to what has been done by their predecessors, previous to suggesting, as new, treatment that has been well known for many years, more especially when so ready a means of reference is afforded as the *Medical Digest*. There, at Section 860:6, it will be seen that, in 1859, the value of bromide of potassium in this affection was fully appreciated by Dr. Simpson.—I am, etc.,
M.D.

60, Boundary Road, St. John's Wood, N.W.

INQUESTS AND CORONERS.

SIR,—May I ask through your columns for the opinion of my brother members of the Association upon the following case? A middle-aged woman, previously in good health, upon returning from shopping, was suddenly taken ill, and died before I could reach her, although arriving within a few minutes. A small crowd congregated in and about the house, and a certificate of the cause of death demanded, but not given. Upon inquiring for the coroner's officer, a policeman made his appearance, and stated, as his opinion, that the woman must have "died of a fit", and that no inquest would be necessary; and I am given to understand the body was buried within four days of the seizure. It may be wrong, but my impression has been that, in cases of sudden death, inquests must be held. Of course, people are averse to inquiries and the visit of twelve enlightened gentlemen of the jury to their houses, and they must feel obliged to coroners saving such (to them) annoyance; at the same time, it might save medical men from looking small in the eyes of the public, and only be an act of courtesy, to say the least, if coroners would condescend to answer one's communication of the facts to them by letter.—I enclose my card, and remain, yours faithfully,
MEDICUS.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Lombe Atthill, Dublin; Dr. Bond, Gloucester; Mr. Orton, Newcastle-under-Lyme; Dr. Ringrose Atkins, Waterford; Mr. Whitwell, Shrewsbury; Dr. J. S. Coghill, Ventnor; Mr. W. Thomson, Dublin; Inquirens; Dr. J. B. Pitt, Norwich; Dr. O'Sullivan, Cork; Mr. Teevan, London; Mr. H. Power, London; Dr. Joseph Rogers, London; Mr. W. Mac Cormac, London; Mr. S. M. Bradley, Manchester; The Secretary of Apothecaries' Hall; Dr. Wade, Birmingham; An Associate; Dr. Skerritt, Clifton; Mr. J. Vose Solomon, Birmingham; Mr. G. Eastes, London; Dr. H. L. Snow, London; Rusticus; Dr. Diamond, Muthill; Associate; Zulu; Old Warrant; Dr. Dyce Duckworth, London; The Dean of a Medical School; M.D.; Dr. C. R. Francis, Sutton; Dr. R. Sinclair, Dundee; Mr. A. Jackson, Sheffield; Mr. Callender, London; Mr. Nisbet, Glasgow; Dr. R. M. Simm, Manchester; Mr. F. H. Harris, Mildenhall; Mr. A. W. Moore, London; Mr. A. G. Blomfield, King's Lynn; Dr. Woakes, London; Mrs. Heber-Percy, Market Drayton; Dr. Henry Ashby, Manchester; Dr. Cotter, Ballinacolly; Mr. Nettleship, London; Dr. C. A. Rayner, Stoke; Dr. Roderick Maclaren, Carlisle; M.B., M.A.; Mr. W. A. S. Royds, Reading; The Registrar-General of England; Mr. Rushton Parker, Liverpool; Mr. Chauncy Puzey, Liverpool; The Registrar-General of Ireland; Mr. L. J. Brown, London; Mr. Jabez Hogg, London; Mr. S. T. Fairland, Bournemouth; Dr. W. Fairlie Clarke, Southborough; Dr. H. Mac Cormac, Belfast; Mr. W. F. Grant, Birmingham; Mr. C. Hood, Yalding; Mr. Nelson Hardy, London; Our Edinburgh Correspondent; Our Dublin Correspondent; W.; Dr. H. Macnaughton Jones, Cork; Mr. Swanzy, Dublin; Dr. F. Bond, Gloucester; Messrs. Massey and Harris, London; Dr. Mackey, Brighton; Mr. W. D. Hemming, Bournemouth; Mr. T. W. Barron, Durham; Mr. A. H. Robinson, Hull; Mr. T. Godfrey, Mansfield; Mr. T. P. Harvey, Great St. Leonard's; Mr. Wheeler, Dublin; Dr. F. M. Pierce, Manchester; Dr. Seguin, Paris; Mr. M. A. Ward, Dublin; Dr. Elliot, Carlisle; Mr. A. Devonald, Cyfarthfa, etc.

BOOKS, ETC., RECEIVED.

Essays on Iridectomy. By G. E. Walker, F.R.C.S. London: J. and A. Churchill. Liverpool: Adam Holden. 1879.

Some Remarks on Workhouse Hospitals; with Illustrative Cases. By Thomas M. Dolan, F.R.C.S.Ed. Leeds: Charles Goodall. 1879.

Transactions of the Pathological Society of Philadelphia. Vol. VIII. Edited by J. Henry C. Simes, M.D. Philadelphia: J. B. Lippincott and Co. 1879.

REMARKS
ON
INVERSION OF THE UTERUS.*

By LOMBE ATTHILL, M.D.,
Master of the Rotunda Hospital, Dublin.

INVERSION of the uterus is of unfrequent occurrence, and probably for this reason the subject has not until recently attracted as much attention as its importance demands, for inversion of the uterus involves results of the greatest gravity, often endangering life itself; moreover, when it has become chronic, it has been looked on by the majority of writers as being almost an incurable affection, an opinion which recent experience proves to be erroneous. I have succeeded in replacing the fundus in a case in which the inversion had occurred many months previously; while in America great success has attended treatment similar in principle to that which I adopted, but of which I was ignorant at the date of my first operation.

No one would, I presume, hesitate for a moment to attempt the restitution of the inverted fundus to its original position, were inversion to occur immediately after delivery and the accident at once detected; but it appears to me that when it does occur at this time the accident is frequently overlooked; and I may here express my disbelief of the theory that pulling at the funis is the cause of inversion of the fundus. The funis breaks under a comparatively slight strain, and any force which it can sustain would be quite insufficient to invert the uterus, if it were healthy; some abnormal condition must therefore exist, without which no amount of pulling at the funis would suffice to induce inversion. The accident, then, seems to be only capable of occurring when, from some pre-existing cause, the muscular structure of the uterus at its fundus has become so unduly weakened that a cause which would otherwise have been powerless to effect any change in its shape is now sufficient to produce, first, depression, and subsequently complete inversion of the part. When inversion occurs as the sequence of the expulsion through the os uteri of a fibrous tumour, a similar weakening, or, according to Schroeder, atrophy, of the muscular structure of the uterine wall occurs; and the cases recorded as resulting from the presence of a tumour are numerous.

But, as I am anxious to discuss the subject solely in its practical bearings, I proceed at once to consider the treatment which should be adopted when inversion has been detected, and at what time reposition should be attempted with the best chance of success, if that treatment be decided on.

If the case occur immediately after delivery, the placenta should be at once detached and reposition immediately attempted; but it is otherwise if some days, possibly even hours, have elapsed since delivery; for then the operation becomes very difficult, not, as is usually supposed, from rigidity of the os and muscular structure of the uterus, but from the very reverse—namely, from the increased softness of the uterine walls. The process of involution of the uterus commences immediately after delivery, possibly, indeed, before expulsion of the fœtus, and in a healthy woman proceeds rapidly; one of the first results being increased softness of the uterine walls. The organ is, in fact, undergoing a species of fatty degeneration, which renders the handling of it dangerous. This was forcibly brought under my notice in the following case.

A healthy young woman was admitted into the Rotunda Auxiliary Hospital on the 5th of May last. She had, three months previously, been delivered, after a natural labour, of a healthy child. She was attended by a midwife; but, as far as could be ascertained, no violence or pulling at the funis had been practised. Inversion, however, occurred; and, after the lapse of a few days, she was admitted into the Sligo County Infirmary, under the care of my friend Dr. McDowell. He immediately attempted to effect reposition, but failing, sent the patient to me for treatment. When admitted, she was greatly exhausted, partly from the effects of the long journey, but still more from the constant hæmorrhage, which had continued ever since her confinement; and, as there was still a constant oozing, I decided to lose no time in effecting reposition, being the more anxious, as I was at that time under the impression that every day which elapsed would only increase the difficulty of doing so. Accordingly, on the day after her admission, she was brought under the influence of chloroform, and I proceeded to attempt reposition of the fundus, adopting the method which I had successfully practised in a case sent to me from this city (Cork) not long before.

On introducing my hand into the vagina, I discovered that the inversion was so complete, that the lips of the os uteri were undistinguishable; but, on grasping the fundus and making pressure upwards, I speedily succeeded in pushing up part of the cervix, and I was then able to distinguish the rim of the os; this I seized with a vulsellum, with the view of gaining a point of resistance against my upward pressure; but the lip was so soft, that the vulsellum tore through it immediately. I now applied the end of my repositor to the fundus, but soon found that it sank into the uterine tissue. I therefore withdrew it, and tried to effect reposition by pressure on the fundus with the palm of my hand, while with my fingers I pushed up that part of the cervix which had passed last through the os; but, to my horror, my fingers sank so deeply into the wall of the uterus, which seemed as soft as dough, that I believe I must have reached the peritoneum. I at once desisted from any further attempt, and I feared that serious results would follow; the patient, however, did not suffer the least inconvenience. But I had learned a lesson—namely, that it is both difficult and dangerous to attempt the reposition of the fundus in an imperfectly involuted uterus, and I consequently decided to postpone all further attempts till that process was complete. I accordingly allowed five weeks to lapse, and in the interval I had made for me Dr. J. P. White's repositor, to which I shall allude by-and-bye; and on my next attempt made use of it. I found it to answer very well; and, as the structure of the uterus had become much firmer, I soon succeeded in making the fundus to pass fairly within the os, but, failed, after a protracted attempt, to effect reposition of the inverted fundus. I therefore decided to close the os uteri by means of wire sutures. This I accordingly did, and thus, inclosing the inverted fundus, I hoped that the steady pressure thus exerted on it would have the effect of reducing the size of the inverted mass, and that reposition would subsequently be more easily effected. This practice is recommended by Dr. Emmet; though he prefers the operation of denuding the edges of the os uteri, and thus closing it permanently.

After the lapse of a fortnight, I made a third attempt, and then found, on removing the sutures, that the os uteri had so contracted since the last operation, that I could only get the fingers into it; the inverted fundus seemed smaller and firmer. Having seized the lip of the os uteri with a vulsellum, I proceeded to use pressure on the fundus with a White's repositor, but effected little if any good. The inverted portion had a very peculiar feel; its thickest portion was at the most depending part: here it was about the size of a pullet's egg; from this it narrowed considerably; and the mass felt exactly like an ordinary uterine polypus, with a pedicle rather thicker than usual. It was not, as one would have expected in dealing with an inverted uterus, wider at the base than at the apex, but the very reverse; and the cavity of the uterus was 2¾ inches in depth. I therefore felt much doubt as to whether I might not be dealing with a case in which inversion might be complicated by the presence of a small subperitoneal fibroid; the more so as I could not feel any dimple or depression on the surface of the uterus, such as had existed at the commencement of the operation. I believed that, were I dealing with simple inversion, the case was irreducible, and that I would not be justified in prolonging the attempt to effect reduction, which on this the third attempt had lasted an hour. Under these circumstances, I applied the *écraseur* just above the enlarged portion, and removed what proved to be the inverted fundus. The patient recovered rapidly; but, had it not been for the deceptive feel of the part, which led me to suppose that a tumour might possibly be present, I certainly should not have removed the part, but have adopted Emmet's plan of closing permanently the os uteri, leaving only a small opening to permit the escape of the menstrual fluid. He contends that, if this be done, no hæmorrhage will occur, and that, if necessary, the os can be at a future time opened.

At the time when this case came under my observation, I was quite unprepared for the difficulty and danger attending the attempt to effect reposition of an imperfectly involuted uterus. But my first attempt demonstrated this; for, as already stated, my fingers sank at once deeply into the uterine tissue. But since this occurred I have received from Professor White of Buffalo, U.S.A., a copy of his paper on Inversion of the Uterus, in which he fully confirms the opinion I have formed. On this point, he says: "Whilst undergoing this change (*i.e.*, involution), the uterus does not possess the firmness and elasticity of the unimpregnated uterus, nor the muscular flexibility and toughness of that at the full period of gestation. Indeed, I am induced to suspect that, at this period, the uterus cannot be subjected, without danger of laceration, to manipulation which would be perfectly safe at a later period, after complete involution has taken place." I was much gratified and encouraged at finding my opinion thus confirmed.

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

The conclusion at which I have arrived, then, is this: that if, from any cause, reposition of the inverted uterus be not effected within twenty-four hours after delivery, it is better to delay the attempt for some weeks, till the involution of the organ is completed.

This opinion naturally leads me to the conclusion that mere lapse of time does not materially add to the difficulty of the operation; and this opinion is confirmed by the result of the following case, which has already been published.

S. M., aged 21, was admitted on August 27th into the Rotunda Hospital, on the recommendation of Dr. O'Sullivan of Cork, who had diagnosed, in the January preceding, the fact that the uterus was completely inverted, the inversion being due to the existence of a fibrous tumour which grew from the fundus. The inversion was complete, and there is reason to believe that it must have existed for quite a year prior to her admission. On August 29th, I enucleated the tumour; and, two months subsequently, I effected reposition with the aid of a very imperfect instrument. In this case, after the lapse of a year, or possibly much more, I effected reposition with little difficulty, having failed in the other case to do so, though but three months had elapsed from the date of her confinement when my first attempt was made.

Dr. J. P. White reports several cases of long standing successfully treated by him, and one in which inversion had existed for no less a period than twenty-two years. Clearly, then, time alone is not an important factor in such cases, and only is so where repeated attacks of peritonitis have occurred and dense adhesions formed.

The attempt at reduction being decided on, and the time fixed for the operation, it is next necessary to consider the treatment to be employed. Numerous methods have been suggested; but that advocated by Dr. White is, in my estimation, the best. In my first case, I effected reposition by the use of a very imperfect instrument. It was simply a stem about the thickness of that of a stethoscope, terminating in a cupped disc an inch and a quarter in diameter. But in my second case this instrument failed; and, while I was considering what modifications of it I should make to meet the difficulty, Dr. White's pamphlet, containing a diagram of his instrument, reached me, and I saw at once that it was exactly what I required. I had the instrument made, and found it most satisfactory. The following is his description of the instrument and of his operation.

"By means of the 'repositor', uniform and gentle pressure can be maintained until the os is fully dilated and the fundus pushed up through it. The insurmountable difficulty heretofore has been supposed to consist in our inability to maintain uniform and persistent pressure for a sufficient length of time. The hand would soon become fatigued, and another hand, even of the same individual, could not be substituted without losing a part of what had been gained. This loss is increased when the hand of a fellow-practitioner is introduced to continue the operation. The various substitutes which have heretofore been resorted to for continuing pressure when the operator has become exhausted have utterly failed. The elastic bags, so often called in requisition, press more upon the viscera resting upon the large surfaces anteriorly and posteriorly situated, than upon the fundus, which has no firm ossific base of support, as have the rectum and bladder. The uterus ascends very soon, owing to the yielding nature of the vagina and perinæum, and escapes from the reach of the distended vaginal bags. By means of the large spring at the outer extremity, the amount of pressure can be graduated to an ounce. The disc of this instrument will follow up the fundus, without compressing painfully the urethra or rectum, by means of this continuous elastic pressure in the upward direction, until the fundus disappears in the os and neck. Any intelligent assistant can be trusted to increase or diminish the pressure during the absence of the operator, as the exigencies of the case may demand.

"The construction and action of the 'uterine repositor' will be readily understood by reference to the accompanying woodcuts, Figs. 1 and 2.

"The instrument is composed of a stem of wood or hard rubber, curved to conform to the vaginal curvature, with a coil of steel wire attached to the outer extremity, whilst the other end is expanded and hollowed so as to receive the fundus of the uterus in its concavity or disc. The edge of this disc is tipped with soft rubber, being an inch and three-eighths in diameter and about half an inch deep. The concave extremity of this instrument is carried up into the vagina and placed in contact with the fundus, and then firmly held by the hand in the vagina. The outer end of the instrument, or coil of wire, is placed against the breast of the operator on the same level with the uterus. By means of this large circular spring, the instrument readily keeps its place on the clothing of the operator, and leaves the other hand free to be used above the pubes to assist in fixing the uterus, and assist also in forcing open the dilating os, which can ordinarily be plainly felt hrough the abdominal walls.

"The spring at the outer end of the instrument enables the operator, without danger of lacerating the tissues, to keep up a constant gentle pressure upon the fundus, and by leaning forward to increase this pressure intermittingly. The force thus exerted is applied more directly

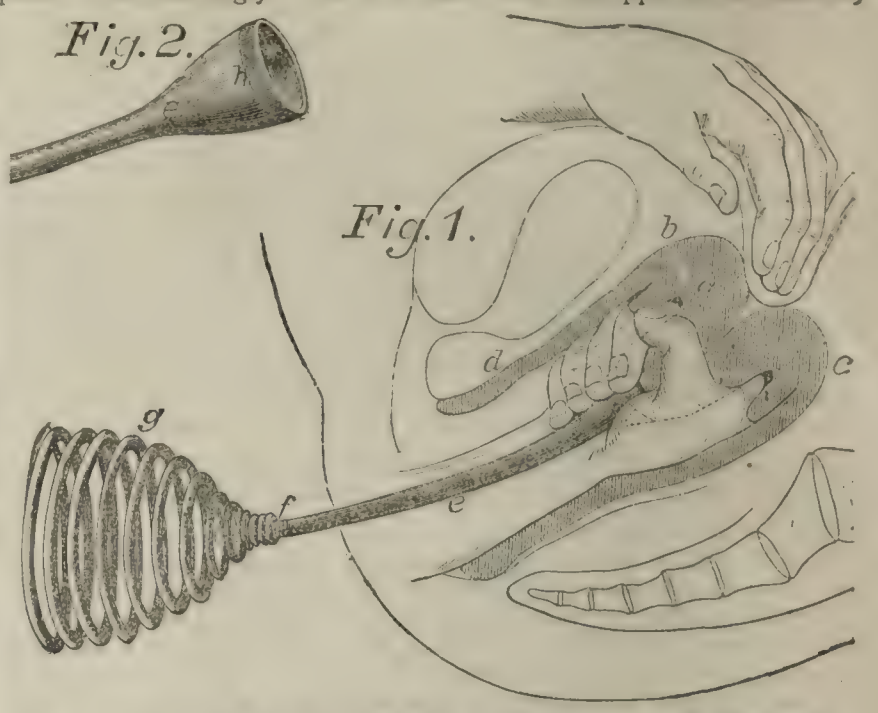


Fig. 1.—*a*. Uterus in process of reduction. *b*. Anterior lip or wall of the uterus with the fingers of the left hand pressing upon it and assisting in pulling open the uterine cavity. *c*. Posterior uterine wall semi-reflected. *d*. Anterior vaginal wall. *e*. Wooden or hard rubber stem of repositor, its enlarged extremity held in contact with the fundus by the intravaginal hand of the operator. *f*. Distal extremity of stem made into a screw, so as to be fastened into *g*, a coil of No. 11 steel spring wire, requiring eight or ten pounds' pressure by the breast of the operator, against which it is placed, to bring it down.

Fig. 2.—*h*. Uterine extremity of stem *e*, which is terminated with a soft India-rubber disk 1⅜ inches diameter.

upon the fundus by means of the repositor than would be possible if the thumb and fingers were used, or the round end of the large bougie. I have often been delighted, since I have used the repositor, to find that it gave me a third hand which did not become fatigued, and which permitted me to use the left hand in manipulating over the hypogastrium; while the right easily held the instrument in contact with the fundus, and firmly grasped that part of the uterus which was not yet reflected and which remained in the vagina. The disc, in which the fundus rests, is less likely to bruise or lacerate the organ than any other mechanical appliance. The intravaginal hand compresses the body and fundus, and lessens its vascularity; whilst something is gained by intermitting the pressure, also lessening by its use the exhaustion incident to unintermitting muscular effort on the part of the operator.

"It may be well to state that the patient is always placed at the side of the bed, with the feet resting in the laps of intelligent assistants, each of whom is also charged with the care of the knee and hand of that side. The hips of the patient are brought quite to the edge of the bed, which is raised so as to bring the parts on a level with the breast and arms of the operator."

I feel convinced, however, that the course I adopt of seizing the lip of the os uteri with the vulsellum, and with it fixing the organ as already described, is very important and greatly facilitates the reduction.

Doubtless, in a few cases, reposition will be impossible; but amputation should, if possible, be avoided; and I therefore think Dr. Emmet's suggestion, if the fundus can be pushed up sufficiently to permit its being enclosed inside the os, of paring the edges of the os and permanently closing it, is well worthy of being practised. It certainly is a proceeding much safer than amputating the fundus, and, as Dr. Emmet points out, does not absolutely render pregnancy impossible; for an opening must be left to permit the exit of the menstrual fluid, through which impregnation may possibly take place.

DAMAGES.—In a town in America, a man brought an action for injury by a defective highway. He said that in consequence the right shoulder and elbow-joints were painful and completely immovable: he had the arm lashed to the body, and the fore-arm supported across the body with the hand as high as the left axilla. He demanded four thousand dollars damages. Two surgeons, who were requested to examine the case, administered sulphuric ether, and found the joints perfectly movable, and apparently perfectly healthy. The claim was settled for seventy-five dollars, and the man was cured.

A CASE OF CHRONIC SENILE INVERSION OF THE UTERUS FOLLOWING THE DEVELOPMENT AND REMOVAL OF A FIBRO-MYOMA: AMPUTATION: RECOVERY.*

By ROBERT BARNES, M.D., F.R.C.P.,
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SEEING that the subject of inversion of the uterus was to come before the Obstetric Section, and feeling that the collation of clinical illustrations affords the most useful means for a right understanding of pathological and therapeutical problems, I have been induced to submit the following case.

Two or three preliminary observations I may be pardoned for obtruding. In discussing inversion of the uterus, especially with reference to treatment, it is essential to bear in mind the distinction I have laid down elsewhere between recent and chronic inversion. An inversion may be described as recent, so long as the due involution of the uterus following labour is not completed. This process takes about a month. During its progress, the uterine muscular fibre still retains more or less of the contractility, dilatability, and vascularity of the pregnant organ. When the process is complete, the muscular wall of the uterus has lost much of the contractility, dilatability, and vascularity which are developed under pregnancy. Those methods of reduction which are comparatively easy if tried within a month after labour may fail if tried at a later period.

In the case I am about to relate, the inversion was first noticed ten years after the woman's last labour. It was discovered after the removal of a fibro-myoma; and the inversion was probably—not certainly—independent of the process of labour. Beginning with the classical case of John Hunter, the preparation of which is in the Hunterian Museum, I have collected in my *Obstetric Operations* and *Diseases of Women* several cases of inversion caused by fibroid tumours. I now describe an interesting case of this kind. Although, in these cases, the growth of a tumour in the uterus may induce muscular development in the proper uterine walls analogous to that observed in pregnancy, still the condition of the uterus, as it comes under observation, much more closely resembles that of chronic inversion. We may, therefore, class the case I now describe as one of chronic inversion. We might, perhaps, even with stricter propriety, refer it to a third order of cases; namely, to one which includes chronic cases observed in women who have reached or passed the climacteric. In these cases, the uterus has gone beyond the involution which follows pregnancy. It has been still further affected by the involution of senility or decrepitude. These, then, may be classed as "senile chronic inversion". The uterine tissue is more dense; the muscular element is disappearing, the fibrous predominating. Hence reduction by taxis or the various manœuvres found effective in the recent and ordinary chronic inversions is more difficult. My present case falls under this order. The woman was near fifty, and senile changes had set in.

In November 1877, I saw, at some distance from London, a woman aged 47, who had had her last child ten years before. Since that time, she had suffered much from metrorrhagia, and this had lately much increased in severity. Being active in business—she was the wife of an innkeeper—she went on disregarding her condition until the losses told so much upon her that she was compelled to give in. She was very stout. I found a large firm mass, rounded, filling the pelvis like a child's head. The hand passed in with some difficulty, surrounded the tumour, and traced its attachment by a broad pedicle to the uterine cavity. I adjusted a wire and cut it through by *écraseur*. A little bleeding followed. The tumour was so large that it was with difficulty brought through the vulva which had previously admitted my hand. It was a fibro-myoma of the size of a small fœtal head. She made a good recovery, and resumed active work.

In May 1879, I was summoned to her again. She had again been suffering from menorrhagia, alternating with offensive watery discharges stained with blood. She was very blanched and very prostrate, and had increased in stoutness. I found a pyriform tumour of the size of a Jargonelle pear, with a small pedicle in the vagina; the root quite continuous with the vaginal roof, leaving no passage beyond for the sound. Her condition made it imperative to remove it with the least possible delay. I applied a wire as before, thinking it was a polypus; but, on tightening the wire, the acute pain aroused the suspicion that it was the inverted uterus. This was verified by closer examination. Still we determined to persevere with ablation, knowing that her condition was too low to bear the tedious, painful, and probably forcible process of reduction by sustained elastic pressure. I therefore deliberately cut through the pedicle with the wire. Rather free bleeding followed; this was staunched by swabbing with tincture of iodine. Considerable pain in the abdomen followed; this was allayed by opiates, and she slowly recovered. My friend Mr. Turrell reported on July 6th that she had progressed favourably—had walked for more than half an hour the day before; and that, examined by the speculum a week before, the cicatrix appeared complete, and all constitutional disturbance had subsided. The temperature rose during the first week to 100.5° and 102°; the pulse to 104, and then fell to normal rate.

The specimen is in the Museum of St. George's Hospital. It is laid open to show the interior. The extremities of the Fallopian tubes and of the round ligaments are drawn into the inverted cavity.

The question arises, When was the inversion produced? It might have arisen before the removal of the tumour in the first operation, or during that operation, or at some subsequent time. Which is the more probable? It is difficult to understand how the uterus could turn itself inside out after the tumour was removed. But it is not impossible that the stump left behind might be so large and projecting as to excite uterine expulsive action, and that thus the inversion was completed soon after the first operation; the stump meanwhile undergoing disintegration and disappearing. But I am more inclined to conclude that the inversion was produced or completed during the operation or immediately after it. I had no opportunity of examining again; and, indeed, she got on so well that there seemed no indication for further treatment, until a year later.

Another question arises: one which I put to myself with especial point, because I acted in opposition to rules upon which I have much insisted. Might not reduction have been effected and amputation avoided? Might not the resistance have yielded to sustained pressure, aided by taxis and the operation I have recommended and practised with success, of incising the neck of the uterus? It is impossible to answer this question in the negative. The attempt, I knew, would be attended by unusual difficulty, suffering, and danger; and, since the subject had reached the climacteric, the loss of organs which had already passed into decline could hardly be regarded in so serious a light as the loss of organs still in the plenitude of functional life. In these cases, then, of senile chronic inversion, the methods of ablation come into stronger competition with the methods of reduction than they ought to be permitted to do in cases of simple chronic inversion. Still I think that even in cases of senile chronic inversion, where the conditions are favourable to the attempt at reduction, the attempt ought to be made. I venture to conclude with the following propositions.

The division of uterine inversions into three orders—namely, 1, recent; 2, simple chronic; 3, senile chronic—it will be seen, is based upon clear physiological distinctions; and this division carries clear therapeutical indications. In the recent cases, immediate reduction by taxis is almost always indicated. In the simple chronic case, taxis, aided or not by sustained elastic pressure and incisions of the uterine neck, is indicated, and will almost always be feasible. In the senile chronic cases, reduction by taxis, aided by every ancillary means, though still indicated, will be much more difficult of execution; and amputation, the last resource, will be less open to physiological objection, and at the same time less dangerous, than in the first two orders of cases. It must finally be borne in mind that, especially in the senile chronic inversions, tolerance may be acquired, and thus render all operative interference unnecessary.

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

THE TREATMENT OF CHRONIC COMPLETE INVERSION OF THE UTERUS:

WITH CASES ILLUSTRATING THE ADVANTAGES OF THE DIRECT METHOD OF APPLYING ELASTIC PRESSURE.*

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THE time has at length arrived when the treatment of inversion of the uterus can no longer be looked upon as an opprobrium to gynæcology. Now, it must be a very exceptional case which cannot be cured, or which demands for its relief dangerous or mutilating operations.

It will be convenient to consider the present subject under the heads Reposition, Aids to Reposition, and Repositors.

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

1. REPOSITION.—During the reposition of an inverted uterus, it may be made to pass through three distinct movements, the results of three methods of reposition—fundal, lateral, and cervical.

Fundal Reposition is impossible except in cases of acute inversion, when the walls of the uterus are very much relaxed. It is attempted by pressing upon the fundus with the fingers in the form of a cone, or with a drumstick-shaped instrument. The object is to drive the fundus through the cervix. It is the most unscientific method of replacing an inverted uterus, as it demands unnecessary dilatation of its neck. Fundal reposition ought never to be employed; it has been superseded by

Lateral Reposition.—This is a very effective plan of reducing acute inversion. The secret of its success has been well explained by Dr. Marion Sims. "By this means," he says, "we slide one-half of the organ at a time through the os internum, instead of the whole fundus, which presents a greater diameter." The manœuvre is performed by the hand, pressure being exerted against either horn of the uterus. Some years since, I was requested to remove what had been diagnosed as a polypus, but which turned out to be an uterus inverted after the patient's confinement ten days previously. In this case, I first tried the fundal plan, but without success. The lateral method succeeded in reinverting the organ in two or three minutes.

Cervical Reposition.—It is difficult to say to whom the credit of having first recommended this plan of reposition is due. In this country, Newnham drew attention to it as early as 1818. He says: "It is wisest and best to endeavour to reinvert the uterus by returning first that portion of it which was last expelled from the os uteri" (*Essay on Inversio Uteri*, p. 16). The recognition of this fact was an immense step in advance, and upon it depended the success now reached. Cervical reposition is produced by pressure upon the fundus; but all idea of indenting it is discarded.

Rate of Reposition.—Whether we look upon the uterus as a plastic organ to be moulded, or a muscle to be tired out, it must be equally unscientific to endeavour to force it to change its form suddenly. When it has been inverted two or three months and the process of involution has been completed, rapid reinversion, whether it be attempted by hand or by the repositor, is an operation unnecessary and unjustifiable There is no need for such dangerous haste. It will probably be found that even gradual pressure had better be exercised intermittently rather than persistently; for the continuous forcible urging of the cup of the repositor against the fundus may result in sloughing.

2. AIDS TO REPOSITION.—Many adjuvants to reposition have from time to time been suggested and employed. *Posture*, *hot-water injections*, *belladonna*, and *galvanism* have been recommended. *Compression* of the uterus by hand, forceps, or bandage, has been also used; but it can be of no use in chronic inversion. It belongs to the past period of fundal reposition, and is not free from danger, as in some cases it has caused sloughing. *Dilatation* of the cervix is another mode of aiding reposition. It may be effected by the fingers acting through the vagina, the rectum, or the abdominal walls. It has also been performed by opening the abdomen and passing a dilating instrument directly into the cervix. *Incisions* have been recommended for the purpose of overcoming the rigidity of the cervix; but they have not been found to answer in all cases; and, where they have, lacerations have also occurred, extending the lesions caused by the knife. *Sutures* have also been passed through the neck of the uterus to maintain the ground gained when reposition has been half performed. Fortunately, it may now be stated that all these aids to reposition, whether they be harmless or dangerous, will henceforth be unnecessary.

3. REPOSITORS.—Various instruments have been used from time to time for the purpose of replacing inverted uteri. Of these, the most important are the hand, elastic bags, straight rods with round and cupped ends, curved rods with round and cupped ends, and double curved rods with cupped ends.

The Hand has been much used as a repositor in chronic inversion; but, it must be confessed, more often with the result of lacerating the vagina than reinverting the uterus. It is an admirable instrument in acute inversion, when lateral reposition is so desirable; but in chronic cases it is cruel and inefficient. Time is now required. No hand can sustain the fatigue of taxis for a sufficiently long period. It is most unscientific to demand suddenly from the uterus that which it will willingly grant if reasonable time be only afforded. The hand, therefore, must be discarded as a repositor in chronic inversion.

Elastic Bags have many faults. They act too slowly; they compress parts which need no pressure; they slip out of the vagina, obstruct the action of the bladder and rectum, and lack precision in exerting their power. It was upon the elastic bag, however, that we took the first great step towards perfecting the application of gradual elastic pressure in the cure of chronic inversion; and to our countryman Dr. Tyler Smith undoubtedly belongs the credit of having done this service. Elastic bags have cured many cases of inversion; but their day has passed.

Straight Rods with Rounded Ends, like drumsticks, were the first instruments employed. They were used for indenting the fundus, and thus reinverting the uterus by fundal reposition. No one dreams of using such a repositor now.

Straight Rods with Cupped Ends.—Perhaps the first cupped repositor mentioned is that referred to by Madame Boivin. In Hemming's translation, page 126, we find the following remarkably suggestive passage. "Might not pressure from below upwards be also made available? A pessary, like that of a cup and ball, might, for this purpose, be introduced into the vagina." The change from the convex to the concave extremity of repositors was a great advance, and, in fact, became inevitable as soon as operators abandoned the fundal and adopted the cervical method of reposition. The straight cupped repositor is nearly a perfect instrument; but it lacks the power of applying pressure to the fundus in the most direct and efficacious manner. It must always act laterally, causing the cup either to slip past the fundus or to urge it against the posterior wall of the vagina in a line diverging 25° from the axis of the pelvic inlet.

CASE I.—A successful case treated with a straight cupped repositor by Dr. Matthews Duncan (*St. Bartholomew's Hospital Reports*, vol. iv, p. 97) will illustrate its advantages and disadvantages. The main facts are briefly as follows. Mrs. S. A. C., aged 38, was admitted into St. Bartholomew's Hospital on March 13th, 1878, with chronic inversion of the uterus, caused by a fibroid. This was removed, and the treatment for reinversion commenced on March 16th by "persistent and very powerful reducing taxis", employed by Drs. Duncan, Godson, and Champneys, but in vain. On May 21st, a straight cupped repositor was applied, and elastic pressure maintained for seventeen hours. Pain, vomiting, and distress rendered it necessary to remove the instrument. On May 28th, a second attempt at reduction was made, but "*failed from the cup slipping off the fundus uteri*". On June 4th, the repositor was again used, and in seventy-four hours reposition took place.

Curved Rods with Round Heads.—Chailly Honoré mentions the use of a "bâton courbe renflé à son extremité" in cases of inversion, and White's first repositor was of this form. Round-headed rods with a pelvic curve are not now used.

Curved Rods with Cupped Ends.—These are not such perfect instruments as straight cupped rods; but they are still much in favour with some gynæcologists. They exert pressure in a wrong direction; that is to say, in a line diverging as much as 45° from the axis of the pelvic inlet. Consequently, all the disadvantages of a straight cupped repositor are increased.

CASE II.—A case treated by the curved cupped repositor, under the care of Dr. Robert Barnes (*Obstetrical Journal*, vol. i, p. 5), may be given in illustration. It is briefly as follows. H. H., aged 27, was admitted into St. Thomas's Hospital February 19th, 1872, suffering from chronic inversion of the uterus.—February 20th. Supposing the uterus to be a polypus, the *écraseur* was applied; but, pain being complained of, it was removed.—March 6th. Inversion having been diagnosed, the "largest hydrostatic dilator" was applied in the vagina and used for two days.—March 13th. A curved repositor was inserted and retained until the 19th, when pain, vomiting, and rigors came on, and the instrument was removed.—March 22nd. The patient was placed under chloroform, and two incisions were made in the cervix uteri, and reduction by taxis attempted. Failing, the repositor was again employed, and continued in use until April 9th, having been temporarily removed on the 5th and 6th, while further attempts were made by taxis. On the 9th, the patient was greatly troubled with vomiting and prostration, and it was determined to make another attempt at reduction by taxis. This was the fifth attempt to reinvert the uterus by hand, and it succeeded.

Double Curved Rod with Cupped End.—It will have been noticed that neither the straight nor the single curved repositor exerts pressure in the most advantageous direction. The necessity of doing this has been long recognised. Burns, in 1728, says reposition "may be facilitated by pressing up the fundus in the direction of the axis of the uterus"; and Aitkin, in 1784, remarks that reinversion may be best "effected by pressure in a just direction". Gooch, in 1831, gives us the most explicit instructions. He says: "You are to press it (the uterus) against the os tincæ, not upwards and backwards, but in the

direction of the upper axis of the pelvis, upwards and forwards towards the præcordia." Nothing more of a practical nature relating to the line in which force should be used can be added to these words. In inventing my repositor, I have endeavoured to construct it in such a form as to make it possible to carry out Gooch's instructions. The rod which supports the cup has been doubly bent, and has a pelvic and a perineal curve. With this instrument, the fundus of the inverted uterus may be pressed "*upwards and forwards*" in a direct line with the axis of the uterus and the pelvic inlet. Dr. Matthews Duncan, when detailing his case, has referred to my instrument. He says: "It has been thought advisable by Aveling to give the stem of the repositor a perineal curve, such as is observed in Tarnier's midwifery-forceps, and for reasons analogous, if not identical. But such modification of the simple straight repositor seems to me unnecessary." I take this opportunity of explaining that the curve in Tarnier's forceps, from which I am supposed to have derived my idea, was invented by myself and applied to my forceps and published ten years before Tarnier made his forceps known. When I published the first notice of my repositor, I said the straight repositor must have a tendency to slip past the fundus; and in the next paragraph to this, in which Dr. Matthews Duncan expresses his satisfaction with the straight instrument, he records the occurrence of the very accident I predicted.

My repositor has been used three times during the past year—twice by myself and once by Dr. John Williams. The cases are briefly as follows.

CASE III.—Mrs. W. came under my care suffering from chronic inversion of the uterus. She had been treated by several eminent gynæcologists with a variety of repositors and by taxis, and had been sent to Mr. Spencer Wells to have the uterus removed. The patient, however, thought she would have one more attempt at being cured without mutilation, and fell into my hands. It was for this case my repositor was made, and it was applied without causing much pain on May 7th, 1878, at 3 P.M. The cup was fitted to the fundus, and by means of four elastic rings, two in front and two behind—all being fastened to a belt kept up by braces—pressure was exerted in a line with the axis of the pelvic inlet to an extent never exceeding two and a half pounds.—May 8th, 10 A.M. The uterus was found reinverted as far as the internal os. At 9.30 P.M., in consequence of pain, all pressure was removed for thirteen hours.—May 9th, 10.30 A.M. The repositor was again made active.—May 10th, 10.35 A.M. The uterus was found completely reinverted. (*Transactions of the Obstetrical Society of London*, vol. xx.) This most obstinate case, therefore, was cured in sixty-seven hours and a half, or in fifty-four and a half hours of active treatment. The patient had no constitutional disturbance, and spent the day after in writing and knitting.

CASE IV.—Mrs. H., aged 26, was admitted into University College Hospital on August 30th, 1878, with chronic inversion of the uterus, under the care of Dr. John Williams.—September 3rd. My repositor was applied.—September 4th, 10 A.M. The uterus was found partly reinverted. At 11 P.M., the uterus was found completely reinverted. An offensive discharge continued for some days; but the patient was soon discharged cured. Reposition in this case was effected in thirty-three hours.

CASE V (not before published).—Mrs. L., aged 26, was admitted into the Chelsea Hospital for Women, under my care, on June 4th, 1879. She had chronic complete inversion of the uterus. Previously to her admission, attempts at reduction by taxis had been made.—June 5th, 4.30 P.M. I applied my repositor.—June 6th, 3.15 P.M. The uterus was found partly reinverted.—June 7th, 1 A.M. The patient felt the elastic rings "suddenly go loose", and all pain ceased. Dr. Chambers, paying an early visit to the hospital, found that the cup had passed into the uterus. At 4 P.M., the cup was tilted and easily removed. I passed my finger into the uterus to the fundus. The cavity measured three inches and three-quarters. An offensive discharge continued for some days; but the patient left the hospital for the seaside on June 25th, three weeks from the date of her admission.

An analysis of these cases shows the following results.

Dr. Barnes's *single-curved repositor* was actively employed five hundred and twenty-eight hours without success; and the treatment, from the first application of the instrument to its removal, was eight hundred and forty hours.

Dr. Duncan's *straight repositor* was in active use more than ninety-one hours; and the treatment, from the first application to the time of reinversion, was four hundred and thirty-two hours.

Dr. Aveling's *double-curved repositor* (taking an average of three cases) reinverted the uterus in forty hours, and the treatment lasted forty-four hours.

These figures show, I think, incontestably that, in treating chronic complete inversion of the uterus, the direct method is the best; and that the success of a repositor is in exact proportion with the directness of its action.

INVERSIO UTERI.*

By J. WALLACE, M.D.Edin.,

Obstetric Physician to the Royal Infirmary, Liverpool; and Lecturer on Midwifery and Diseases of Women in the School of Medicine.

THE two following cases are remarkable in this respect, that in the one symptoms of an alarming nature showed themselves, while in the other little or no inconvenience was experienced.

CASE I.—Mrs. A., aged 25, primipara, of good health previous to pregnancy, married, and was taken in labour at full term. She hadt been depressed and debilitated by news of the loss of her husband a-sea. She had a tedious labour, and was delivered by her medical atl tendant with forceps; ergot having been previously given on severa. occasions. She made a slow recovery. The urine had to be extracteds She noticed that the after-discharges were profuse; and three week after delivery a profuse vaginal hæmorrhage set in which did not yield to astringents. Dysuria and dribbling were constant. The bowels were constipated. She gradually lost strength, became hysterical and delirious, and was at length seized with epileptiform convulsions. It was thus (October 20th, 1872), twelve weeks after the confinement, I was asked to see her in consultation.

She was lying in dorsal decubitus, drowsy, with low muttering delirium; pulse 120 to 135, weak; skin hot and dry; pallor of face. The teeth were covered with sordes; the tongue was furred, covered with aphthous spots, which extended over the tonsils and pharynx, and interfered with deglutition. The abdomen was flaccid, not tympanitic. She had occasional vaginal hæmorrhage.

On examination, I found in the vagina a pyriform tumour like a polypus. There was no uterine cavity; no uterus in the normal position, as determined by combined bladder and rectal examination, and by rectal and suprapubic examination, the patient being under chloroform.

Treatment.—I dilated the vagina with the hand, and applied the taxis after the combined methods of Viardel and Noeggerath, that is, fixing the uterus with one hand pressed against the ring of the cervix above the pubes, and grasping it *per vaginam* with the other, and bringing pressure to bear on one cornu. After forty minutes, it was reduced suddenly. On passing the sound, it measured two inches and a half. She was put under full doses of opium for two days. The bad symptoms disappeared, and she recovered.

CASE II.—Mrs. B., aged 46, married a second time, came under my observation for influenza and somewhat obscure abdominal symptoms, with the supposition of pregnancy. She objected to give me any history until after I had examined the case carefully and completely; the result of which was that I stated she had inversion of the uterus. She at once confessed it was so, and she knew it, and that this was the history. Twenty-eight years ago, when eighteen years old, she was confined with her first and only child, after a labour of three days' duration. She recovered so far as to be up and about in the course of three weeks, but the after-discharge continued more or less for twelve months. She had loss of power over the sphincter ani, dysuria, and dribbling of urine; and also partial loss of motor power over the lower limbs, especially after exertion. These conditions continued with varying severity for about ten years, after which they gradually abated and almost entirely disappeared. Menstruation became regular and normal, and continued so until about a year ago, when it ceased, and never returned. I advised her to let well alone. She continues well.

REMARKS.—The curious feature in the last case is this, that we find an intelligent lady who knew her condition resolute enough to marry a second time. It has medico-legal aspects, probably. But so well did she feel, that on the cessation of menstruation she imagined there was just a possibility of her being pregnant; and, under the *ruse* of a feigned illness, she attempted to get what she thought was an independent opinion. The first case, on the other hand, presented conditions of the most extreme danger. She was entirely unconscious, presented symptoms which indicated the grave nature of the so-called typhoid state, and had periodic convulsions of an epileptic character, each one of which threatened to extinguish her life. Reduction of the inversion was followed by an immediate abatement of all these grave indications, and she regained her health.

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* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

THE USE OF DUBOISINE, GELSEMINE, ESERINE ETC., IN OPHTHALMIC PRACTICE.*

BY H. MACNAUGHTON JONES, M.D., M.CH.,
Professor in the Queen's University in Ireland; Surgeon to the Cork Ophthalmic and Aural Hospital, etc.

IN introducing the discussion on mydriatics and myotics, after consideration, I have determined, remembering the time at my disposal, to proceed as follows. I thought that, to make this discussion practically useful to the general profession, as well as to more special practitioners, it would be desirable, in the first instance, to summarise all that I find recorded on the action of the alkaloids, eserine, duboisine, pilocarpine, and gelsemine, to this date; and secondly, to briefly give the results of my own experience on some of these, of necessity limited compared with that of others present. I hope by so doing to open the way to what must be a most useful and generally instructive ophthalmological discussion. I may add, that I have also been compelled to this course by the very limited time at my disposal to collect material and to make satisfactory experiments.

To my notes, I have added some with which Mr. John Tweedy of London has kindly supplied me. They are distinguished by being included within brackets.

RESULTS OF EXPERIMENTAL RESEARCHES TO THIS DATE WITH MYDRIATICS AND MYOTICS.

Duboisine (*Mydriatic*).

Alkaloid found in the leaves of a shrub, the *Duboisia myoporoïdes*, native of New Guinea, Australia, and New Caledonia: nat. order Scrophulariaceæ (Endlicher); Solanaceæ (Bentham and Hooker). It forms a link between both. Duboisine resembles atropine, and may be identified with it.

[The first experiments with this powerful mydriatic performed in Europe were undertaken in December 1877 by Mr. John Tweedy, at the request of Dr. G. Fortescue, of Sydney, New South Wales. The *Lancet* for March 2nd, 1878 (vol. i, pp. 304-306), contains an interesting account of Mr. Tweedy's investigations, as well as an elaborate and complete report on the general physiological action of duboisia, prepared by Dr. Sydney Ringer.

The mydriatic properties of duboisia myoporoïdes were, in the first instance, accidentally discovered by Dr. Joseph Bancroft of Brisbane, while pursuing, at the suggestion of Baron von Mueller, some investigations elucidatory of the action of "pituri", a stimulating narcotic chewed by the natives of Central Australia. Dr. Bancroft related the circumstances under which he came to discover the mydriatic properties of duboisia myoporoïdes, in a paper read before the Queensland Philosophical Society in October 1877. In order that the subject might be more completely investigated, Dr. Bancroft seems to have submitted some of the extract of duboisia to Dr. Fortescue, who in his turn forwarded it to Mr. Tweedy.

This gentleman says: "It will be seen from Dr. Ringer's elaborate report that the physiological action of duboisia is apparently identical with that of atropia. The same remark applies to the effects of the local application to the eye. If there be any difference, it is that duboisia is more prompt and energetic than atropia, and certainly very much more so than the strongest extract of belladonna."

Of a watery solution of the extract (one in twenty), Mr. Tweedy says: "The resulting dilatation of the pupil usually lasted from six to ten days; and the concomitant paralysis of accommodation, which in every instance became rapidly complete, about three or four days; it then gradually subsided; so that, about five to seven days after the application, the accommodation was as strong and active as before. The pupil in all cases was affected sooner, and recovered later, than the accommodation."

By employing the drug on his own eye, Mr. Tweedy found that the pupil became fully dilated in fifteen minutes; and that, during the same period, the nearest point of distinct vision receded from four to ten inches from the eye. In twenty-five minutes, ordinary small print could not be read at any distance with the unaided eye; so that in this comparatively short time a high power of accommodation for near objects was practically abolished. By more delicate tests, however, it was found that the effect went on increasing for four hours, when it attained its maximum. After about thirty hours, the power of accommodation began to declare itself, and in four days was completely restored.

Employed subsequently in all cases in which atropia was indicated, such as injuries and diseases of the cornea, iritis, spasm of accommodation, etc., it was always beneficial in its action, and in some instances superior to atropia.

Since these experiments, an alkaloid (duboisine) has been obtained, but its action has been found to correspond with that of the extract. All observers seem to corroborate Mr. Tweedy's statement that duboisine is a more rapid and more powerful pupil-dilator and accommodation-paralyser than either belladonna or atropia.

Mr. Tweedy has lately informed me that, after repeated trials, he is disposed to prefer a watery solution of the extract to the solution of the alkaloid. The former is, he says, painless, and quite as prompt and powerful as the latter, and has, moreover, in his experience, never been attended with that feeling of giddiness, or those symptoms of mild delirium, that sometimes undoubtedly occur when the alkaloid is frequently used.]

Mr. A. W. Gerrard (*Pharmaceutical Journal*, April 6th, 1878, and *Journal de Pharmacie*, tome xxvii, p. 405) gives the following differences between duboisine and atropine. 1. Duboisine is twice more soluble in water. 2. Duboisine is a more energetic base (lower molecular weight). 3. Their reaction with *concentrated sulphuric acid* differs. 4. Atropine, heated with *hydrate of barytes*, gives an odour like hawthorn-flowers; duboisine, similarly treated, emits a disagreeable odour. They behave alike when heated: the vapour condensed looks like transparent varnish. The only salts of duboisine Mr. Gerrard obtained in the crystalline state were the sulphate and hydrobromate.

Mr. Holmes (*Pharmaceutical Journal*, March 9th, 1878) says duboisine has the same action as atropia and datura stramonium.

Dr. Ringer (*Lancet*, March 2nd, 1878) says that the action of duboisine is as energetic and rapid as that of atropine. It dilates the pupil; dries the mouth; suspends the secretion of the skin; causes headache and drowsiness; and increases the pulse. It is antagonistic to muscarin. After some days' administration, it produces tetanus in frogs.

Mr. Tweedy finds no difference between the action of duboisia and belladonna. Duboisia is more rapid and energetic than belladonna. [The cause may be that the leaves of duboisia contain more alkaloid, or the extract is better made. H. M. J.] For use, the extract, dissolved in twenty times its weight of water, acts better than concentrated extract.

Dr. W. K. Sullivan suggests that atropine is identical with *duboisine* ("seems undoubtedly to be only atropine"). Its behaviour with tannin, iodhydrargyrate of potassium, chloride of gold, bichloride of platinum, sulphocyanate of potassium, mercuric chloride, potash, soda, and ammonia is the same as that of atropia. Experiment may prove it a different body, but containing closely related homologues of the radical atropine.

Gelsemine (*Mydriatic*).

According to Frediger, this alkaloid was discovered in the roots of the *Gelseminum sempervirens* (Persoon), a North American plant, found in Virginia and South Florida. In American pharmacy, it was styled "Electrical Febrifuge". It is a solid, colourless, inodorous body. It dissolves in twenty-five parts of ether; in chloroform, and in sulphide of carbon; scarcely in alcohol or in water. Water acidulated with hydrochloric acid dissolves it readily. The alkaloid itself has not been obtained crystallised. When heated above 100°, it volatilises. Although it dilates the pupil, it is not antagonistic to strychnia nor to Calabar bean. It paralyses the circular fibres of the iris, not contracting the radiating fibres as atropine. (The action is first on the cerebro-spinal system; then on the respiration and the heart.) *The motor nerves of the eye are first affected.* The lids are paralysed, and cannot be lifted; the pupil is dilated. (The special sensibility of the tongue is deadened.) (Pronunciation is difficult.) (The antidotes are alcoholic stimulants, electricity, aromatic spirit of ammonia, and tincture of *Xanthoxylum fraxinum*.

[In 1875, Dr. Sydney Ringer and Mr. William Murrell, experimenting with gelseminum sempervirens, observed the curious fact that, while the internal administration of the tincture in doses sufficiently large to produce toxic effects caused contraction of the pupil (*Lancet*, 1876, vol. ii, p. 78), the local application of a solution of hydrochlorate of the alkaloid (gelsemine) to the conjunctiva was invariably followed by dilatation of the pupil (*Lancet*, 1876, vol. i, p. 734; also vol. ii, p. 78).

At the request of these gentlemen, Mr. Tweedy undertook to complement these investigations by a more detailed examination of the mydriatic properties of this alkaloid. The result of this examination is given in the *Lancet* for June 9th, 1877 (vol. i, p. 832), in a paper "On the Mydriatic and other topical effects of the application of Gelsemina to the Human Eye".

After incidentally calling attention to the remarkable fact that the commonly recognised dilators of the pupil had hitherto been obtained

* Read in the Subsection of Ophthalmology at the Annual Meeting of the British Medical Association in Cork, August 1879.

from some member of the natural order *Solanaceæ*, gelseminum, a powerful mydriatic, is botanically allied to strychnos nux vomica, and is said by many authorities to belong to the same natural order—namely, *Loganiaceæ*—Mr. Tweedy describes in order the changes (*a*) in the size of the pupil, (*b*) in the state of the accommodation, and (*c*) in the relative strengths of the extra-ocular muscles.

Pupil.—With a solution of moderate strength, eight to ten grains to the ounce, the pupil slowly dilates, attaining its maximum in from fifty to seventy minutes. Stronger solutions are, of course, rather more active. When once the pupil is fully dilated, it remains fixed and immobile for many hours.

Accommodation.—No sooner does the pupil begin to dilate, than evidences of impaired power of accommodation appear, and by the time that dilatation is complete, the normal range of accommodation is shortened by several inches. The effect on the power of accommodation, however, goes on increasing for three or four hours, at the end of which period the nearest point of distinct vision will be removed from four to fourteen inches if a strong or frequently applied solution have been used, and to seven or eight inches with a weaker or less frequently applied solution. But accommodation can only be wholly abolished by a very strong solution of about twenty grains to an ounce, applied at frequent intervals. If the power be very great, or if spasm exist, gelsemine cannot be relied on to overcome the accommodation, although the pupil dilates freely.

Ocular Muscles.—In a large number of trials, it was invariably found that the internal rectus muscle could overcome a stronger, and the external rectus a weaker prism than before. This Mr. Tweedy ascribes to the action of gelsemine on the terminations of the sixth nerve; and the explanation accords with the experience of Dr. Ringer and Dr. Murrell. In the experiments performed by these gentlemen upon rabbits and cats, it was found that whenever the animals were poisoned, whether by internal administration or by local applications, the eyeballs became prominent from paralysis of the ocular muscles (*Lancet*, 1876, vol. i, p. 732). Subsequent experiments upon man showed that one of the first symptoms of the toxic effect of the internal administration was weakness of the external recti giving rise to marked convergent strabismus.

From the ophthalmic surgeon's point of view, Mr. Tweedy calls attention to the important fact that after the use of gelsemine, sufficient accommodation to read ordinary newspaper print returns in from ten to fifteen hours, and that in thirty hours the accommodation is practically restored, though the pupil remains somewhat dilated for several days. With atropine, on the other hand, as we all know, many days must elapse before accommodation returns.]

Physostigmine or Eserine (*Myotic*).

From cotyledons of *Physostygma venenosum* or Calabar bean. Discovered in 1864 by J. Jobart and Hesse.

M. Vée and M. Leven showed how to obtain it crystallised, and called it eserine.

M. Duquesnel (*Journal de Pharmacie*, iv série, tome xxii, p. 48) says that eserine, dissolved in hydrobromic acid and allowed to evaporate slowly, forms stellar groups and fibrous crystalline crusts. The salt is still somewhat coloured, but forms almost colourless solutions; boiled distilled water and glycerine prevent oxidation. Neutral eserine sulphate is employed by oculists in yellowish or red masses. Oxygen transforms it into a crystallisable but inert substance. The coloration of the eserine salts is due to this red inert body.

A. Weber does not recommend eserine in glaucoma; it increases the pressure of the crystalline humour which exists at the beginning of that disease. He expects good results from pilocarpine. (Die Ursachen des Glaucom, *Archiv für Ophthalmologie*, Bd. 13, Abth. i, S. 1; Virchow and Hirsch, *Jahresbericht*, xii Jahrgang (1877), Bd. ii, Abth. 2, S. 447.)

According to Von Reuss, solution of eserine (1 or 2 per cent.), dropped into the eye, within five minutes caused increase of refraction. This continued to increase; the maximum being reached in from twenty to thirty minutes. In emmetropic eyes the maximum reached $\frac{1}{9}$. (The maximum was higher if the solution were frequently applied.) It only lasts a short time. There is a gradual diminution of refraction in an hour and a half to two hours. The focus has then about its original position. Simultaneously with the adjustment spasm there is an increase in the convexity of the cornea, as measured by Helmholtz's opthalmometer. The diameter of the cornea is diminished from 8 to 17 hundredths of a *millimètre*. In seventy or eighty minutes, with *the backward adjustment*, it reaches as a rule its former magnitude. (Ueber Eserinwirkung, *Wiener Med. Presse*, No. 21; also Die Wirkung des Eserins auf das normale Auge, *Archiv für Ophthalmologie*, Bd. 23, Abth. 3, p. 63; Virchow and Hirsch, *Jahresbericht*, Bd. 11 for 1877.)

Von Reuss is disposed to connect the diminution of the radius of the cornea with the act of spasmodic tension of the adjustment muscle with the scleral limbus, and less so with a diminution in pressure of the anterior chamber.

Königstein obtained the same results as Von Reuss. The effect of solution of eserine (1 per cent.) on the near vision focus vanishes after the lapse of one hour; the focus of distant vision is moved nearer the eye. The former position is only regained after forty-eight hours. Simultaneously with the myotic action of the eserine, intensity of light and sharpness of vision are diminished with myosis. The results are the same as previously obtained by von Gräfe with Calabar bean. (Ueber die Wirkung des Eserin an normalen Augen, *Wien. Med. Presse*, No. 38; Virchow and Hirsch, *Jahresbericht*, 1877.)

Mohr gives a fuller account (same as Weber), and relates cases. (Noch einmal das Eserin, *Archiv für Ophthalmologie*, Bd. 22, Abth. i, S. 161.)

Von Wecker (Ueber Eseringebrauch, Zehender's *Klin. Monats. für Augenheilkunde*, S. 69; *Annal. d'Oculistique*, tome 77, Jan. and Feb. 1877) recommends eserine in widespread ulcerated cornea; abscess (after puncture); in marginal ulcer (serpens) (after cutting through); and in the beginning of suppuration of the flap after cataract operation, after the whole wound has been opened with a needle as recommended by von Gräfe (See also Macnaughton Jones, on Wecker's Cataract Operation, *Medical Press and Circular*, July 1877). Von Wecker ascribes to it an antiseptic action. Schmidt and Rimpler deny this. (Zur Frage über die antiseptische Wirkung der üblichen Eserin und Atropin Lösung, Zehender's *Klinische Monatsblatt für Augenheilkunde*, 1877, S. 127.)

Laqueur (Ueber Atropin und Physostygmin und ihrer Wirkung auf den intraocularen Druck, Ein Beitrag zur Therapie des Glaucoms, *Archiv für Ophthalmologie*, Bd. 23, Abth. 3, S. 149) considers the pressure-diminishing action of atropine very doubtful. Chronic glaucoma is transformed into acute by dropping atropine into the eye. The blood in mydriasis is driven from the iris into the choroidal vessels, followed by increased transudation into the crystalline humour. He also describes a paralysing action of atropine on the walls of the vessels. In normal eyes, the pressure-increasing action of atropine is counterbalanced by the adjusting arrangements. Eserine possesses pressure-diminishing action, shown by experiments in simple and acute glaucoma. In ten cases of glaucoma simplex, sinking of pressure was constant, but evanescent. Improvement of vision was not obtained, but in several cases there was increase of field of vision. He related a case of a scleral wound, the ciliary body being squeezed in, where acute glaucoma was produced by dropping in solution of atropine. Physostigmine reversed the appearances in one hour. In cases of typical acute glaucoma, physostigmine acted favourably; it is adapted to mitigate an attack pending operation. The pressure-diminishing action of physostigmine is explained by the contraction of the choroidal vessels, and diminished infiltration into the lens.

Indications and Contraindications for Atropine and Eserine.

Indications for Atropine.—Horner (Vortrag über Indicationen und Contra-Indicationen von Atropin und Calabar, *Correspondenzblatt für Schweitzer Aertze*, Nos. 17 to 31, Lecture to Zürich Medical Association) gives the following. 1. *Narcotic.* (*a*) Pain where ends of subcutaneous trigeminus implicated; (*b*) Reflex spasms (photophobia). 2. *Mydriatic.* (*a*) Diagnostic mydriasis; (*b*) Therapeutic mydriasis. 3. *Accommodation or Adjustment.* (*a*) Diagnostic reagents for determining refractive anomalies; (*b*) Therapeutic, in treatment of progressive myopia of children where adjustment spasm is present. He doubts its pressure-diminishing action.

Contraindications for Atropine.—1. *Absolute.* Glaucomatous diseases where intraocular pressure is increased. It must be carefully used in pannus. 2. *Relative* (*a*) Individual idiosyncrasy; (*b*) Maximal conjunctival injection and pannus; (*c*) Cyclitic process with softness of bulb and pupillar closing and shutting up; (*d*) Caution is necessary with children, possible intoxication.

Indications for Calabar Bean. (Horner used $\frac{1}{3}$ to $\frac{1}{2}$ per cent. solution of Eserine.) 1. *Myotic* (*a*) In natural and artificial mydriasis after action of atropine for removing it before iridectomy for glaucoma; (*b*) For narrowing in case of peripheral choroid abscess, and in iris accidents. 2. *Accommodation or Dynamo-Supplementing.* In cases of impaired adjustment, especially in diphtheritis faucium. 3. *Diminishing Intra-ocular Pressure.*

Jaborandi and Pilocarpine (*Myotic*).

The sialogogic effects of jaborandi after intravenal injection of its infusion have been frequently described. The extreme intensity of its phenomena is well shown in dogs, who scarcely sweat at all. It

produces a mucous secretion from the anus and considerable flow of tears.

Jaborandi is a name for several different South American plants; *e.g.*, a kind of pepper Seronia Jaborandi; a species of Herpestes, belonging to the nat. order of Scrophulariaceæ; pilocarpus pinnatifolius or pinnatus of Lemaire, a plant of the Rutaceæ family. This latter appears to be the Alfovaea de Cobra of Brazil, introduced in 1873 into the Hospital of Beaujon by Dr. Coutinho.

Pilocarpine is the active principle of jaborandi. It forms crystalline salts with hydrochloric, nitric, and sulphuric acid. Hydrochlorate of pilocarpine crystallises in long radiated needles.

Pilocarpine-leaves contain also an oil—*pilocarpène*—having considerable affinity with oil of lemons.

[The first precise experiments on the topical effects of the local application of extract of jaborandi to the eye were performed by Mr. John Tweedy, of the Royal London Ophthalmic Hospital, Moorfields, at the end of the year 1874, and were recorded as an appendix to a paper written conjointly by Dr. Sydney Ringer and Mr. Alfred P. Gould, and published in the *Lancet* for January 30th, 1875 (vol. i, pages 157-159). At that time, the alkaloid pilocarpin had not yet been discovered, but the results then arrived at are identical with those subsequently obtained with pilocarpine.

After performing a large number of experiments, and carefully noting all the phenomena, Mr. Tweedy thus sums up.

"From these facts, we may conclude that jaborandi, locally applied to the eye, causes (1) contraction of the pupil; (2) tension of the accommodative apparatus of the eye, with approximation of the nearest and farthest of distinct vision; (3) amblyopic impairment of vision from diminished sensibility of the retina. These effects, however, do not last long. In my own case, the approximation of the near and far points had declared itself in a quarter of an hour, and reached its maximum in about forty minutes. It then gradually subsided, and had entirely passed off and the eye resumed its normal state in about an hour and a half."]

Results of the Author's Experience.

Eserine.—Having used eserine for several years, and in all affections in which it is indicated, I may group thus the diseases in which it has been of service in my hands.

1. Various forms of corneal ulcer, especially *marginal* with suppurative tendency.
2. Cases of ulceration with perforation and prolapse.
3. Incipient suppuration of the cornea.
4. Traumatic inflammation of cornea, and suppuration of corneal wound after cataract-extraction.
5. Mydriatic states, diplopia, asthenopia, aberrations of accommodation.
6. Glaucomatous states.

I have lately used the hydrobromate for the reasons before stated, and with the best results.

Gelsemine.—I have used for the past year or more a neutral solution of the alkaloid (four grains to the ounce) for ophthalmoscopic purposes. I have thus avoided the inconvenient consequences both to patient and surgeon which follow the prolonged dilatation after atropine. I have had no unpleasant effects. The motor disturbance, drawn attention to by Mr. Tweedy, has been in some cases marked, and interferes slightly with the examination. So also I have noticed some slight conjunctival irritation following for a short time after instillation. But frequently within forty-eight hours, often earlier, there has been no trace of mydriasis, and I never had any complaints after the use of gelsemine for diagnostic purposes. I have had mine through Messrs. Martindale, of 10, New Cavendish Street. I have not used it for a therapeutic object save once or twice, and cannot say anything definitely.

Duboisine.—I have tried the sulphate of duboisine largely in all cases in which atropine is indicated. In all respects its action appears similar to that of atropine. I have compared its effects many times on the same and both eyes, in healthy and affected persons. Its effects are, as Mr. Tweedy states, more energetic and last a little longer. I have found the same beneficial action in keratitis, corneal ulcer, in inflammatory and painful states. I have used it with success where atropine has had to be relinquished from conjunctival irritation caused by the latter. Of the two, so far as my experience teaches me, save for its expense, I prefer the sulphate of duboisine to the sulphate of atropia.

Pilocarpine.—I have not used much of this alkaloid. I have found it less energetic in its action than eserine.

In the eyes of a patient, gelsemine was applied after complete dilatation. Pilocarpine was put into the right eye, and eserine into the left. The normal vision was $\frac{20}{30}$, and she could read No. 1 Jaeger. When the pupils were fully dilated with gelsemine, the vision was $\frac{20}{50}$, and No. 4 Jaeger. In an hour after the myotics were applied, vision = right eye (pilocarpine), No. 8 Jaeger near point, and $\frac{20}{60}$ distant point; left eye (eserine), No. 2 Jaeger near point, and $\frac{20}{40}$ distant point. In an hour and a half: right eye, No. 12 Jaeger (No. 1 with a+7 lens); left eye, No. 14 Jaeger (No. 1 with a+5 lens). In three hours and fifteen minutes: right eye, No. 14 Jaeger (No. 1 with a+7 lens); left eye, No. 16 Jaeger (No. 1 with a+5 lens). The pupils measured—right eye, 6¼ lines; left eye, 3 lines; and the near point was removed 12½ inches from the eyes. The distant vision remained $\frac{20}{60}$ in both eyes. In twenty-four hours, vision was the same in both eyes (No. 4 Jaeger, $\frac{20}{60}$ths distant point). The pupil of the right eye was about the normal size, but the iris sluggish; that of the left eye was slightly contracted. In forty-eight hours, the vision had returned to its normal standard. The right pupil was normal, but the left was still slightly contracted. While the eyes were under the influence of either of these alkaloids, the distant vision was scarcely improved by any lens.

Atropine.—I have here to make a few remarks on atropine, before concluding these observations. I wish to record the fact that, since I first commenced to employ it, I have never had an instance of its toxic effects. Of late, Drs. Meyer, Galezowski, and Lutand have noticed the occurrence of such, and have proposed morphia as an antidote. I have no experience to offer, as I have never had occasion to employ it. Even yet, in iritis after traumatic mischief and in many inflammatory affections, the importance of the early use of atropine is not regarded sufficiently by medical men who are not ophthalmic surgeons. Many instances of irremediable impairment of vision have occurred to me from this cause. I have tried the salicylate of atropia, and with equal benefit. I cannot say, however, that I have noticed any special advantage. The peculiar intolerance of some patients to atropine has been frequently noticed by me, and the occurrence of an erysipelatous swelling in such is not unfrequent. This is an idiosyncrasy. I have seen the recurrence of swelling, redness, and irritation, each time the atropine was used; while the same solution produced no trouble in other eyes. Here the duboisine may be of value.

Specimens of the various alkaloids, hydrochlorate of pilocarpine, sulphate of eserine, sulphate of duboisine, hydrobromate of eserine, have been sent to me to exhibit to this section, by Messrs. Corbyn, Stacey, and Co., and I have pleasure in showing them to the members.

ON INTRATYMPANIC INJECTIONS IN CATARRHAL AFFECTIONS OF THE MIDDLE EAR.*

By Dr. WEBER-LIEL,
Teacher of Aural Surgery in the University of Berlin.

The results of my observations during sixteen years of aural practice have forced me to give up the idea that it may be possible to cure inveterate catarrhs of the tympanic cavity by means of any intratympanic injections of medicated fluids.

1. Either the symptoms of catarrh of the tympanum depend upon extension of a simple catarrh from the Eustachian tube and the pharyngo-nasal cavity; then the latter only must be the object of our treatment. In this treatment, injections of strong solutions of nitrate of silver into the mouth of the Eustachian tube, followed four days afterwards by the use of the air-douche, will be found of the best effect. But two precautions must be strictly observed. If the dangers of vehement inflammation of the tympanum itself are to be avoided, firstly, not more than a few drops of the solution must be blown in with force by means of the Eustachian catheter; secondly, the patient must be absolutely forbidden to blow his nose till four hours after the injection.

2. Secondly, the symptoms of the intratympanic catarrh may be due not only to a catarrh of the tube, but to a *collapse of the walls* of the Eustachian canal; this collapse being dependent on insufficient or paralysed action of the Eustachian-tube muscles, as shown by me in my book on different forms of progressive deafness. The insufficient action of the muscles may be due as much to a chronic catarrh as to muscular or neurotic disturbance. If, from this cause, the tympanic cavity be not ventilated sufficiently, the result must be, I presume, the ordinary one following the rarefaction of the air over a circumscribed part of any mucous membrane. There will be congestion of blood, overfilling the superficial vessels, and a tendency to catarrhal transudation. Experiment is favourable to this view. The most cautious rarefaction of air in the tympanic cavity by means of my tympanic catheter, for the purpose of sucking out mucus from the cavity, is immediately followed by a visible intense hyperæmia of the membrana tympani; the same as you

* Read in the Subsection of Otology at the Annual Meeting of the British Medical Association in Cork, August 1879.

know results from rarefaction of air in the external meatus. A second view will, perhaps, help to explain the intratympanic hyperæmia and the symptoms of the secondary catarrh. As in the body generally, principally in the muscular parts, the motions of the members assist in the circulation of blood, so the normal and perpetual motions—undulations of the membrana tympani and of the ossicula auditûs—may aid the circulation in the drumhead. If now, as a result of chronic rarefaction of air in the tympanum, the drum and the ossicula auditûs come under the influence of greater tension, their motion will be hindered, and I imagine this other assistant factor in the circulation will be eliminated. If my explanation be correct, it is clear why intratympanic injections cannot be of any therapeutic effect in such cases. It is my experience that only in the first stage, principally in young people—collapse of the Eustachian-tube cartilages—therapeutics are efficacious against insufficient muscular action, general internal remedies being used as well as local ones. My method of galvanisation of the muscles by means of the intratubal application of the electrode I have found among the most valuable; and I have the satisfaction of knowing that in this country also Mr. Swanzy, from his own experience, has spoken favourably of its efficacy. My opinion, therefore, is that, in cases of tympanic catarrh from the cause mentioned, not intratympanic injections, but the awakening of the activity in the tubal muscles, must be the purpose of the treatment, to cause the disappearance of the symptoms of the secondary intratympanic vascular stasis and catarrh.

3. There is a third cause on which, in many cases, I believe, depend the symptoms of congestion and catarrh of the tympanic cavity: alterations of the vaso-motor and trophic nerves and of the sympathetic supplying the tympanic cavity. An illustration that such neurotic alterations take part in the origin of hyperæmia, inflammation, and chronic catarrh of the tympanic cavity, may be found in the symptoms observed in otitis intermittens, described by me eight years ago, and confirmed by the subsequent observations of Voltolini and of Clarence Blake of Boston. I wonder that such affections, which I meet with frequently, are not oftener observed by other aurists. If my observations cannot be contradicted, it must be conceded that in these last mentioned cases also no method of intratympanic injection can be of any therapeutic value against the symptoms and results of tympanic catarrh.

Now comes the question, Do you believe no method of intratympanic injections of medicated fluids to be of any use? Perhaps it may be remembered that I was the first, thirteen years ago, to recommend them. The older one becomes, the more scrupulous one is; and so, by further observations, repeating over and over again all kinds of intratympanic injections and carefully examining the results, I was forced, step by step, out of my earlier illusions. Most of the fluids injected I found to be directly noxious, especially the strong solutions of remedies, even in minute doses; and so also, as regards the weakest solutions of nitrate of silver, corrosive sublimate, and common salt, in almost all cases in which they were experimented with, I observed, immediately following, acute inflammations with perforation of the membrana tympani. From injections of weak solutions of hydrochlorate of ammonia and iodide of potassium, I cannot positively affirm I have seen any bad effects, but with just as little certainty have I seen any satisfactory result. Some years ago, I made, with one of my pupils—Dr. Acker of Washington—experiments on rabbits. Different medicated fluids were injected into the tympanic cavities by means of the naso-pharyngeal syringe. Dissection showed that in all the ears of the rabbits there had occurred an acute inflammation of the tympanum, with perforation of the membrana tympani in nearly all. There was only one medicament the solution of which even in strong doses occasioned no, or only few, symptoms of inflammation: pure carbonate of soda. This result agrees with my experiments on the living human body. Carbonate of soda is a remedy well known as a good anticatarrhal one. Though it may not be possible to say that any catarrh will be cured by it, it may, at any rate, be conceded that mucus, incrusted and transuded purulent matter, may be diminished by it. It may be agreed that tissue (false bands, for instance) and intratympanic adhesions may be softened by it; so that it would became more easy to loosen intratympanic adhesions by means of the air-douche, and further to cause absorption of hardened masses. Here, and only for this kind of catarrhal affection, I have found intratympanic injections to have a really good result. The injections, combined with air-pressure, are effected by means of my pharmaco-koniontron, described by me thirteen years ago. I hope to profit by the opportunity afforded me by Professor Jones to demonstrate my method of injecting the solution of carbonate of soda and exercising intratympanic air-pressure. I believe you will be astonished how strong solutions can be used—what power of pressure may be applied, not only without any harm to the patient, but often even with immediately consequent amelioration of the symptoms.

FORTY-SEVENTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Held in CORK, August 5th, 6th, 7th, and 8th, 1879.

PROCEEDINGS OF SECTIONS.

SUBJOINED are abstracts of the papers presented to the several Sections at the annual meeting, and of the discussions thereon.

SECTION C.—OBSTETRIC MEDICINE.

Wednesday, August 6th.

THE following was accidentally omitted from the report of the discussion on Intra-uterine Medication in last week's JOURNAL.

Dr. BYFORD (Chicago) said the condition which usually called for intra-uterine medication was one in which there was general hyperæmia and more or less hyperplasia of all the tissues of the uterus—the mucous, fibrous, and vascular. The vessels and glands of the mucous membrane were enlarged, and the whole organ was bulky. Menorrhagia, metrorrhagia, and leucorrhœa, one, or in many instances all of them, were symptoms of this condition. When examined, the cervix would be found engorged, and sometimes its surface abraded to a greater or less degree, and the cavity enlarged. This state of things many times dated from confinement at full time or abortion. The local remedies most beneficial, whether there were hæmorrhage or not, were such as powerfully stimulated the nervous and vascular systems of the organ. The vascular and nervous apparatus of the cervix and body were intimately associated with the vascular system, if brought under the influence of the same portion of the vaso-motor nerves. Dr. Tilt had very correctly stated that many of these cases, particularly the less grave varieties, might be, and often were, cured by making repeated strong impressions upon the cervix by local applications. This had repeatedly occurred in Dr. Byford's hands, and was the treatment relied upon before intra-uterine medication was so freely used as now. A strong stimulant, applied to the vaso-motor nerves of the cervix, influenced the circulation of the whole organ. All this was no argument against properly conducted intra-uterine treatment; and he believed most cases, such as he had described, could be cured more promptly by resorting to it. He had not for many years injected medicine into the uterine cavity, because he thought it attended with risk to life; and quite certainly it caused great pain. With those who had spoken before, he thought the fluid form the best, and the application of it by means of the swab the most appropriate method of using it. The kind of medicine to be used must be regulated by the susceptibility of the patient, as well as by the intensity and extent of the disease. To begin, he generally preferred the tincture of iron. The use of this two or three times habituated the patient to such impressions, and enabled us to make stronger applications with impunity. Then, if the mouth of the organ were patulous and the case were a hæmorrhagic one, strong nitric acid, applied carefully to the whole inside of the body of the uterus, would be of great service. If the application were as mild as the tincture of iron, it ought to be repeated every five or six days. If strong acid were applied thoroughly once a month, and that not more than three days after the cessation of the menstrual flow, when it was desired to make a strong application, the patient should be confined to her bed for one or two days, or until all pain and inconvenience subsided.

Thursday, August 7th.

THE Chair was taken by GEORGE H. KIDD, M.D., President of the Section.

HÆMORRHAGE FROM THE GENITAL ORGANS DURING PREGNANCY AND PARTURITION.

A discussion on this subject was opened with the following paper.

Hæmorrhage from the Organs of Generation during Pregnancy and Parturition. By A. V. MACAN, M.B. (Dublin).—The points which the author proposed for discussion were: 1. Menstruation during pregnancy; 2. The symptoms or conditions that justify, in a case of threatened abortion, the giving up of all further attempts at saving the ovum; 3. Imperfect abortion and its treatment; 4. The treatment of placenta prævia; 5. The prevention and treatment of *post partum* hæmorrhage, including that described by Gooch as "a peculiar form of hæmorrhage". After giving briefly the views generally held about menstruation during pregnancy, the author noticed at some length the opinion held by Professor Spiegelberg of Breslau, that all so-called menstrual discharges were nothing but hæmorrhage from pathological

causes, which, as was often noticed also in the unimpregnated condition, had taken an aperiodical type. There was no evidence to show that ovulation went on during pregnancy; and, therefore, as he believed in Bischoff's theory of the dependence of menstruation on ovulation, he held that menstruation did not occur during pregnancy. Indeed, the changes in the mucous membrane of the uterus that accompanied menstruation were quite incompatible, as he thought, with the continuance of pregnancy. The second question involved the determination of the life or death of the ovum; or whether the mother's life were in actual danger from the continuance of the pregnancy (hæmorrhage, excessive vomiting, etc.); or her condition such as to render the continuance of the pregnancy very doubtful (cholera and the acute exanthemata); or, finally, whether uterine action had gone on so far that it could not be stopped, or had already led to rupture of the membranes, or to such extensive detachments as to render it probable that the ovum would soon perish, even if it were not at once expelled. He considered that the determination of these facts, in individual cases, was one of the most difficult questions the midwifery practitioner was called on to decide; and quoted a case, given by Scanzoni, to illustrate how the ovum might sometimes survive the most numerous and varied perils. Some authorities held that the discharge of altered (decolorised) blood-clots was evidence of the death of the fœtus; but he (Dr. Macan) had lately, through the kindness of the President, had the opportunity of examining a case in which this symptom was present, and, notwithstanding, the fœtal heart was heard a fortnight subsequently. The term "imperfect abortion" was applied to those cases where all the ovum was not expelled at the same time, but when part (placenta or membrane) remained in the uterus. He drew attention to the great improvements that had lately been introduced in the treatment of such cases by the use of Thomas's blunt wire curette, or the scoops that Simon of Heidelberg introduced for the removal of cancer. By this method, the painful and tedious operation of dilating the cervix might be often avoided. The question of the treatment of placenta prævia was one which, above all others, would, he hoped, be benefited by discussion. There would never be anything like unanimity on the subject till the knowledge of the true changes that took place in the cervix during pregnancy and parturition became more widely spread; not only the fact that the cervix was not taken up gradually into the body of the uterus during the latter months of pregnancy, but more especially that the manner in which the cervix became obliterated was very different, according as the patient was a primipara or a pluripara. He thought the term "cervical zone", as used by Dr. Barnes, was very likely to lead to its being confused with the cervix itself; and quoted passages from Dr. Barnes to show that even he was guilty of thus confounding them. The placenta was never found attached to the cervix, except in some rare cases, when this condition led to early abortion; and, therefore, it was not correct to speak of the placenta being detached from the cervix as the latter became retracted. Moreover, instead of the interior of the cervix becoming smaller during the dilatation of the os, the fact was that it became immensely distended in every direction. In primiparæ, the length of the cervix was, on an average, doubled during labour, as might be seen by the beautiful plate of Braun's which Dr. Playfair reproduced as the frontispiece to his second volume; and its diameter was increased from that of the finger, or even less, to that of the head of the fœtus at full time. The placenta, when partially prævia, was inserted into the lower zone of the body of the uterus, to one or other side of the inner os. There could be no doubt that the insertion of the placenta into any part of the circumference of the inner os caused that portion of the uterus to which it was attached to be less ready to dilate than the rest of the circumference, which was not in the same way tied down. It seemed, therefore, plain that, at all events in a case of partial placenta prævia, the site of the placenta would not be so distended as the rest of the circumference of the inner os. In fact, the same thing took place, though in a much less degree, as in a case when carcinoma involved a portion of the circumference of the cervix; viz., the dilatation took place at the expense of the sound portion. If this were true, Dr. Barnes's method of separating the placenta from its attachments, as far as the fingers could reach, could hardly be the right one. Again: the mechanism of the separation of the placenta from around the margin of the inner os during labour was almost universally misunderstood. For, till the membranes were ruptured, the effect of an uterine contraction was to detach the whole lower segment of the ovum from the uterus and force it into the cervix, the margin of the inner os being at the same time drawn upwards by the contraction of the fundus. Of course, when the placenta formed a portion of the lower segment of the ovum, it must slide downwards more or less over its seat of attachment to the uterus. Once, however, the membranes were ruptured and separated to a considerable extent from the lower margin of the placenta, the ovum was no longer forced downward *en masse*, and the placenta was free to move, upwards and outwards, along with the lower segment of the body of the uterus. This at once explained how rupture of the membranes in placenta prævia was often followed by a cessation of the hæmorrhage. Again: it was known that, at the occurrence of each pain, the circulation was almost entirely arrested in the site of the placenta, and the uterine souffle disappeared. Ergot caused such a tonic contraction that the circulation was permanently interfered with, and the child died, if not suitably delivered, from asphyxia. Hence, if ergot acted properly, it ought almost to stop all circulation in the placental site, and thus prevent it in cases of placenta prævia or accidental hæmorrhage. If presentation were complete, one had only to detach the placenta from one or other side of the inner os, to tear the membranes freely away from its edge, and the case, for all practical purposes, became one of partial placenta prævia. This was the great treatment of placenta prævia; but, if once rupture of the membranes, or separation of one portion of the placenta, in a case of complete presentation, were impracticable, then we must plug till one or both became possible. It was not requisite to dwell at any length on the prevention and treatment of *post partum* hæmorrhage; but the author would draw attention to that form which was due to rupture of the soft parts, more especially one or other crus of the clitoris, and to the peculiar form of hæmorrhage described by Gooch, which was simply due to alternate contraction and relaxation of the uterus. The newest points in treatment were the use of ergot subcutaneously, the injection of hot water at 110° to 120° Fahr. (not *warm* water) into the uterus to arouse it to contract, and the use of the various diffusible stimuli subcutaneously—such as ether, camphor, musk, or brandy—the first of which was introduced into this country by the author.

On the Prevention and Treatment of Post Partum Hæmorrhage. By THOMAS MORE MADDEN, M.D., M.R.I.A. (Dublin).—In a long and tolerably extensive obstetric experience in hospital and private practice, Dr. More Madden had seen but two fatal instances of *post partum* hæmorrhage. With the advancement of our art, such cases had gradually become less frequent, and would probably be altogether unknown in the more perfect obstetric practice of the future. The author discussed *seriatim* the causes of *post partum* hæmorrhage, and the treatment required by each of these. Having dwelt on the constitutional conditions predisposing to flooding, and the preventive measures by which this might be warded off, even in those who had been habitually subject to this accident on former occasions, he considered the causes of flooding and the management of labour, so as to prevent subsequent inertia or irregular contraction of the uterus. The ill effect, in this respect, of the premature application of the forceps before the full dilatation of the os uteri, and also the production of hæmorrhage as the result of undue delay in the second stage, were next referred to. During labour, when there was any reason to anticipate flooding, the preventive measures recommended by the author were: the rupture of the membranes in the first stage; the use of stimulating enemata of a strong infusion of ergot, or the hypodermic injection of ergotine, in the second stage; and a firm unremitting manual pressure over the fundus uteri, from the time the child's head escaped from the vulva until the completion of the third stage, which should never be hastened by traction on the cord, and the permanent contraction of the uterus was secured. In nineteen cases of flooding, the solution of perchloride of iron was resorted to; in eighteen of these, the hæmorrhage was thus arrested, and in one instance it failed. Dr. Madden, however, considered that the ordinary mode of using this styptic—viz., by a syringe passed up to the fundus uteri—was a very hazardous proceeding, and exposed the patient to great and needless twofold danger of death from embolism or from peritonitis. He, therefore, recommended instead the direct application of the strong liquor ferri perchloridi to the bleeding vessels by a sponge soaked in this fluid, and carried up by the hand into the uterus, and retained there until a firm contraction was produced. Some cases were referred to in which hæmorrhage, that had resisted all other treatment, was thus arrested; and Dr. Madden, therefore, regarded this as the most effectual method of treating flooding. At the same time, he admitted that it was not free from danger, or even to be adopted without grave necessity. Some of the other remedies employed in the treatment of *post partum* hæmorrhage, including the hypodermic use of ergotine, galvanism, and cold and hot injections, were referred to. The treatment of collapse from flooding by brandy, opium, stimulating enemata, hypodermic injection of sulphuric ether, and transfusion, was considered. Dr. Madden related a case in which a patient, apparently at the last extremity, was rescued from death by the subcutaneous injection of ether, which he regarded as being in many instances a substitute for transfusion. The latter operation was, he considered, destined to fill an important place in the future practice of midwifery. But, as yet, no method of transfusion had been suggested which met the requirements of what, to be useful, should be a generally feasible as well as an effectual operation. Transfusion was required for a most serious emergency that might suddenly occur in practice: namely, in cases of collapse from flooding.

Therefore, its success should not be altogether dependent on the possession of exceptional surgical skill, as some of its modern advocates insisted. On the contrary, it should be within the reach of every properly educated midwifery practitioner, who might, at any moment, and perhaps in a remote district, under unfavourable circumstances, meet with a case in which this operation was required. In these respects, transfusion was as yet far from that perfection at which it must one day arrive; and, however theoretically improved in a physiological point by modern authorities, practically speaking its success was yet hardly greater than was the case under the ruder methods employed by Dr. Blundell and others, for the same purpose, half a century ago.

The Treatment of Post Partum Hæmorrhage by the Intra-uterine Injection of Hot Water. By WILLIAM WALTER, M.A., M.D. (Manchester).—Since the method of treating *post partum* hæmorrhage by the injection of hot water was brought under notice by Dr. Atthill early in 1878, Dr. Walter had treated in this way eleven cases in the Manchester and Salford Lying-in Hospital. The temperature of the water used ranged from 110° to 120° Fahr.; and the utmost care was taken that the tube (Hayes's) reached well up to the fundus; and that there was afterwards no impediment to the escape of the water from the uterus. The results in the eleven cases—particulars of which were given—led Dr. Walter to the conclusion that the hot water treatment offered some advantages, in being generally accessible and not disagreeable to the patient; but that, as a means of contracting the uterus, it was, in his experience, not to be relied on. Nevertheless, he hoped to continue the method; and he advised that the temperature of the water should be ascertained by the thermometer in every case. The recent researches of Dr. Max Runge tended to show that, if success was to follow the hot water treatment of *post partum* hæmorrhage, the temperature of the water must not be so high as it was in Dr. Walter's cases. In all the cases but one, the injection was followed by relaxation and dilatation of the entire uterus; if contraction occurred, it was but temporary; but, when the temperature of the water did not exceed 104° F., the uterus contracted without being afterwards paralysed. No appreciable effect was produced on the pulse and general condition of the system. After the failure of the injection, the application of the induced current was successful in several of the cases.

Hot Water Injection in Post Partum Hæmorrhage. By NORMAN KERR, M.D., F.L.S. (London).—The author was called on January 5th, 1874, by a midwife, to Mrs. T., aged 25, a primipara. The child had been delivered an hour and a half, and the placenta expelled half an hour, before he was sent for. He was told that the patient was dying, everything that could be done having been done by the midwife. The patient was deathly pale, cold, unconscious, and with no perceptible pulse. The vagina was packed with clots. He hastily removed most of these, and threw up into the vagina (there being some difficulty in finding the os uteri) about a quart of hot water about 110° Fahr., and had hardly withdrawn the syringe when a faint tinge of red began to appear on the face, accompanied by a slight warmth of the skin and a faint pulse. In three minutes more, Dr. Kerr had cleared out the remaining clots, and thrown a pint and a half of water at 105° Fahr. right up to the fundus uteri. Ergot, milk, Liebig's extract, and cocoa were administered. Dr. Kerr narrated a second case of a primipara who had serious *post partum* hæmorrhage with collapse, and in whom repeated hot water injections arrested the loss and restored the strength. From these and other cases, Dr. Kerr was driven to the conviction that hot water injection was a most valuable general stimulant; it acted like a charm in many cases where the use of cold was contraindicated. Alcohol was a prompt and efficient stimulant; but its use was fraught with great risk of renewed flooding from the relaxation of the circulation. The injection of hot water was even more speedy in operation, and quite devoid of danger, no serious sequelæ following its employment. He was convinced that, in all the hæmorrhages of pregnancy and parturition accompanied by collapse, the injection of hot water would be found a simple, ready, and reliable remedy.

Dr. BARNES (London) complained of the misconstruction of his views on placenta prævia. He said there were cases in which the uterus had lost all reflex contractility. In these cases, the application of cold, the injection of iced or of warm water, was of no avail. The immediate application of some styptic to the gaping veins, such as the perchloride of iron, would alone arrest the hæmorrhage. He had lately attended a lady in her eighth confinement, in whom the uterus had become relaxed from successive pregnancies, and had lost the power of contracting. Knowing this beforehand, he had adopted every precaution. The hand had never left the uterus from the moment the child was born, until long after the expulsion of the placenta. In spite of all precautions, such as the subcutaneous injection of ergot and continued pressure on the uterus, hæmorrhage set in. The subcutaneous injection of brandy, the injection of warm water into the uterus, the injection of a solution of iodine into the uterus, were tried in succession, but failed to arrest the hæmorrhage. The patient was now blind, deaf, pulseless at the wrist, and almost *in extremis*. The perchloride of iron was injected, and the hæmorrhage at once arrested. In half an hour afterwards, the patient had rallied; and she made a good recovery. This was a typical case for the use of the perchloride; and it was in such cases as this that he advocated its use. But for the iron, the patient must have died.

Dr. DILL (Belfast) considered the pouring of cold water from a height on the abdomen as most valuable.

Dr. J. THOMPSON (Leamington) was extremely pleased with the lucid explanation given by Dr. Barnes. He believed with him that it was important to attend well to the ordinary means for stopping hæmorrhage, so that cases requiring the employment of injections into the uterus should not often occur. In every instance, he would first apply pressure, and this was most effective if directed to the base rather than towards the neck of the womb. A dash of cold water was doubtless a very powerful means of producing contraction; and some practitioners would throw two or three pints, or more, suddenly over the abdomen when profuse flooding occurred, but the patient was thus placed in a most uncomfortable condition, though the hæmorrhage was stopped; and should this recur, we could not go on throwing such quantities of cold water. He had been in the habit of dipping the end of a napkin in cold water, and, striking this first against the side of a wash-basin, so as to disengage superfluous water, used it to flap the naked abdomen, so that each stroke should produce a little shiver. In this way, he had kept a controlling influence over the uterus for several hours at a time till the disposition to flooding had ceased, without subjecting the patient to unnecessary discomfort. He had attended a case where the placenta was expelled in a mass before the head of the child came down, and the labour was completed without further loss of blood.

Dr. CORDES (Geneva) recommended the subcutaneous injection of ether in *post partum* hæmorrhage. He also regarded the subcutaneous injection of ergotine as valuable. The syncope could be avoided by the positional treatment, and by the application of Esmarch's bandages to the arms and legs.

Dr. ATTHILL (Dublin) would confine his remarks to the use of the four principal agents used for the arrest of *post partum* hæmorrhage; namely, ergot, cold water, warm water, and the perchloride of iron. Ergot was most unreliable; it took time to act, and, though valuable if administered to anticipate hæmorrhage, was nearly useless at the time, even if injected under the skin. Cold was perhaps the most efficient of all agents, if used in the proper cases and at the right time; that is, while the patient was warm, and reaction consequently followed. If its use were prolonged, or the patient were cold and exhausted, it was worse than useless. It was at this stage that hot water came in with advantage, not to supersede the use of cold. Dr. Walter recorded cases in which it failed, or did actual harm; but he used it too hot, namely, at 120°, instead of 100°; and the experiments referred to at the conclusion of his paper showed that hot water was efficient in causing contraction of the uterine muscular tissue. If used at the proper temperature, hot water was far from being an absolutely efficient agent, but it was valuable; it would not replace the use of perchloride of iron, but it must sometimes render it unnecessary. Perchloride of iron was in some cases absolutely demanded, and was the most certain means of checking *post partum* hæmorrhage. It had, in Dr. Atthill's hands, saved several lives; but, like all other remedies, it was not absolutely safe. He knew of one case in which it seemed to cause instantaneous death; but he had known death to follow in a few moments from the simple act of syringing the vagina; air entered the uterus and caused death. Might this not have also been the cause of death when the perchloride was used?

Dr. MALINS (Birmingham) said there were two conditions under which *post partum* hæmorrhage appeared to be benefitted: one was sickness, the other fainting. The former had been recognised by Mr. Higginbottom, whose practice it was to give ipecacuanha until this was produced; but it was a rude and unsatisfactory mode of treatment, and could not be looked upon as reliable. As regarded fainting, he had never known a patient die in this form of hæmorrhage who fainted. It was generally alarming to bystanders; but it was a wise provision of nature to arrest the bleeding by lessening the force of the circulation, and promoting the formation of clots in the open sinuses. His own plan in so-called "flooders" was always to insist upon some preliminary treatment of general health; at the time of delivery, never to take the hand off the uterus; to give a dose of ergot as soon as the head pressed on the perinæum; afterwards, to inject ergotine subcutaneously by a long needle into the buttock. If these means were unable to effect the proper control, he saturated a sponge with solution of perchloride of iron—of Dr. Barnes's strength—and introduced it, protected by the hand, into the uterus, the opposite hand exerting pressure externally. He did not

inject the solution, as, from his own experience, future evils after this plan were more likely to be avoided.

Dr. More Madden (Dublin) thought the members were largely indebted to Dr. Macan, for having ably initiated a discussion which had brought forward the views of many experienced practitioners, who had given their opinions on the causation, prevention, and treatment of the most serious complication of labour. With regard to the prevention and treatment of flooding, he entirely agreed with Dr. Macan, that the reason they had comparatively so few cases of serious hæmorrhage in Dublin was, that there almost every practitioner was accustomed to follow the uterus down with his hand above the fundus, from the moment the child's head began to pass the vulva until the third stage was completed, and firm contraction of the uterus was secured. No attempt should ever be made to hasten the expulsion of the placenta by any traction on the cord. Next in importance, as a prophylactic of hæmorrhage, Dr. More Madden regarded the administration of an enema of warm infusion of ergot, or the hypodermic injection of a couple of grains of ergotine, towards the conclusion of the second stage. In the treatment of severe flooding, Dr. More Madden had great faith in the introduction of a sponge, saturated with solution of perchloride of iron, by the hand into the uterine cavity until hand and sponge were expelled by the contractile action thus excited. There were many other points which the time at their disposal prevented them from fully discussing—such, for instance, as the use of opium under certain circumstances, and the value of cold affusion; or the old Dublin practice of slapping the woman's buttocks with a wet cloth; and the use of injections of iced water, vinegar and water, etc. He thought the cases reported by Dr. Walter were a very strong argument against the use of hot water injections; and, in his own practice, he would not feel justified in wasting any time, in a case of serious *post partum* hæmorrhage, in again injecting hot water, which Dr. Walter had clearly shown to be capable of producing relaxation of the uterus, and thus of increasing instead of restraining hæmorrhage. In the treatment of collapse, he had derived very great benefit from the hypodermic injection of sulphuric ether; and he believed that, if this were generally adopted in the first instance, in the treatment of collapse, they would have little necessity for falling back on their last resource—namely, transfusion. For his own part, Dr. More Madden firmly believed that in most instances they might prevent flooding, if consulted in time, by the prophylactic treatment he had described in his paper; and that, in the improved midwifery practice of the future, and, he hoped, not distant time, the lamentable spectacle of a woman dying from hæmorrhage after labour would be never witnessed.

Dr. Edis thought that the preventive aspect of the question had not been sufficiently dwelt upon. Where labour had been conscientiously and intelligently supervised, the cases of *post partum* hæmorrhage would be few and far between. Before a patient was allowed to incur the pains and perils of childbirth, she should be put into training, the same as an athlete who was about to perform any severe task calculated to test his powers of speed, endurance, or physical strength. The general health should be looked after, care being taken that the bodily functions were kept in as natural a condition as possible, so that, when the time came, the patient should be strong to labour. During parturition, every means should be resorted to calculated to prevent unnecessary delay or suffering. Chloroform, if administered at all, should only be given during the latter part of the second stage, and not during the preliminary stage, unless under special circumstances, as in rigidity of the os uteri, immoderate pains, etc. On the first evidence of any flagging power or arrest of the presenting part, timely assistance should be rendered, and the patient not allowed to exhaust her powers uselessly. In a very large percentage of cases, *post partum* hæmorrhage might be altogether avoided by the judicious application of the forceps where the natural powers had been fairly tried and proved to be inadequate to effect delivery *cito*, *tuto*, *et jucunde*. The misfortune was that, when any special remedy was brought prominently forward as valuable in certain contingencies, many practitioners seemed to think it was the only or the best thing to do, and lulled themselves into a false security by the thought that they had the remedy at hand in case it should be needed; attention being thus diverted from what should have been the chief consideration—the prevention of exhaustion—to which alone the hæmorrhage was due. In those trying cases where *post partum* hæmorrhage occurred in spite of all efforts to the contrary, too much praise could not be accorded to Dr. Barnes for having introduced to notice a remedy so valuable and so reliable, and which enabled the obstetrician, as it were, to snatch his patient from the very jaws of death, when otherwise all his efforts would have been futile.

The President (Dr. Kidd) said that, before calling on Dr. Macan to close the debate, he would sum up some of the more important points that had been touched upon, with a few brief comments. Dr. Macan opened his paper with remarks on the hæmorrhages of the early months, and the so-called menstruation of pregnancy, which he had very conclusively shown was not menstruation at all, but hæmorrhage arising from varying causes; and Dr. Henry Bennet had drawn attention to the frequency of inflammation of the cervix as one of these causes. This was quite in accordance with his (Dr. Kidd's) own experience; and, guided by what Dr. Bennet had said in his work on *Inflammation of the Uterus*, he had from an early period made it a rule, in treating cases of frequently recurring small hæmorrhages, or long continued draining of blood in early pregnancy, to examine the cervix, when he generally found the condition described by Dr. Bennet; and on curing this the hæmorrhage ceased, and the patient went to her full time. Dr. Macan said he had directed attention to the recent use of the thermometer as a means of ascertaining whether the embryo was still alive or had perished. If the thermometer could afford positive information on this point, it would render the obstetrician even greater service than it had conferred on the physician in the treatment of typhoid fever; but we must still rely on the old rules of practice, and endeavour, when the os was not open and no portion of the ovum protruded, to prevent abortion; and when it was open and a portion beginning to protrude, use all the means in our power to hasten its expulsion. Plugging the vagina was a most valuable method of controlling the hæmorrhage; but, so long as there was any hope of preventing the abortion, no attempt should be made to adopt Dr. Bennet's suggestion of plugging the os. It was even doubtful whether the vagina should be plugged under such circumstances, unless the hæmorrhage were excessive. When the embryo had come away and the membranes remained, plugging was a most valuable means of treatment in the early months. This was a most perplexing condition; so long as the membranes were retained, the patient was liable to excessive or even fatal hæmorrhage at any moment, and they might be retained for days; but if the vagina were efficiently plugged, more especially if Dr. Bennet's form of plugging the os, "bottling up the uterus", as he called it, were adopted, the attendant might leave his patient for some hours, satisfied that no hæmorrhage of consequence could take place; and when he removed the plug at the end of ten or twelve hours, he would probably find the membranes in the vagina and all risk of hæmorrhage over. Another plan that had been often adopted, especially when the membranes had not come away with the first plug and the os was open, was to pass a catheter into the uterus, and with a syringe throw up a stream of cold water. This generally caused their expulsion in a few minutes, and he had never seen any unpleasant consequence arise from the injection. Placenta prævia was the next subject referred to. He would only allude to the very interesting points as to the pathology of this condition, discussed by Dr. Macan and Dr. Barnes, and would pass on to some of the plans of treatment spoken of by others. Dr. Wallace spoke of plugging the vagina as being in common use in Liverpool, and expressed fear of the practice, lest the hæmorrhage should go on in a concealed manner, blood accumulating in the uterus. Plugging had long been the practice adopted in Dublin, but it did not originate there. It was a German practice, introduced in the last century; and when the membranes were unruptured, or the case was one of complete placenta prævia, it was a most remarkable method of controlling hæmorrhage till the os was sufficiently dilated to allow the completion of labour. If the placenta were attached all round the os internum, or the membranes were unbroken, the blood could not accumulate in the uterus. But plugging was not so much in use in Dublin now as formerly. Twelve or fourteen years ago, there was a great debate in the London Obstetrical Society on the treatment of placenta prævia; and since then the induction of labour as soon as possible after the discovery of the nature of the case, especially if the child were viable, had been more and more adopted as the rule of practice. He had himself been frequently called to see patients who had been safely conducted through one or two early and slight hæmorrhages, and then reduced to a state of so great prostration by a sudden rush of blood that they died in the act of delivery, or even before it was attempted; and therefore he lost no opportunity of urging the induction of labour as soon as it was clearly ascertained that the case was one of placenta prævia. For this purpose, the plugging of the os after Dr. Bennet's plan, with prepared sponge, as suggested by Dr. Playfair, was the best means of commencing the induction of labour, as not only checking the bleeding, but at the same time dilating the os. Regarding the treatment of *post partum* hæmorrhage, Dr. Edis had drawn attention to the preventive treatment, and to the advantage of attending to the general health of the patient before labour came on. He had happily compared this to the training an athlete underwent before undertaking a race or other great physical exertion, and had very wisely urged that women should be put in training by attention to their general health for the exertion they were about to undergo. Dr. Malins,

Dr. Dill, Dr. Edis, and others, had further spoken of the importance of preventing the woman's powers from being worn out and exhausted by prolonged efforts in labour, and advised that she should be assisted by the use of ergot or by the forceps. That the undue prolongation of labour was one of the most frequent causes of *post partum* hæmorrhage could not be questioned, and all must agree with Dr. Edis in recommending the prompt use of the forceps when delay threatening to exhaust the patient occurred in the second stage. There was another means of preventing hæmorrhage which had not been spoken of, that was of not less value: the placing of the hand on the fundus as soon as the child's head was expelled, and following the uterus down, keeping it contracted till not only the placenta was expelled, but for some time afterwards, to afford time for the closing of the vessels by Nature's own processes. This following down of the uterus was called by Dr. Collins "a duty of paramount importance", and was very different from the method of Crèdè, which had been mentioned. He tried to expel the placenta at once by pressure on the uterus. Collins' or the Dublin method was to wait till the uterus expelled the placenta by its own efforts, securing a good contraction all the time; and with the same reason one did not extract the child, but allowed it to be expelled, even the feet, by the contractions of the uterus and vagina. The introduction of the hand into the uterus for the removal of clots, and causing contraction, as a means of checking hæmorrhage, had not been spoken of. It was certainly a most efficient mode of treatment, and should always precede the use of injections of any kind. Though an operation that seemed specially liable to be followed by inflammatory and septicæmic symptoms, it was certainly not so dangerous as the use of styptic, or perhaps even simple injections, and in the majority of cases completely checked the bleeding. Dr. Malins spoke of the effect of vomiting in checking the bleeding, and reminded the meeting of Higginbottom's recommendation to administer ipecacuanha in cases of *post partum* hæmorrhage. Of this treatment, the President had no experience; he had not tried it, because, in the first place, ipecucuanha took a considerable time to produce its effects, and he feared the nausea that preceded the vomiting would be injurious; but he was always glad to see vomiting in cases of hæmorrhage, and more than suspected that the greatest benefit derived from the use of ergot by the mouth was caused by the vomiting it often induced. He had very seldom seen hæmorrhage recur after vomiting had taken place. Dr. Walter's cases proved that the conditions were not yet known, under which injection of hot water might be relied on for inducing contraction and checking bleeding. That it was often useful, and stimulated very promptly the vital powers when the patient was cold and prostrate, the President was well aware from his own experience. The injection of a solution of perchloride of iron acted in a different way. The iron both coagulated the blood and corrugated the uterus, as Dr. Barnes had remarked. Unfortunately, the coagulation sometimes extended along the vessels, even reaching the heart, and so killing the patient. In the Coombe Lying-in Hospital, they had often tried the introduction of a small piece of the solid perchloride into the uterus, either leaving it there or removing it in a few seconds; and the practice was probably a safer one than the injection of a solution. Professor Dill and Dr. Cordes had spoken of the advantage of lowering the patient's head so as to favour the flow to the brain of any blood that might still be in the vessels; bandaging the abdomen, by compressing the vena cava and other large veins, contributed to the same effect. Not only should the pillow and bolster be removed, but the foot of the bed should be elevated so as to give a decided inclination to the blood to gravitate towards the head. Some years ago, Dr. Wyse, of Rostellan, in the county Cork, wrote a paper recommending that the arms and legs should be elevated almost to a right angle with the body for the same purpose; and more recently German writers suggested bandaging the limbs tightly with the same view, and dignified the process with the name of "autotransfusion". The last resource was transfusion. Dr. More Madden spoke of this as a difficult operation; but, after some experience of it, the President could state that with due care, and following the method and directions of Dr. Robert McDonnell, it was not very difficult. He believed it was one almost entirely devoid of danger or bad after-consequences, and one that ought to be had recourse to at a much earlier stage than had hitherto been done.

Dr. MACAN, in reply, said that he had purposely left out accidental hæmorrhage from his paper, as he considered there were already quite enough subjects for discussion. In what he had said with regard to the confusion that has occurred between "the cervix" and "the cervical zone", he had not intended to convey the impression that Dr. Barnes asserted that the placenta was inserted into the cervix. On the contrary, he knew that Dr. Barnes held the same idea on this point as he (Dr. Macan) did, but had been led by the similarity of the two expressions to use them as if they were convertible terms. This confusion happened more than once in Dr. Barnes' work. First, when speaking of the cause of the hæmorrhage during the latter months of pregnancy, he said: "The first detachment of placenta, then, arises from an excess in rate of growth of the placenta over that of the cervix, a structure which was not designed for placental attachments, and which is not fitted to keep pace with the placenta." And again, when speaking of *post partum* hæmorrhage, he said that paralysis of the cervix was doubly dangerous in cases of placenta prævia, because "the cervix is the placental site". He did not agree with Dr. Barnes, that one could tell exactly what amount of detachment of the placenta must take place in each case; for there could be no doubt that the implantation of the placenta over any part of the uterus caused that portion of the uterus to resist any dilating force more than the surrounding uterine tissue into which the placenta was not attached. If, now, the presentation were marginal, then the expansion of the inner os would take place chiefly at the expense of that portion of the uterine tissue into which the placenta was not attached. It therefore at once followed that the placental site had not to dilate as much as Dr. Barnes' theory demanded that it should dilate, and therefore one could not tell the exact amount of detachment that must take place, and should therefore abstain from any attempt at artificial separation. The analogy that Dr. Barnes gave of the placenta growing too fast for the site of its insertion in cases of tubal gestation held good only if the placenta were supposed to be attached to the inside of the cervix, which idea Dr. Barnes repudiated. There was no analogy between the lower segment of the body of the uterus and the Fallopian tube; and to say that the lower segment of the uterus was not suited for the attachment of the placenta, and therefore did not grow fast enough for it, was a simple *petitio principii;* the whole question in dispute being whether this portion of the uterus were suited for placental attachment or not.

Summary of the Results of Fifteen Cases of Battey's Operation. By ROBERT BATTEY, M.D. (Rome, Georgia, U.S.A.)—The writer opened his paper with a tabular statement of his cases, gave certain deductions drawn therefrom, and appended a more full statement of the present condition of the several patients. The mortality had been 13⅓ per cent. Regarding the results obtained at the end of six months, separating the recovered cases into three classes, there were three cases (*a*) of removal of but one ovary, three cases (*b*) of imperfect removal of both ovaries, and seven cases (*c*) of complete removal of both ovaries, which compared as follows: Morbid conditions wholly disappeared in class *a*, 1; in class *c*, 6; partly disappeared in class *a*, 1; in *b*, 1; not benefited, class *a*, 1; class *b*, 2; too recent to determine, class *c*, 1. *Present condition.*—Perfect health, class *a*, 1: class *c*, 4; comfortable health, class *a*, 1; class *b*, 1; class *c*, 2; not benefited, class *a*, 1; class *b*, 2; too recent to determine, class *c*, 1. The objects of the operation were described as fourfold, viz.: 1. To obviate the effects upon the general system of a vicious ovulation; 2. To obviate the effects of unrelieved menstrual molimen; 3. For the control of exhausting uterine hæmorrhages incident to ovulation; 4. To produce the vascular and nervous revolution which attends upon the change of life. As regards the warrant for the operation, it is difficult to define exactly the field. The writer was accustomed to ask himself three questions, viz.: 1. Is the condition to be remedied a grave one? 2. Is it incurable by other and less radical means? 3. Is it curable by the arrest of ovulation or change of life? If the three questions be answered affirmatively, the case is a proper one; but if either of them had a negative answer, it is not. Two methods of incision had been followed, viz., the abdominal and the vaginal. The writer had had three cases of the abdominal without fatality, and twelve of the vaginal with two deaths. This however, did not accord with the experience of others; for, in fifty-four cases tabulated, thirty-four were abdominal with a mortality of 35⅓ per cent., and twenty were vaginal with a mortality of only 15 per cent. In dealing with the pedicle, in but two cases was the ligature employed; in twelve, the pedicle was simply crushed by the *écraseur*. The latter method was deemed safe and most desirable. In but one case was the method of Mr. Lister employed, and Dr. Battey was favourably impressed with the result. Without exception, when but one ovary was removed, or both ovaries in an incomplete way, the menses continued; and without exception, when both ovaries were completely removed, the menses ceased entirely. The writer concluded with a series of notes, giving personal communications and extracts from letters, to show more fully and satisfactorily the present status of each case.

Friday, August 8th.

The chair was taken by the President, GEORGE H. KIDD, M.D.

Inversion of the Uterus. By LOMBE ATTHILL, M.D. (Dublin).—(This paper is published at page 357.)

A Case of Chronic Senile Inversion of the Uterus following the Development and Removal of a Fibro-Myoma: Amputation: Recovery. By R. BARNES, M.D. (London).—(This paper is published at page 359.)

Inversio Uteri. By JOHN WALLACE, M.D. (Liverpool).—(This paper is published at page 361.)

The Treatment of Chronic Complete Inversion of the Uterus, with Cases illustrating the advantages of the direct method of applying Elastic Pressure. By J. H. AVELING, M.D. (London).—This paper is published at page 359.)

The Treatment of Vomiting in Pregnancy. By GRAILY HEWITT, M.D. (London).—Dr. Hewitt said that Dr. Copeman's observations on the effect of dilating the cervical canal in cases of vomiting in pregnancy were of great value. He (Dr. Hewitt) believed that the vomiting of pregnancy was one of the reflex disturbances produced by resistance to the normal expansion of the tissues at and immediately surrounding the internal uterine orifice. The success that had attended dilatation by Dr. Copeman's method was to be explained in two ways: (1) by the change of the flexed condition of the uterus—which the author had pointed out to be an usual cause of the sickness—to a condition of comparative straightness; (2) by the relief of the compression and condensation of the tissues by the artificial dilatation. Relief from vomiting during pregnancy might be obtained (1) by elevating the body of the uterus, and thereby taking off the pressure at the internal os; or (2) by dilatation of the cervix after the method of Dr. Copeman. His own opinion, based on observation, was that the postural treatment was generally sufficient.

The PRESIDENT said he had learned at the beginning of his career, from Dr. Henry Bennet's book, that inflammation of the cervix uteri was a frequent cause of excessive vomiting in early pregnancy; and he had since made it a rule to examine the uterus in such cases, and frequently found the condition described by Dr. Bennet; and, on touching the inflamed surface freely with the solid nitrate of silver, the vomiting generally ceased. Dr. Marion Sims had, about a year ago, communicated to the journals a letter from an American practitioner, recommending blistering the cervix with nitrate of silver in such cases, which, he thought, acted as a counterirritant. The President believed it was really cases of inflammation of the cervix that were relieved by this treatment, and that it generally failed in other cases. In many instances, the free use of purgatives gave much relief. He did not attach so much importance to flexions of the uterus as Dr. Graily Hewitt did. He had seen many cases of excessive vomiting where there was no flexion, and many cases of marked flexion where there was no vomiting. Dilatation of the cervix he thought liable to produce abortion, and he had seen it followed by fatal peritonitis; he had never himself tried it.

Ergot in the Treatment of Fibroid Tumours of the Uterus. By W. H. BYFORD, M.D. (Chicago).—Dr. Byford laid down the following propositions, and offered arguments in support of them. 1. When properly administered, ergot frequently very greatly ameliorates some of the troublesome and even dangerous conditions of fibroid tumours of the uterus, *e.g.*, hæmorrhage and copious leucorrhœa. 2. It often arrests their growth, and checks hæmorrhage. 3. In many instances it causes the absorption of the tumour; occasionally without giving the patient any inconvenience; while, at other times, the removal of the tumour by absorption is attended by painful contractions and tenderness of the uterus. 4. By inducing uterine contraction, it causes the expulsion of the polypoid variety of the submucous tumour. 5. In the same way, it causes the disruption and discharge of the intramural tumour. He said that, in administering ergot in cases of fibrous tumour, the action of the drug would depend on the degree of development of the fibres of the uterus, and on the position of the tumour with reference to the serous or the mucous surfaces: the nearer the mucous surface, the better the effect. A good result might be expected under the following conditions: smoothness of contour of the tumour, denoting uniform development; hæmorrhage; a lengthened uterine cavity; and elasticity of the tumour. He would expect large fibro-cystic tumours to resist the action of ergot; and a good result was not to be expected in cases of uneven nodulated tumour, absence of hæmorrhage, shortness of the uterine cavity, and hardness of the tumour. It was not essential to give ergot hypodermically, though this was a very efficacious method; it might be given by the mouth, in suppositories, etc. If the object were to cause painless absorption of the tumour, the dose should be moderate, and not too frequently repeated; if it were desired to have the tumour expelled, full and increasing doses should be given often, and continued till the object was attained. The preparation which he used was Squibb's fluid extract of ergot. He said, in conclusion, that he disclaimed any expectation that ergot would supplant all other modes of treatment.

The PRESIDENT said he had given a very full trial to ergot of rye in various forms, both by mouth and by hypodermic injections; but hitherto, he regretted to say, without obtaining any of the good results described by Dr. Byford. He had not, however, tried the preparation Dr. Byford mentioned; and the result of his cases was so encouraging, that he would give the medicine in this form a further and full trial.

Fibro-Myoma of the Placenta. By JOHN T. HODGEN, M.D. (St. Louis, Missouri).—Dr. Hodgen presented a tumour which had been discharged during the fourth confinement of a healthy woman, thirty years of age. It preceded the delivery of the placenta. The woman had never any unusual discharge from the womb. The pregnancy progressed to the delivery of a mature healthy child at term. The tumour was about three inches long, two broad, and one thick. One surface was smooth, shining, and lobulated. At the border of this shining surface, two blood-vessels entered the tumour. One of these was thin-walled, and about the size of the external jugular vein; the other thick-walled, and near the size of the radial artery. Both of these vessels disappeared in the tumour. A fragment of placental tissue was found attached to the surface of the tumour. The placenta was normal in every respect; but next the margin, on the fœtal surface, was a depression three inches long, by one inch and a half broad. This surface was not covered by the amnion, but surrounded on its inner border by a torn margin of the amnion. When first observed, the membrane presented at a point opposite the site of the depression in which the tumour was supposed to have entered a lacerated opening, corresponding in form and size to the bright shining surface of the tumour. At one end of the depressed surface on the placenta, passing into the membranes, were two vessels, whose broken ends corresponded in size and relative situation to the vessels already described entering the tumour. One of these vessels was continuous with a placental artery, and the other with the placental vein. The tumour was a fibro-myoma of the placenta.

The PRESIDENT asked whether it was not possible that this tumour was a truly uterine one, and that the placenta had overlapped and formed a vascular connection with it. Pathologists regarded fibrous tumours as a growth of the non-striated muscular fibre; and, if this view were correct, it was difficult to understand how such a tumour could have its origin in the placenta.

SECTION E.—PSYCHOLOGY.

Wednesday, August 6th.

THE Chair was taken by the President, J. A. EAMES, M.D., Resident Medical Superintendent of the Cork District Lunatic Asylum, who delivered an address, which was published at page 250 of the JOURNAL for August 16th.

The Psycho-physiological Training of an Idiot Hand. By E. SEGUIN, M.D. (New York).—The paper of Dr. Seguin was more doctrinal than descriptive. It meant to convey and support two ideas. The first was, that the senses might be more affected than the mind in idiocy, and that, even when the mind was more incapacitated than the senses, it was yet by the arousing of the senses that the mind was trained to come out. The second doctrinal point treated was of more philosophical importance: viz., that, as the senses might be trained to sensualism, on the contrary, in the education of idiots the senses were trained to idealise more and more the sensations. Another remark was on the avoidance of alphabet, reading, and so forth, till a child was used to pick up his own ideas from his own perceptions, instead of swallowing them from books; not because they were true or just, but because they were printed. The details of the progress of the child R., whose case was described, were almost confined to those of his hand to move, work, and play; but a sufficient space was given to the methodical *training* which preceded the *uses* of that idiotic hand. The teacher who had done that work under Dr. Seguin's direction was not forgotten; and it was a justice too often neglected in monographs. The paper was illustrated by photographs of the child to whom reference was made.

Dr. BALL (Paris) remarked that Dr. Seguin's extremely interesting paper brought out strong arguments in favour of the power of education even in the most unfavourable cases. He would only make one remark on this point. It was a well known fact that, in many cases, idiots were paralysed or rendered incapable of properly using their limbs through absolute malformation of the brain—through deficiency or total absence of certain parts which corresponded to the supply of nerve-power in the upper or lower limbs. In such cases, it would, in all probability, be found impossible, by any process of education, to improve the condition of the patient. A case in point was the atrophy of the motor centres, which Dr. Luys had ascertained in patients who several years before had suffered amputation; the loss of a limb leading to the suppression of the corresponding central department, just as the absence of that department would lead to the incapacity of the corresponding limb.

Dr. MAJOR (Wakefield) said that a consideration which had occurred to him on hearing Dr. Seguin's case was the scant justice, so to speak, which was done to idiots in the large asylums. Such patients were doubtless of the lowest and most degraded type; still, as many could not be received into idiot asylums, it would be well if, in the ordinary lunatic asylums, more pains and attention were devoted to their training and amelioration than was now done. It was difficult to doubt that, were this done, the habits of these patients, at least, would be improved, and themselves rendered less troublesome and objectionable than they were well known to be.

Dr. ASHE (Dundrum) thought the most important consideration deducible from Dr. Seguin's paper was the element of hope it held out for the further development of the results of moral and educational treatment alike of idiocy and insanity, and the explanation it gave thereof. It could be inferred that there was a definite correlation between the development and actions of the different organs of the body, and the development of the brain and spinal cord as the organs that presided over these actions; so that a reflected development of the nervous system arose from the use of the bodily organs. No doubt this statement might be extended, so as to affirm that an increase not only of cerebral functional power, but even of brain-tissue, with structural amelioration, would arise from the cultivation of mental powers and the proper direction of mental endeavour by suitable moral and educational training.

Dr. SEGUIN agreed with the objection of Dr. Ball that some anomalies of the brain-substance could never be corrected by education; with this reservation, that, in many cases apparently hopeless, the training had had this rather sad though useful result, to make a number of idiots more happy, and to improve them in this wise that, instead of exacting one person's time for each idiot, a single attendant could minister to the wants of several of them. Dr. Herbert Major had expressed a doubt that the training described could be applied in large institutions. Dr. Seguin remarked that, as a fortunate compensation, the asylums offered greater facilities for the general training, whose advantages were fully equal to those of a private education; expressing the wish that, by some wise arrangement, all the idiots could have the benefit of these two forms of treatment, each in proportion to his physiological wants. In the course of these remarks, the speaker alluded to the improvements of both sorts of training he had noted during his last visit to Earlswood. The observations of Dr. Ashe were almost adhesions to the physiological facts and doctrines enunciated. Dr. Ashe was particularly precise in pointing out the importance of the psycho-physiological training of the hand, as advocated by Dr. Seguin, to shape what might be called with absolute certainty the education of the future.

On Claustrophobia. By B. BALL, M.D. (Paris).—The author's object was to call attention to a state of mind in which there was a morbid fear of closed spaces. It was apparently different from, but in reality similar to, agoraphobia or the dread of open spaces; and, with Professor Verga, he proposed to call it claustrophobia. He had noticed two cases of this form of mental aberration in 1875, but had for some time refrained from publishing them, and had been anticipated by other observers. The first case which he saw was in a young officer, aged 20, who, when Dr. Ball first saw him, was labouring under the condition described by Dr. Legrand du Saulle as *délire du toucher*, or tactile mania—a dread of becoming polluted by the objects which he touched. With this, he had a feeling of irresistible terror whenever he found himself alone in a room with the doors shut. Another case in which this morbid feeling existed was that of a lady aged 36. Dr. Meschede had called attention to this condition at the recent meeting of German Naturalists and Physicians at Cassel; and cases had been related two years since by Dr. Raggi of Bologna. Dr. Ball considered that agoraphobia and claustrophobia were closely allied to the causeless depression of melancholy or the furious excitement of mania, and that they must be viewed as the result of a distinct and peculiar form of insanity. The prognosis in claustrophobia was unfavourable. None of the patients had recovered, and some had lapsed into the more severe and hopeless form of insanity.

Dr. G. M. BEARD (New York) said that the paper was to him more interesting than any to which he had listened in any of the Sections, for the reason that he was specially interested in the subject of morbid fear as a symptom of nervous disease. Topophobia, or fear of places, was a generic term, and included under it, as special forms of fear of places, agoraphobia, or fear of open squares or places, and claustrophobia, or fear of closed places, as described by Dr. Ball. These morbid fears had their opposites; that is, they took opposite directions in different patients. He described a number of cases of morbid fear that had come under his own personal observation in America. One of these patients, a physician, although a strong man, could not go away from his office in any direction without great agony; another patient could not go to a certain place, where he was first attacked with morbid fear. Dr. Beard also referred to other varieties of morbid fear; as anthropophobia, or fear of man—aversion to society; and its direct opposite, fear of being alone. In regard to these varieties of morbid fear, these generalisations were demonstrable: first, they were symptoms of functional rather than of organic disease. Dr. Ball was in error in assuming that they usually led to insanity. They were not in any sense insane symptoms; they were not accompanied by delusions or hallucinations. In very many cases, the individuals recovered entirely, according to his experience, under tonic and sedative treatment. With some exceptions here and there, patients of this kind did not become insane, and did not develop any organic disease. These conclusions were based on the study of a large number of cases in America, where, for climatic reasons, these symptoms were far more common than in Europe. What these climatic conditions were, he had described in his paper on the nervous diseases of America, read before the Medical Section of the Association.

Thursday, August 7th.

The Chair was taken by the President, J. A. EAMES, M.D.

THE PREVENTION OF INSANITY.

The discussion on this subject was arranged under the following heads: *(a)* Ascertaining and classification of causes; *(b)* The legitimate prevention of hereditary transmission; *(c)* The influence of bad sanitary conditions; *(d)* The effect of the teaching of elementary physiological principles. It was opened by Dr. HERBERT C. MAJOR (Wakefield).

Dr. MAJOR said that the importance of the subject could not be overestimated. While increase in the proportion of persons becoming insane was still open to some doubt, there could be no doubt of the annual growth of the insane population, from the accumulation of incurable cases. And if such accumulation were to be checked, it was to be done by preventing by every possible means the occurrence of fresh cases. It was not sufficient, when insanity had once supervened, to insist on early treatment; this, although most advisable, would in many cases fail to bring about a cure, with our present knowledge, from the fact that oftentimes there existed, with the onset of mental symptoms, grave or incurable cerebral lesions. Taking up specially the question of the ascertaining and classification of causes in insanity—a subject which must form the starting point for all efforts at prevention—the importance in the first place of the adoption of a satisfactory scientific system of classification was alluded to, as also the utter inadequacy of the system adopted in most asylum reports. While the difficulties and uncertainty attending the forming of a correct idea of the cause inducing insanity were often very great, this was no argument against continued patient investigation. But the value of results thus obtained would depend very much upon their adequate expression in statistical tables. It was, therefore, greatly to be desired that, without loss of time, a system of tabulation should be devised which might fairly meet the requirements of the case; further, that such a method, having been recommended by competent authorities, should be adopted in all asylums, not in this country only, but also in our colonies; and thirdly, that the results thus elicited should be made known for the guidance of medical men and (through them mainly) of the community. The tables of the English Commissioners in Lunacy were doubtless a valuable step in this direction, but more remained to be done; and it was for asylum physicians, by their individual efforts, to render such statistics of still greater public utility and benefit.

The Prevention of Insanity.—By A. C. F. RABAGLIATI, M.D. (Bradford).—This paper was read by Dr. Major in the unavoidable absence of the writer. Dr. Rabagliati spoke of the present deplorable state of the country where one in every twenty-five or thirty of the population was a pauper, and stated that, in Yorkshire alone, there were 2,900 pauper lunatics in the county asylums, besides those in the workhouses. He considered that the ratepayers would be quite justified in insisting on a forcible limitation of such a state of things, and suggested that, in the present ignorant state of the mass of society, marriage should be prohibited between persons who had ever been insane, and at any period of adult life chargeable to the rates. He even thought there ought to be no objection offered to apply such a provision to all insane persons whatever, on the ground that the individual liberty should never endanger the common good. Nevertheless, compulsory legislation was to be deprecated where people were sufficiently educated to be convinced by moral persuasion and argument; and it was very desirable that public opinion should be educated by a fair and truthful statement of the facts regarding the progeny of diseased persons. His

own opinion, based on a careful examination of facts, was, that insanity was only one group of a large class of closely allied diseases, such as scrofula, consumption, cancer, and perhaps syphilis. It might seem unreasonable to interfere forcibly with the marriage of persons affected by any of these diseases; but there was already generally a strong feeling against such marriages, and much might be done by education to develop and strengthen such a feeling. He thought, however, that even the children of unhealthy parents might be brought up in good sanitary conditions, with well selected food, properly arranged work, sleep, exercise in the open air, and in a suitable climate, and so develop a more healthy constitution than that which they inherited. Care in bringing up children was the chief agent in making healthy men and women; and he thought it therefore most necessary that the principles of sanitary science, of feeding, clothing, exercising, working, and resting children, and their various powers and requirements, should be taught in the higher board-schools, as also the responsibilities and capacities of parents. This, which would benefit the whole country, might well be done at the public cost. In order, however, to give such care to their children, parents must have the means to do so, and with very large families this would generally be impossible. It was far too common to hear of large families of whom nearly all, or more than half, died in infancy. Among the lower classes especially, this was generally the case. Instances of it came before him every day. Half the children born in the country died before the age of five years. This system was a wasteful one, even from a pecuniary point of view; and, considering the neglect of even the surviving children, from want of means and time on the part of the parents, and the too frequent ill-health and premature death of the overwrought mother, its consequences were mischievous. He thought that, in our over-peopled country, the number of children in a family should average three, who could then be properly cared for; but, were the present high death-rate to continue, then the average number should be five or six. He had heard it objected that such a course would only be followed by the prudent and thoughtful, who would then soon be swamped by the idle and profligate, still multiplying without check; but this argument overlooked the lessons of history. As to the means of effecting limitation of families, abstinence alone should be advocated to bring about the desirable result; no other measures could command respect from rightly disposed and high minded persons.

Mr. MOULD (Cheadle) said that to attempt to deal with passion, feeling, and emotion, was a most difficult problem. It was impossible to attempt to interfere with the individual liberty of the subject in these matters. People married, not because they had found, after careful inquiry and due consideration, that they were perfectly healthy, but from other and more emotional considerations; and he felt assured that it was both injudicious and inexpedient for scientific men to interfere with the relations between the sexes, and especially the regulation of the number of children. In the prevention of insanity, very much could be done to assist the healthy growth of children, both in the middle and lower classes; in the former with suitable food, in the latter with both suitable and sufficient food and healthy surroundings. In this manner, the healthy growth of the mind was assisted; and it had often astonished him that means were not taken by those in authority to feed as well as to educate children. He had been much struck with the healthy appearance of the children he had seen in Cork, and he would attribute it to a full and sufficient supply of good and digestible food, and to freedom from the confinement of the immediate neighbourhood of their small and, of necessity, frequently unsavoury dwellings; and one would wish that, in the large manufacturing counties, greater attention should be paid to the forcible observance of the plain, simple, and natural laws of health, more especially in early life. In asylum practice, there was little to do with the prevention of insanity; efforts were more directed to its cure, generally in its acute or advanced stages; but that might be taught, especially in medical schools, which was known to be essentially necessary to the healthy condition of mind of those who, either from hereditary transmission or from acquired causes, were peculiarly liable to mental disease.

Dr. ASHE (Dundrum) thought that some fallacy must underlie the Malthusian doctrine supported by Dr. Rabagliati. In accordance with the doctrine of natural selection, a great superabundance of life was required, from which the individuals most fit for survival were selected. The compulsory separation of husband and wife could only result in either the substitution of irregular and illicit relations between the sexes, for those which were regular and lawful, or in other and still more serious deviations from the design of nature, having a still greater tendency to fill the asylums. He thought that, with a view to the prevention of insanity, it would be necessary, by further research, to correlate insanity with other abnormal or diseased conditions, and, after having thus arrived at a scientific classification of insanity, to base a sound therapeutic system thereon; and, having done so, to spread this scientific knowledge of the disease amongst general practitioners, so that the earlier stages might be brought under a sound and rational system of treatment.

Dr. BODINGTON (Kingswinford) said that one chief means of the prevention of insanity was to diffuse a knowledge of mental physiology amongst the public. The ignorance on all questions concerning the mind was great and widespread: it was impossible, under present conditions, to get people to entertain the view that the phenomena known as mind were dependent on brain-function, and should come under treatment upon the ordinary principles of medicine. Again, instruction regarding lunacy should be regularly given in all medical schools; not only for the sake of lunacy practice, but also that medical men might be competent to influence families to take the necessary precautions for the forestalling and prevention of attacks. It might be desirable for lunacy practitioners, through the medium of the Medico-Psychological Association, to suggest to the authorities of medical schools that they should at once make psychology a part of the ordinary course of instruction in medicine. The schools might exact a course of lectures and clinical instruction in insanity from all their students. He concurred with all said by Mr. Mould regarding the value of good food; but it must be remembered that insanity occurred amongst classes of society where food was substantial and abundant, and hence other causes must be looked for. Amongst these causes, overdue forcing of young brains must be reckoned; it was very rife just now, and it had led to many unhappy consequences. He was told by an Oxford fellow and tutor that one or two cases of suicide by undergraduates occurred yearly in that University; and in his opinion they were mostly due to the fatigue, anxiety, and distress arising from excessive brain-work and undue competitive struggles. A year or two since, he had a Cambridge undergraduate under his care, suffering from mania distinctly traceable to overwork. Parents sent little boys to preparatory schools, and insisted on having them finely ground and polished in classics and mathematics without reference to their capabilities, so that they might make a figure in the public schools. He had it on the testimony of the master of a large preparatory school, that boys thus forced broke down frequently at fifteen and sixteen, and did nothing more thereafter. On the other hand, he was acquainted with a public school (Giggleswick School) in Yorkshire, where science and modern languages held a prominent place. The sciences taught were botany and experimental physics. He was assured that the teaching of botany to little boys was most valuable in helping along the dull ones in their school career. It cultivated their powers of observation, but it also excited their interest and relieved the tedium of the round of classics and mathematics, and promoted industry and happiness. While he concurred with all that had been said with regard to food and hygiene, the early training of the mind must not be neglected, which in his view, was now, in too many instances, unwise, injurious, even barbarous. As physicians treating insanity, and desiring to do all they could to prevent it, it was, he thought, their duty to set their faces against the brain-forcing now common, and generally to endeavour to get the education of the young established on a sound footing and conducted by healthy methods.

Dr. MURRAY LINDSAY (Mickleover, Derby) said that those engaged in asylum practice had chiefly to deal with the cure of insanity; but prevention was even more important, and their best efforts should also be directed towards aiding in any measures that would tend to the prevention of insanity. He endorsed the observations of Dr. Major as to a more satisfactory classification of the causes of insanity, and greater uniformity in the statistical tables of Asylum Reports. Psychologists should be able to instruct medical practitioners; but, before being in a position to do so, they must arrive at a better understanding as to some standard and greater uniformity of statistical tables. With regard to such tables, the result of his experience was, that the causation of insanity was generally a compound of several causes. The same held good with regard to the causes of death in those dying in asylums: the causes being compound. In filling up such tables, it was desirable in each case to put down all the causes operating to produce insanity, as well as all the causes producing death. In order to obtain greater accuracy and greater uniformity in this respect, it was incumbent on asylum medical officers to do their best to obtain as careful and accurate histories as possible of the cases admitted, and to ascertain the causes of death in as many cases as possible, by *post mortem* examination. With regard to the prevention of insanity, medical officers of health should be able to render very valuable aid.

Dr. OSCAR WOODS (Killarney) acknowledged the great benefit to be derived from a careful classification of the causes of insanity, and regretted that it was impossible to classify the causes very accurately in the Irish asylums, owing to the want of information in the committal forms; few facts being stated, the medical man, as a rule, certifying on

hearsay, not on facts observed by himself. Friends rarely accompanied patients to the asylums: they were brought in charge of the police, who knew nothing of their history. He hoped that when the report of the Commissioners, lately laid before the House of Commons, was being considered, the committal form for dangerous lunatics would be done away with, and a form similar to that in use in England be adopted instead. Much good might also be derived if the tables recommended by the Medico-Psychological Association were generally used in Irish asylums.

Dr. RINGROSE ATKINS (Waterford) said that, as in other diseases, the causes of insanity must be definitely ascertained before any steps could be taken to successfully combat their attacks or reduce their influences for evil; and it was in this ascertainment of causes, on the very threshold of the inquiry, that the Irish Asylum Physicians were met by difficulties which it seemed, in the present condition of things, almost impossible to overcome. This state of things, outside the asylum physician himself, appeared to depend upon two conditions; on the one hand, the comparative ignorance, or want of aptitude, on the part of the certifying medical practitioner, who, in his student career, had learned, as regards the subject of insanity, little more than, if even so much as, the meaning of certain terms, which he subsequently used most loosely, or perhaps improperly, while he was quite unacquainted with the investigation of those intricate factors which worked in the production of the cerebro-mental disorder; and, on the other hand, the unthinking and often wilful concealment of all important facts and information on the part of the friends of those afflicted. The prelude to the prevention of insanity should be the dissemination of a knowledge of insanity during their student careers amongst those who might be afterwards called upon to cope with the disease in its commencement, or to give advice which might prevent an attack; as well as teaching the public generally the nature of brain-structure and brain-function in health, and leading them to see in mental derangement actual disease of organic structures, and not merely mental alterations outside the true domain of medical science. They would then realise the delicacy of those nervous structures, know now to conserve their functions, and when derangement did ensue be able and willing to give such information as might aid the physician in his search for the cause, which might in many cases be but of a temporary or removable character. He concurred with Mr. Mould that, if the young brain were to ripen and develope to maturity, it must have pabulum whence to draw that nutriment on which the developmental processes depended, and it must be surrounded by such influences as would allow these developmental processes to have free play and power. In its growth, however, it must not be worried or forced; if it were, its functions might, indeed, appear to bloom when they should be but budding, but they would fade before full fruition came. Too early development must pay the penalty of premature decay. He agreed with Dr. Bodington in his condemnation of the system of education now pursued in many schools and educational establishments. All must regard the practice of teaching by pure efforts of memory as most baneful in its after-effects. He would gladly see introduced the system of teaching by demonstration, of appealing to the intellect through the senses; and the information thus gained would be far more permanent, far more interesting, and far less injurious. If insanity could be prevented, if it were possible to lessen the ravages of mental derangement, it was necessary to begin by so building the brain that, when the wear and tear of after-life came, its structures might be able to stand the shocks to which it might be subjected while passing through the shoals and quicksands of life.

Dr. MAJOR replied, on the part of Dr. Rabagliati, to some of the criticisms on his views regarding the limitation of the number of children.

Metalloscopy in the Treatment of Hysterical Hemianæsthesia. By RINGROSE ATKINS, M.D. (Waterford).—Dr. Atkins read a paper on this subject, illustrated by a case which had come under his observation in Dr. Connolly's wards in the Waterford Union Hospital. The patient, a girl aged 18, had for several years suffered from menstrual irregularities and hysterical symptoms of an exaggerated character. In the early part of this year, she became affected with pain in the left hip and knee, simulating morbus coxarius; and later on, the symptoms changed to a spasmodic jerking of the entire body, but especially of the limbs of the left side; the attacks coming on independently, but being at once determined by slight pressure over the inner surface of the left knee, the hip, and the ovarian region. Under treatment with bromide of potassium, liquid extract of ergot, and galvanism, these seizures subsided, and she left the hospital, but was soon afterwards re-admitted, the pain returning when she had attempted to work. Spasm of the diaphragm then ensued, and soon afterwards the entire left side became quite anæsthetic and analgesic, the left leg paralysed for motion, and the left arm partially so. The special senses of hearing, taste, and smell, were obliterated on the left side; there was no achromatopsia, at least for bright tints, and no interference with sight. Being in this condition, four zinc discs were fastened round the left wrist, and a copper band round the ankle. The first apparent effect was to render the arm more powerless and rigid; in some hours, however, this condition had quite disappeared, and increased motor power existed, while sensation had returned to the fore-arm. Zinc discs were now placed round the ankle, those on the wrist being retained. The next day, sensibility existed over the entire of both limbs and over the body, with the exception of the back of the neck and left ear; there was no transference of the anæsthesia, nor then any return of the special senses affected; zinc discs were then applied to the ear and neck, those on the limbs being removed; motor power had now returned in great degree to the left leg, so that the girl was able to walk with assistance. From this time, the sensibility rapidly increased, as did also the motor power of the arm and leg; taste and smell became normal, and hearing improved; and within a week from the first application of the metallic discs, the girl was quite well, and has continued so since. Dr. Atkins made some remarks on the pathology of this congregation of symptoms, and on the general question of metallotherapy, and, while being quite open to conviction, could not help thinking that the influence of the mind over the body, of the concentration of the attention, played an important part in the results which followed the metallic applications. He added, however, that the girl was quite unsophisticated, and had no knowledge, beyond that which she gained by experience, of the effects which were considered likely to ensue; and thus of course it was a question how far the principle of the so-called "expectant attention" could come into operation.

Dr. G. M. BEARD (New York) remarked that this paper was more judicial in tone than most of those that had been written on the subject of metalloscopy, and the author had stated the facts without attempting to explain them. Experiments of this kind were experiments with living human beings, for which hitherto there had been no guide or chart laid down by philosophers. The philosophy of Lord Bacon did not apply to living human beings, but only to inanimate nature, and to that extent the Baconian philosophy must be reconstructed. These metalloscopic experiments were simply part of a long series of similar experiments that had been going on for nearly a century, beginning with mesmerism. In all these experiments, there were six sources of error, all of which must be guarded against if our experiments would have any scientific value or command the homage of scientific men. If the Salpêtrière experiments had been made properly, the results would have been put beyond controversy. These six sources of error were: 1. The phenomena of the involuntary life; 2. Unconscious deception on the part of the subject experimented on; 3. Intentional deception on the part of the subject; 4. Unintentional collusion of third parties; 5. Intentional collusion of third parties; 6. Chance and coincidence. These sources of error were not pointed out by Lord Bacon, nor had they been pointed out by any of the writers on logic. It was ignorance of these sources of error, and of the means of guarding against them, that made the experiment of Charcot and his followers, and even of some of his critics, of such a non-expert and unsatisfactory character. In order to guard against some of these sources of error, it was necessary to use orderly systematic deception. One could deceive subjects experimented on in three ways: 1. By doing something when the subject experimented on believed that one was doing nothing; 2. By doing nothing when the subject believed that one was doing something; 3. By doing something different from what the subject believed was being done. Dr. Beard had made a series of experiments a number of years ago in one of the institutions of New York, in the use of mental therapeutics alone, no objective treatment being used. For a number of months, he treated all his patients in the class of nervous diseases, by applying metals and various bright objects outside of the clothing. The results proved these two facts, which he believed to be new to science, and which had been denied by neurologists, but which were verifiable by any one: 1. Organic diseases can oftentimes be relieved by mental influence better than by medical treatment; 2. Functional diseases of various kinds may be cured permanently in this way. Not only hysteria, paralysis, neuralgia, rheumatism, and so forth, were successfully treated by mental therapeutics alone; and the results in his experiments, in fair comparison in the same class of cases, far surpassed the results of ordinary objective medication. Dr. Beard then described and illustrated the muscle-reading experiments (so-called mind-reading) he had made in America. It was shown by these experiments that a person whose nervous sensation was delicate, could find a very minute locality on which the mind of the subject was concentrated, by simply taking the hand of the subject, and leading him up and down the room. So minute an object as a head of a pin could be found in this way. The explanation was, the unconscious muscular tension of the subject

toward the locality on which his mind was concentrated, and muscular relaxation when he reached the locality or object thought of. Five years ago, physiologists would have called this impossible, but these experiments had been confirmed again and again in America.

On the Prevention of Suicide. By W. F. WADE, F.R.C.P. (Birmingham).—Out of 1,600 cases of suicide in 1875 in England alone, it is Mr. James Wilkes's opinion that a majority were those of insane persons, and might have been obviated had these unfortunate persons been under "proper care". The newspaper reports indicate that coroners do not take sufficient, if any, care to ascertain whether the persons in legal charge of these suicides have or have not been guilty of *lâches* in regard to them, and might by "proper care" have prevented them. It was suggested that the Home Secretary, who alone has access to the depositions—the only reliable documents which can prove whether or no the coroners are negligent in this respect—should be requested carefully to examine all depositions when the verdict is one of "Suicide in a state of (temporary) insanity", and act in the matter as he may be advised.

Friday, August 8th.

The Chair was taken by the President, J. A. EAMES, M.D.

Intemperance in Study. By D. HACK TUKE, M.D. (London).—In this paper, the author laid down the following propositions.—1. There is danger at the present time arising out of intemperance in study, both at school and during the period of medical education. 2. The ill-effects of mental strain are greatly increased by the anxiety attending examinations. 3. Mental strain may induce brain-fag only, or blunt the fine edge of the faculties; may predispose to attacks of insanity or directly excite them; may cause convulsive affections, or, at other times, disease of the lungs, heart, or kidneys, the particular organ being determined by the hereditary tendencies of the individual. 4. Inasmuch as the active exercise of the mental powers is highly beneficial, the object of the medical psychologist must be, not to discourage a thorough education (general or professional), but to induce the instructors and parents of youth, and those who are responsible for medical study and examinations, to moderate their requirements as to quantity, though not as to quality, and to avoid crowding the mind with too many minute details. 5. It is very important to lessen the strain on the memory at the final medical examination, and to prevent the possibility of students deferring to work hard until a late period of their term by spreading the examinations over the period of medical study; these being so arranged that the student's attention is not distracted while engaged in hospital work by scientific examinations not related to it. 6. The action now taken by the Metropolitan Counties Branch of the British Medical Association in directing the attention of the profession to the unsatisfactory state of medical study and examination, deserves the warm approval and support of medical psychologists.

Dr. HERBERT MAJOR (Wakefield), while agreeing with Dr. Tuke as to the injurious results liable in many cases to follow excessive or misdirected study in colleges and schools, expressed the opinion that in practice it lay more with parents and guardians than with professors to avert evil results. If parents, having an intelligent appreciation of the delicacy of the organ of mind and the importance of cultivating its vigorous growth, would discourage in young children everything tending to produce brain-fatigue, and on the other hand promote development by special attention to food, exercise, etc., while encouraging at the same time purely negative education, many evils would probably be averted, and especially if schooling proper were commenced rather late than early. If this were done, the apparent loss of time in the first instance would be more than made up for by subsequent greater intellectual vigour; and students' brains would respond better, without being injured by the severe work of the schools, which, after all, was a necessity in the educational struggle.

Osteomalacia amongst the Insane. By RINGROSE ATKINS, M.D. (Waterford).—Dr. Atkins read a paper on this subject, recording a case which had come under his observation in the Cork District Lunatic Asylum, and exhibiting specimens of the bones which had been taken from the patient. The subject of the affection was a male aged 55, formerly a soldier, and for over fifteen years an inmate of the District Lunatic Asylum, Cork. While serving in India, he had mutilated himself, removing the entire scrotum and testes. For the past seven years, he had been bedridden, the lower limbs having become immovably fixed in the flexed position, and, as a result, perfectly useless; he constantly lay on his back, and had an old and effeminate appearance, and was at times affected with strange and occasionally amorous delusions; he was remarkably clean in his habits, and scrupulously particular regarding his surroundings; he never had any tendency to bed-sores, nor suffered from ailment of the bodily organs. On November 30th, 1877, a fellow patient, in a moment of excitement, threw himself on him as he lay in bed with the knees flexed and fixed, and this slight force sufficed to fracture both femora in their upper thirds, and both legs, the right in the middle, the left in the lower third; and these multiple fractures thus occasioned at once directed attention to the weakened condition of the bones. No complaint of pain was made, nor did any swelling or inflammatory action ensue; splints were applied to support the limbs, but their weight pressing on the abdomen caused erythema and excoriation of the groins and flanks, in spite of the endeavours made to avoid this; and the movements which were thus rendered necessary, as well as his generally weakened condition, soon led to exhaustion, to which he succumbed. On *post mortem* examination, the bones appeared externally quite normal; but when touched with the scalpel they were discovered to be so soft as to be easily cut through in any direction, this being especially the case with the bones of the lower limbs. On section, the medullary canals were found to be greatly enlarged, the cancellous tissue reduced to very fine and delicate trabeculæ, the meshes of which were filled with an oily gelatinous-looking material, much of which was removed by boiling; and the cortical layers were greatly reduced in thickness; in the case of the lower extremity of the femur, the shell being quite translucent. The bones of the upper limbs were similarly affected, but to a less extent, and so also was the vertebral column. The cranial bones had not participated in the change. The nerve-elements of the cord were affected with degeneration and atrophy, as were also the muscular fibrillæ of the lower limbs and the strands of the sciatic nerve. The author made some comments on the relation of the bone-disease to the condition of the nerve-centres, and to the functional inertia of the limbs for such a prolonged period.

SECTION F.—PHYSIOLOGY.

Wednesday, August 6th.

THE Chair was taken by the President, HENRY POWER, F.R.C.S., Ophthalmic Surgeon to St. Bartholomew's Hospital, who delivered an address which was published at page 277 of the JOURNAL for August 23rd.

The Mode of Propagation of Nervous Impulses. By J. J. CHARLES, M.D.

The Causation of the Dicrotic Pulse-Wave. By R. J. HARVEY, M.D. (Dublin).—The author discussed the possibility of longitudinal recoil as a factor in the causation of the dicrotic beat. If a given quantity of fluid be pumped into an elastic tube already full, the cavity of the tube will become increased in all three dimensions—the ratio of the longitudinal to the circumferential (or radial) increment being constant for any given tube, and hence independent of the initial tension. When fluid is pumped into an over-full arterial system, a wave of increased tension is propagated from the heart towards the capillaries, the up-stroke of the sphygmograph measuring the radial or circumferential increase at the spot where the instrument is applied. But the increased tension is expressing itself at the same instant in a tendency to elongate the vessel from this spot forward; and in so far as this elongation occurs, the circumferential tension is diminished, and the height of the up-stroke consequently lowered. The effects of the elastic reaction or recoil from the distension in these two directions (radially and longitudinally) are not synchronous. The radial is instantaneous, while the longitudinal is necessarily postponed. And as the occurrence of the elongation tended to lessen the radial tension at the point in question, the longitudinal recoil now tends to increase it, and so to cause a break in the descent, or a secondary elevation, of the lever. As the proportionate increase in the contents of a tube by the addition of a given quantity varies inversely as the initial contents, the elongation will vary in the same ratio; and as the effect of any longitudinal recoil will again be inversely as the contents of the tube, the height of the secondary up-stroke will, *cæteris paribus*, tend to vary inversely as the square of the initial contents. Hence its occurrence, in any marked degree, is necessarily a concomitant of low tension. The amount of elongation and subsequent recoil is not the sole factor in the effect of the recoil. Suddenness is also essential; hence the absence of peripheral resistance whereby a sudden recoil is permitted in an all-important condition of dicrotism. Lastly, as any effect in increasing tension from a cause in front would be lost if there were not resistance behind, the competency of the aortic valves is also required for the full exhibition of a dicrotic pulse.

Thursday, August 7th.

The Chair was taken by HENRY POWER, F.R.C.S.

Remarks on Connective Tissue, with Demonstrations. By GEORGE THIN, M.D. (London).—The author alluded to the prevalent view

regarding the nature of the cells of connective tissue, which regards the cell as made up of two distinct parts, namely, a nucleated centre, and wings and processes by which the cells in some instances anastomose. He was induced to believe that the cell was a less complicated element, being an epithelioid cell pure and simple, without processes, membranous expansions, or fibrils, passing into the connective tissue proper. In the subcutaneous connective tissue, he had found evidence that these epithelioid cells were juxtaposed like the cells of a serous membrane. In support of this view, he showed nitrate of silver preparations (similar to those described by him some years ago in the proceedings of the Royal Society) from the subcutaneous tissue of the mouse's back, in which oval or somewhat rounded cells with round nuclei were arranged in the manner described, the cells being clean-contoured and having neither expansions nor processes. The appearance of expansions and processes, when they are present, the author believed to be caused by the adherence of a nucleated remnant of the cell to delicate membranous substance, with or without elastic fibres strengthening it. He also showed a cell-reticulum, as indicated by nitrate of silver lines in the substance of a mouse's cornea, the area of each cell being large; the inference being that epithelioid layers existed in the tissue. Smaller cells could be demonstrated in the mouse's cornea by gold solution in slightly pathological conditions, which could hardly be held to admit of the new formation of cells. He also showed layers of cells in a rabbit's cornea which had been inflamed for four hours, and had been treated by chloride of gold. Similar epithelioid cells covered the nerve-trunks in the cornea. These preparations were not new, having been five years in the author's possession, and having been described by him. Similar preparations, obtained by the use of nitrate of silver, had been described previously by Stricker's pupils. So far as Dr. Thin knew, however, the preparations shown were the only ones of the kind in which the cells had been preserved by chloride of gold, and Dr. Thin differed from the view held by Stricker as to their nature, believing that they were not the product of inflammatory action, but were loosened by it from their attachment to the bundles, and that their demonstration was thereby facilitated. He further showed preparations of hyaline cartilage from the kitten and frog, in which, by the absorption of nitrate of silver applied solid to the surface, a peculiar appearance had resulted. The cartilage was found to be composed of parallel bands of uniform breadth, separated from each other by narrower colourless bands. The dark bands might be considered either as sections of strata or as bundles. In the paper in which Dr. Thin originally described and figured this appearance, he had regarded them as of the nature of bundles, but it was quite open to regard them as strata in the cartilage. He had not found them in cross section, and had found them to vary little in breadth. From a notice lately in the *Centralblatt für die Medicin. Wissenschaften*, a similar appearance seemed to have been since met with by a German investigator, but Dr. Thin had not had access to the original paper referred to.

Friday, August 8th.

The Chair was taken by HENRY POWER, F.R.C.S.

Demonstration on the Bearing of the Discovery of a Third Corpuscular Element in the Blood. By RICHARD NORRIS, M.D. (Birmingham).—Some of the principal points which Dr. Norris thought he had made out in regard to the blood by adopting new methods of examination, and which he demonstrated before the Association, were the following. 1. There exists in the blood, in large numbers, corpuscles which, being of the same refractive index and colour as the liquor sanguinis, are ordinarily invisible. 2. By certain methods of manipulation, they can be rendered visible in the field of the microscope. 3. These corpuscles are really chyle-corpuscles. 4. In the blood, they gradually obtain colour, and become ordinary red corpuscles.

A Few Points with regard to Cardiographic Tracings. By. R. J. HARVEY, M.D. (Dublin).—The points in question were, 1. The effects on the bifid top produced by aortic obstruction and mitral regurgitation respectively; and, 2. The evidence of increased action of the left auricle. The latter was considered in connection with simultaneous lever-tracings from the auricle and ventricle of pithed frogs.

The Arrangement and Distribution of the Muscular Fibres of the Rectum. By J. G. GARSON, M.D. (London).—In this paper, Dr. Garson showed that the rectum and bladder are united together by the longitudinal muscular fibres of the gut. The distance that the bladder and rectum are adherent may be divided for purposes of description into two parts, an upper and a lower. Of those, the upper is the longer. Here the two organs are united only by areolar tissue, and can be easily separated from one another; but at the lower part, the anterior longitudinal fibres of the gut, which are closer together on this than on other parts, as they pass downwards over the front of the rectum, are reflected (in the same way that the peritoneum is) from it to the bladder, and are distributed over the posterior surface of that viscus. The rectum and bladder are, therefore, firmly bound together, not only by areolar tissue, as is generally stated in anatomical works, but also by muscular fibres. This arrangement of what Dr. Garson terms recto-vesical fibres does not appear to have been previously described; at least, it is not mentioned in the principal works on the anatomy of the bladder and rectum.

ANNUAL MUSEUM.

THE annual museum was held in the Medical Buildings of the Queen's College, and was divided into the following Sections.

SECTION I: PATHOLOGY.—These specimens were placed in the splendid new Pathological Museum of the College. This department of the College cannot be expected to possess as yet a large permanent museum; a fine collection of specimens having been destroyed by the fire which occurred some years since; but the pathological specimens, if not numerous, are very good. We may notice particularly a series of preparations, illustrating bone-disease; collections exhibiting the various diseases of the kidneys, heart, and other organs; some rare and unique specimens of aneurisms, etc. In the division of the museum set apart to obstetric medicine, are a collection of preparations illustrative of fœtal life; and a series of beautiful wax models, showing the position and development of the fœtus at the different stages of pregnancy.

A considerable number of specimens were lent by the Medical School of Trinity College, Dublin; amongst which were preparations of all varieties of fracture of the lower end of the radius, fractures of the costal cartilages and ribs, and of the femur. There were also casts of the deformities during life resulting from fracture of the upper part of the femur, simulating dislocation of the hip, together with a rare case of impaction of the vertebral column on the skull.

The Royal College of Surgeons of Ireland also lent a fine collection. Looking at these, we especially noticed some preparations of aneurisms of the thoracic aorta and abdominal aorta, and of the common and internal iliac arteries; a series of specimens, illustrating fractures generally; a series showing bone-disease; and several sets of vesical calculi.

The Richmond Hospital, Dublin, contributed a considerable number of valuable preparations; amongst which we noticed a large aneurism of one of the cerebral arteries; a double aneurism of the aorta, one projecting into the œsophagus and one opening into the trachea; also a preparation illustrating abscess in bone (tibia), the abscess-sac being well-defined and thick; an epiphysial fracture of the acetabulum; and a fracture of the spine of the tibia.

Steevens's Hospital, Dublin, lent a variety of preparations; these included, amongst others, a fine specimen of strangulated obturator hernia; an aneurism invading an intervertebral substance of the spinal column; an aneurism of the left ventricle of the heart; a consolidated aneurism of the aorta; a specimen of fracture of the great trochanter, without any other fracture of the femur.

The Mater Misericordiæ Hospital, Dublin, sent a collection to the museum, the principal feature therein being a series of preparations illustrating mitral stenosis. These specimens are alluded to in Dr. Hayden's classical work on the heart. An unique specimen of laryngeal polypus was included in this collection.

Dr. J. F. Hodgen of St. Louis, U.S.A., contributed an extremely rare specimen of a "placental fibroid", which had occurred in a case in his practice.

Dr. D. J. Leech (Manchester) exhibited portions of the skin, one arm, one leg, and the organs of generation, from a man who died from Addison's disease; on each part presented were large patches of pigmentation, which had acquired an almost inky hue on the penis and part of the buttock. Dr. Leech also brought some beautiful sections of the suprarenal capsules and semilunar ganglia, showing in the latter abundant nuclear proliferation, pointing to the implication of these ganglia in this interesting disease.

Sir Henry Thompson sent the detritus of a stone which weighed 521 grains, which he had removed in a single sitting from a gentleman aged 78. The case is shortly recorded in the JOURNAL for August 2nd, 1879, page 161.

Dr. Gueneau de Mussy (Paris) exhibited and presented to the College Museum a specimen of enlarged bronchial glands, illustrating an affection which he has been recently investigating.

SECTION II: PHYSIOLOGICAL APPARATUS.—In the physiological laboratory were shown a collection of the most recent physiological apparatus purchased for the College. Amongst them we noticed the "double sphygmoscope", by means of which the difference in the pulsa-

tion of two arteries is rendered apparent to a large audience, through the vibration of two gas-jets, each of which has its supply affected by being connected with one of the arteries; Hermann's "model heart-pump" for illustrating his theory of the action of the auricles; Dr. Gowers's "hæmoglobinometer", for determining the amount of hæmoglobin present in a given specimen of blood; the "plethysmograph" and "plethysmoscope", instruments for showing changes in the volume of the arm owing to variations in its blood-supply, due to certain states of the mind, the inhalation of certain drugs such as nitrite of amyl, etc.; Helmholtz's apparatus for estimating the elasticity of muscle when loaded with different weights; also his apparatus for determining the velocity of nervous impulses in motor nerves; and Professor Maxwell Simpson's and Mr. O'Keeffe's new instrument for estimating, by means of hydrobromate of soda solution, the amount of urea in a specimen of urine.

SECTION III: SURGICAL, MEDICAL, AND OBSTETRICAL INSTRUMENTS AND APPLIANCES.—This department of the museum was arranged in the new dissecting-room of the College, one of the finest rooms of its kind in the kingdom.

Messrs. Arnold and Son (London), as usual, were large exhibitors; and amongst a valuable assortment we particularly noticed a cheap form of their patent simplex enema; and their patent self-lubricating plunger fitted to aspirators, hypodermic syringes, enema-apparatus, etc., which is most useful, as the plunger is always moist and ready for use. They also showed Dr. Godson's pocket gynæcological case, and Dr. Southey's trocar and elastic tube for capillary drainage. Messrs. Arnold's constant current batteries, and commutating and graduating rheophores, present numerous advantages. The handles, which are similar to ordinary ones in external form, are constructed so that, by pressing with the finger the small key or button, changes can be effected, and, in addition, the galvanic current can be conveyed to any part of a hospital or other institution without a multiplicity of conducting wires. Mr. Shepard's vaporiser, bronchitis-kettle, and inhaler combined is useful, as it can be used either as an inhaler, a bronchitis-kettle, or a portable vapour-bath.

Messrs. Maw, Son, and Thompson (London) displayed a fine collection of their amputating, lithotrity, and resection instruments. The saws in this selection were of a very ingenious character, allowing by a simple movement a free and easy exchange of blades. They also showed improved *écraseurs* for uterine polypi; a circular sphygmograph; a superior India-rubber douche in one continuous piece without seam, and warranted from its construction not to split or crack; and a large assortment of their new clinical thermometers.

Messrs. Weiss and Sons (London) sent, for Sir Henry Thompson, the improved and somewhat enlarged lithotrite, with which he crushed the stone in the case which has already been alluded to, together with his modification of Bigelow's apparatus for removing the detritus of the stone from the bladder after lithotrity.

Mr. Lawson Tait (Birmingham) sent a set of his new ebonite dilators, a circular wire-clamp, and a pair of ovum-forceps.

Mr. W. D. Spanton (Hanley) showed his new instrument for the radical cure of hernia. It is constructed somewhat like a corkscrew with a wide spiral, and is used to keep the hernial sac in place after its reposition. In inguinal hernia, it is introduced through the abdominal wall above the internal abdominal ring.

The exhibits of Messrs. Salt and Son (Birmingham) were very extensive. We noticed specially a variety of their aluminium cases; a waistcoat-pocket case containing fourteen instruments, most conveniently arranged; a new urinary test-case, and hypodermic syringes; these being specialities of the firm. They also showed clinical thermometers with magnified and indestructible indices; aspirators, including a miniature one recently introduced by them for emptying superficial abscesses in the neck and face; Paquelin's *thermo-cautère;* the telephonic stethoscope; and Dr. Auzoux's beautiful model of the female pelvis, showing the internal organs of generation, which attracted much attention.

Messrs. Mayer and Meltzer (London) had a large display of novelties, amongst which we noticed Dr. Woakes's pneumatic tractor, guarded knife for incising the membrana tympani, and his bivalve speculum; Mr. Reeves's improved Politzer's bag with vapour-box and Professor Macnaughton Jones's aural probes; Dawson's improved galvano-caustic battery; *thermo-cautère* with Mr. Reeves's fine point for piles, and Dr. Aveling's tap for regulating the heat. They also had on their stall Dr. Aveling's revolving needle; Dr. Aveling's double-curved midwifery-forceps; Dr. Chambers's tent-introducer and uterine hook; Whistler's laryngeal dilator, and laryngeal and nasal spray-apparatus. They also showed anatomical specimens of a molar tooth, larynx, and ear in *papier maché*, by Dr. Auzoux.

On the stall of Messrs. Krohne and Sesemann (London), we noticed Professor Hughes's audiometer, which is said to be a precise measurer for the sense of hearing. Mr. Lennox Browne gave a complete account of the construction and mode of using this instrument in the Subsection of Otology, to which we would refer our readers. They also showed a laryngo-phantom, invented by Dr. Isenschmid of Munich: with this were thirty drawings of the larynx in health and disease. This will be found most useful for teaching purposes, and in acquiring skill in the use of the laryngoscope. They also exhibited Dr. Schrötter's set of dilators for dilating the constricted part of the trachea after tracheotomy has been successfully performed; a four-bladed dilator (Navratil's), for the same purpose; Bryant's double splint, for treatment of fractures of the thigh or lower leg, which can also be used in the treatment of hip-joint disease; Thomas's splint for knee-joint disease; Wells's new torsion-forceps; Parker's prepuce-dilator; and a collection of modern eye instruments.

Messrs. W. Harrington and Sons (Cork) had a fine collection of valuable instruments. Amongst these, we particularly noticed several cases of amputation and resection instruments, pocket-cases, etc., by Favre of Paris, which for their compactness and neatness cannot be excelled. They showed also a large variety of midwifery instruments, specula and pessaries, aspirators, hypodermic syringes, tonsil-guillotines, and a beautifully prepared set of osteological specimens well suited to the wants of students attending the Queen's College.

Messrs. Wright and Co. exhibited, through their local agent, Mr. T. R. Lester, a large variety, the majority of the instruments being nickel-plated. We especially remarked Dr. Cousins's portable vaccinating-case and vaccine-tubeholders; Dr. Alexander's portable urinary test-case; Mr. Adams's saw and knives for subcutaneous osteotomy; Mr. Pollock's modified Clover's apparatus for washing out the bladder; Mr. Davy's lever for compressing the iliac artery in amputating through the hip-joint; and Dr. Marion Sims's new wire duck-bill speculum.

Messrs. W. B. Hilliard and Sons (Glasgow) had a large collection, selected specially to show the instruments in vogue with Scotch surgeons, amongst which were Dr. Foulis's laryngoscope; Dr. Foulis's artificial larynx—the instrument worn for many months by his patient: the voice in it was perfect for all sounds and syllables; but, being a strict monotone, was of course devoid of expression. They also showed Dr. Macewen's osteotomy-chisel (mentioned in his paper read before the Surgical Section); Christie's hydrostatic bags for arresting hæmorrhage from the uterus; Watson's splint for knee-joint excision; Fleming's transmitting sphygmograph; Hilliard's hare-lip forceps; and a variety of other instruments.

Mr. David Marr (London) had a fine collection of carbolic spray-producers, as used by Professor Lister himself. This is a speciality of Mr. Marr, and each instrument is tested to stand a high pressure. A new feature in these apparatus is the burner, which is constructed so that the flame can be regulated by merely moving a lever from side to side, thus doing away with any rackwork adjustment. He also showed antiseptic gauze, carbolised gut, and silk ligatures; also some minor operating cases and pocket-cases, of the best material, but plain, and moderate in price, especially got up for students.

Mr. F. Gustav Ernst (London) had a large display of Cocking's poroplastic felt for adaptable splints, and jackets for the treatment of spinal disease. By a recent improvement in the process of manufacture of these jackets, any portion required by the surgeon can be left soft, so as not to press unduly on a prominent vertebra, sternum, or iliac crest, etc. Where greater strength is required, the felt can be doubled; this does not interfere with the softening or moulding process. Mr. Ernst also showed a varied assortment of orthopædic instruments generally.

Messrs. Fannin and Co. (Dublin) were largely represented. They exhibited a superior collection of surgical, obstetrical, and gynæcological instruments, together with a number of books and well-illustrated medical works issuing from their own and other firms. They also had a choice series of osteological preparations well suited to the requirements of students.

The India-Rubber, Gutta-Percha, and Telegraph Works (Silvertown) exhibited several sizes of their patent Leclanché medical battery. They also exhibited a very complete set of samples of the various qualities of India-rubber and gutta-percha, both in their raw states and as manufactured into the many varieties of articles for medical, surgical, and chemical use, such as ebonite stethoscopes, pessaries, syringes, India-rubber water-beds, waterproof bed-sheeting, etc.

Messrs. George Prescott and Co. (Dublin) exhibited a constant bichromate of potash battery, invented by the Rev. Dr. Gerald Molloy. This battery is likely to be useful for cautery purposes. They also exhibited Dr. Richardson's spray, which is worked by means of a bellows, and is always ready for use; and a new form of operating-table by Dr. Cruise of Dublin. This table has a screw conveniently placed, so that the table may be raised or depressed, or various other

adjustments made, while the patient is on the table. They also showed a new form of rotating cylinder, devised by Dr. Reuben J. Harvey of Dublin, for cardiographic and other similar tracings. The instrument consists of a drum rotated by clockwork, with the power of adjusting the rate of rotation, and raising or lowering the rotating cylinder, without interrupting the experiment.

SECTION IV: NEW DRUGS AND THEIR PREPARATIONS, NEW ARTICLES OF DIET, ETC.—These were arranged partly in the therapeutic and partly in the pathological museums of the College. The materia medica museum of the College has just been completed, and, from its completeness and method of arrangement, will be a valuable addition to the student in acquiring a knowledge of this branch of his profession. The collection includes the herbs, leaves, flowers, fruits, seeds, roots, woods, barks, juices, balsams, essential oils, resins, gums, starches, sugars, and animal substances in the materia medica. Space does not permit us to give any detailed account of the specimens; but we cannot fail to mention the fine collection of cinchona-barks, opiums, aloes, sassafras, casia-pods, and a plant of chiretta. The specimens were supplied to the College by the firm of Messrs. W. Harrington and Sons (Cork), who deserve great credit for the fine selections they have made.

The exhibit of Messrs. Savory and Moore comprised most of the recent introductions to this department of medical *armamentaria*. Of specialities in this exhibit, we noticed a large jar of pancreatic emulsion like clotted cream, and a compound of the three digestive agents pepsin, pancreatin, and diastase, invented and named by them *peptodyn*. They also showed cigars and cigarettes of datura for asthmatics, and effervescing capsules of salicin and salicylic acid. They had a large display of fluid preparations, including the oils of cashew, gurjun, and chaulmoogra, used in leprosy and other skin-diseases; also specimens of the oleates of morphia and atropia, and the glyceroles of bismuth, lead, and salicylic acid. The gelatin-discs for ophthalmic and hypodermic purposes, which are a speciality of the firm, were also shown. They also exhibited a new form of carbolic acid vaporiser for disinfecting purposes, and "Felton's inhaler" for the inhalation of ammonium-chloride and other medicated vapours.

Messrs. W. and H. M. Goulding (Cork) had an exceedingly prettily arranged stand. On it we noticed elixirs of beef and iron; chloral-hydrate; cinchona and bismuth; and monobromide of camphor, a very convenient form of administering these drugs. They also showed emulsions of cod-liver oil with quinine, lactophosphates, and maltine, etc. The Messrs. Goulding represented several large firms.

Messrs. Corbyn, Stacey, and Co. (London) had an extensive collection of the latest novelties in pharmacy. Amongst the most recent additions are noticed *Liquor Opii Dialysatus*. It is a pale liquid, with slight taste, from which the disagreeable and heavy odour of opium is absent. The proportion of morphia and other opium alkaloids is said to be constant, containing about four grains of morphia hydrochlor. to the ounce of the preparation. The dose is therefore the same as that of tincture of opium. Its continued use does not produce headache, constipation, or gastric disturbance. Their medicated suppositories and coated pills were also especially noticeable. Among other articles exhibited by this firm were Chaulmoogra oil *(Oleum Gynocardiæ)*, used in the treatment of leprosy, scrofula, and skin-affections in India; *Extractum Fuci Vesiculosi; Extractum Damianæ Liqudum*, an aphrodisiac; *Syrupus Chloralis* (Liebreich); *Grindelia robusta*, and *Eriodictyon Californicum*, used in catarrh of mucous membranes; Pepsin essence (Liebreich); and a variety of other well selected preparations. Full particulars of them will be found in *Notes on Drugs*, published by Messrs. Corbyn and Co., and distributed to the members at the meeting.

Amongst the American exhibitors, were Messrs. Parke, Davis, and Co. (Detroit, Michigan). Through their agent, Mr. H. A. Metzel, they supplied the members with samples of their fluid extracts, empty gelatine capsules, etc. The empty capsules, manufactured in six different sizes, are composed of two small tubes of prepared gelatine, sliding into each other, and each closed at one end. The drug, either in powder or as a soft pill mass, is put into the smaller capsule, and this is, as it were, "telescoped" into the larger; the filled capsule thus representing a small cylinder, closed at both ends. These are quite soluble. They also showed a large number of their oviform sugar-coated pills. It is said that these can be readily swallowed by those who cannot take a pill in globular form. The following fluid extracts, prepared by a special process, were also exhibited: *Berberis aquifolium*, an alterative and tonic; *Coscara Sagrada (Rhamnus Purslicana)*, an aperient for habitual constipation; *Damiana*, an aphrodisiac; evening primrose, used in respiratory and gastric troubles; fine-flowered gentian, a tonic and antiperiodic; *Grindelia Robusta*, a specific for asthma; quinine flower, from Florida, resembling quinine; *Ustilago Maidis* (corn ergot), used instead of ergot of rye; *Yerba Santa*, for bronchial and laryngeal disorders; also specimens of podophyllin, leptandrin, euonymin, hydrastin, jugulandin, and a variety of other new remedies.

Messrs. Seabury and Johnson (New York and London) showed a large variety of their improved medical and surgical plasters in India-rubber combination. The advantages are, perfect pliability in any temperature, adhesion without heat or moisture, the preservative character of an India-rubber combination, a cold process by which volatalisation by heat is avoided, and convenience in using.

Messrs. John Wyeth and Brothers (Philadelphia) exhibited some valuable preparations; amongst these, we may mention their dialysed iron (*Liquor Ferri Dialysati—Wyeth*). It has no disagreeable taste, does not discolour the teeth, disturb the stomach, or constipate the bowels. Another novelty of this firm is their compressed powders or tablets. They are prepared by simply compressing pure dry powdered drugs; in no case is any addition made, except sugar of milk, and this only where the bulk of the drug is too small to admit of its being compressed alone. The tablets comprise caffeine citrate (one grain); lacto-phosphate of calcium (five grains); sulphates of quinine and quinidine, of various strengths; iodide of potassium, nitrate of potash, bicarbonate of potash, etc., also of different strengths, etc. They also showed malt extract with cod-liver oil, "Kepler". Messrs. S. M. Burroughs of Holborn Viaduct are the London agents of this firm.

Messrs. Richardson and Co. (Leicester) had a large exhibit of their medical specialities, for which the firm is well known. These included an assortment of their soluble pearl-coated pills; pocket emergency-cases of pearl-coated pills; cases containing phosphorus pills; colonists' medicine-chests, as designed by Dr. Spencer Thomson; specimens of "hypnopoietic", "peptocolos", liquor secalis ammoniatus, liquor copaibæ compositus cum matico, phosphorised cod-liver oil emulsion, thymol soap, etc.

Messrs. Richard Evans and Co. (Wrexham) exhibited Johnson's patent non-alcoholic beverage, zoedone. It contains phosphate of lime, iron, etc.; and in solution is effervescing, and has a sparkling appearance and delicate flavour. It appeared to be greatly appreciated by the members, all of whom had an opportunity of tasting it in the museum.

Mr. T. R. Lester (Cork) exhibited specimens of selected rare drugs, rare chemicals, and new remedies. Amongst these latter, we noticed the salts of salicylic acid; staphisagria, dugong, and chaulmoogra oils. Amongst the rarer chemicals were specimens of caffeine, theine, codeia, thymol, apiol, carbolised camphor, etc. On the centre of the table was a beautiful ball of refined camphor. Mr. Lester also showed a large assortment of medical suppositories, bougies, and pessaries.

CLASS V: MICROSCOPES, PHOTOGRAPHS, AND DRAWINGS.—Dr. R. J. Harvey (Dublin) kindly sent a large collection of microscopes, which, with those belonging to the College laboratories, were placed in the engineering drawing-room. Dr. Leech (Manchester) showed photographs of his case of Addison's disease. The Richmond Hospital, Dublin, also lent a large collection of drawings, taken from cases of special surgical interest. Mr. W. Adams (London) sent two series of drawings: the first may be described as illustrations of Dupuytren's contraction of the fingers—dissections and cases; the second, a set of drawings illustrative of depressed cicatrices in the neck, and their obliteration by a subcutaneous operation. Professor H. Macnaughton Jones exhibited a number of beautifully drawn representations of retinal affections, taken from nature with the ophthalmoscope by the young lady who had previously executed the illustrations for his *Atlas of Aural Diseases*. The majority of the diseased conditions of the retina were faithfully depicted, and the drawings were most artistically finished and tastefully mounted.

PUBLIC HEALTH.—During last week, the annual death-rate in London and twenty-two other large towns of the United Kingdom was 19 in every 1,000 persons living; it was 17 in Glasgow, 18 in Edinburgh, 20 in London, and 21 in Dublin. In the twenty English towns, the highest death-rates were the following: Leicester 20, Newcastle-upon-Tyne 20, London 20, Liverpool 22, Plymouth 22, and the highest rate, 23, both in Manchester and Leeds. The annual zymotic death-rate in the twenty towns averaged 4.6 per 1,000, and was 5.6 in London and 5.7 in Liverpool. In London, 1,391 deaths were registered, or 58 below the average, and equal to an annual death-rate of 20.0. These 1,391 deaths included 7 from small-pox, 44 from measles, 59 from scarlet fever, 13 from diphtheria, 43 from whooping-cough, 13 from different forms of fever, and 209 from diarrhœa; in all, 388 deaths, or 10 above the average from these diseases. Nine cases of suicide were registered. At Greenwich, the duration of registered bright sunshine was equal to 36 per cent. of its possible duration.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 6TH, 1879.

ADMISSION OF CANDIDATES FOR EMPLOYMENT IN THE MILITARY AND NAVAL MEDICAL SERVICES.

THERE are two aspects under which the public, and the medical profession as no unimportant part of the public, regard with particular interest the question which has been recently raised of partially admitting medical officers into the military services of the country by the old plan of nomination, instead of by the system of entirely open competition which has been in force during the last twenty years. One, is that the public are entitled to a guarantee that the most competent surgeons who can be obtained on the terms offered by the Government of the country receive the vacant appointments; the second is, that all surgeons who are properly qualified according to the published regulations on the subject, and who desire to compete for such appointments as are vacant, may have an equal chance of entering the arena to contest for them.

The army of Great Britain differs in some respects from all other armies. Owing to the manner in which the troops are raised and officered, and to other special circumstances, it is, strength for strength, the most costly of all armies; while, from the regional distribution of the colonial possessions and dependencies of the empire which it has to defend, much of them situated in tropical climates, it is also more constantly exposed to conditions which entail special risks to life and health than any other army in the world. The country that provides the funds for so costly a force has a right to know that the outlay is as thriftily applied as it can be; and one most important factor in such economy must always be that the grave charge of maintaining the health of the troops, and of treating the diseases and injuries which occur among them, is only entrusted to those who have been able to show that they are the most qualified to undertake it. The officers and troops of other armies go through the greater part of their service in their native country, and consequently, in case of need, can obtain the advice of the most skilled and experienced practitioners and consultants that are to be found in it; the officers and men of the British army, who pass a great part of their time on foreign service, or on board-ship in going from one station to another, rarely enjoy similar opportunities of obtaining the advantage of such further aid, supposing the need or desire to do so should occur. They have no appeal from the management of the particular surgeon in whose hands they may happen to be placed. There are some who try to make it appear that all who have obtained the necessary licences to practise are equally to be depended upon for the proper discharge of their professional functions. But practical acquaintance with men and things as they are proves clearly enough that the qualities of medical men differ as greatly in kind and degree as do those of the members of any other profession. While some, from love of the calling they have adopted, from special aptitude for its practical work, particular opportunities, and from conscientious motives, devote themselves to their profession, and become fit at an early period to be entrusted with its most responsible duties; others, from opposite qualities, from bad habits early acquired, or from negligence, soon lose much of the knowledge they have gained, and are anything but safe and desirable guides in the difficulties which professional practice may bring upon them. A practical examination, publicly conducted by competent examiners, enjoying the confidence of the profession, and independent of departmental influences, may well be relied upon as the means of placing those who enter into the competition fairly in their order of merit as regards general professional knowledge and practical skill. Let this "index be smashed", as has been said; and what guarantee can the profession or public have that the candidates for commissions selected have been fairly dealt with as regards their respective merits and titles to pre-eminence one over another in the branch of the public service which they have just entered? We say nothing about the number that may offer themselves to compete for appointments in any particular branch of the service, for that must depend upon the attractions presented by it; the struggle for employment is so great that, if a position be worth having, there will be no lack of competitors to obtain it.

The second point in the question of the right mode of admitting qualified candidates for employment in the military and naval medical services of the country, is that all shall have an equal right to compete for them who desire to do so; and that the only ground on which any can be excluded is, that other candidates have achieved a superior title to the vacant posts by proving their possession of superior qualifications. All persons who desire to uphold the principles upon which this right is founded are interested in its maintenance in the medical department of the military services. As one of the most important scientific branches connected with them, one on whose functions such grave issues depend, it is, almost more than any other, the one in which the applicant for employment in it, who can show himself to be the best qualified, should be the first selected to fill a vacancy. Entrance into other departments of the army and navy is now open to competition; and it would be strange indeed if the medical part should become the only one to be entered by a system of departmental nomination, which, under whatever guise the fact may be concealed, will certainly, as of old, degenerate into a system of dependence and favouritism. At the late meeting of the Association in Cork, Surgeon-General Dr. Crawford, the head of the Army Medical Department in Ireland, asked, if competition is to be applied to the medical service of the army, why should it not be also adopted for appointments in civil hospitals? But, as was stated at the time, there is no analogy whatever between the position of surgeons and physicians appointed to civil hospitals and of those who receive appointments in the public services. The regulations under which the appointments in the civil hospitals and infirmaries of the country are made are almost as various as the circumstances under which these institutions have been founded, and under which they are supported and maintained. If they were State establishments, paid for out of the public funds, and if their medical officers were functionaries salaried by the Government, it might be a reasonable question to ask whether such appointments should not be thrown open to public *concours;* but, as they are nothing of the kind, the modes in which their professional staffs are appointed can no more be compared with the manner in which the medical staff of the public services is appointed, than can be the way in which the officials of any other specially organised and independent bodies are selected. The preservation of fair and open competition for medical appointments in the military and naval services of the country is from every point of view a public concern; and we are convinced that the more the subject is considered, the more plain it will appear that not only will any plan of admission in which a system of patronage and nomination enters be injurious to the interests of the public, and detrimental to the welfare of the officers and men of the army and navy, but that it will also be a step in a wrong direction as regards the professional reputation and best interests of the military and naval medical departments themselves.

THE PATHOLOGY OF SPEECH.

DR. HUGHLINGS JACKSON, one of the distinguished editors of *Brain*, contributes an elaborate and thoughtful article to recent numbers on Affections of the Speech from Diseases of the Brain. Dr. Hughlings

Jackson acknowledges the extreme difficulty of the task he has undertaken—an inquiry upon which much light may be thrown by him, because of his special competence and of the rich field of illustration which he can bring to bear on the subject through his connection with the London Hospital and the Hospital for Epilepsy and Paralysis.

We are reminded in this article of the laudable attempt made by Dr. Bucknill to clear up the well-worn controversy on the classification of mental diseases by approaching it from every standpoint. We may frequently gain more information for ourselves, and impart more information to others, by the employment of an empirical than of a scientific classification of disease. It is particularly important to have both an empirical arrangement and a scientific classification. The one kind is for diagnosis—for direct "practical purposes"; the other is for increase of knowledge, and is worthless for immediate practical purposes.

To show how little we learn from the mere names of disease, Dr. Hughlings Jackson tells us that there is no single well-defined "entity" —loss of speech, or aphasia; and, thus to state the matter for a particular practical purpose, such a question as "Can an aphasic make a will?" cannot be answered any more than the question "Will a piece of string reach across this room?" Indeed, we have to consider degrees of affection of language, of which speech is but a part. Admitting the occurrence of numerous degrees of affection of language, we must make arbitrary divisions for the first part of the inquiry, which is an empirical one.

Let us divide (says our author) roughly into three degrees. 1. *Defect of Speech.* The patient has a full vocabulary, but makes mistakes in words, as saying "orange" for "onion", "chair" for "table"; or he uses approximative or quasi-metaphorical expressions, as "Light up the fire there" for "Light the gas". 2. *Loss of Speech.* The patient is practically speechless, and his pantomime is impaired. 3. *Loss of Language.* Besides being speechless, he has altogether lost pantomime, and emotional language is deeply involved.

This might be expressed in a table as follows.

1. Partial loss of speech.
2. Total loss of speech; partial loss of pantomime.
3. Total loss of speech and of pantomime.

To start with (writes Dr. Hughlings Jackson), we take the simplest case, one of *loss of speech*, No. 2 ("complete aphasia"). Cases of defect of speech (1) are far too difficult to begin with; and so too are those cases (3) in which there is not only loss of speech, but also deep involvement of that least special part of language which we call emotional language (pantomime).

To understand fully the three cases above enumerated, we must realise two distinct conditions in the aphasic patient: A. A negative condition, including what the patient has lost in language; and B. A positive condition, which shows what he retains of language.

The patient's negative condition:

1. *He does not speak.* He can, the rule is, utter some jargon, or some word or some phrase. With rare exceptions, the utterance continues the same in the same patient: we call these recurring utterances. The exceptions to the statement that he is speechless are two. *a.* The recurring utterance may be "yes" or "no"; or both these words are propositions when used for assent or dissent; and they are so used by some patients who are for the rest entirely speechless.

2. *He cannot write;* that is to say, he cannot express himself in writing. This is called agraphia (William Ogle). The speechless patient does not write because he has no propositions to write. His inability to write, in the sense of expressing himself, *is* loss of speech.

3. In most cases, the speechless patient *cannot read at all*, obviously not aloud, but not to himself either, including what he has himself copied.

4. His power of making signs is impaired (pantomimic propositionising).

So far, we have (says our author) only got two things: loss of speech (by simple direct evidence, and by the indirect evidence of non-writing and non-reading) and defect of pantomine.

The patient's positive condition.

1. He can understand what we say or read to him; he remembers tales read to him. This is important; for it proves that, although speechless, the patient is not wordless. Coining a word, we may say that the process of verbalising is dual; the second half of it being speech.

2. His articulatory organs move apparently well in eating, drinking, swallowing, and also in such utterances as remain always possible to him (recurring utterances), or in those which come out occasionally. This proves that the medulla is not involved; and, *per contra*, in other nervous disorders where the medulla is involved, the patient is able to propositionise by writing, although he may not be able to articulate. In other words: if a patient does not talk because his brain is diseased, he cannot write (express himself in writing), and can swallow well; if he cannot talk because his tongue, lips, and palate are immovable, he can write well and cannot swallow well.

3. His vocal organs act apparently well. He may be able to sing.

4. His emotional language is apparently unaffected. He smiles, laughs, frowns, and varies his voice properly. Although he may be unable to make any but the simplest signs, he gesticulates apparently as well as ever, and probably he does so more frequently and more copiously than he used to do.

Many other interesting points regarding the capabilities and incapabilities of the aphasic patient are touched upon, a selection from which can only be given here. He will point to any object he knew before his illness which we name; he recognises drawings of all objects which he knew before his illness. He continues able to play at cards or dominoes. He recognises hand-writing, although he cannot read the words written; he knows poetry from prose, by the different endings of the lines on the right side of the page. In some cases, the patient finds his way about the streets. He can copy writing, and he can copy print into writing. He does not write in the sense of expressing himself, because there are no words reproduced in speech to express. In many cases, the speechless man, who can write nothing else without copy, can sign his name.

Dr. Hughlings Jackson very properly says that, in discussing that question, we are not concerned with deaf-mutes who never had speech, nor yet with cases of hysterical aphonia. The facts that such patients do not talk, and *do* write and *do* swallow, are enough to show that there is no disease at all, in any sense, except that the patients are pretending. There can be no *local* disease, at any rate.

The prognosis in this disorder is by no means hopeless. A patient may be quite speechless for a few days, and afterwards improve so as to have at length only slight defect of speech; and, of course, there are numerous cases of complete recovery. For typical examples, however, it is most convenient to consider cases of permanent speechlessness only. As before stated, unless we recognise the fact that the symptomatic condition of the patient is duplex, positive and negative, we shall be misled into supposing that cases are different in kind when there are only differences of degree.

The most important thing showing the duality of the speechless man's condition is given very generally by saying that speechlessness does not imply wordlessness.

We have now, says our author, to consider more particularly the condition of the patient we call speechless. In most cases, there remains some utterance. But to utter words, is not necessarily to speak.

These utterances Dr. Hughlings Jackson divides into two classes, (1) recurring and (2) occasional.

1. *Recurring Utterance.* — Soon after the attack, there may be no sort of utterance; but almost always one comes in a few days or weeks. Recurring utterance may be conveniently considered under four heads.

a. It is sometimes jargon. In one case, it was "Yabby"; in another, "Watty", etc. Such utterances have no propositional value whatever.

b. Sometimes the utterance is what to the healthy person is a word; as "man", "one", "awful", etc. Such a word is, for use, no better than jargon in the mouth of a speechless patient, and, of course, has no

propositional value. In such cases, the rule is that the particular recurring utterance each person has at first never changes. Sometimes, however, but exceedingly rarely, it changes. Another general remark is that, although these rags and tatters of what was once the patient's speech are of no use as speech, they serve as parts of emotional manifestations. Some amusing stories are told by Dr. Jackson illustrating the important part which the habit of swearing plays in these cases of partial aphasia, which would be spoilt by being reproduced in *précis*, and which alone are sufficiently piquante to recommend this paper to the lay-reader as well as to the profession.

c. The recurring utterance is sometimes a phrase, as "Come on", "Come on to me", "Yes, but you know", etc. In some cases, the patient may utter "yes" or "no", or both, in addition to his recurring utterances. But, in this subdivision, these phrases have no propositional function.

d. A common thing is that the patient retains as his sole utterances "yes" or "no", or both these words. Sometimes there is, in addition, some utterance of one of the other divisions. This must be carefully borne in mind. We shall consider the utterances "yes" and "no" at length. It is, says our author, the most important of the whole inquiry. The consideration of these and of some other fundamentally like phenomena will help us out of the empirical stage of divisions into the scientific one of distinctions.

To speak is, as has been already said, to propositionise. The words "yes" and "no" are propositions. We can *say* with them. With the three previous recurring utterances—*a*, *b*, and *c*—the patient says nothing; they are a mere series of syllables; the so-called words and phrases (*b* and *c*) being intellectually dead. An utterance is, or is not, a proposition according as it is used. The relative values of "yes" and "no", when uttered under different conditions, vary in a somewhat curious manner.

1. "Yes" and "no" may be used as mere interjections. In this lowest form, it appears that even the tone of voice in which this jargon is uttered is not propositional.

2. "Yes" and "no" may be used appropriately as replies to questions.

3. Besides using "yes" and "no" as interrogatories and replies, he may, in addition, be able to say these words when told to say them.

4. A speechless patient may utter "yes" and "no" without any sort of application.

5. He may utter "yes" when he means "no", and "no" when he means "yes".

6. And this may be done in conjunction with a nod with "yes", or a shake of the head with "no".

7. "Yes" and "no" may be mere expressions of emotion. But although "yes" and "no" are not propositional in such a case, they possess a higher value than the "yes" and "no" of No. 1, in that we may understand or guess from them how the patient is feeling, which we cannot do from the "yes" or "no" of No. 1.

8. In some cases of loss of speech, there is a use of the words "yes" and "no", which is higher than a mere emotional service. The patient can reply with them. Here, then, is evidence that the so-called speechless man is not absolutely speechless. He propositionises by "yes" and "no".

9. He may be, as aforesaid, able to reply "no" to a question requiring dissent, when he cannot say the word when he is told, and when he tries.

10. In many cases of loss of speech, the patient, besides having the emotional service, and also the power of reply with the words, can say "yes" or "no" when told. He has the full use of these words.

Amongst healthy people, occasionally the word "no" is used as an exclamation, expressing pain or surprise; in such cases being substituted for "Oh!", or for "You don't say so!".

Propositionally, "yes" or "no" give assent or dissent to anything whatever. From their almost universal applicability, they are very frequently used; they are the most general, most automatic, and most organised of all propositions. They are, then, exceptions proving the rule; the patient has lost all speech except these two propositions, which are at the "bottom" of intellectual language, and at the "top" of emotional language.

II. *Occasional Utterances.*—These utterances are rare, except that some patients swear very frequently. They are as follows: 1. Utterances which are not speech; 2. Utterances which are inferior speech; 3. Utterances which are real speech.

1. Utterances which are not speech have no intellectual meaning. Moreover, the patient cannot repeat them when he tries.

2. Examples of occasional utterances which are real speech, but inferior speech. A patient who could only say "no" and "what", once said, "Wo, wo!" when standing by a horse. A woman who could only utter the phrase, "Yes, but you know", once said, "Take care", when a child was in danger of falling.

3. Dr. Hughlings Jackson has records of still higher degrees of utterances by one absolutely speechless patient. Once, when he had had enough bread and butter, he said, "No more". His son wanted to know where the father's tools were. The patient replied, "Master's", which proposition was as explicit as a sentence would have been in health.

With regard to the pathology of aphasia, Dr. Hughlings Jackson considers that "inferior" speech belongs to the right half of the brain, but that the "nervous arrangements for words used in speech lie chiefly on the left half of the brain"; and that the "nervous arrangements for words used in understanding speech (and in other ways) lie in the right also". These points he intends to consider on another occasion.

The subdivisions of aphasia advanced by Dr. Hughlings Jackson, although strikingly original, are somewhat complicated and difficult to retain in the memory. It appears that they might be roughly summed up under four questions concerning an aphasic patient as follows:

1. Can he gesticulate?
2. Can he speak?
3. Can he write?
4. Can he, by one or more of these three methods, propositionise?

The practical aspect of this disease has never been so clearly enunciated by any previous writer. We confess that we have hopes that, before Dr. Hughlings Jackson has finished with the subject, he will leave us a few suggestions as to the medico-legal importance of the most prominent symptoms detailed above. A few simple tests of the patient's capabilities of articulation, pantomime, recognition, writing powers, ability or not to sign his name, emotional language as expressed by ejaculation, and general signs of intellectual capacity, would be most welcome from the pen of so experienced a practitioner. These might be modelled after the form of Sir Henry Holland's mental gymnastics for the healthy subject; and would probably, in such able hands, be fashioned into weapons sufficiently keen and powerful to enable us to determine exactly the medico-legal position of any given case of aphasia.

FORTY-TWO surgeons, including several natives of India, appeared before the London Board of Examiners on the 28th ultimo, to compete for the sixteen medical commissions recently advertised by the Indian Government.

GENERAL LAZAREFF'S troops are reported to be suffering heavily from sickness. Scurvy and dysentery are making many victims; and 25 per cent. of cases of the latter malady and of a peculiar kind of steppe fever are said to be proving fatal.

THE seventh annual meeting of the German Public Health Association will take place in Stuttgart on the 15th, 16th, and 17th of September. The following subjects will be discussed:—1. The protective regulations against the threatened introduction of epidemic diseases (plague, cholera, etc.) from foreign countries; 2. The regulations for disinfection; 3. The hygienic demands of boarding and lodging-houses; 4. The construction and the necessity of mortuaries; 5. Public baths.

In London, during the past nine weeks of the current quarter, the death-rate has averaged but 18.3 per 1,000, against 23.4, 20.0, 23.6, in the corresponding periods of the three years 1876-7-8.

Dr. John Kirk, Her Majesty's Political Agent and Consul-General at Zanzibar, has been appointed an ordinary member of the third class of Companions of the Order of St. Michael and St. George.

The retirement of Mr. C. Mackeson is announced, who has, during his twenty years' service in the Medical Department of the Navy, been chiefly occupied in the compilation of the statistics furnished in the reports on the health of the navy, annually presented to Parliament.

DEATH OF M. CHASSAIGNAC.

We regret to hear that M. Chassaignac, to whom Surgery is indebted for the introduction of the drainage-tube into practice, died on August 26th. He had for some time retired from active life.

ALEXIS ST. MARTIN.

The *Detroit Lancet* for August says that Alexis St. Martin now lives at St. Thomas, Joliette County, Province of Quebec, Canada, and is seventy-nine years old. The opening in his stomach is nearly an inch in diameter. For his age, he is strong and perfectly well. Always a hard worker, his digestion has never failed, in spite of the hole in his stomach. He will be remembered as the subject of Dr. Beaumont's experiments on gastric digestion.

AMERICAN PORK.

The microscopic examination of American pork is carried out extensively in Berlin. An official report lately issued shows that from August 1st, 1878, to August 1st, 1879, about 5,000 hams, 600 sides of bacon, 500 shoulders of pork, and 125 *roulades*, were examined. Of these, there were reported to the police authorities as containing trichinæ, 109 hams, 16 sides of bacon, 7 shoulders, and 4 *roulades*. Trichinæ were also found in two pigs slaughtered in Berlin.

SCIENCE AND SPORT.

When the Vivisection Act was in legislative process, there was a strong party which were especially determined to take the frog under protection; and it is included in the Act, notwithstanding a very distinct and definite undertaking to the contrary by Mr. Cross, the Secretary of State, who conducted the Bill through the House of Commons. Now, however, that the absurdity is being felt of placing upon the physiologist, in his seriously humanitarian pursuits, restrictions which are not imposed upon sportsmen, fishermen, or "the boy on the street", it is seriously maintained that neither fish nor frogs are capable of feeling pain, and that "a frog, for instance, may be vivisected in the most elaborate manner without apparently being worse for it than was the jackdaw of Rheims for the shower of ecclesiastical curses". A little consistency, if you please!

PAINLESS EXECUTIONS.

It is not surprising that from time to time attention is recalled to the barbarous nature of the mode of executing the death-penalty in this country. Hanging by the neck till the criminal is dead is obviously a relic of barbarism: it is the most primitive, the most various, the least prompt and uniform and certain of the modes of execution which have been or could be devised. If the object of an execution nowadays be to ensure the rapid and certain death of the criminal without any probability of intervening accident, delay, or torture, hanging by a cord, and trusting to the rough adjustment of weight and fall which the "eye and experience" of an ignorant hangman can afford, is the most fallible of methods, and must of necessity from time to time lead to painful scenes of torture. The *garotillo* is perhaps, of all existing European methods of legal execution, the most rapid and certain; but, without proposing any one substitute on our own responsibility—whether the carbonic acid chamber, the massive electric discharge, or any other method—it is certain that any scientific man or commission could very speedily devise a prompt and bloodless certain mode of execution which should be free from the clumsiness and uncertainty of hanging. The retention of this ancient relic of past barbarism is not creditable to our jurisprudence.

FROM THE COW TO THE KITCHEN.

Now that milk has been so repeatedly and abundantly proved to be a source of epidemic disease, by reason of its imbibition of poisonous gases or contamination by polluted water, or at the hands of infected persons in dwelling-houses or rooms connected with dairies, it would be very satisfactory to know that stringent use was being made of recent enactments aiming at the separation of dairies from dwelling-houses, and the enforcement of precautions necessary for ensuring the safeguarding of this necessary of life on its way from the cow to the kitchen. This desideratum, however, appears to be still far from general realisation. Mr. Corner gives, in his last report, two striking examples of what may occur for want of due sanitary inspection of dairies. In one case, the milk was stored and retailed in a yard where it was exposed to offensive gases; in another, the body of a child who had died from scarlet fever was found in the house of a dairyman, neither coffined nor disinfected, and the mother had attended both on the child and on her customers during the several days of her child's illness. Under an adequate system of inspection, whether private or public, such dangers would be prevented.

MR. PRESCOTT HEWETT.

The portrait of Mr. Prescott Hewett, painted by Mr. Onless, which was the form "the memorial" took upon his retirement from the office of Surgeon to St. George's Hospital, is finished; and will be presented to the Governors of St. George's Hospital, on October 1st, at the meeting of the Weekly Board, the Board having expressed their willingness to accept the picture and agreed to have it placed in the Board-Room. The delay in completing the picture has arisen from the great pressure of engagements on the part of the artist as well as of Mr. Hewett.

BABY-FARMING.

At the Long Ashton Petty Sessions, near Bristol, last week, Mrs. Dyer of Totterdown was charged with a breach of the second section of the Act for the better protection of infants, by keeping more infants than one (not being twins) without having her house registered. The Bench passed the heaviest punishment the Act allows, namely, six months' imprisonment, with hard labour. Nine children placed with the prisoner have died within the last two years.

THE HABITUAL DRUNKARDS' ACT.

On the 1st of January next, the Habitual Drunkards' Act, to facilitate the control and cure of habitual drunkards, will come into operation, and will be in force until the expiration of ten years from the date of its passing, July 3rd, 1879. In the preliminary part of the Act, it is laid down that an "habitual drunkard" means "a person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquor, at times dangerous to himself or herself, or to others, or incapable of managing himself or herself, or his or her affairs". A "retreat" is stated in the Act to mean "a house, licensed by the licensing authority named by this Act, for the reception, control, care, and curative treatment of habitual drunkards". No licence shall be given to any person who is licensed to keep a house for the reception of lunatics. The Act gives to the justices of the peace in England and Ireland, and to the sheriff or his substitute in Scotland, power to hear and determine, under the Summary Jurisdiction Acts, an information or complaint under the Act. The justices are to have the power to send habitual drunkards to retreats; and persons may be admitted to retreats on their own application; and such applicants, after their admission and reception into retreats, unless discharged, shall not be entitled to leave the retreat until the expiration of the time mentioned in the application, provided that such term shall not exceed twelve months. Provisions are made for the inspection of the retreats by an officer to be styled "the inspector of retreats", and each retreat shall be

inspected at least twice in each year. Power is given to the justices to permit an habitual drunkard confined in a retreat to live with any trustworthy and respectable person willing to take charge of him for a definite time for the benefit of his health. An habitual drunkard escaping from the person in whose charge he has been placed shall forfeit his licence, and may be taken back to the retreat. Ample provision is made by the Act for the medical attendance and cure of those detained in the retreats under orders made by the justices.

THE DEATH-RATE FROM DIARRHŒA.

THE deaths referred to diarrhœa in the twenty English towns rose to 343 last week; in the corresponding weeks of the three years 1876-7-8, the fatal cases were 614, 514, and 512 respectively. The greatest proportional fatality of diarrhœa among the twenty towns occurred last week in Leicester, Liverpool, Leeds, and London. In London, the deaths referred to diarrhœa, which had risen in the five preceding weeks from 25 to 174, further increased last week to 209, and exceeded the corrected average for the corresponding week of the last ten years by 11; in the corresponding week of the last three years, the recorded fatal cases of diarrhœa were 134, 154, and 148 respectively. No fewer than 165 of the 209 fatal cases last week were of infants under one year of age. The annual death-rate from diarrhœa was equal to 3.0 per 1,000 in London last week, whereas it did not average more than 1.9 in the aggregate of the nineteen large provincial towns; it ranged from 2.3 in the central to 4.2 in the east groups of metropolitan districts.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.

A SHORT time ago, we drew attention to the new code of rules which the Board of Management of St. John's Hospital had issued for the guidance of its honorary medical officers. It seemed scarcely probable that any body of professional men, especially when they were giving their services gratuitously, could work under such regulations. It now appears that difficulties very speedily arose; and the consideration of these difficulties gave rise to larger questions, affecting very seriously the general management of the hospital. We have before us a copy of a correspondence which has recently passed between Dr. Hoggan and the Board of Management, in which the former makes some grave charges and raises some important questions. The result has been, that Dr. Hoggan has been summarily dismissed. We understand also that another member of the medical staff has rendered himself obnoxious to the Board of Management by too freely expressing his disapproval of the management; and that his connection with the institution has been consequently severed. Should any members of the profession contemplate making application for the vacant offices, we would recommend them in the first place to obtain some information regarding the position in which, if successful, they will find themselves.

METROPOLITAN HOSPITAL SATURDAY.

SATURDAY, this week, is Hospital Saturday in London, and a "street collection" will be made by 230 ladies: 30,000 subscription-sheets have been issued to large firms, companies, and offices, the police, railways, docks, etc. This fund is gradually rising to a higher level of organisation and principle, and its promoters are undertaking an active co-operation in the foundation of provident dispensaries on sound principles.

PERSISTENCE OF THE CANAL OF MÜLLER IN A BOY AGED SIX.

IN the March and April number of the *Journal de l'Anatomie et de la Physiologie*, M. Rémy describes the *post mortem* appearances seen in the genito-urinary apparatus of a child who died in the Hôpital des Enfants, Paris, of cystitis and suppurating kidneys, the result of chronic retention of urine. In front of the right ureter, another canal was found: it began as a *cul-de-sac* among a mass of little cysts close to the suprarenal capsule, and passed downwards under the fundus of the bladder, opening into the utricle of the prostate by an aperture which would admit a large probe. Passing between the muscular and mucous coats of the bladder for some distance before reaching the utricle, it raised the mucous membrane close to the neck of the bladder to such an extent as clearly to have been the cause of the fatal retention of urine. The urethra was perfectly free from stricture. This abnormal canal was evidently Müller's duct, and the cyst at its upper end represented the remnants of the Wolffian body. As the duct opened into the utricle, the homology of that depression to the female uterus is practically confirmed by this case. But Waldeyer's theory that the hydatid of Morgagni represents a remnant of Müller's duct is shaken by the fact that a well-formed hydatid existed on the right testicle in this instance where the duct was so complete. The presence also, of an "organ of Giraldès" over the right epididymis, although no distinct remnants of the Wolffian body were found far from the testicle, at the upper end of the duct, tends to disprove Giraldès' opinion that the little structure which bears his name consists of the remnants of the Wolffian body. The malformation in M. Rémy's case was perfectly unilateral.

THE VITAL STATISTICS OF BRUSSELS.

THE seventeenth annual report on the vital statistics of Brussels has just been published by Dr. Janssens, the inspector of the sanitary service of that city. From this report, which consists almost exclusively of tabular statements, we learn that during last year 5,740 births and 4,948 deaths were registered in the Belgian capital. Of the total births, no fewer than 1,392, or nearly a quarter, were illegitimate. The total number of males born was 2,925; of females, 2,815. The deaths were 762 less than the average of the ten years 1864-73, and were equal to a death-rate of 23.1 per 1,000.

POLICE MEDICINE.

THE police superintendents just now are actively further the instruction of the members of the force in "ambulance drill." If Colonel Henderson would see that some elementary instruction in the distinction between apoplexy and drunkenness were added, possibly medical aid might more often be called in time to persons dying from apoplexy in the streets, but treated by the police as being "drunk and incapable". The diagnosis is often far from easy: the suffering to the insensible person is, of course, *nil*, and the probability of effectual help treatment not very considerable; nevertheless, it is difficult not to feel that errors of this kind—of which one of the usual type is again this week reported—are painful and discreditable by their frequency.

ATTEMPTED MURDER: EROTOMANIA: IMPULSIVE HOMICIDAL MANIA.

M. MOTET lately communicated to the Medico-Legal Society of Paris the following case, which presents some points of interest in reference to homicidal mania and erotomania. A glazier, named Douaille, aged 49, much given to drinking alcoholic liquids, suddenly, and without any apparent cause, inflicted several stabs with a knife on a fellow-workman, and then attempted suicide. On inquiring into the condition of the assailant, it was found that for two years before the perpetration of this act Douaille had become inattentive and had fallen off in his work. At the same time, he gave way to habits of drinking to such a degree that, after these excesses, he frequently had epileptiform fits. It was further ascertained that he had manifested an unnatural passion for the man whom he had stabbed, and had an irresistible desire to sleep with him. In order to satisfy this disgraceful passion, he secretly entered the man's bedroom, and being there surprised by his companion, and fearing that he might be mistaken for a robber, he threw himself on him and inflicted the stabs above described. The question arose whether Douaille was really in a state of mind to be conscious of his acts and responsible for the attempt at murder. M. Motet drew up a report for the Court of Assizes, contending, on the following grounds, that Douaille should not be held legally responsible. Unlike most pederasts, Douaille had selected for his criminal passion an old man, a man indeed older than himself, the age of the person attacked being sixty-four. Pederasts, as a rule, select young persons. In this abnormal fact, M. Motet considers that there was strong evidence of diseased cerebral excitement such as might occur in a man who had given way to excess in drinking alcoholic liquids. Considering also that Douaille had had four epilep-

attacks in one year, that he had attempted suicide by charcoal fumes in 1877, and that on the day before the crime he was in a dull and stupid condition, M. Motet came to the conclusion that there was evidence of mental disease sufficient to render the man irresponsible for the crime. He regarded Douaille, in fact, as an alcoholic maniac labouring under an uncontrollable bestial passion with a sudden impulse to murder. Upon this evidence, Douaille was acquitted on the grounds of insanity, and sentenced to be confined in an asylum. The case is, no doubt, one of considerable difficulty. Here was a man labouring under two distinct criminal impulses at the same time—the impulse leading to unnatural intercourse, and the impulse leading to murder; but the latter may receive another interpretation. It is not unreasonable to suppose that the real motive for the stabbing may have been that he was resisted in the attempts to carry out his criminal passion. The change of character and habits observed in Douaille before he assaulted his companion was some evidence in favour of insanity. The result shows that the rule of criminal responsibility in France does not err on the side of severity.

YELLOW FEVER IN AMERICA.

AMERICAN papers state, as the result of recent inquiries of the National Board of Health in America, that the germs of the yellow fever which has again become epidemic at Memphis, are believed to have been imported from the West Indies, to have passed the New Orleans quarantine, and arrived in Memphis about June. Fresh cases have occurred in New Orleans; and last week fifty-four persons died of yellow fever in Memphis.

CHOLERA IN INDIA.

ADVICES received by this week's mail announce that cholera has diminished in Candahar, though it is still prevalent in the neighbourhood. Out of seventy-five cases in the city among Europeans up to the 6th instant, there were sixty deaths. The disease is very severe in some districts of Scinde. Over 10,000 deaths are said to have occurred from cholera alone in the Muzafarpur portion of the Tirhut district. As this amount represents the registered deaths only, the mortality must have been very severe. The heavy rains have done much to check the disease, but it is still very bad in many villages in that district.

SEATS FOR SHOPWOMEN.

DR. EDIS has ably drawn attention in this country to the injury inflicted on shopwomen by being compelled to stand during the hours of business; and a considerable amount of reform has, we believe, been the effect of his representations. We are glad to see that one of our most able contemporaries, the *Philadelphia Medical Times*, has taken up the matter on behalf of persons of the same class in America. "The young women", it says, "who are found behind the counters in the ordinary retail stores are expected to dress neatly on a minimum of salary, to be on duty from eight o'clock or earlier in the morning until six or later at night, with an interval for rest and dinner of half-an-hour (or, rarely, an hour) at midday, and, during all this time, must be constantly on the alert, ready to please the capricious taste of the buyer (*bonâ fide* or pretended), constantly moving, and, in the busy season, without a moment's rest, perhaps, from morning to night.....With a refinement of—we will not say cruelty, but—severity, these shop-girls are frequently—in fact, we may say generally—forbidden, under any circumstances, to seat themselves or taken any rest during the hours of labour.....Nor is there any change in this rule for the varying conditions of the system. As the periodical return of languor, and perhaps pain, intimates the call of the system for some rest, some mitigation of the usual labour, the wear and tear of this constant standing position becomes almost beyond endurance. Uterine disease is induced when there is the least tendency to it, and aggravated to a high degree when it exists; and many a young woman leaves the duties of the shop to take up those of maternity with the seeds of future disease implanted, and needing only the added stimulus of child-bearing and lactation to break out and give rise to chronic invalidism." Our contemporary considers that it would be too much to expect of human nature that this injustice should be spontaneously remedied by the heads of the establishments; and suggests that no one is more fit to point out the necessity of a change in the direction of more humane treatment than the physician, who may be the adviser at once of the proprietor and of the saleswomen. He remarks that in London and some of the larger towns associations have been formed for the amelioration of the condition of shop-girls, and already much good has been done in this way.

A NEW CONVALESCENT HOME FOR CHILDREN.

THE new convalescent home for children recently erected at Meanwood, near Leeds, was opened on August 30th, by the Bishop of Ripon and Miss Beckett of Somerby Park. The building will accommodate about eighteen children, and is pleasantly situated on the high road between Meanwood and Moortown, having a frontage to the south, east, and west aspects. Besides the usual kitchen, offices, and outbuildings which are placed in the rear to the north, a dining-room with south and east aspect, and a day-room with south and west aspect are provided on the ground-floor, with a matron's room, store-room, and other conveniences. The kitchen is placed in the rear of the dining-room, having a buttery hatch or window for serving purposes, and the matron's room has an inspection window overlooking the day-room. Suitable dormitories are provided on the chamber-floor, also matron and servants' bedrooms, with inspection windows overlooking the dormitories. A lavatory and bath-room, with cold and hot water services, linen-room, etc., are also provided on this floor. Much attention has been paid to light and air, drainage, and the proper ventilation of all drains, soil-pipes, etc., and to providing ample superficial and cubic space to the day-rooms and dormitories, and other matters of detail necessary to render the home healthy and comfortable. Dr. Clifford Allbutt of Leeds is the honorary physician, and Mr. Horsfall of Leeds is the honorary surgeon.

AN ALMOND-SHELL IN A BRONCHUS.

THE following curious case is published in No. 54 of the *Allgemeine Med. Central-Zeitung*, 1879. A servant-girl, aged 19, swallowed one evening a piece of an almond-shell. She began to cough immediately after the accident. The cough lasted through the night, and was accompanied by vomiting, dyspnœa, and severe pain in the throat. The pain gradually extended over the right half of the thorax, and the patient expectorated a very offensive bloody sputum. When she presented herself at the hospital three weeks later, slight dulness was found on the right side of her back, extending from the middle of the scapula downwards; the breath-sound was feeble and vesicular on the back; sonorous rhonchi were heard in front on the right side and in the right interscapular space. She complained of pain in front in the upper part of the thorax when coughing. There was no fever. Five days later, pleuropneumonia of the right side broke out, which was only definitely cured after two months and a half, when the patient left the hospital feeling well, with the exception of the above-mentioned sensation of pain when coughing. The sonorous rhonchi could still be heard. Three weeks later, she again felt very unwell, and re-entered the hospital. A few days afterwards, during a violent fit of coughing, she coughed up a piece of a rough almond-shell with ragged borders. It measured nearly nine-tenths of an inch in length, more than six-tenths of an inch in breadth, and was one-third of an inch thick. The patient recovered rapidly. It is remarkable that a foreign body of such a size could be aspirated into the bronchi, and that not more injury was caused by its roughness and ragged edges.

THE HEALTH OF BOMBAY.

THE report of the Municipal Commissioners of Bombay is always an interesting document, containing, as it does, minute and valuable information as to the action taken in every department of the municipality. The report of Mr. Weir, the health officer, is the most bulky of the appendices of Mr. Grant's last volume, and deals with the vital statistics of the year 1878 in a very exhaustive manner. Mr. Weir dwells at

some length on the untrustworthiness of the figures of the census of 1872 as representing the population of Bombay, and he shows reasons for believing that it has considerably increased. At the most favourable estimate, the death-rate was 36.47 per 1,000 of the population. The actual number of deaths in 1878, exclusive of still-born, was 29,699, of whom 14,682 were males, and 12,317 females, as compared with 33,511 in 1877. Though this shows a somewhat less mortality, it exceeds by upwards of ten thousand the average annual mortality in the ten years 1866-75. Fevers caused 9,944 deaths, as against 12,832 in 1877; phthisis 3,229, as compared with 2,988; diseases of the respiratory system 2,452, as against 817; while from diarrhœa there were 1,258, and from dysentery, 1,820 deaths, as against 1,644 and 2,203 respectively in the previous year. Cholera was less prevalent, there having been 1,183 deaths only, as compared with 2,550 in 1877; but the ratio of deaths to attacks, 80.9 per cent., was very high. Parsees, Jews, and Eurasians were, according to the figures, the healthiest races in Bombay, whilst the heaviest mortality was amongst the Hindoo outcasts.

OPIUM AND ITS EFFECTS.

OFFICIAL reports state that the consumption of opium in Burmah has of late years increased largely, especially in the Arakan division. The evils arising from this vice manifest themselves in a very marked fashion in the prisons, to which the devotees of the drug are brought in great numbers. When rice becomes scarce and dear, as it did in 1877, the opium-eater is unable to procure his usual quantity of opium, and, as a consequence, he falls into a bad state of health. The prisoners committed to the Akyab Jail in 1877 are stated to have been, without exception, opium-eaters to excess, who, when deprived of the drug, are quite unfit for work, and, as a means of living, resort to theft. When they become inmates of a jail, they are strongly predisposed to be attacked by such diseases as diarrhœa, dysentery, and anæmia. Of these three diseases, thirty-three prisoners died in Akyab Jail during 1877, in addition to forty-five from cholera; and this whilst the sanitary state of the jail was excellent, and only three prisoners died from other diseases. Writing on this subject, the civil surgeon of Arakan says that the use of opium, both in smoking and eating, has been the cause of a great deal of sickness and mortality in the jail, most of the cases dying from intractable forms of bowel complaints. "Even though the patients were regularly supplied with large quantities of opium, many were suffering severely from it before their arrival. A few days' deprivation is often sufficient to make them enter the downward path, and it is too often the case that when once they have entered that path no amount will re-establish their health. Very frequently, in bringing these men from the district, they occupy several days on their journey, during which they get no opium, and the evil effects soon become apparent. Another evil is that, when put to jail on hard labour, they soon break down. No doubt many would recover provided you revoke confinement and hard labour, and supply them with a reasonable quantity of opium; otherwise, in my experience, the result is that they break down, fall into a wretched state of debility, and finally succumb to dysentery or diarrhœa. It seems to me that during the year opium-eating has been a fertile source of crime."

ABDOMINAL EXPLOSION.

THE following curious case is published in the *St. Petersburg Medicinische Wochenschrift*, No. 26, 1879. A man had been so severely injured, in trying a new cannon, by the explosion of a portion of the powder, that he died in an hour after having been taken to the hospital. His hand had been shattered, and he was severely burnt in the face and other parts of the body. In his left groin was a wound about two inches long, covered with coagulated blood. On passing a sound into this wound, it did not penetrate into the abdominal cavity, but could be freely moved in all directions beneath the abdominal walls. The abdomen was then opened, and it was found that both the membranes and the fatty tissue had been torn off from the subjacent muscles. A kind of sac had thus been formed, which extended almost to the spinal column on both sides. The abdominal cavity was open on the right side, and filled with large masses of fluid and coagulated blood; the intestines and all the tissues were covered with grains of powder which had not exploded; and the small intestine had in two places been torn from its mesentery. The external abdominal wall was not injured. It appears that the powder must have penetrated into the abdomen through the above-named small wound; and that subsequently an explosion must have taken place in the abdominal cavity, which caused the terrible injuries that have been described.

INFLUENCE OF THE ATMOSPHERE ON OPERATIONS.

PROFESSOR TRÉLAT, in a recent clinical lecture, drew attention to some facts which seem to prove that the condition of the atmosphere exercises a certain influence on traumatic lesions. He pointed out that the older surgeons, and even those of a more recent period, always put off operations that were not very urgent till certain seasons of the year. Roux, who operated on a large number of cataracts, always kept the operations for the spring; and this tradition was probably based on observation. All the cases of acute septicæmia observed by M. Trélat occurred in June, in hot and sultry days. One case was that of a very healthy woman in her fourth confinement, all her labours having been remarkably easy. She began to feel ill on the first day, and was worse the second day; on the third day the case was hopeless, and she died on the fourth. At the same time, M. Trélat had been operating upon a man suffering from cataract in both eyes. Everything had gone well, and the operation promised to be a very successful one, but during the night the patient suffered much from the heat, and was very restless; the eye grew worse, and a few days later suppuration set in. Another case was that of a woman in whom he operated for cancer of the breast during June. For the first four days, all seemed to go well, but on the night of the fifth day the patient suffered intensely from the sultry weather, and passed a bad night. Next day the sore presented a very bad aspect; the patient became slightly delirious towards night, erysipelas set in, and she died on the eighth day. A patient was suffering from multiple fistula and stricture of the rectum. M. Trélat performed rectotomy by means of the galvano-caustic loop. The patient did not lose a drop of blood, and the operation was done under excellent conditions. Towards night, however, he felt a little restless; during the night a profuse fœtid diarrhœa set in; and the temperature in the axilla rose to 102.2°. These symptoms grew worse the following days; and on the fourth day the patient died of acute septicæmia. Three years ago, M. Trélat was called upon to perform perineoraphy on a young woman in whom the perinæum had been lacerated during parturition. The operation had, against his will, been put off from April to June. It happened to take place on a very hot day, but everything went on so smoothly that the best hopes were entertained, till at night, when the patient became flushed, restless, and died of septicæmia four days after the operation. M. Trélat particularly insisted on these facts, because, although they all took place in different years, yet they occurred at the same season and under the same atmospherical conditions. He also compared them to the remarkable results at which M. Davaine has recently arrived. He found that a very small quantity of septicæmic blood, when injected under the skin of guinea-pigs, caused death within thirty hours if the operation were performed in summer at a temperature of 82° to 86° Fahrenheit. When the experiment was repeated in the winter, not one of the animals died as long as the dose remained the same as in summer. M. Davaine concluded from his experiments that the two-thousandth part of the septicæmic matter needed in the cold season was sufficient to kill a guinea-pig in summer. Another curious fact is, that the seasons seem to exercise no influence on rabbits, who die both in winter and in summer from the same doses. However, M. Trélat thought it impossible not to trace a connection between these experiments and the facts which he had observed, especially as the latter were not isolated. Thus M. Cauchois, in his thesis on the etiology of hæmorrhages, mentions that a few years ago, on a very hot day in June, more than a hundred cases of secondary hæmor-

rhage were observed in the hospitals in Paris. It must be added that M. Cauchois shares M. Verneuil's views as to the fact that most secondary hæmorrhages are of septicæmic origin. It may therefore be admitted that in these cases we meet with septicæmic accidents which have been caused by the influence of the temperature. M. Trélat has also shown long ago that the seasons have a great influence on the mortality in the lying-in hospitals. The practical conclusion which may be drawn from these facts is that, so far as operations are concerned, the summer season itself is not to be dreaded so much as the sultry days, or the great heat, which often comes on suddenly and unexpectedly. Therefore, it will be safer to avoid as much as possible performing any operations during this season.

VACCINATING WITH THYMOLISED LYMPH.

DR. EMIL STERN, Medical Officer of the Royal Vaccine Institute in Breslau, gives in the *Breslaue ärztliche Zeitschrift*, No. 8, 1879, an account of some observations which he has made with vaccine matter subjected to the action of thymol. He says that last year Kobert stated that the addition of a one per mille aqueous solution of thymol to humanised lymph in no way injured it, but, on the other hand, afforded a means of preserving it. On repeating experiments with vaccine matter in the Breslau Institute, he found that the use of lymph mingled with glycerine, salicylic acid, or carbolic acid, gave almost always negative results; while the aqueous solution of thymol, while it resisted decomposition, did not destroy the specific action of the lymph. Hiller had already shown that the addition of carbolic acid destroyed the action of vaccine matter. Dr. Stern followed Kobert's method of blowing the fresh lymph from a capillary tube on to a watch-glass, filling the tube with a one per mille solution of thymol, and blowing this also on the watch-glass. The vaccine matter and the thymol solution are then stirred together, and the mixture is drawn into a clean capillary tube, leaving behind fibrinous coagula, blood-corpuscles, and accidental admixtures, such as broken threads, etc. The mixed lymph is always perfectly clear and transparent. Köhler is said to have never failed in vaccination with the thymolised lymph; but Dr. Stern has not been able to obtain such success. Of twenty-nine children vaccinated thus for the first time, characteristic pustules were produced in twenty, while the operation failed in 9 (31 per cent.). It must, however, be remembered that nearly one-fifth of the vaccinations with ordinary lymph that has been preserved in capillary tubes fail. As with ordinary lymph, the activity of the thymolised lymph varies with its age. The pustules following vaccination with thymolised lymph had the specific vaccine character, as was shown by the lymph obtained from them producing ordinary vaccine pustules when used for vaccination. The latter pustules, however, had only a small areola, and there was no inflammatory reaction; nor was there erysipelas or any phlegmonous process. Dr. Stern has had no opportunity of testing the thymolised lymph in revaccination. He says that further observations are required; but that, so far as his observations have gone, they show that the mixture of humanised lymph with a one per mille solution of thymol does not destroy its activity, that the mixture is not more irritating than ordinary vaccine matter, and that the addition of the thymol presents advantages in regard to preservation.

SCOTLAND.

HEALTH OF GLASGOW, EDINBURGH, AND LEITH.

THE mortality in Glasgow last week was 17 per 1,000, as compared with 15 the previous week; of 7 deaths from fever, 5 were due to typhoid. There were registered 31 cases of fever, 59 of measles, 49 whooping-cough, and 30 scarlet fever. In the Belvidere Hospital at present there are 46 cases of scarlet fever, 37 of typhus, 23 of typhoid fever, 11 of whooping-cough, and 9 of measles—total, 126; an increase of 7 in the previous fortnight's returns. In Edinburgh, the mortality was 17 per 1,000. Only one case of fever (one of very rapidly fatal typhoid) occurred, and in the New Town. Other zymotic diseases caused 6 deaths, all in the Old Town; of these, 3 were due to scarlet fever. In Leith, the death-rate was 18 per 1,000.

WATER-SUPPLY.

THE scheme for supplying Dunfermline with water from Glensherup is now nearly completed, and was officially inspected last week. The works have been in progress for fully two years. The reservoir, having an area of 23 acres, is so deep that it will contain 180,000,000 gallons, and at a height of 935 feet above Ordnance datum. The present supply to the town of Dunfermline from these works is 1¼ million gallons a day of excellent water. These works are also to supply Inverkeithing, Aberdour, Charlestown, and other contiguous villages. The cost of the scheme will have been about £70,000, when finished.—The Edinburgh water-supply at present is 13,435,000 gallons per day, or about 45 gallons per head of population.

IRELAND.

THE NEW REGISTRAR-GENERAL FOR IRELAND.

WE have much pleasure in being in a position to announce that his Grace the Lord-Lieutenant of Ireland has offered the important post of Registrar-General for Ireland to Dr. Grimshaw, and that that gentleman has accepted the office. In selecting Dr. Grimshaw to succeed the late Dr. Burke, the Irish Government have chosen a man whom, of all others, the profession in Ireland know to be the most fitted for the place. Dr. Grimshaw has for many years been well known as an authority on sanitary science and statistics; and those who had the privilege of hearing his address, as President of the Section of Public Medicine, at the recent annual meeting of the Association, will have had ample evidence of his intimate acquaintance with these subjects; while those who are familiar with his most arduous and praiseworthy voluntary and self-sacrificing work in connection with many of the most useful public and corporate bodies in Dublin, know that he will bring to his new sphere of duty a cultivated intelligence and a business capacity which augur well for the increased usefulness of a most important public department. The salary attached to the office is £1,000 *per annum*. For the present, at least, we understand that Dr. Grimshaw retains his position as Physician to Steevens's Hospital.

INFANT MORTALITY IN DUBLIN WORKHOUSES.

LAST week, we referred to the high rate of mortality among the nursed-out children of the South Dublin Union Workhouse, as shown by a report of the Local Government Board Inspector. A return of the deaths among the same class in the North Dublin Union, for the five years ending June 30th, 1879, was submitted to the Guardians last week. This return compares favourably with that of the South Dublin Union; the percentage of the deaths of the nursed-out children under the age of one year being 30.61 per cent., against 39.24 per cent. in the South Union. The total number of children over twelve months of age sent out from the North Union was 1,241, of whom 10 died; under twelve months 49, of whom 15 died. Of the total number, four died within three weeks after being sent out. The death-rate of the children over one year of age was 0.8 per cent. For the purpose of comparison, it may be mentioned that, in twenty large English towns, the annual rate of mortality per 1,000 living, under five years of age, in 1877, varied from 59.0 (in Brighton) to 89.6 (in Liverpool); and that in Lancashire the death-rate per 1,000 under one year of age was 157.

INFANT MORTALITY: CORK UNION.

A STATEMENT having been made, that 33 per cent. of the infant children of the Cork Workhouse die in consequence of the insufficient food given to the nurses, the medical officers of the Workhouse, at the request of the Guardians, have recently reported on the subject, denying its accuracy. After a careful inquiry, they found that the correct rate of infant mortality in the house amounts to only 7 per cent., and not 33 as stated.

INTERNATIONAL EXHIBITION IN PARIS.

SURGICAL INSTRUMENTS.

[*Continued from page 400 of last volume.*]

Artificial Leg, with Self-acting Bolt.

Persons who have had to undergo amputation of the thigh, generally use non-articulated artificial legs, on account of the position of the stump, which, after the wound is healed, tends to protrude, throwing the centre of gravity of the body backwards. The result of this changed position is that the articulated legs generally give way, and their bearer either stumbles or falls in the act of stepping forwards. This artificial leg has the advantage of not bending or giving way in the act of stepping; it advances, putting the heel down and inclining the point of the foot. This is the way in which it acts. 1. The heel, in being



Fig. 21.

lifted from the ground, acts upon a bolt, which fixes the knee, stiffens the leg, and consequently prevents its bending. 2. At the same moment when the natural leg, after moving forwards, rests upon the ground, the artificial leg moves backwards, lifts the point of the foot in putting down, at the same time, the heel; by this proceeding, the bolt is removed from the knee, and the leg allowed to bend sufficiently in order to be brought forward and walk another step. (Fig. 21.)

Mathieu's Artificial Arms.

The woodcut represents the arm which was constructed for M. Roger, first tenor of the opera, by Messrs. Mathieu. In order to make the arm really useful, the following problem had to be solved: 1. All the movements of the fingers, wrist, and lower part of the arm must be perfectly free and easy; 2. The arm had to be placed on the breast, stretched out, elevated over the head, moved in all directions, etc. Messrs. Mathieu succeeded in making the artificial arm perform all these movements. They have also constructed hands which are very much like human hands in colour, consistency, and softness, and which will remain unalterable. Messrs. Mathieu hope that they will be able to endue these hands with the movements which they have succeeded in giving to wooden hands. (No. 22.)

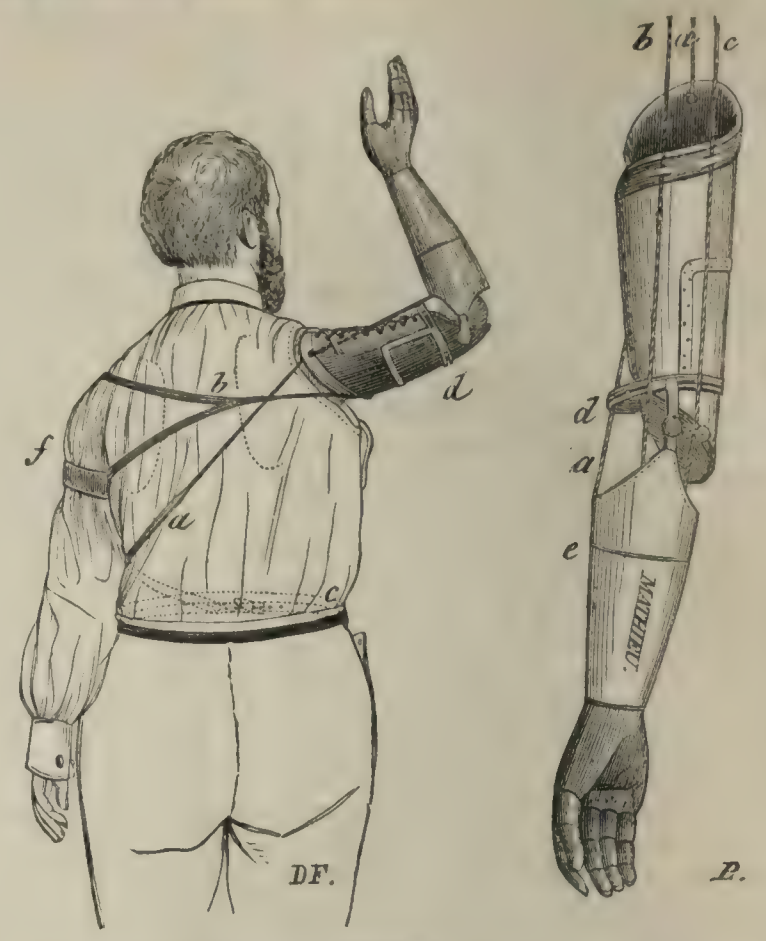


Fig. 22.

Apparatus for the Direct Transfusion of Blood.

This apparatus is constructed on the principle of aspiration and compression of fluids through the medium of an India-rubber bag, which acts as pump. The blood, on leaving the vein, runs into a funnel, where it is collected, the India-rubber bag then being allowed to relaxate; it is thence aspired into a glass cylinder. The bag is then again compressed, and the pressure by the air, acting as a piston on the

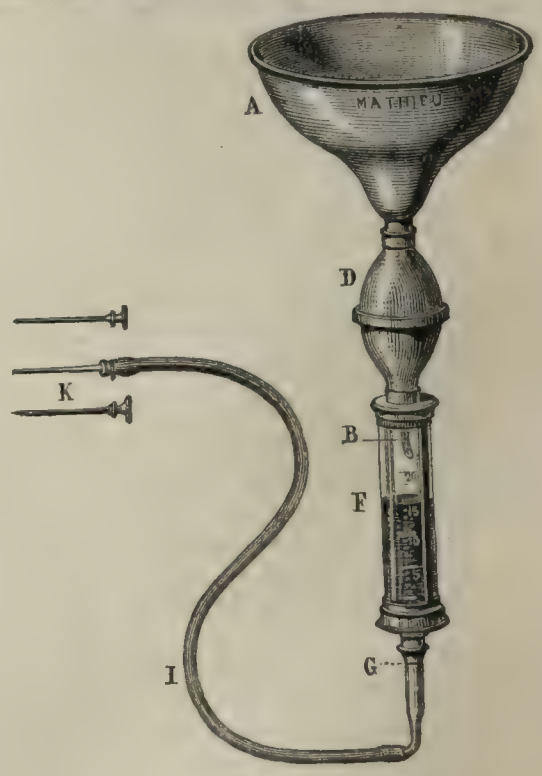


Fig. 23.

column of blood, injects it into the patient's vein. The covering of the cylinder is divided into grammes, so that the operator may know the exact amount of blood injected. This instrument offers many other valuable advantages; it is easily worked with only one hand, leaving the other perfectly free; it is easily cleaned, and works with great rapidity, etc. (Fig. 23.)

DR. DEMARQUAY'S DILATOR.

This instrument is used to dilate the neck of the bladder before performing lithotrity. It consists of four blades, which when closed form a cone (D). Having been introduced in this form, they are dis-

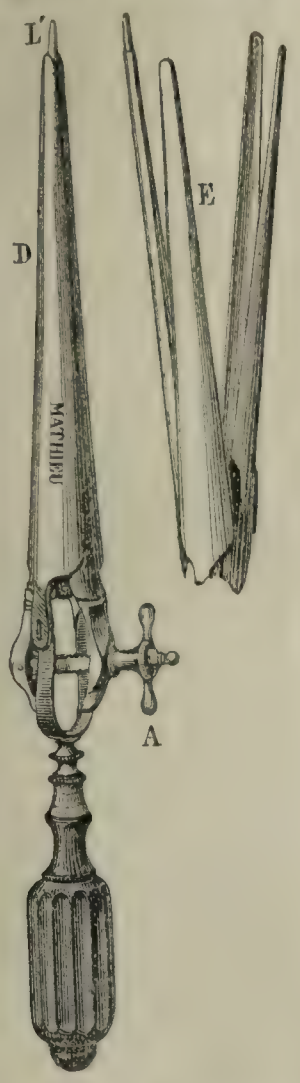


Fig. 24.

tended (E), and in so doing dilate the neck of the bladder to any given diameter. (Fig. 24.)

DR. DESPRÈS' DILATOR OF THE HERNIAL RING.

In cases of strangulated hernia, Dr. Desprès, instead of making an incision in the ring, introduces into it separately the two blades of the

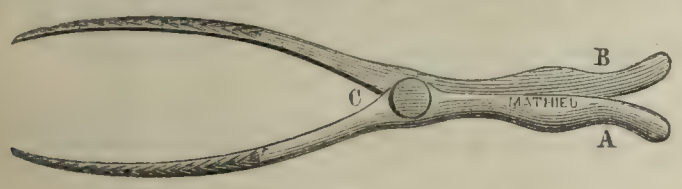


Fig 25..

dilator. He then unites them, so as to form a forceps, and moves the dilator about in the ring till it is sufficiently dilated to allow the hernia to be reduced. (Fig. 25.)

THE ARMY MEDICAL DEPARTMENT IN ZULULAND.

WE have received from correspondents in South Africa some interesting details respecting the medical arrangements of the army in Zululand.

One correspondent writes that, on March 29th, a force of about 5,000, under the personal command of Lord Chelmsford, marched from Fort Tenedos. on the Zulu side of the Lower Tugela river, for the relief of Colonel Pearson's column at Ekowe. The force consisted of over 3,000 European soldiers, 2,000 native contingent, and a naval brigade of about 600 men from the *Shah*, *Tenedos*, and *Boadicea*. The medical officers who accompanied the force were Surgeons-Major Boulton, Edge, and Tarrant; Surgeon Harding; and four civil surgeons, Messrs. Duncan, Lindon, O'Neil, and Wood; and, with the naval brigade, Staff-Surgeons Longfield and Shields, and Surgeons Sibbald and Pollard. In charge of Surgeon-Major Tarrant were the ambulance and the store-wagon; there were no field-hospital equipments, although two had been sent for the purpose from D'Urban by Surgeon-General Woolfreyes. There were thus five army medical officers and five civil surgeons with a land force of over 5,000, not including staff and regimental officers and camp-followers; and two staff-surgeons and two surgeons with a naval force of about 600. At the end of the fourth march—the health of the men having remained good—the army encamped, on April 1st, at Gingihlovo, within sight of the high hills on which Ekowe is situated. Early the next morning, the camp was attacked by a force of about 13,000 or 14,000 Zulus, who, after an engagement which lasted an hour and ten minutes, were forced to retreat, with the loss of more than 1,000 dead and wounded. The medical officers were obliged to attend to the wounded under fire, it not being possible to remove them during the battle to the ambulance in the rear, where the senior medical officer (Surgeon-Major Tarrant) and his staff were making preparations to receive them. Among three officers who were severely wounded was Staff-Surgeon Longfield, R.N., who had his right humerus broken by a rifle-bullet. Three bell-tents (the only tents with the entire force) were pitched by the senior medical officer and his small staff, during the fight, beside the ambulance-wagon, in the space where the oxen and horses were enclosed; where, after the action, the medical officers—three military and three naval—were at length able to have their wounded conveyed on stretchers by the men of their own corps. It is scarcely necessary to say that every medical officer under fire did his duty nobly and fearlessly.

On the morning of April 3rd, at about 5 A.M., it became known that Lord Chelmsford intended making a forced march to Ekowe that day; and, without giving time for the troops to get a hot drink of tea or coffee with their hard biscuit, the force was at once put under arms and formed into column of advance, and moved off a little before 7 A.M. The force consisted of about 1,800 men of the 57th, 60th, and 91st regiments; 138 marines and sailors; about 120 mounted infantry; and about 1,000 native contingent. The medical staff consisted of Surgeons-Major Boulton and Edge; Surgeon Harding; Surgeon Pollard, R.N.; and one civil surgeon (Duncan) with the native contingent. Each medical officer had a field-companion and water-bottle, carried by a man detailed from the corps, and a pack-horse with field-panniers; and a covered conveyance, on springs, drawn by four horses, and capable of holding six persons sitting down, accompanied the rear of the column; while each company in every regiment carried two field-stretchers on the light carts conveying waterproofs, blankets, and reserve ammunition. Not a man of the Army Hospital Corps was present.

At Ekowe, there were found one surgeon-major (Fitzmaurice) and one surgeon (Wilson) of the army; one staff-surgeon (Norbury) and one surgeon (Thompson), Royal Navy; and one civil surgeon (Giles); the force being a little over 1,000 Europeans, including 170 marines and sailors of Her Majesty's ship *Active*, and about 300 black troops (native contingent); this does not include the officers or the numerous camp-followers. There were two field-hospital equipments, and there were one serjeant, one lance-corporal, and five privates of the Army Hospital Corps. Three civil surgeons had originally accompanied Pearson's column; but two of them had been sent to Tugela, with a force of about 750 Europeans and about 2,000 native contingent, escorting a convoy of wagons sent for fresh stores, which could never return. There had been twenty-six deaths in Pearson's column from his entry into Ekowe in the latter end of January, principally from dysentery and enteric fever (?); and a number of sick, said to be suffering from the same diseases, were then in the hospital-tents and Missionary Church, which had been converted into a hospital.

Colonel Pearson's force left on the afternoon of April 4th, with their sick, field-hospital equipments, and empty wagons, for return to Fort Pearson, and encamped for the night about four miles down the hill; the force under Lord Chelmsford remaining at the camp at Ekowe. Early on the morning of the 5th, Pearson's column marched again, and Lord Chelmsford's followed in its route. At eight o'clock the next morning, they moved on to Gingihlovo, Pearson's column having proceeded early on its march to Tugela. On arriving about two miles from the old camp, the stench of Zulu bodies, which had not been found in the long grass, and escaped burial on the day of the battle, was awful; probably they were bodies of wounded Zulus who had crept away and died. On reaching the camp, the foul stench was scarcely lessened; they, therefore, marched for a few miles further, taking up fresh ground for the camp that night. On April 7th, Lord Chelmsford selected a position on a small hill close by (although the water-supply was of wretched quality), where a strongly fortified camp was formed, to be occupied by Major-General Crealock's Brigade, consisting of about 2,500 Europeans (not including staff or regimental officers, or camp followers) and a native contingent of 2,000. This brigade took up its new position in the evening, and the medical arrangements were as follows: Three

bell-tents for the sick; one bell-tent for sick officers; a wagon containing three boxes of medicines and surgical appliances; each corps having besides a medical field-companion and water-bottle. With the land-forces were two surgeons-major, one surgeon, and one civil surgeon (Duncan, since dead from dysentery). The naval brigade, numbering 552, had one staff-surgeon (Shields) in medical charge, and two surgeons (Sibbald and Pollard). The naval medical officers had their "sick-bay men" to attend on the sick and compound and dispense medicines, while there was not a single man of the Army Hospital Corps present. The officers of the Army Medical Department had to attend to all the duties of their corps, inclusive of attendance on punishment parades, and to compound and dispense their medicines, with privates detailed from their regiments to act as sick orderlies.

On the morning of April 8th, Lord Chelmsford marched with the remaining troops to Tugela, taking all the wounded and sick with him, in medical charge of Surgeon-Major Tarrant, accompanied by civil surgeons Wood, Lindon, and O'Neil, together with the officer, non-commissioned officers, and two privates of the Army Hospital Corps that had accompanied the relieving column as far as Gingihlovo. The previous fatigue and exposure, coupled with the wretched water-supply, began to affect the troops and officers; and the four only available bell-tents were soon filled with sick, as well as a temporary shed rudely constructed with branches and grass roof. It was necessary to send three officers and over 130 men to the rear hospitals at Tugela and Herwan. Fevers of the simple continued type, dysentery, and diarrhœa were the principal diseases. On April 23rd, Surgeon-Major C. H. Giraud arrived to relieve Surgeon Harding, in medical charge of the 57th Regiment; the latter going to Tugela to take medical charge of the 88th Regiment, then in charge of a civil surgeon; but no other change took place in the medical arrangements. Owing to strong representations regarding the large amount of sickness caused by the impure water-supply, orders were received from head-quarters to move the camp; and, on April 26th, the force moved to a small hill on the right bank of the Inyazane river, and encamped strongly.

The force, on arrival at Fort Chelmsford on April 26th, consisted of 2,900 European soldiers, not including staff, regimental, and departmental officers, or camp-followers; and 2,012 Native Contingent (two battalions). One surgeon-major accompanied each full battalion of European troops, and one civil surgeon the two battalions of Native Contingent. One staff-surgeon and two surgeons Royal Navy accompanied the Naval Brigade, numbering 406 men. There were four bell-tents for the sick of the army and navy, one for sick officers, one for surgery and stores, and two for medical officers. There was no non-commissioned officer or private of the Army Hospital Corps, or any one to dispense medicines, except for the navy. Sickness continued unabated, especially diarrhœa and dysentery; and numbers, both amongst officers and men, continued to be sent to the rear hospital by the weekly convoys. After a few weeks, diarrhœa and dysentery lessened, and fevers, principally of the remittent type, became prevalent—no doubt due to the great range of daily temperature (about 40°) and the intensely heavy dews at night, coupled with the malarious emanations from the low-lying banks of the river and the marshy valleys extending towards the shores of the Indian Ocean, only six miles distant.

On May 4th, one half-company of Royal Engineers and a detachment of Royal Artillery arrived, accompanied by a surgeon (Cross) of eight months' service; and at last one sergeant, one lance-corporal, and two privates of the Army Hospital Corps. The next convoy (May 8th) brought a field-hospital equipment, including two hospital marquees, with two civil surgeons, forty native stretcher-bearers, and eight stretchers. One additional lance-corporal and six privates of the Army Hospital Corps also arrived at this date. Two interpreters accompanied the Kaffir stretcher-bearers, who, in addition to field-stretchers, were supplied with eight "Ashanti cots".

On May 10th, the 91st Highlanders, Nettleton's Native Contingent, and a few mounted scouts, left to garrison Fort Crealock, and were joined there by a detachment of Artillery with two nine-pounder guns. The medical arrangements were as follows: one surgeon-major (Edge) with the Europeans, and one civil surgeon (Jones) with the natives; a few bell-tents for the sick, since supplemented by a hospital marquee, with a pair of field medicine-panniers and field-hospital canteen.

Our correspondent says that he cannot conclude without mentioning the great assistance rendered to the officers of the Army Medical Department by the medical officers of the navy, who, not being under their orders, voluntarily assisted them even so far as to take charge, on several occasions, of the sick sent to the rear hospitals.

The following is a statement of the admissions, deaths, and transfers to rear hospitals, for European troops and Naval Brigade.

At Camp Gingihlovo, from April 7th to 26th, out of an average strength of 76 officers and 2,000 rank and file, there were amongst the officers 19 admissions; viz., fevers, 1; sunstroke, 1; diarrhœa, 4; dysentery, 4; other diseases, 4. Two of these (dysentery) were transferred to rear hospitals. Amongst the rank and file, there were 180 admissions; viz., fevers, 25; rheumatism, 29; diarrhœa, 40; dysentery, 29; bronchitis, 2; boils and ulcers (Natal sores), 11; other diseases, principally slight wounds (accidental), blistered feet, etc., 44. Of these, 4 died, 2 from continued fever and 2 from dysentery; and 128 were transferred to rear hospitals. In the Naval Brigade, for the same period, out of an average strength of 12 officers and 550 men, there were amongst the officers 3 admissions: 1 for diarrhœa; and 2 for dysentery in the same officer, who was sent to Tugela. Amongst the marines and sailors, there were 119 admissions; viz., fevers, 19; rheumatism, 1; diarrhœa, 53; dysentery, 11; other diseases, 35. There were no deaths, and 14 were sent to rear hospitals.

From the arrival at Fort Chelmsford on April 26th up to May 28th, including the garrison at Fort Crealock, the statistics were as follows: European troops, average strength, 80 officers and 2,300 rank and file: admissions amongst officers, 19; viz., fevers, 9; diarrhœa, 3; dysentery, 4; other diseases, 3; no deaths; 13 sent to rear hospitals; admissions amongst rank and file, 454; viz., fevers, 161; rheumatism, 31; bronchitis, 7; diarrhœa, 116; dysentery, 35; boils and ulcers (Natal sores), 27; other diseases, 77. Of these 3 died: 1 from fever (remittent), 1 from dysentery, and 1 from peritonitis; and 317 were sent to rear hospitals. In the Naval Brigade during the same period, out of an average strength of 11 officers and 485 men, amongst the officers there were 3 admissions, 2 for fever and 1 for diarrhœa, all sent to rear hospital. Amongst the marines and sailors, there were 131 admissions; viz., fevers, 81; rheumatism, 4; diarrhœa, 10; dysentery, 7; boils and ulcers, 8; other diseases, 27; no deaths; and 97 were transferred to rear hospitals.

From another correspondent, whose letter is dated July 13th, we learn that Surgeon-Major Wills, stationed at D'Urban as senior medical officer of the line of communication and base, had two large hospitals and an officers' hospital under his charge. There was accommodation in the three for 440 sick, and there were 417 occupants. He had established a convalescent depôt at Pinetown for men who did not require active treatment. This was situated 1,100 feet above D'Urban, twelve miles distant by rail; and the men rapidly improved there.

During the six months from January 4th to July 4th, there were about 1,800 admissions into the hospitals at D'Urban, principally from coast-fever, diarrhœa, enteric fever, and dysentery, all contracted along the coast in Zululand. In the same period, there were 16 deaths: 10 from enteric fever, 3 from dysentery, 1 from poisoning by drinking new Natal rum, 1 from ulcers of the stomach, and 1 from heart-disease. One officer, a medical man, died of dysentery.

A correspondent criticises the remarks made on the medical arrangements in Zululand at page 866 of the JOURNAL for June 7th. He says that, on each ship arriving at the port, a memorandum was sent off, signed by Surgeon-Major Wills, giving the medical officer all necessary information; but sometimes the "bar" would be so rough that no vessel could cross it for many hours, and perhaps for a day or two; and then, of course, all communication with the troop-ship would be cut off, except by signal.

HOSPITAL AND DISPENSARY MANAGEMENT.

THE WORTHING INFIRMARY.

THE annual meeting of the Governors of this Institution was recently held, and a proposal to erect a new and enlarged Infirmary was considered. That a growing town like Worthing should need increased hospital accommodation, would seem reasonable enough. But, as yet, the time has scarcely arrived for making this alteration. The present building can accommodate eight in-patients; but the average number last year was only four. At no time were the eight beds all in use at once. There is, therefore, no need to increase the in-patient accommodation. So far as the out-patient department is concerned, medical opinion at the present day is in favour of diminishing rather than of increasing this branch of hospital work. Some members of the Committee argued that, if a larger building were erected, a greater number of persons would avail themselves of the benefits of the Institution. No doubt they would; and among this number would be many who ought not to seek charitable assistance at all. Thus, the enlargement of the Infirmary before it is called for by the necessities of the case would only tend to pauperise the working people of Worthing.

CORRESPONDENCE.

TO PARENTS AND GUARDIANS.

SIR,—During the next few weeks, many anxious parents will decide on their son's course in life so far as entrance to a medical school may determine it; and I may, perhaps, be permitted to address to them unofficially a few suggestions, of which my official position has long shown me the need. Diligent readers of your pages may, perhaps, be *au courant* in medical education; but my experience shows me that the bulk of the profession and the whole of the outside public are singularly ignorant of the steps necessary towards making a doctor.

Imprimis, every intending medical student must have passed a preliminary examination—either one of the recognised tests of professional boards, or, at least, an Oxford or Cambridge "local" with Latin and mathematics and *one* optional subject. But, if a lad wishes for the degree of the University of London—and he ought to wish for it—he must have passed the matriculation examination at Burlington Gardens *at least* before commencing medical study. Too many young fellows have never even heard of the University of London before entering at a medical school, and then they make the disastrous attempt to read up for matriculation while attending their first year's lectures, with the result usually of being plucked in January or June, and of pretty well throwing away twelve months.

But an intending graduate should not only matriculate, but also pass the preliminary scientific examination, as advised by the University itself, *before* becoming a medical student, if he is not to be crushed by the load of science with which the medical degree is overweighted. Let him devote a year, if possible, to the Chemistry, Physics, Botany, and Zoology of this examination; or, if unable to do this, let him register as a medical student and attend the lectures on Human Anatomy only, in addition to the subjects already mentioned; and, should he fail in July, he will have, at least, the consolation of knowing that his year is not completely lost, but will count as one of the four of the medical curriculum. The tests of the University of London are confessedly severe, and failure may occur at any stage. Let me entreat rejected candidates to accept the verdict of the examiners with the best philosophy they may, but never to make a second attempt! Examinations which occur but once a year pre-suppose the devotion of the whole year to preparation, and no partial success on one occasion is of the slightest assistance in the following year.

Four full years, or five for a candidate for University honours, are required at a medical school, and nothing should be allowed to break in upon these years of study and hard work. The days are gone when a nominal attendance on lectures and hospital practice could be condoned by a vigorous "grind" for the last six months; nor can a young fellow now-a-days afford to take the position of "assistant with time to attend lectures"—I say *afford* advisedly, because the result of such an arrangement is invariably that the student is plucked for his "first College", *i.e.*, the examination in Anatomy and Physiology at the end of his second year, and probably he does not succeed in passing till his third or even fourth year, which he ought to devote to Medicine and Surgery entirely.

But *paterfamilias* may say: "The fees at the schools are all higher than they were, and I cannot afford to keep a son entirely for four years without his earning a penny." True; but these are the days of scholarships and prizes, and, if your boy is well-grounded in his work and industrious, he may, by a little judicious "pot-hunting", not merely save pretty well all his fees, but put money in his pocket too. But, if you have a son who is notoriously slow in intellect, wanting in application, or who prefers pleasure to steady work, as you value his future happiness and your own peace of mind, put him to any profession or business you like save that of Medicine, where the competition is not only severe, but lasts from the first to the last day of professional life!—Yours obediently,

THE DEAN OF A MEDICAL SCHOOL.

THE PROPOSED MEDICAL DEGREE OF THE VICTORIA UNIVERSITY.

SIR,—In the last number of the BRITISH MEDICAL JOURNAL is a leading article upon the subject of the recent decision of the Privy Council not to include the power of granting medical degrees in the charter of the new Victoria University; and a strong opinion is expressed that the result is deplorable in itself and in its consequences. The subject is one so important to the medical profession, that it will well bear thorough examination; and hence I trust you may find room for this letter.

For the sake of clearness, I will arrange my remarks under three heads: 1. The necessity for a popular degree in medicine for English students; 2. The reasons for the late opposition to the proposed medical degree of the Victoria University; 3. Some observations to show that the University of London ought by rights to supply the desired degree.

1. *The Necessity for a Popular Degree for English Students.*—As matters stand at present, this necessity, for the sake of argument, may be conceded. The number of students who obtain a medical degree from an English university is ridiculously small, whilst almost every medical paper teems with letters upon the subject of the title of "Doctor", which only serve to show how keen is the desire for a real and legal right to the use of a title which now-a-days nearly every qualified man assumes, whether he has it or not. Oxford and Cambridge, although of late years they have shown an amazing vitality and a strong desire to meet the wants of the nation, and not merely of the upper ten, are as yet, from various causes, barred against all but a very few of the host of medical students. Durham?—well, Durham is in the hands of the clergy. *Non possumus*. London, alas! originated to supply the popular demand for degrees, has, by obstinately persisting in one course of action, as effectually shut her gates in the face of the great body of medical students, as ever did Oxford or Cambridge in their most exclusive days. Witness the fact that, of 893 London students passed through examination, only forty-five obtained the London University degree. It being admitted, then, that there ought to be a medical degree within the reach of the average English student, what ought to be the cardinal and essential features of such a degree? As I venture to think, they ought to be, 1. That the applicants for it shall give proof of a good preliminary education and a complete course of medical study, properly so called; 2. That the examinations for it shall not be conducted by men interested in any one teaching body, but selected from professors of eminence in their special departments, wherever they may be; 3. That residence at one place shall not be necessary, and that the teaching of all properly equipped medical schools shall be recognised. In short, the characteristic features of this degree ought to be liberality and accessibility to all English students of medicine.

2. *The Reasons for the Late Opposition to the Proposed Medical Degree of the Victoria University.*—If it be granted that the requisites for the English medical degree of the future are liberality and accessibility, then the reasons for the late opposition to the proposed Victoria University are most obvious: that degree would have been neither liberal nor accessible. I may say, without fear of contradiction, that it was the original intention of the scheme, that those students alone who matriculated and studied at the Victoria University should be eligible for the degree; and if the promoters had had their own way, this would really have been the state of matters now. Subsequently, it is believed, some recognition of a certain part of the teaching at Liverpool was put into the draft charter submitted to the Privy Council; but that draft was so carefully kept private, that nobody, outside of the select few in Manchester, had the slightest notion of what the design of the Owens College authorities was. Now, what is the Victoria University? At this moment it is Owens College, Manchester, and for a very long time to come it will practically be nothing else. Compared with this sort of thing, Oxford and Cambridge and London are liberality itself. This Owens College, originated in perhaps the most common-sense commercial town in the world, fostered by the money of the middle classes earned in trade, raised to notoriety by the excellence of its popular lectures on science, no sooner blossoms into an university and sees its way to grasp the degree-giving power, than it becomes the most exclusive of exclusives. If I am wrong in what I say, let the Owens College authorities produce their draft charter, or give a clear statement of what its provisions for the medical degree were to be. The medical public will then be able to judge for themselves what advantages the proposed Victoria degree would have brought to the great mass of metropolitan and provincial students, who are at present hopelessly excluded from the possession of the much coveted doctorate in medicine. Had the Victoria University obtained the desired medical privileges, I have not the slightest hesitation in saying that, with the exception of the Manchester school, and the one or two others which, in process of time, would have become allied to her, the provincial schools in general would have suffered in place of being benefited. Never in the history of education have monopolies in teaching been productive of good. Your leading article observes, with regard to the petition which was got up by the Council of the Liverpool School as soon as they became alive to the nature of the proposed degree, that "the machinery set in motion to procure the petition, and the haste with which the document was framed, were alike suspicious". The silence and secrecy with which the Owens College authorities prepared their draft charter, laid

it before the Privy Council, and obtained the consent of that body to the formation of the university, were such that nothing whatever was known of the matter by the general public till a short intimation appeared in the London newspapers, and questions on the subject were asked in the House of Commons. It was indeed high time for the Council of the Liverpool School to make all haste and to use the speediest machinery—which they did. I think your article is a little severe upon the principal teachers of all the metropolitan and of a number of the provincial schools, in saying that "individual interests, narrow prejudices, and hasty and biassed conclusions", did nevertheless suffice "to impose upon the understanding of a number of gentlemen entitled and accustomed to be ranked among the leaders of the profession". I feel certain that there is not a man who signed that petition who had not carefully considered the subject of medical education and medical qualifications, and that a more competent body of judges upon such a subject could not have been obtained. And there was no hesitation in their response. As your article truly says, forty-eight hours concluded the matter and turned the tables. Whether it be true or not "that the voice was not the voice of reason or of the profession", this much can be said, that the Council of the Liverpool School was fully prepared, had the petition of the teachers failed in its effect, to appeal, and that with the utmost confidence, to the judgment of their medical brethren throughout the country.

3. *Some Observations to show that by rights the University of London ought to supply the desired Degree.*—Under the present heading, I shall try to point out that the London degree, while professedly possessed of these features, has practically become quite the reverse of liberal and popular. London demands no residence; it freely recognises the teaching of any school in the kingdom; its examiners are selected without partiality, and solely with reference to their eminence in their respective departments. It fulfils all the requirements mentioned. Why, then, do only five per cent. of all the men educated at the London schools take its degree? The answer is simple. Its absurd and egregious examinations drive from its doors all but the men with the best heads, the longest purses, and the most time. Now, at the risk of being thought somewhat conceited, I venture to speak upon this subject as one having some authority. Educated at Edinburgh, a demonstrator of anatomy at Glasgow, a lecturer and registrar of an English provincial school, and intimately acquainted with the working of the metropolitan schools, it is impossible that I should have passed the last fourteen years in teaching the ingenuous youth of this country without having been able to form a pretty fair judgment upon the nature of medical examinations, and their effects upon medical students. I have no hesitation in condemning the examinations of the London University as radically false in principle. The examiners seem to think that the medical practitioner ought to be a peripatetic encyclopædia of botany, organic chemistry, mathematics, natural philosophy, zoology, and metaphysics;—an excellent preparation, no doubt, for enabling the future doctor to treat the measles, manage a forceps case, or amputate a leg. I remember being pretty well dosed with these subjects myself. What Edinburgh man can ever forget the terrors of the botany examination? All I can now say of the matter is, that my teachers did me a great injustice in wilfully compelling me to throw away a vast amount of valuable time and brain-power in painfully burdening my memory with a collection of facts, not one of which has ever enabled me to do a patient a halfpenny-worth of good so far as I can remember. Ah! we are told, but look, what a splendid mental training this is! Very likely. We used to be told that when we were small boys, and had to excogitate from our wearied pates stumbling Latin hexameters and cranky Greek iambics, while we could not point out Dresden on the map, and knew as much about the French Revolution as we did about the Justinian Pandects. Mental gymnastics, forsooth! When a man is nineteen or twenty years of age, it is time he dropped these, and began to learn something useful. Think of the nonsense of obliging anybody, who has, by a severe matriculation examination, proved himself a well educated man, and an accomplished mental gymnast, to spend a whole year of the most valuable part of his life in cramming himself with convection, transverse vibration of strings, refraction at plane and at spherical surfaces, the distinctive character of the amentaceæ, or the history of the embryonic development of the frog! Three years after his matriculation, what object can there be in tormenting him with compound radicals and the products of destructive distillation? My idea of the London University is, that it is an institution for finding out what men among the medical students of this country can digest the largest number of scientific text-books, and spin them forth in the shortest time by the clock. From a careful study of successive relays of London University students, I compute that about two-thirds of their time is spent upon work, the bearing of which upon the real object of their lives is infinitesimal. If it be a matter of asking questions, are there no such subjects as ophthalmology, aural surgery, dermatology, diseases of women, mental diseases, sanitary medicine, or advanced medical and surgical pathology, upon which the memory and the intellect can be exercised with advantage? And yet an occasional question upon these subjects is all that one can find in the calendar, while there are pages of questions about things which "no fellow can understand", except the examiners. Is there no means, Mr. Editor, by which the authorities of the London University can be induced to listen to the voice of common sense, and employ it for the noble purpose for which it was founded—namely, to aid and to free the prosecution of learning among the people of England? Could they not (just to throw out a hint) make their M.B. degree a fair, thorough, and practical examination, such as most honest and hard-working students should be able to aim at, if not to command; while the M.D. might be kept for those of better brains and higher ambition, who might wish to distinguish themselves above their fellows? Surely a combined representation by the medical schools of the country would have some weight. The solitary opponents, I feel sure, would be the present graduates, who, having passed through the fiery furnace, would naturally want to keep out everybody who might essay to enter by an easier process.

Meantime, my object is fulfilled, that of endeavouring to point out that in a reformed London University degree ought to be found the popular degree of the future. The fact that we have four universities which all refuse to supply the public wants, so far from being to my mind an argument for making a fifth, only goes to show the danger of incurring a fresh incubus. If nothing can be done with any of these four universities, then it will be time enough to take the Victoria University in hand.—I am, sir, your obedient servant,

W. MITCHELL BANKS, Chairman of the Council of the Liverpool School of Medicine.

THE VICTORIA UNIVERSITY.

SIR,—I thank you for your timely and apposite leading article on a subject which seems greatly misunderstood in certain quarters. The disability—not to call it injustice—under which English medical students labour at the present time, is, that they have to pass through a curriculum similar in kind to and often more searching in degree than the Scotch and Irish university students; and that, while the latter receive, in the shape of a licence, the degree of Doctor of Medicine, the English student gets no convenient appendix or prefix to his name. Both these classes of men settle in life and live side by side in our midst. The one possesses a social advantage over the other, because he places M.D. at the end of his name, and is presumed to have been educated at an university. This is, as I understand it, the grievance that requires to be remedied.

In common with, I suppose, all medical teachers, I received the Liverpool circular. This I declined to sign, because I saw no objections to Owens College granting degrees in medicine, providing it received and examined all properly accredited students, and subjected them to a sufficient test. I say nothing against the University of London. Let it dispense the "blue ribbon" of Physic as it likes to its five per cent. of graduates; but let us have a door opened through which such of the other ninety-five per cent. of English medical students can pass as have shown superior developmental powers during their curriculum, or as medical practitioners have developed and acquired such knowledge as entitles them to an improved position in their profession. To accomplish this end, we require a Queen's University for England and Wales, which shall respond to the legitimate aspirations of our best medical students, and turn them out into the world without a brand of social disability. All this may be easily accomplished, if the quicksands and pitfalls so correctly pointed out in your article be avoided, and a spirit of fairness, justice, and unselfishness be manifested amongst the leaders of the profession.—I am, sir, etc.,

Birmingham, September 1st, 1879. JOHN BASSETT, M.D.

THE TEACHING OF PSYCHOLOGICAL MEDICINE.

SIR,—There are few men, either in or out of professions, who have not a stern regard for the liberties of their fellow-men; and there are still fewer in the medical profession who do not hesitate—nay, almost regret that they are called upon to perform a duty to the public—when they have to sign a certificate which deprives a fellow-citizen of his rights. No one can doubt the correctness of the views set forth by Dr. Sutherland in his letter of the 30th ult.; but, I maintain, it would be both unwise and unreasonable to submit a general practitioner to the especial study of psychological medicine (to compel him to answer certain questions, clinically and otherwise, as regards the etiology, diagnosis, prognosis, and treatment of insanity); and I base my assertion

upon these resolutions. 1. The examinations, as at present conducted, tax an ordinary man's brain-power to the utmost, not unfrequently leaving convolutional psychic areas inert and inactive upon those very subjects with which he has been cramming his brain-cells to over-repletion. 2. An intrinsic knowledge of varying mental defects which come under the heading of insanity is not required to enable a medical man to fill up a certificate of lunacy. 3. No ordinary practitioner, who sees, perhaps, six cases of lunacy in a lifetime, can be expected to do more than to state in plain words his reasons why he considers his patient to be of unsound mind and a lunatic. 4. If the general practitioner have his doubts relative to the soundness or otherwise of his patient's mind, he would act most wisely in refusing to sign any certificate at all. 5. Under such circumstances, every presumed lunatic should be referred to an expert, who ought naturally to be held responsible for any hasty decision at which he may arrive. 6. The broad question at issue in signing a certificate of lunacy has always appeared to me to consist in a general statement of facts (not theories) which are required to be set forth as arguments establishing that, *upon these formulated grounds*, a man is of unsound mind. It is certainly an appeal to the reasoning powers of the certifying and certificated agent. A little knowledge is at all times a dangerous weapon; and the field of psychology, as we at present know it, is as barren as it is broad and uncultivated. I would say, rather than tax the student by introducing the study of psychology into his overburdened curriculum, let the practitioner be cautioned to avoid signing a certificate of lunacy unless he is able to do so upon the clearest and most satisfactory evidence. To weigh a man's words eagerly, to catch some expression or defect in the correlation of ideal connection, in order to brand him as insane, and lock him up in an asylum and deprive him of liberty, is degrading and debasing, and a disgrace to true and scientific investigation.—I am, sir, etc.,

THOMAS STRETCH DOWSE.

Old Burlington Street, September 2nd, 1879.

MOUNTAIN-AIR IN THE TREATMENT OF PHTHISIS.

SIR,—Though regretting my inability to be present at the annual meeting of the British Medical Association, I have read with great interest the various papers and discussions; and, with regard to the one on the Influence of Mountain-Air in the Treatment of Phthisis, having investigated the subject for many years, I should like to offer a few remarks; for it appears to me that, at the hands of the mover, Dr. Henry Bennet, it has not received the estimate to which its merits and importance fairly entitle it.

Dr. Bennet states that the advocacy of mountain-air for the treatment of phthisis is based on (1) the presumed immunity from phthisis of the inhabitants of great altitudes; (2) the presumed immunity from phthisis of the inhabitants of very cold countries.

These grounds were fully discussed in my Lettsomian Lectures on "The Influence of Climate on Pulmonary Consumption" (which appeared in the BRITISH MEDICAL JOURNAL of January and February 1876), and shown to be valueless.

So serious a step as exiling patients to a mountain-climate for the winter, whether amidst the snows of the Grisons or to the distant plateaux of the Andes or Rocky Mountains, could not be rightly taken on such grounds as these, nor without the basis of well authenticated successful results in cases of consumption. Such have been furnished by Archibald Smith, Guilbert, and Hermann Weber as regards the Andes; by Surgeon-Major Kellett as regards the Himalayas (Landour); by Hermann Weber and myself for Switzerland and South Africa; and in all these constitute a mass of evidence overlooked apparently by Dr. Bennet, but sufficient from the completeness of the observations to furnish good grounds for the trial of mountain-climates in suitable instances.

As fit examples, I would cite Guilbert's six cases, especially the famous clockmaker's case, and Hermann Weber's seventeen instances. The remarkable similarity in the mode of improvement in these patients, whether they lived in Switzerland, in the Andes, or in South Africa, in spite of great thermometrical differences, leads me to believe that equability of climate is not the chief factor concerned, but some element connected with altitude, such as does not exist at low levels. The general effects of this element on the human system are stimulating; the processes of digestion, assimilation, sanguification, are improved; respiration and circulation are quickened; and, in cases where there is a tendency to pyrexia, the temperature rises or keeps up, instead of subsiding.

The local effects on the thorax and lungs are those which might be expected from breathing an atmosphere of low barometric pressure, whatever may be affirmed to the contrary—namely, enlargement of the thorax and development of emphysema. The widening of the chest has been noted by Dr. Walshe in a patient who spent some years at Santa Fé di Bogota; and four of my patients who passed last winter at Davos, and whose cases are recorded in the *Lancet* of August 9th and 16th, 1879, showed both enlargement of the chest and development of emphysema. Sometimes this enlargement occurs on the affected side, and is accompanied by diminution of dulness, dry crackle, or harsh breathing. Sometimes it is to be found on the healthy side, the signs in this case indicating rather a true hypertrophy of the lung-tissue than an emphysematous dilatation.

Doubtless, at Davos, the exercise taken assists these local changes; but that they are mainly due to the rarefied atmosphere is proved by the influence of the climate on advanced cases of phthisis, who cannot take exercise, and in whom the lung-surface is reduced in extent by excavations and consolidations. These patients at lower levels have a pale cachectic aspect, but here present livid countenances, blue extremities, quick respiration, and all the appearances of imperfect aëration of blood. Such phenomena cannot, I think, be explained on other grounds than as the effects of diminished barometric pressure on the human system. That the stimulating influence of the mountain climate is solely due to antiseptic qualities, as held by Dr. Clifford Allbutt, I am not prepared to judge of; but as yet I have failed to see his proofs; and, during my visit to Davos last Christmas, it appeared to me that the persistent pyrexia of many cases of phthisis, where large ulcers in the form of discharging cavities were present, and showed no tendency to quiescence or healing, did not point to any distinctly antiseptic influence in the air, whatever effect it might have on infusions of animal matter.

The cures at Davos, as Dr. Allbutt says, are not to be got over; but, with its rising popularity, the danger lies in the numbers who will flock there; many of them being very advanced cases, will, as I witnessed last winter, only arrive to die, or to return the worse for the journey. Davos is a familiar spot to me, as my first visit to it was made in 1862, when it consisted of a church, the Rathhaus, and one hotel; my next in 1872, when several hotels had sprung up; and I drew the attention of the profession to it in a paper in the *Lancet* of July 1872; and, lastly, at Christmas 1878, when I visited it to ascertain the exact conditions of the winter climate, and how invalids endure them, my conclusions being embodied in a contribution to this JOURNAL for January of this year.—I remain, sir, your obedient servant,

August 30th, 1879. C. THEODORE WILLIAMS, M.D.

THE NORRISIAN BLOOD-CORPUSCLE.

SIR,—Those who did not witness Professor Norris's demonstrations at Cork might draw an erroneous inference from a cursory reference to the subject in the last number of the JOURNAL.

It is quite true that Dr. Norris sees reason to believe that his third corpuscle is "a", or perhaps "the", fibrine factor.

But his main position is that this corpuscle, unseen in blood examined by the methods heretofore employed, is the young and immature ordinary red corpuscle; and, further, that it is really an ordinary chyle-corpuscle in process of development into a red corpuscle. These are two separate propositions, the former of which may be true, even if the latter be incorrect.

Is the former one true?

Having gone through the matter with Dr. Norris several times during the last twelve or eighteen months, and having been much impressed by what I have seen, I introduced Dr. Norris at Cork to my old friend and teacher, Professor Charcot.

After an hour and a half of careful examination of the photographs and of fresh blood, Professor Charcot expressed to me his unqualified belief in the genuineness of Professor Norris's discovery. Even so high an opinion does not set the matter at rest. But it will probably secure what Dr. Norris has long sought, viz., a critical and searching investigation of the question by a jury of competent physiological experts.—Yours obediently,

W. F. WADE.

Birmingham, August 20th, 1879.

THE DISCUSSION ON GLAUCOMA AT THE CORK MEETING.

SIR,—In the report of this discussion in the JOURNAL for August 30th, the description of my operation of intraocular myotomy requires correction. I have never performed it with a Wenzel's cataract-knife, but invariably with a Beer's: the incision is made through the corneo-scleral union, the pillars of the iris, and the ciliary muscle, care being taken to make the internal wound of the same length as the external one—viz., two lines. The incision is made parallel with one of the meridians of the eyeball. I do not believe that any one kind of operation is appli-

cable to every case of glaucoma that demands surgical treatment for its relief. I stated to the Section that I had given up "trephining" the sclera, in consequence of the choroidal hæmorrhage that had followed it in two chronic cases. Of sclerotomy, I had had a successful case in a patient who was blind from chronic glaucoma simplex; but that in it, and two cases which had been operated upon by very skilful surgeons, there was considerable procidentia iridis and flattening of the cornea; in the last two cases also, pain and considerable irritation were set up by the sclerotomy.

There are cases in which iridectomy is the safest and best remedy. I have performed it often. Eyes affected with chronic glaucoma, and which could read the *Times* newspaper, have lost that amount of useful vision after being submitted to a skilfully performed iridectomy. It is in these cases that surgical procedures which interfere less with the internal economy of the eye should be preferred. Some are better left alone, as where there is evidence of enfeebled brain-power and failure of the general health.

Much as has been attempted to unravel the pathology of glaucoma and to devise means for its relief, and much as is the good that has been done, yet at the present moment there is no known remedy which will secure the patient from a recurrence of the glaucomatous process.

I am, sir, yours, etc., J. VOSE SOLOMON.

Birmingham, September 2nd, 1879.

P.S.—In the discussion on the extraction of an opaque lens through "a peripheral section of the capsule", the sole objection advanced by me was that, as admitted by Knapp and others, a second operation for the removal of an opaque capsule is invariably required. The new procedure consequently exposes the eye of the patient to an increased risk of blindness. I do not believe that the particles of lens-matter retained in the capsular envelope are liable to be a source of irritation.

ASSOCIATION INTELLIGENCE.

EAST ANGLIAN AND CAMBRIDGE AND HUNTINGDON BRANCHES.

THE autumn combined meeting of the East Anglian and of the Cambridge and Huntingdonshire Branches will be held on Friday, September 12th, at Cromer, Norfolk, under the presidency of J. KILNER, Esq., F.R.C.S., Bury St. Edmunds, Senior Surgeon to the Suffolk County Hospital.

Members intending to read papers, or to dine, or take luncheon, will please communicate with one of the Honorary Secretaries, on or before September 4th.

Dinner tickets, including wine, 12s. 6d. each; Luncheon tickets, 5s. 6d. each.

W. A. ELLISTON, M.D., Ipswich
B. ANNINGSON, M.D., Cambridge } *Hon. Secs.*
J. B. PITT, M.D., Norwich

August 27th, 1879.

WEST KENT DISTRICT.

THE first evening meeting of this district will be held at the residence of J. C. Armstrong, Esq., 197, Parrock Street, Gravesend, on Tuesday, September 23rd, at 6.45 P.M.: J. ARMSTRONG, M.D., in the Chair.

Mr. Jessett of Erith has kindly consented to introduce the subject of "Fractures".

A. H. B. HALLOWES, M.R.C.S., *Honorary Secretary.*

Maidstone, September 2nd, 1879.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held at Durham, on Tuesday, September 23rd.

Members desirous of reading papers, or making other communications, are requested to give notice to the Secretary at their earliest convenience.

T. W. BARRON, M.B., *Honorary Secretary.*

10, Old Elvet, Durham, August 26th, 1879.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this district will be held at Ramsgate, on September 25th, at 3 o'clock; President, Mr. S. WOODMAN, F.R.C.S.

Members desirous of reading papers are requested to communicate with the Secretary.

WM. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, August 31st, 1879.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE Waterford Board of Guardians, at a special meeting, held last Monday, reduced the salaries of their dispensary medical officers, as officers of public health, from £20 to £10 a year each.

MEDICAL RELIEF IN THE HARTLEY WINTNEY UNION.

THE *Winchester Observer* of the 23rd ult. contains a report of an inquest held a fortnight ago at Odiham, the particulars of which call for some additional comment. The case has excited considerable local interest, and has been referred to editorially in several of the Hants county papers.

Ten weeks ago, Mr. G. Pound, Medical Officer of the Odiham District of the Hartley Wintney Union, was requested by the relieving officer to visit a middle-aged woman named Swinton, whom he found to be very ill. Learning, on inquiry, that her husband had only ten shillings a week, out of which he had to support himself, his wife, a grown-up daughter, and her child, and therefore was clearly incapable of supplying the food and stimulants which her condition required, Mr. Pound sent a recommendation to the relieving officer, advising the grant of some meat and gin. That official brought the matter before the board of guardians (of which the President of the Local Government Board, Mr. Sclater-Booth, is an *ex officio* member). That body, however, promptly disallowed the grant. Seven weeks afterwards, the woman having in the interval grown much weaker, Mr. Pound again gave a recommendation to the relieving officer for meat and stimulants, to which recommendation that officer paid no attention. Before the guardians could meet again, the woman died, her death being accelerated, in the judgment of the medical officer, by want. An inquest having been held, the jury appended a tolerably strong rider to their verdict. It would further appear that the relieving officer allowed the body to remain uncoffined until decomposition had considerably advanced.

This case is one of many which have cropped up in recent years at the Local Government Board, and which have either been condoned or officially suppressed, the complaining medical officer having been called on to resign. We must, however, point out to the President of the Local Government Board that, sooner or later, such a feeling will be excited, that his department will be compelled to direct that the righteous recommendations of the medical officer in the interests of the sick poor shall be obeyed.

PAYMENTS TO HOSPITALS.

ON the 1st of September, the Poor-law Act, 1879, came into operation. Under the heading of "Miscellaneous Amendments of Law", the concluding sections of the Act embody some provisions of importance. By Section 4 of the Poor-law Amendment Act, 1851, guardians are authorised, with the consent of the Poor-law Board, to pay any sum of money as an annual subscription towards the support of any public hospital or infirmary for the reception of sick, diseased, disabled, or wounded persons, or of persons suffering from any permanent or natural infirmity. Under the new enactment, the provisions of the above section are widely extended; and the guardians are now authorised, with such consent as before mentioned, to subscribe towards any asylum or institution for the blind, or for the deaf and dumb, or for persons suffering from any permanent or natural infirmity, or towards any association or society for aiding such persons, or for providing nurses, or for aiding boys or girls in service, or towards any other asylum or institution which the guardians may think to be calculated to render useful aid in the administration of the relief of the poor. No subscription, however, is to be granted to any asylum or institution unless the Local Government Board be satisfied that the paupers under the guardians have, or could have, assistance therein in case of necessity. The Metropolitan Asylums Board is enabled to contract with local authorities in the metropolis (acting in the execution of the Nuisances Removal Act, 1855), for the reception and maintenance in any hospital, belonging to or under the management of the board, of any person suffering from any dangerous infectious disorder within the district of any such local authority; and any person received into a hospital, by virtue of any such contract, is to be deemed to be maintained in such hospital by the local authority with whom the contract is made.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following candidates obtained honours at the recent First B.Sc. and Preliminary Scientific (M.B.) Examinations.—Chemistry.

First Class.

Luff, Arthur Pearson, Prel. Sci., St. Mary's Hospital
Chitty, John Shaw W., First B.Sc., Magdalen College, Oxford } equal
Gostling, William Ayton, Prel. Sci., University College }

Second Class.

Goodwin, William Lawton, First B.Sc., University of Edinburgh
Prideaux Frances H., Prel. Sci., London School of Medicine for Women } equal
Tomlinson, Emily, Prel. Sci., Girton College, Cambridge }

Third Class.

Spiegel, Adolf K. A., First B.Sc., Owens College }
Wynter, Walter Essex, Prel. Sci., St. Bartholomew's and Middlesex Hospitals } equal
Duncan, Horace, Prel. Sci., University College } equal
Stevenson, John, Prel. Sci., Owens College }
Frankland, Percy F., First B.Sc., Royal School of Mines and private study
Turner, Alfred Jefferis, Prel. Sci., University College

Experimental Physics.

First Class.

Ryan, John, First B.Sc. (disqualified by age for the Arnott Medal), Cambridge (unattached)

Second Class.

Duncan, Horace, Prel. Sci., University College } equal
Slater, Wm. Arnison, Prel. Sci., Guy's Hospital }
Cockey, Edmund Percival, Prel. Sci., Epsom College
Young, Sydney, First B.Sc., Owens College
Goodwin, William Lawton, First B.Sc., University of Edinburgh
Turner, Alfred Jefferis, Prel. Sci., University College } equal
Womack, Frederick, Prel. Sci., St. Bartholomew's Hospital }
Lee, Robert Brewer, First B.Sc., Private study

Third Class.

Wynter, Walter Essex, Prel. Sci., St. Bartholomew's and Middlesex Hospitals
Whitcombe, Philip Percival, Prel. Sci., Epsom College and St. Mary's Hospital
Dallmeyer, Thomas Rudolphus, First B.Sc., University College and private study }
Harmer, Sidney Frederic, First B.Sc., University College } equal
Settle, Henry, Prel. Sci., St. Bartholomew's Hospital }
Spong, Charles Stuart, Prel. Sci., Epsom College and Guy's Hospital

Botany.

First Class.

Mann, Alfred Mason, Prel. Sci., King's College
Hill, George William, First B.Sc., King's College and St. George's Hospital

Second Class.

Cox, Robert Fortescue, Prel. Sci., Private study and London Hospital } equal
Laisin, Catherine Alice, First B.Sc., Private study }
Short, Thomas Sydney, Prel. Sci., King's College

Zoology.

First Class.

Halford, Bernhard F., Prel. Sci. (Exhibition), University College
Turner, Alfred Jefferis, Prel. Sci., University College

Second Class.

Sore, Thos. William, Prel. Sci., Hartley Institution and Royal School of Mines

Third Class.

Merrifield, Sydney S., Prel. Sci., King's College
Taylor, Alfred Ernest, Prel. Sci., University College

The following obtained honours at the First M.B. Examination.—Anatomy.

First Class.

Crokshank, Edgar M. (Exhibition and Gold Medal), King's College
*Lee, William (Gold Medal), Guy's Hospital
†Mosimer, John Desmond Ernest, Westminster Hospital

Third Class.

Meson, Alfred, Liverpool Royal Infirmary } equal
Udale, Joseph James, Guy's Hospital }

Histology and Physiology.

First Class.

Hart, Thomas, Owens College
Fielden, William Eckett, Guy's Hospital

Second Class.

LaneWilliam, Guy's Hospital

Organic Chemistry.

First Class.

Adene, Edwin Leonard (Exhibition and Gold Medal), Guy's Hospital
†Lane, William, Guy's Hospital
Lukis, Charles Pardey, St. Bartholomew's Hospital

Second Class.

Udale, Joseph James, Guy's Hospital

Third Class.

Prothero, Richard, Liverpool School of Medicine and Guy's Hospital } equal
Sisley, Richard, St. George's Hospital }

Materia Medica and Pharmaceutical Chemistry.

First Class.

Barron, Alexander (Exhibition and Gold Medal), Owens College and Liverpool Royal Infirmary
*Daniell, Alfred, Universities of Edinburgh and Paris
Maddison, William Thomas, King's College

* Obtained the number of marks qualifying for the Exhibition.
† Obtained the number of marks qualifying for a Medal.

Second Class.

Dawson, Arthur George, Owens College } equal
Rogers, James Macdonald, Middlesex Hospital }
Stonham, Thomas George, London Hospital
Bull, George Coulson Robins, St. Mary's Hospital
Fielden, William Eckett, Guy's Hospital

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 21st, 1879.

Glanville, Francis Ferratus, The Western Dispensary, Westminster
Mudge, James, Hayle, Cornwall
Rowlands, Hugh Pugh, Bryngwyn, Towyn, Merionethshire
Wright, Christopher St. John, Prior's Marston, Warwickshire

The following gentlemen also on the same day passed their primary professional examination.

Thomas, William Richardson, St. Bartholomew's Hospital
Waterhouse, George Beardmore, London Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, August 28th, 1879.

Brown, James, Reading
Gaylor, Norman Edward Johnson, Belper, Derbyshire
Hutton, Henry Richardson, Epsom, Surrey
Jones, Richard Thomas, Portmadoc
Sanders, John William, Trowbridge
Stilwell, Samuel Dillingcourt, King Street, Wigan
Taylor, William Charles Everley, South Cliff, Scarborough
Veale, William Edward, Plymouth

The following gentlemen also on the same day passed their primary professional examination.

Harper, Charles Frederick, Charing Cross Hospital
Henslow, Frederick Wakefield Doyle, St. Thomas's Hospital
Hepburn, John, Westminster Hospital
Mason, Arthur Edwin, St. Thomas's Hospital
Rygate, Robert Edward, London Hospital

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At special examinations, held on Tuesday and Wednesday, July 29th and 30th, the following candidates were successful.

For the Licence to Practise Medicine.—James Hamilton Nicholas and Robert Peel, M.R.C.S.Eng.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH: DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examination during the July sittings of the examiners.

Edwin Simpson, Loch Chou; Harry Albert Murphy, Lancashire; Edwin Douglas, Edinburgh; Charles Pope, Yorkshire; Dugald Christie, Glencoe; Frank Bernard Norris, County Cork; George William Daunt, County Cork; Mark Anthony Wardle, Stratford-le-Bow; James Satterthwaite, Ulverston; Anthony Snowdon, Helme Park; Edmund McDonnell, County Antrim; Titus Helden Harwood, Burnley; James Charles Bradshaw, Staffordshire; Peter Dunlop, County Down; Francis Woore, Guernsey; Miles Wolfe Carr Partrige, Birmingham; Arthur Thomas Nunn, Hampshire; Francis Edward Ackerley, Liverpool; James William Thornton Gilbert, Calcutta; John Swatman Reynolds, Holton, Suffolk; John Arthur Cornett, Liverpool; Michael Joseph Collins, Cork; Abraham Llewellyn Reece, Barbadoes; James Booth Clarkson, Lancaster; David William Johnston, Whitehaven; Eugene Geary, Cork; Edward Evans, North Wales; John Holt Marsh, Bolton; William Lloyd Reade, Portarlington; Robert Greenwood Dempster, Liverpool; Alexander McDonald Westwater, Edinburgh; Francis Mac Donald Swallow, Isle of Man; Charles Samuel Gibbons, Brocklesby; Frank Cheetham, Rochdale; John Ottley, County Cork; Richard Francis Walsh, County Cork; Abercromby McBeath, Banffshire.

The following gentlemen passed their final examination during July and August, and were admitted L.R.C.P.Edin., and L.R.C.S.Edin.

William Crofts, County Cork; Valbert Larcher, Mauritius; William David Sheppard, Haverfordwest; Frederick Dunbar Sutherland McMahon, St. Vincent; John Joseph MacDonnell, Galway; Alexander Bowie, Edinburgh; William Stevenson, Stirlingshire; Denis Quinlan, County Cork; Robert William Anderson, Portsmouth; John Henderson Brannigan, Mayo; James Camac Smyth, Dervock; Alfred James O'Hara, India; Thomas Harrop Roberts, Saddleworth; John Paxton, Norham-on-Tweed; Owen Lynch, Londonderry; Arthur Fredrick Wilkins, Madras; James Joseph Delahunt, Huntley, Ballinasloe; Edward North, Hampshire; Angus Munro, Carbost, Inverness; Milbourne Luscombe Bloom Coombs, Devonport; William Cotton Cornwall, Ballygur; William Henry Haley, Lincolnshire; Eleazar Davies, Cwm-Amman; Marshall John Campbell, Colmonell; Humphry Haines, Cork; Philip Durrell Pank, Norwich; William Langford Pruen, Bristol; John Stewart, County Armagh; William Ring, Cork; Miles Wolfe Carr Partrige, Birmingham; Egbert Williams, Llandilo; Anthony Snowdon, Helme Park; James MacMullen Bolster, Mallow; Samuel Wallace, County Antrim; George Francis West, County Fermanagh; George Gibson Hamilton, Falkirk; James Ferguson Wyllie Clarke, Aberfeldy; William Dalziel, South Shields; James Ronayne, Ballyhaunis; Alexander Dryden Moffat, Glasgow; Robert Huntly Campbell, Boulogne; George Skirving, Edinburgh; Peter Slade Kendall, Cornwall; Robert Fawcett Maxwell, Armagh; David Leslie Porter, Londonderry; Alexander McNaughton, Perthshire; Robert Dover Brunskill, Bampton, Penrith; Sarkies Thaddeus Avetoom, Calcutta; Duncan William Francis Chisholm, Nova Scotia; John Adolphus Burton, Madras; Edmund Seymour Bricknell, Queenstown; Charles Paget Hooker, Richmond, Surrey; Robert Joseph Kennedy, County Kerry; Joseph William Townsend Anderson, Kurrachee, India.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The following gentlemen passed their first professional examination in July.

Alfred Ernest Bartrum, Bath; Saint John Colwood Bennett, Sussex.

The following gentlemen passed their final examination, and were admitted Licentiates of the College.

John Tubb Thomas, Pontypool; John Edward Hanson, Huddersfield; William Doughty, Coalport; John Edmond Fairlie, Paisley; William Arthur Ormsby Roberts, Carnarvon.

The following gentlemen, having passed the necessary examinations in July, obtained the Diploma of Licentiate in Dental Surgery:

William Armston Vice, Isleworth; Leon Jablouski Platt, Edinburgh.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

*BETHNAL GREEN BOARD OF GUARDIANS—Assistant Medical Officer. Salary, £150 per annum, with board and residence. Election on September 9th.

*BIRMINGHAM GENERAL HOSPITAL—Assistant Physician. Salary, £100 per annum. Applications on or before September 29th.

*CUMBERLAND INFIRMARY—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, not later than September 23rd.

*DREADNOUGHT SEAMEN'S HOSPITAL, Greenwich — House-Physician. Salary, £75 per annum; House-Surgeon, £50 per annum, with board, furnished rooms, and attendance. Applications on or before September 10th.

*EAST LONDON HOSPITAL—Resident Clinical Assistant. Applications on or before September 8th.

JERSEY GENERAL DISPENSARY—Resident Medical Officer. Salary, £120 per annum, with apartments, attendance, etc. Election early in September.

*KENT AND CANTERBURY HOSPITAL—House-Surgeon. Salary, £80 per annum, wirh board, lodging, and washing. Applications on or before September 26th.

LONDON FEVER HOSPITAL—Resident Medical Officer. Salary, £200 per annum, with residence, coals, gas, and attendance. Applications on or before September 6th.

*MANCHESTER ROYAL INFIRMARY, DISPENSARY, and LUNATIC ASYLUM—Honorary Assistant Surgeon.

METROPOLITAN DISTRICT ASYLUM, Caterham—Assistant Medical Officer. Salary, £120 per annum, rising £10 annually to £150, with board and furnished apartments. Applications on Tuesday, September 9th.

ROYAL HANTS COUNTY HOSPITAL—House-Surgeon and Secretary. Salary, £100 per annum, with board and lodging. Applications to be made on or before September 10th.

ROYAL UNITED HOSPITAL, Bath—House-Surgeon. Salary, £60 per annum, with board and residence. Applications on or before September 6th.

*ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Election on October 1st.

*TEIGNMOUTH, DAWLISH, and NEWTON INFIRMARY—House-Surgeon. Salary, £65 per annum, with board, lodging, and washing. Applications on or before September 12th.

*TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, coals, gas, and attendance.

TORBAY HOSPITAL AND PROVIDENT DISPENSARY, Torquay—House-Surgeon and Dispenser. Salary, £100 per annum, with board, lodging, and attendance. Applications not later than September 9th.

*VICTORIA HOSPITAL FOR CHILDREN—Medical and Surgical Registrar. Applications on or before September 20th.

WESTMINSTER HOSPITAL—Pathologist and Curator of the Museum. Remuneration, £52:10 per annum. Applications on or before September 13th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum.

*WILLITON UNION, Somerset—Medical Officer for the Porlock District. Salary, £50 per annum. Applications on or before September 22nd.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

LUNN, John R., appointed Resident Clinical Assistant to the East London Hospital for Children, *vice* R. Morse, M.R.C.S., resigned.

PROWSE, A. B., M.B., appointed Resident Registrar and Chloroformist to St. Mary's Hospital, Paddington, *vice* H. E. Juler, F.R.C.S., resigned.

ROBINSON, A. H., M.B., appointed Senior House-Surgeon to the Hull General Infirmary, *vice* B. F. Smallman, L.K.Q.C.P., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

SHAPTER.—On August 28th, at The Barnfield, Exeter, the wife of *Lewis Shapter, M.D., of a daughter.

MARRIAGE.

DAVIES—LENN.—On the 2nd instant, at Newport, Monmouthshire, by the Rev. J. W. Lance, George Augustus Davies, L.R.C.P.Lond., M.R.C.S., of Newport, second son of W. J. Davies, Esq., J.P., F.R.C.S., of Penner House, near Newport, to Amy, second daughter of Ebenezer Lenn, Esq., J.P., of Mamdee Hall, near Newport.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northen, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.0 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Th, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., Th. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Lrynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1 o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthoædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S. 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communicaons, should authenticate them with their names—of course not necessarily for pubbation.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

COPYING PRESCRIPTIONS AT HOME.

AN American druggist declares that he lately received the ollowing ecipe, which his customer explained had been copied from "a doctor's book". "Twelve grains each of lactate of iron; citrate of iron; strychnine; sulphate of quine. Make twelve powders. Take one every four hours." Asking first if the meicine was for a crocodile or a Christian, the druggist pointed out that it would be hardly necessary to make up all the dozen powders unless a family burying was n contemplation. The gentleman who copied the prescription now knows that itrate of iron and strychnine is not the same as the same articles separated. Even the simple art of copying prescriptions requires some little previous training.—*Chemist and Druggist.*

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

WATER ANALYSIS.

SIR,—At a time when it is officially announced that the water of several London companies is "unfit for dietetic use", perhaps residents in this district will be interested by the following analysis, the result of some work I was requested to undertake this morning.

Date.	Name and Source of Water.	Grains.	Per Gall.	Parts.	Per Million.
1879. August 14th.	Southwark and Vauxhall, unfiltered: from pipe in private house.	Lime Salts.	Chlorine.	Saline Ammonia.	Organic Ammonia.
		12.35	1	.058	.098

Your readers will at once perceive that these figures place the water in the class of "organically safe" drinking water; and that the addition of from four to five grains of quick lime to each gallon in a cistern, followed by common filtration, will cause it to become "organically pure", as well as rendering it perfectly soft, since the already comparatively small amount of organic impurity will be reduced at least one-half, and the lime-salts will be precipitated.—I am, etc.,

Rotherhithe, August 14th, 1879. BENJAMIN BROWNING.

STATE MEDICINE AND CONTAGIOUS DISEASES ACTS.

SIR—Though State Medicine and Contagious Diseases Acts are not necessarily part and parcel of the same power which rules the civil and military resources of a nation, the two are so intimately connected with the well-being of a people, that, for the present, it may as well be assumed they are one.

Taking it in this way, without prejudice to reports of Select or Royal Commisions, it may be asked why, when tentative legislation is so much in fashion, the Orkneys, the Isle of Man, St. Helena, Jersey, Ceylon, Cyprus, Van Dieman's Land, etc., should not be handed over to an efficient staff, legal and medical, for a short term of years, for the purpose of carrying out any vaunted scheme for dealing with either or both these important questions.

After having been thus put into operation for a time, more settled opinions on the acts would, in my opinion, be arrived at, indicating the course that ought to be pursued, if British interests and ideas are not to be inimically dealt with, and science openly insulted or made light of.

Of course, to ensure satisfactory results, a plan differing either fundamentally or in detail ought to be tried in each separate place, because each would have to stand or fall on its own merits. In experiments of this kind, death-rates ought not to be important factors, or not so important as a healthy population, except as a guide where two or more systems produce equal results, and a preference has to be given, and no definition has been attempted of the difference between a distinction without a difference and one with a difference. Different systems tried in different countries do not, as a rule, form a satisfactory basis for forming a correct opinion; so much depends upon the laws and government of the place, as well as the idiosyncracies and habits in which the people have been educated; let alone the fact that nations are apt to change all, or almost all, their ideas in a very short space of time. Fixity of tenure to individual practitioners to me seems impossible without a settled system.—I am, etc., V. BROWNE.

French Consulate, Port Royal, August 16th, 1879.

THE WEST CHESHIRE PROVIDENT ASSOCIATION.

SIR,—My attention has been called to a short note under the above heading, in your issue of August 23rd. The handbill commented upon, and which was recently circulated, has probably not met with the approval of the medical men whose names are mentioned thereon. In any case, the expression "no class restrictions" is liable to misinterpretation, and should not have been inserted. You are, however, in error in stating that, "in the rules of the Association, no upward limit is stated". The limit adopted appears in the following rule:

"The provident members are those who make the prescribed payments, and are thus entitled to receive the aid of the institution. Persons whose average gains do not exceed forty shillings a-week are eligible for membership, unless the average earnings of a father, and his children under sixteen, amount to more than forty shillings a-week, in which case they are ineligible except under special circumstances."

If, after some experience, we find that the line has been drawn too high, we shall take steps to lower it.—I am, sir, yours sincerely, FRANCIS VACHER.

Birkenhead, September 1st, 1879.

DELHI MEDICAL MISSION.

SIR,—Not being a reader of your JOURNAL, I did not see the letter from a medical officer at Meerut on the above subject till a friend drew my attention to it.

With regard to the salary offered, it is plain that it cannot be so insufficient as your correspondent imagines, as it is the sum accepted by missionaries from our universities who are at work on the spot; more of course is given to a married man. With regard to the fees, which he presumes will be a source of great profit to the mission, the experience of many years shows that they do not come to one-eighth of the expenses of the medical work, which is carried on mainly among the poor. If you have room for the enclosed extract from the last report, it will show the people the medical men will mostly have to deal with.

I am still anxiously looking out for a man of skill and devotion for this work. Surely the medical profession will not come behind the clerical in self-denial and true heroism. Last year, 11,500 cases were attended. Inquiries sent to the following address will be forwarded to me till November 6th, when I hope to return to India.—I am, etc., R. R. WINTER, Missionary in Delhi.

28, Montpelier Road, Brighton.

The following is the extract referred to above. "In one Muhalla, one day, where I had gone to distribute medicines, an old lady extends her arm towards me for a coin, as she is hungry; another tells me that she is hungry and naked, referring me to her ragged dress, which would cover her nowhere; while a third, lying on her bed, tells me that she is hungry, and naked, and ill. At the Dispensary alone, during one single morning, it is in such a variety of ways that poverty is related to me. Here is an old widow woman, telling me that her only bed, on account of the constant occupation of the same by herself and daughter, broke, and that they are now so very uncomfortable on it; would I not give her some money to get it repaired? Another young woman, with baby in arms, deserted by her husband, tells me that her house-rent not having been paid for several months, her landlord had taken away her mill, thus depriving her of the very means to find both rent and daily bread; would I redeem the mill for her? Two other old ladies, and most truly ill, tell me a similar story, only sadder in so far as they had nothing valuable in possession which the landlord might have taken, therefore they were turned out of the house. In another instance, the house fell in during a heavy shower of rain, and as the rain was still pouring, and husband and children laid up with fever and dysentery, would I give her a small sum for which to get a hut of reeds raised? Again, another very nearly blind old woman complains about the inconvenience caused by the want of a vessel to keep water in, for yesterday, she says, all five members of the family were in the hot stage of the fever at the same time; and as, thus, none could go to the well to have a draught there, and as no neighbours would drop in, they suffered very severely."

ERRATA.—In the JOURNAL of August 23rd, page 289, column 2, line 29 from bottom, for "Addison", read "Bright". In the number for August 30th, page 324, column 1, lines 13, 14, and 16 from bottom, for "conical", read "corneal". At page 325, column 2, line 17, for "Dana", read Daae.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.

SIR,—In your last number, a letter is inserted from Mr. T. J. Eames Brown, in which he invites your readers to join "the ranks of the British Medical Temperance Association, and....support only candidates for Parliamentary honours who will....vote for local option and Sunday closing". I write to prevent the misconception, which the above sentence may create, that the members of our Temperance Association are bound to take the course he suggests. The basis of our union is simply personal abstinence from all alcoholic liquors as beverages, and, of the two hundred medical men who have joined the Association as abstainers, many employ alcohol as a drug, and in all probability some will not adopt the course which Mr. Brown recommends. Though I myself fully approve of it at this crisis in our history, it has nothing to do with our Temperance Association.—I am, sir, yours truly, J. JAMES RIDGE,

Honorary Secretary British Medical Temperance Association.

Carlton House, Enfield, August 30th, 1879.

SIR,—Will Mr. T. J. E. Brown be good enough to state how it can be fully proved that life and health are prolonged by total abstinence from alcohol, tobacco, etc.?—I am, yours truly, DUBITANS.

September 2nd, 1879.

TRUE HÆMATEMESIS IN INFANTS.

SIR,—The remarks of Drs. Edis and Thorburn on spurious infantile hæmatemesis are exceedingly interesting, and will do much to put practitioners on their guard in cases of this kind. As I have had the rare experience to see a case of true infantile hæmatemesis, an account of which I published in the *Edinburgh Medical Journal* for June 1879, perhaps I may be excused drawing attention to this uncommon disease.

The case which I had under my care was associated with a hæmorrhagic tendency in the mother, who had suffered severely from *inter partum* hæmorrhage (if I may be allowed to coin a term) in her previous labour. The vomiting of blood came on in the infant on the second day of its life, and was exactly similar in character to the same disease in the adult, large quantities of black clotted blood being passed by the bowels. The vomited blood was florid, for it had no food to speak of, to decompose it in the stomach, the milk only beginning to come from the breast on that day. The hæmorrhage lasted more or less for twenty-four hours, but, as the infant gradually became more attached to the breast, it gradually ceased. It is not to be understood that this was a mere mouthful or so of blood; it was so great in quantity as to stain the greater part of the bedding. The other members of this family were decidedly scrofulous, and the hæmorrhagic tendency inherited, along with this, would account for the hæmorrhage of themselves.

In infants, hæmatemesis is of two varieties: 1. That depending on rupture of some blood-vessel in the stomach, when the course of the circulation has been impeded; 2. That depending on a want of tone in the coats of the blood-vessels, associated with the hæmorrhagic diathesis, either hereditary (as in my case) or not.

The exceeding rarity of the disease may be drawn from the fact that Dr. West, in his *Diseases of Infancy and Childhood*, says that he has only seen three cases of it during a long term of practice.

In conclusion, the cessation of the bleeding in my case, after the infant took kindly to the breast, recalls to my mind a similar cessation of bleeding (which I have seen pretty severe) after dividing the frænum linguæ in a tongue-tied child. After the child had been put to the breast a few minutes, the ranine hæmorrhage at once ceased. This arrest is probably due, in both cases, to the contraction of the coats of the blood-vessels, from the energetic action of the child, or from the coagulation of the blood coming into contact with the milk.—I am, etc.,

Dunse, North Britain. JOHN A. ERSKINE STUART, L.R.C.S.E.

THE TREATMENT OF SYPHILIS WITHOUT MERCURY.

SIR,—Do not the facts contained in Dr. Boileau's valuable paper afford one of the strongest cases in proof of the professional value of a regimental medical officer? Will it be possible for a military medical officer, under any other system, to have the opportunity of watching the continuous history of a soldier, and placing on record such results as those achieved by Dr. Boileau?—I am, sir, your obedient servant, INTIGER.

CRICKET.—Our correspondent's question, "How long surgeons have ranked with non-commissioned officers and privates in the army?" is a very natural one under the circumstances. But, on more carefully examining the newspaper paragraph which he has sent us, we have come to the conclusion that "Dr." as used there does not mean "Doctor", but "Drummer".

THE DISCUSSION ON INTRA-UTERINE MEDICATION.

SIR,—Permit me to correct the report in your last number (p. 335), of the observations I made at Cork on the above question. Instead of "Thirty years ago or more, Dr. Tyler Smith published a book, illustrated by Dr. Hassall with some beautiful drawings, etc.", I referred to his "classical" memoir on Leucorrhœa, in vol. XXXV (1852) of the *Medico-Chirurgical Transactions*, which has been constantly quoted in every book on the diseases of women since written.

Further on, I am made to say that "metrorrhagia was more often the sign of uterine disease, in which respect it differed from menorrhagia, which arose more ordinarily from constitutional disease". For "menorrhagia", please to substitute "amenorrhœa", which I meant to say, and believe I did say.—Yours, etc.,

15, Harley Street, August 29th, 1879. ROBERT BARNES.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161A, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

RAPID DEATH FROM CHLORAL-HYDRATE.

SIR,—A very rapid death, if not the most rapid I have seen recorded, from chloral-hydrate, lately took place close to me.

A gentleman in a mercantile firm, in fairly vigorous health, having dined, called at a druggist's shop half a mile away, and purchased one ounce of hydrate of chloral. The purchase occurred "between three and five o'clock" on July 21st. He returned to his office the same afternoon, and at four o'clock spoke to one of his clerks, and complained of his head. At a quarter to five, he walked leisurely up the stairs to an upper office, where he was heard some time afterwards, from below, to be snoring. At twenty minutes to six, one of the clerks went up to get some signatures from him, and found him quite dead, and leaning backwards over a half-high arm-chair, and with the left knee and leg resting upon the right. I saw him immediately, and observed no sign of life. The main appearances were, dusky pallor of skin, great rigidity of fingers of both hands up half their length, together with somewhat dilated pupils. On the desk, close to the body, were two recently used wineglasses and a bottle of water. No *post mortem* examination was allowed, though I requested it. The request, made next morning, was answered by the statement that the deceased had written a letter to a friend—the letter having been found some time after the death—on the outside of which was the statement, "I have taken chloral".

An opinion has been expressed in this JOURNAL that rapid action of the drug leads to contraction of the pupil, and a very slow action results in dilatation. This opinion is not supported by the case now related. Though there was not a great dilatation of the pupil, the opposite condition was entirely absent. Dr. B. W. Richardson, I believe, reports contraction of the pupil as one inevitable result of poisoning by chloral. It is shown by this case that this effect is at least not constant.

Supposing the chloral was swallowed immediately on going upstairs, the time which elapsed between the taking and the death might be fairly put at about three-quarters of an hour, and the dose was very likely one ounce.—I am, etc.,

W. HINDS, M.D.

A MEMBER OF THE B. M. A.—It is altogether inconsistent with the ordinary rules of professional ethics that a medical man should intrude himself on the patient of another, and express a disparaging opinion of the diagnosis made and the treatment pursued. Our correspondent should, we think, lay the case before the Council of the Branch within whose limits he resides, at the same time giving notice to the offending practitioner of his intention to do so. In this way an opinion may be obtained, which may have the effect of putting a stop to conduct which is possibly the result of oversight of the mutual relations of medical men, rather than of intentional disregard of them.

TREATMENT OF BLUSHING.

SIR,—"Scrutator" or "Scarlatina" should read J. H. Burgess's *The Physiology or Mechanism of Blushing, with a View of the Sympathies*" 8vo, London, 1839, which is the only known work devoted entirely to the subject.—I am, etc.,

London, September 2nd, 1879. E. N.

OIL OF PEPPERMINT AS A LOCAL ANÆSTHETIC.

SIR,—Allow me to inform your correspondent, Mr. A. D. Macdonald, that, as long ago as November 19th, 1870, I brought to the notice of the profession the efficacy of oil of peppermint as a local application for the relief of pain, especially that of facial neuralgia and gout.

I have found the English essential oil quite as effective in its action as the Chinese. The only drawback to the use of the remedy is its strong, and to some persons objectionable, odour.—I am, sir, yours obediently,

Finchley, September 1st, 1879. ALFRED WRIGHT.

BATHYBIUS.—A gentleman holding the diplomas of L.R.C.P.Ed. and L.S.A.Lond., is not eligible for a parochial appointment. Qualification both in Medicine and in Surgery is required; and both the above-mentioned diplomas only entitle the holder to practise medicine.

THE LEPER ASYLUM AT DELHI.

SIR,—Allow me to state, for the information of readers of the JOURNAL, that the name of the medical officer mentioned in your last week's issue, as "having succeeded, by dint of unwearied exertions, extending over four or five years, in collecting a sum of nearly 12,000 rupees for the Leper Asylum at Delhi", is Surgeon George Gilbert McLaren, M.B., of the Bengal Medical Service.—Your obedient servant, C. H. BROWNE, Surgeon-Major, A. M. D.

Junior United Service Club, London, S.W., September 1st, 1879.

THE TORBAY INFIRMARY.

WE learn from the *Torquay Times* of the 23rd ultimo, that difficulties have recently arisen in the administration of this hospital between the Weekly Board and the executive officers. The best remedy for such difficulties is publicity. If the proceedings of the Weekly Board were made public, a benefit would be conferred upon all parties. The general body of the subscribers would take a more lively interest in the institution, and would know how to appreciate both those who wisely directed the business of the Weekly Board, and those who worthily filled the executive offices.

SUPERFLUOUS HAIR.

SIR,—In answer to your correspondent "Medicus", as to the treatment for removal of superfluous hair from the face and hands, I made the same inquiry, after repeated trials of various treatment, and the use of all the well known depilatories, in an obstinate case of general hirsutis. I find that, if the growth be localised and the hairs few, the best method is to remove each hair by the tweezers, and to insert a three-sided needle into the follicle, completely destroying it, as suggested by Dr. Buckley in the *Archives of Dermatology* (New York, October 1878, vol. XIV, p. 4). If the hair be general and over large surfaces, a preparation of liquor potassa and spirits of wine in equal parts, carefully brushed over the affected parts twice a-week, and the parts to be well washed afterwards, say with Pears's soap. This method has proved most successful in a series of cases in which I have applied it. This method was mentioned also by Dr. Cairns Wicks, in the BRITISH MEDICAL JOURNAL of July 26th last.—I am, sir, yours truly, JAMES STARTIN,

Surgeon to St. John's Hospital for Skin-Diseases.

17, Sackville Street, W., September 1st, 1879.

P.S.—Allow me to return my best thanks to those gentlemen who answered a similar inquiry of mine.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

UNCERTIFIED DEATHS.

SIR,—Will you kindly insert the following case in your JOURNAL?

I was called on August 24th to see a middle-aged woman. On my arrival I found her lying upon the bed, dead. I had never previously attended her, and up to the time of her death she seemed to be in good health. I instructed the husband to communicate with the authorities, in order that an inquest and necropsy, if considered necessary, might be held without delay, which he did. Much to my astonishment, I received no communication from the coroner; and on making inquiries, I find that no inquest or *post mortem* examination has been held. Now, sir, I should like to know if the coroner possesses sufficient authority in such a case to grant a certificate without holding an inquest. I am myself under the impression that he has not such authority.

I enclose my card, and am, sir, yours truly, M.R.C.S.

August 30th, 1879.

ECZEMA INTERTRIGO IN INFANTS.

SIR,—Eighteen months since, I had under my care a case of severe eczema intertrigo in an infant two months old. In all essential particulars, it was a *facsimile* of the case described by "Far North", in the JOURNAL of the 30th ultimo. For a period of two months, I tried, except lycopodium, every application mentioned by "Far North" without benefit; ointment aggravated, and Fuller's earth gave most relief; antacids had been fairly tried to no purpose. Had the child been at the breast, I would have recommended weaning it; as it was bottle-fed, I resolved on a change of diet. I caused the child to be fed on rusk biscuits very finely pulverised, and mixed with water in such quantity that it would go through the tube of the feeding-bottle. Water-arrowroot was occasionally substituted. I also gave ligun arsennalis in minim doses three times a-day; and the child was well in less than three weeks. Whether to give credit to the change of diet or to the arsenic, I am at a loss.—I am, etc., J. G. CLENDINNEN.

September 2nd, 1879.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpoo Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspaprs will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Robert Barnes, London; Dr. Lombe Atthill, Dublin; Dr. Aveling, London; Dr. H. Macnaughton Jones, Cork; Dr. McCall Anderson, Glasgow; Dr Aigre, Boulogne; Mr. J. Taylor, Ticehurst; Dr. G. Hoggan, London; Mr. F.Vacher, Birkenhead; Dr. J. Wallace, Liverpool; Dr. W. Sneddon, Beith; D. Paget, Cambridge; Dr. Stevenson Macadam, Edinburgh; Dr. J. P. Cassells, Glasgow; Dr. C. T. Williams, London; Mr. J. Birch, London; Mr. Joseph Bell, Edinburgh; Dr. F. Barnes, London; Dr. Wade, Birmingham; Mr. Reginald Harrison, Liverpool; Dr. Bassett, Birmingham; Dr. K. N. Macdonald, Cupar-Fife; Small by Degrees and beautifully less; Mr. Nettleship, London; Mr. W. K. Treves, Margate; Mr. S. Snell, Sheffield; Dr. Seguin, Paris; Retired; W. H.; Mr. T. J. E. Brown, Llanbister; Mr. T. Laffan, Cashel; Mr. J. Starti, London; Dr. Sutherland, London; Dr. Dudfield, London; Bathybius; Mr. T W. Hime, Sheffield; Dr. W. Walter, Manchester; Mr. G. Ashmead, Brierley Hill; M.D.; Surgeon-Major C. H. Browne, London; Dr. Fairlie Clarke, Southbcough, The Secretary of Apothecaries' Hall; Our Dublin Correspondent; Messrs Savory and Moore, London; Mr. L. H. Ormsby, Dublin; Mr. D. M. Henderson, London; Mr. T. Alexander, London; Dr. Malins, Birmingham; Mr. R. H. S. Carpenter, London; Mr. Joll, St. Ives; Dr. A. T. H. Waters, Liverpool; Mr T. J. Dyke, Merthyr Tydfil; R. M. C.; Cricket; The Registrar-General of England; Dr. J. J. Ridge, Enfield; Mr. Hallowes, Redhill; The Registrar-Geneal of Ireland; Nemo; E. N.; Dr. Ball, Paris; Mr. Solomon, Birmingham; Mr. J. G. Clendinnen, Coseley; Messrs. F. S. Cleaver and Co., London; M. M. Simpson, Leiston; Mr. G. Lowe, Middleton-in-Teesdale; W. T. R.; Mr.F. A. Maciver, Edinburgh; Mr. T. Jones, West Bromwich; Mr. A. H. B. Hallowes, Maidstone; Dr. T. S. Dowse, London; Mr. Fagan, Belfast; Dr. L. Shapter.Exeter; Dr. A. Wright, Finchley; Dr. Robinson, Runcorn; Mr. R. Roberts, Blenau Festiniog; Dubitans; Dr. Mackey, Brighton; Dr. O. Thomas, Twickenham; Our Edinburgh Correspondent; Mr. A. Stanford Morton, London; Mr. W. M. Banks, Liverpool; Dr. Rivers Willson, London; Mr. S. M. Bradley, Manchester; Dr. Fairbank, Windsor; Mr. S. Skinner, Clevedon; A Member; Dirty Water, etc.

BOOKS, ETC., RECEIVED.

Annual Report of the Committee of the Manchester and Salford Sanitary Association: being a Summary of their Proceedings for the year 1878. Manchester: Powlson and Sons. 1879.

Eyeball Tension, its Effects on the Sight, and its Treatment. By W. Spencer Watson, F.R.C.S.Eng., M.B.Lond. With Woodcuts and Illustrative Cases. London: H. K. Lewis. 1879.

Lectures on the Theory and General Prevention and Control of Infectious Diseases. By J. B. Russell, B.A., M.D. And on Air, Water Supply, Sewage Disposal, and Food. By William Wallace, Ph.D., F.C.S. Glasgow: Maclehose. 1879.

Deaths in Childbed and our Lying-in Hospitals. By Æneas Munro, M.D. London: Smith, Elder, and Co. 1879.

Essays on Ophthalmology. By G. E. Walker, F.R.C.S. London: J. and A. Churchill. Liverpool: A. Holden. 1879.

REGULATIONS

OF

THE GENERAL MEDICAL COUNCIL AND MEDICAL LICENSING BODIES.

SESSION 1879-80.

RECOMMENDATIONS OF THE GENERAL MEDICAL COUNCIL ON EDUCATION AND EXAMINATION.

PRELIMINARY EXAMINATION.—1. No person is allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as hereinafter provided.—2. The Executive Committee is to prepare annually and lay before the Council for recognition a list of examining bodies, whose examinations fulfil the conditions of the Medical Council as regards general education.—3. For the present, testimonials of proficiency granted by educational bodies, according to the subjoined list, are accepted; the Council reserving the right to add to or take from the list. (A Degree in Arts of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council, is considered a sufficient testimonial of proficiency.) I. *Universities of the United Kingdom. Oxford:* Responsions; Moderations.—*Cambridge:* Previous Examination; Higher Local Examinations.—*Durham:* Examination for Students in their second and first years; Registration Examination for Medical Students.—*Oxford, Cambridge, and Durham:* Examination for Degrees in Arts; Local Examinations (Senior), Certificate to include Latin and Mathematics; Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects: viz., Greek, French, German, Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.—*Oxford and Cambridge Schools' Examination Board:** Certificate to include Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, First two books of Euclid; Latin, including Translation and Grammar; and one of the following optional subjects: Greek, French, German, Mechanical Division of Natural Philosophy.—*London:* Examination for a Degree in Arts or Science; Matriculation Examination.—*Aberdeen, Edinburgh, Glasgow, and St. Andrew's:* Examination for a Degree in Arts; Preliminary Examination for Graduation in Medicine or Surgery.—*Edinburgh, Aberdeen, St. Andrew's:* Honours Certificates granted under Local Examination; Certificates to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, German, Natural Philosophy.—*Glasgow:* Senior Certificate of Local Examination Board; Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects: Greek, French, Germany, Natural Philosophy.—*Dublin:* Examination for a Degree in Arts; Public Entrance Examination.—*Queen's University (Ireland):* Examination for a Degree in Arts; Entrance Examination; Examination for the Diploma of Licentiate in Arts; Previous Examination for B.A. Degree; Local Examinations for Men and Women; Certificates to include all the subjects required by the General Medical Council, as set forth in Recommendation 4. II. *Other bodies named in Schedule (A) to the Medical Act.—Royal College of Surgeons of England:* Preliminary Examination for Membership and for Fellowship, conducted under the superintendence of the College of Surgeons, by the Board of Examiners of the Royal College of Preceptors.—*Society of Apothecaries in London:* Examination in Arts.—*Royal College of Physicians, Edinburgh; and Royal College of Surgeons, Edinburgh:* Preliminary Examination in General Education, conducted by a Board appointed by these Colleges combined.—*Faculty of Physicians and Surgeons of Glasgow; and Apothecaries' Hall of Ireland:* Preliminary Examination in General Education.—*Royal College of Surgeons in Ireland:* Preliminary Examination; Certificate to include Mathematics. III. *Examining Bodies, in the United Kingdom, not included in Schedule (A) to the Medical Act.—Royal College of Preceptors:* Examination for a First-Class Certificate.—*The Examiners for Commissions and Appointments in Her Majesty's Service, Military, Naval, and Civil:* Certificate to include all the subjects required by the General Medical Council. IV. *Indian, Colonial, and Foreign Universities, and Colleges.—Universities of Calcutta, Madras, and Bombay:* Entrance Examination; Certificate to include Latin.—*Universities of M'Gill College, Montreal; Bishop's College, Montreal; Toronto; Trinity College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada; Fredericton; Melbourne; Sydney; and the Cape of Good Hope; Medical College, Halifax, Nova Scotia:* Matriculation Examination.—*University of King's College, Nova Scotia:* Matriculation Examination; Responsions.—*University of Otago:* Preliminary Examination.—*University of Adelaide:* Matriculation Examination; Primary Examination; First-Class Certificate, provided it contains all the subjects required by the Council.—*Codrington College, Barbadoes:* English Certificate for Students of two years' standing, specifying the subjects of Examination; Latin Certificate, or "Testamur".—*Tasmanian Council of Education:* Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.—*Christ's College, Canterbury, New Zealand:* Voluntary Examinations, Certificates to include all the subjects required by the General Medical Council.—*South Australia, South Australian Institute, Adelaide:* Preliminary General Examination; First-Class Certificate.—4. It is recommended to the licensing boards not to accept the certificate of proficiency in general (preliminary) education from any of the bodies, the names of which are contained in the list annually circulated, unless such certificate testify that the student to whom it has been granted has been examined in: 1. English Language—including Grammar and Composition;* 2. Arithmetic—including Vulgar and Decimal Fractions; Algebra—including Simple Equations; 3. Geometry—first two books of Euclid, or the subjects thereof; 4. Latin—including Translation and Grammar; 5. One of the following optional subjects: Greek; French; German; Elementary Mechanics of Solids and Fluids (meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics).—5. It is desirable that the examination in general education be left to the Universities and such other bodies engaged in general education and examination as may from time to time be approved by this Council.—6. It is recommended to the various licensing bodies to instruct their examiners in professional subjects to report to them any cases in which decided ignorance in the subjects of general education has been displayed by the candidates, with the name of the board or boards before which the preliminary examinations have been passed; and the licensing bodies are requested to transmit such reports to the Registrar of the General Medical Council.

REGISTRATION OF MEDICAL STUDENTS.—7. Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council.—8. No medical student shall be registered until he has passed a preliminary examination, as required by the General Medical Council, and has produced evidence that he has commenced medical study.—9. The commencement of the course of professional study recognised by any of the qualifying bodies, shall not be reckoned as dating earlier than fifteen days before the date of registration.—10. The registration of medical students shall be placed under the charge of the Branch Registrars.—11. Each of the Branch Registrars shall keep a register of medical students.—12. Every person desirous of being registered as a medical student, shall apply to the Branch Registrar of the division of the United Kingdom in which he is residing, according to a form, which may be had on application to the several qualifying bodies, medical schools, and hospitals; and shall produce or forward to the Branch Registrar a certificate of his having passed a preliminary examination, as required by the General Medical Council, and evidence that he has commenced medical study.†—13. The Branch Registrar

* The English is provided for by the following resolution of the Executive Committee:—"That, as every candidate for the certificate of the Oxford and Cambridge Schools Examination Board is required to answer questions in such a manner as to satisfy the examiners that he has an adequate knowledge of English grammar and orthography, this shall be held as conforming to the requirements of the Medical Council in reference to English language."

* The General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate—1. To write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; 2. To write a portion of an English author to dictation; 3. To explain the grammatical construction of one or two sentences; 4. To point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature: 5. To give the derivation and definition of a few English words in common use. Provided always that an examination may be accepted as satisfactory that secures, on the part of the candidate passing it, a sufficient grammatical knowledge of English.

† *Form of Application for Registration as a Medical Student.*—I hereby apply to be registered as a Student in Medicine, in conformity with the Regulations of the General Council of Medical Education and Registration of the United Kingdom, for which purpose I submit the following particulars. [Name of applicant (to be written in words at length); Surname; Christian name; Preliminary examination; Date of preliminary examination; Place of medical study; Applicant's signature; Address; and Date of Application.]

Certificate of commencement of Medical Study.—I hereby certify that Mr. ——— has commenced the study of medicine in (insert name of School, or Hospital, or place of apprenticeship, as the case may be); Signature of Master, Teacher, or Official in a Medical School or Hospital; Place and date. To the Registrar of the Branch Council for ——.

N.B.—The word "Master" or "Teacher" will be held to include any registered practitioner whose pupil the applicant may be at the time. The certificate of ex-

shall enter the applicant's name and other particulars in the students' *Register*, and shall give him a certificate of such registration.—14. Each of the Branch Registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students.—15. The several Branch Councils shall have power to admit special exceptions to the foregoing regulations as to registration for reasons which shall appear to them satisfactory.—16. A copy of the *Register* of medical students, prepared by each of the Branch Registrars, shall be transmitted, on or before the 31st of December in each year, to the Registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised lists to each of the bodies enumerated in Schedule (A) to the Medical Acts, and through the Branch Registrars to the several medical schools and hospitals.—17. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts, any candidate (not exempted from registration) whose name has not been entered in the medical students' *Register* at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils shall have power to admit exceptions to this recommendation.—18. The Branch Councils are desired to take means to make these regulations known at the various medical schools.

AGE FOR LICENCE TO PRACTISE, ETC.—19. The age of twenty-one shall be the earliest age at which a candidate shall obtain a licence to practise, and that the age shall, in all instances, be duly certified.—20. No licence shall be obtained at an earlier period than after the expiration of forty-five months subsequent to the registration of the candidate as a medical student.

PROFESSIONAL EDUCATION.—21. The course of professional study required for a licence shall occupy at least four years, of which at least three winter and two summer sessions shall be passed at any school recognised by any of the licensing bodies mentioned in Schedule (A) of the Medical Act.—22. The following are the subjects, without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered: 1. Chemistry, including a knowledge of the principles of Chemistry, and of those details of the science which bear on the study of Medicine, and Chemical Physics, meaning thereby Heat, Light, and Electricity; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy; 5. Pathology, including Morbid Anatomy; 6. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 7. Surgery, including Surgical Anatomy and Clinical Surgery; 8. Midwifery; 9. Forensic Medicine.—23. The Council will view with approbation any encouragement held out by the licensing bodies to students to prosecute the study of the natural sciences before they engage in studies of a strictly professional character.—24. A certificate shall be required, by each licensing body, from every candidate for its degree, diploma, or licence to practise medicine or surgery, that he has studied vaccination under a competent and recognised teacher; that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle and with the methods of preserving lymph, and that he is thoroughly informed in every necessary part of the subject.—25. Such a certificate should be received by any licensing body only from an institution where the appointed teacher of vaccination is recognised by the Local Government Board.

PROFESSIONAL EXAMINATION.—26. It is desirable that the different licensing bodies, whether singly or in combination, should frame their examinations so as to secure that the knowledge of every practitioner whose name appears on the *Register* shall have been tested in all the subjects of professional education which the Council has determined to be essential, viz.: (as in Recommendation 22).—27. It is desirable that there should be in future three professional examinations.—28. The professional examinations shall be arranged in two divisions; the first division to embrace the more elementary subjects. The first division may be completed at or before the close of the second year of professional study, but the second division not till the expiration of two years after the passing of the first division, nor before the completion of the fourth year of study. The examinations, and the subjects included in each, shall be such, and in such order, as may insure, so far as possible, a due continuity and sequence of study.—29. The first division of the examinations shall include the following subjects: 1. Chemistry and Chemical Physics; 2. Anatomy; 3. Physiology; 4. Materia Medica and Pharmacy. The second division shall include the following subjects: 1. Pathology, including Morbid Anatomy; 2. Medicine, including Medical Anatomy, Clinical Medicine, and Therapeutics; 3. Surgery, including Surgical Anatomy and Clinical Surgery; 4. Midwifery; 5. Forensic Medicine.—30. It is desirable that an examination in the earlier subjects of professional study should take place before the end of the first year of professional study.—31. The professional examinations shall be conducted both in writing and orally; and they shall be practical in all branches in which they admit of being so.—32. Not less than two examiners shall take part in every oral and clinical examination.—33. The questions to be answered in writing should be submitted to the whole body of examiners for consideration and revision, if desirable, before being proposed to the candidates.—34. The written answers should be submitted to more than one of the examiners.—35. Excellence in one or more subjects should not be allowed to compensate for failure in others.—36. The professional examinations shall be held by the several licensing bodies, except in special cases, at stated periods, to be publicly notified.—37. Returns from the licensing bodies in Schedule (A) shall be made annually, on the 1st of January, to the General Medical Council, stating the number of the candidates who have passed their first as well as their second and third examinations, and the number of those who have been rejected at the first and second and third examinations respectively; and the registrar shall forward a sufficient number of forms, with a notice for their being returned in due time.—38. It is not desirable that any University of the United Kingdom should confer any degree in medicine or surgery, whether that of bachelor, doctor, or master, upon candidates who have not graduated in Arts, or passed all the examinations required for the Bachelorship in Arts, or passed, after due course of education, examinations, such as are *bonâ fide*, academically equivalent to those required for a degree in Arts.—39. It would be desirable, as a general rule, that none of the higher degrees or qualifications in medicine or surgery should be conferred on persons who have not shown evidence of high professional attainments.—40. It is desirable that in the examinations on several of the subjects of the curriculum, such, for example, as chemistry, including chemical physics, physiology, and materia medica, the licensing bodies should limit and define by schedule the extent of examination.—41. It is recommended that in no case should the examination of a candidate by any of the licensing bodies in any subject be conducted wholly by the lecturer or teacher in that subject in the school in which the candidate has been educated.—42. It is desirable that observation with the microscope should form part of the examinations of candidates for a licence.—43. It is recommended that candidates for the final professional examinations be required to give evidence that they have had opportunities of practical study, with care of patients, as pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or elsewhere.—44. It is desirable that, in examinations in anatomy, candidates should understand that they may be called upon to perform actual dissections, and that candidates in examinations in surgery should understand that they may be called upon to perform one or more operations on the dead subject.

amination must testify that the student has been examined in the subjects mentioned in Recommendation 4.

The above form of Application, duly and legibly filled up, must be forwarded to the Registrar, post free, and be accompanied by a Certificate of the applicant's having passed a Preliminary Examination, as required by the General Medical Council.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THIS College confers two diplomas; that of Member and that of Licentiate. A synopsis of the regulations for the membership and the licence is given at page 400. Certain portions, in addition to those there mentioned, are common to both.

Every candidate must give fourteen days' notice in writing of his intention to present himself for examination, at the same time transmitting the necessary certificates in each case, as stated below. Blank forms of the required certificates in each case may be obtained on application at the College.

By Practical Pharmacy is meant instruction in the Laboratory of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society, or of a recognised Public Hospital or Dispensary. The course of Botany may be attended prior to the commencement of professional studies; and any candidate proving that Botany formed a subject of his preliminary examination will be exempt from attendance on this course. The Principles of Public Health must be comprised in the course of Lectures on Medicine, or in that on Forensic Medicine. The attendance on Lectures on Medicine and Surgery must not commence earlier than the second winter session; and the attendance on Lectures on Clinical Medicine and Clinical Surgery must not commence until after the first winter session (for members, not until the second summer session). A three months' course of Clinical Instruction in a recognised Lunatic

Hospital or Asylum may be substituted for the same period of attendance in the Medical Wards of a General Hospital.

Every candidate must produce a testimonial of moral character and conduct; in the case of the membership, from a Fellow or Member of the College.

Exemptions.—The following exemptions are common to the Membership and the Licence.

Any candidate who shall produce satisfactory evidence of having passed an Examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the primary examination. Any candidate who shall produce satisfactory evidence of having passed an Examination on Chemistry and Materia Medica, required for a Degree in Medicine at an University in the United Kingdom, in India, or in a British Colony, will be exempted from re-examination on those subjects. Any candidate who shall have obtained a Degree in Surgery at an University in the United Kingdom, or who shall have passed the Examination on Surgery conducted by any one of the Royal Colleges of Surgeons in the Uaited Kingdom, after a satisfactory course of study and examination, will be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery.

MEMBERS.

Any person who shall have satisfied the College touching his acquirements in general Science and Literature, and his knowledge of Medicine, Surgery, and Midwifery, and who shall comply with the By-Laws and Regulations of the College, may be proposed to the College to be admitted a Member. (For synopsis of Regulations, *see* pages 400-401).

Every candidate who has prosecuted his studies abroad, whether in part or to the full extent required (except such as shall be exempted), shall nevertheless bring proof of his having attended, during at least twelve months, the medical practice of a hospital in the United Kingdom containing at least 100 beds.

Examinations.—Every candidate for the Membership of the College (except such as are exempted) must pass the following examinations.

First Examination; Monday: 7 to 10 P.M., written questions on Anatomy and Physiology. Tuesday: 7 P.M., *vivâ voce*, on Dissections and Preparations.

Second Examination; Monday: 1 to 4 P.M., written questions on Materia Medica and on Chemistry in its application to Pathology, Pharmacy, and Toxicology. Tuesday: 1 to 4 P.M., the same subjects; the examination being partly *vivâ voce* and partly practical: 7 to 10 P.M., written questions on Midwifery and the Diseases peculiar to Women. Wednesday: 7 to 10 P.M., written questions on Surgical Anatomy and on the Principles and Practice of Surgery. Thursday: *Morning*, Practical Examination either at the College or in the Wards of a Hospital; 7 P.M., Principles and Practice of Surgery and Midwifery, *vivâ voce.*

Third or Pass Examination; Thursday: 2 to 6 P.M., written questions on Medical Anatomy and on the Principles of Medicine. Friday: 2 to 6 P.M., written questions on the Practice of Medicine, including the Principles of Public Health, and on Psychological Medicine. Saturday or Monday: Practical examination at the College or in the medical wards of a Hospital. Tuesday and Wednesday: Examination *vivâ voce.*

The third or pass examination for the membership will be held on Thursdays, October 23rd, 1879; January 22nd, April 22nd, July 22nd, and October 21st, 1880. The first and second examinations are generally held at the commencement of the same months.

Certificates required: Primary Examination.—Evidence of having passed an Arts' Examination; and in the case of those who shall have commenced professional studies after 1861, evidence of having previously obtained a Degree in Arts from some University of the United Kingdom, or of the Colonies, or from some other University specially recognised by the Medical Council, or that he has passed examinations equivalent to those required for a Degree in Arts; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school; all other candidates for membership shall be examined on the subjects of General Education by the President and Censors of the College.

Second Examination.—Evidence of having completed four years of professional study; of having attained the age of twenty-one years; of Instruction and Proficiency in the Practice of Vaccination; and of having attended not less than twenty labours; and of having discharged the duties of Clinical Clerk, and performed the duties of Dresser, for periods of not less than three months.

Pass Examination.—Proof of having attained the age of twenty-five years; a testimonial from a Fellow or Member of the College; evidence of having completed the required course of professional study.

Exemptions (in addition to those stated in paragraph above). Any candidate who has already obtained the Degree of Doctor or Bachelor of Medicine at an University in the United Kingdom, in India, or a British colony, or who shall have obtained a qualification entitling him to practise medicine or surgery in the country where such qualification has been conferred, wherein the courses of study and the examinations to be undergone previously to graduation shall have been adjudged by the Censors' Board to be satisfactory, shall be exempt (if the Censors shall think fit) from all or any parts of the examinations, except the Third or Pass Examination. The nature and extent of this examination shall, in the case of each candidate, be determined by the Censors' Board. Every candidate for the Membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek, or of one or more of the modern European languages.—If any candidate who has attained the age of forty years shall produce testimonials satisfactory as to his moral character and conduct and his general and professional requirements, and showing that he has improved the art or extended the science of medicine, or has at least distinguished himself highly as a medical practitioner, the Censors may, if they see fit, submit these testimonials to the Fellows at a general meeting, and it shall be determined whether the candidate shall be admitted to examination.

No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist or any other person for the supply of medicines; or who practises medicine or surgery in partnership; or who refuses to make known, when required by the President and Censors, the nature and composition of any remedy he uses.

LICENTIATES.

For synopsis of Regulations, *see* pages 400-401.

Of the four years of professional study, one winter and two summer sessions may be passed in either of the following ways: 1. Attending the practice of a hospital or other institution recognised by the College; 2. Receiving instruction as the pupil of a legally qualified practitioner holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery; 3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* the candidates shall have passed an examination in the subjects of general education will not be recognised.

Every candidate for the Licence, before he is admitted to examination, must sign a declaration that he has not been rejected within three months by any of the Examining Boards included in Schedule (A) to the Medical Act.

Examinations.—Candidates must pass the following examinations. First Examination, on Anatomy and Physiology. First day, 7 to 10 P.M., written questions. Second day, 7 P.M., *vivâ voce*, on Dissections and Preparations. Second or Pass Examination. First day, 1 to 4 P.M., written questions on Materia Medica, and on Chemistry in its application to Pathology, Pharmacy, and Toxicology; 7 to 10 P.M., written questions on Medical Anatomy, and the Principles and Practice of Medicine, including the Principles of Public Health. Second day: *Morning*, Practical Examination at the College or in the medical wards of a hospital; 1 to 4 P.M., on Materia Medica, and on Chemistry in its application to Pathology, Pharmacy, and Toxicology. (This examination will be partly *vivâ voce* and partly practical.) 7 to 10 P.M., written questions on Midwifery and the Diseases peculiar to Women. Third day: 7 to 10 P.M., written questions on Surgical Anatomy, and on the Principles and Practice of Surgery. Fourth day: *Morning*, Practical examination at the College or in the surgical wards of a hospital; 7 P.M., *vivâ voce*, on Medicine, Surgery, and Midwifery.

Certificates required: First Examination.—Evidence of having passed an Arts examination; of having been duly registered as a medical student; and of having completed the second winter session of professional study at a recognised medical school.

Second or Pass Examination.—Evidence of having completed four years of professional study; of having attained the age of twenty-one years; of proficiency in the practice of vaccination; and of having attended not less than twenty labours. A testimonial of moral character is required of every candidate.

Exemptions (in addition to those stated above).—Any candidate who shall have obtained a Degree in Medicine at an University recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the Primary Examination. Any candidate who shall have obtained a qualification which entitles him to practise Medicine or Surgery in the

TABULAR VIEW OF THE REGULATIONS OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, AND OF THE SOCIETY OF APOTHECARIES IN LONDON.

	ROYAL COLLEGE OF PHYSICIANS OF LONDON.		ROYAL COLLEGE OF SURGEONS OF ENGLAND.		APOTHECARIES' SOCIETY.
	Members.	Licentiates.	Fellows.	Members.	Licentiates.
Age Required	Twenty-five.	Twenty-one.	Twenty-five.	Twenty-one.	Twenty-one.
Evidence of Preliminary Education before Commencement of Professional Study.	A Degree in Arts of a recognised University, or evidence of having passed examinations equivalent to those for a Degree in Arts.	Certificate of having passed examination in subjects of General Education recognised by the College.	Degree in Arts of recognised University; or evidence of examination in Arts recognised by College; or examination in English, Classics, and Mathematics.	Degrees in Arts of recognised University; or evidence of an examination in Arts recognised by College; or to pass an examination in English, Classics, and Mathematics.	Examination in Arts by the Society's examiners; or certificate of having passed an examination in Arts recognised by the Medical Council.
Duration of Professional Study.	Five years, of which four must have been passed at a school or schools recognised by the College.	Four years; at least three winters and two summers at a recognised school or schools.	Six years; for members, two years in addition to the certificate for the diploma of member.	Four years, or not less than four winter and four summer sessions.	Four years; not less than three winters and two summer sessions at a school or hospital.
Courses of Lectures, etc., required.					
Anatomy and Dissections	Two winter sessions.	Two winter sessions.	Lectures during two winters; dissections three winters.	Lectures, two winters; dissections, two winters.	First two winter sessions.
Physiology	Two winter sessions.	Two winter sessions.	Lectures one winter; and Practical Physiology, another session.	Lectures, one winter; Practical Physiology, another session.	First two winter sessions.
Chemistry	Six months.	Six months.	One course.	One course.	First winter session.
Practical Chemistry	Three months.	Three months.	Three months.	Three months.	First summer session.
Materia Medica	Three months.	Three months.	One course.	One course.	First summer session.
Practical Pharmacy	Three months.	Three months.	Three months.	Three months.	Three months.
Botany	Three months.	Three months.	Not required.	Not required.	First summer session.
Morbid Anatomy	Six months; including instruction in hospital *post mortem* room.	Six months, including instruction in hospital *post mortem* room.	Lectures, three months; demonstrations, three winters and two summers.	Lectures, three months; demonstrations in *post mortem* room.	Third winter session.
Medicine	Two winter sessions.	Two winter sessions.	One course.	One course.	Last two winter sessions.
Clinical Medicine	Three winter and three summer sessions.	Two winter and two summer sessions.	One winter and one summer session.	One winter and one summer session.	Third winter session.
Surgery	Two winter sessions.	Two winter sessions.	One winter session.	One winter session.	Not required.
Clinical Surgery	Two winter and two summer sessions.	Two winter and two summer sessions.	Two winter and two summer sessions. Observation and examination of patients for three months.	Two winters and two summers. Observation and examination of patients, three months.	Not required.
Practical Surgery	Not required.	Not required.	Six months.	Six months.	Not required.
Midwifery and Diseases of Women.	Three months; not less than twenty labours.	Three months; not less than twenty labours.	One course; not less than ten labours.	One course; not less than ten labours.	Second summer session; twenty cases of labour.
Clinical Study of Diseases of Women.	Six months.	Six months.	Not stated.	Not stated.	Not stated.
Forensic Medicine	Three months.	Three months.	One course.	One course.	Second summer session.
Hospital Practice	Medical practice, three winters and three summers; surgical, three winters and two summers.	Medical and surgical practice, three winter and two summer sessions.	Surgical practice, four winters and four summers; medical practice, one winter and one summer.	Surgical practice, three winters and two summers: Medical practice, one winter and one summer.	Medical practice, beginning with second winter session to end of period of study.
Hospital Appointments	Clinical clerk, six months.	Clinical clerk, three months; dresser, three months.	House-surgeon or dresser, six months.	Dresser, or (after a year of study) charge of patients under superintendence of a surgeon, six months.	Clinical clerk, six weeks at least.
Other Certificates	Instruction and proficiency in Vaccination. Moral character, from a Fellow or a Member. Registration as a Student as directed by Medical Council.	Instruction and proficiency in Vaccination. Moral character. Registration as a Student as directed by Medical Council.	Instruction and proficiency in Vaccination. Comparative Anatomy, one course. Operations on Dead Body.	Instruction and proficiency in Vaccination.	Having been examined at class examinations. Instruction in Vaccination. Moral conduct.

NUMBER OF EXAMINATIONS. FIRST EXAMINATION; WHEN IT MAY BE PASSED; SUBJECTS; DATES WHEN EXAMINATIONS ARE HELD.	Three. After end of second winter session. Subjects: Anatomy and Physiology.	Two. After end of second winter session; Anatomy and Physiology; first Mondays of October and December 1878; and February, April, July, October, and December, 1879.	Two. After third winter session; in Anatomy and Physiology; May and November, and such other times as Council may appoint.	Two. After second winter session; Anatomy and Physiology; January, April, May, July, November.	Two. After second winter session; Physicians' Prescriptions & Pharmacy, Anatomy and Physiology, General and Practical Chemistry, Botany, Materia Medica and Histology. Every Wednesday and Thursday.
SECOND EXAMINATION; AT WHAT PERIOD IT MAY BE PASSED; SUBJECTS; DATES WHEN EXAMINATIONS ARE HELD.	After four years of professional study in Surgical Anatomy and Surgery; Materia Medica; Chemistry in its application to Pathology, Pharmacy, and Toxicology; Midwifery and Diseases of Women; Examination of Surgical Patients. Third Examination: After completion of required course of study. Subjects: Medical Anatomy, Medicine, including Public Health and Psychological Medicine; Examination of Medical Patients.	After four years of professional study; Medical and Surgical Anatomy, Surgery, Materia Medica, Chemistry applied to Pathology, Pharmacy, and Toxicology; Midwifery and Diseases of Women, Medicine, and Principles of Public Health; Examination of Medical & Surgical Patients. Second Mondays in October and December, 1878, and February, April, July, October, and December, 1879.	After six years of professional study; in Pathology, Therapeutics, Surgery, and Medicine (Medicine not required from candidates holding approved diplomas, degrees, or licenses, or from those intending to obtain a medical qualification; in the latter case, the diploma of the College is not issued until proof of having passed the medical examination is produced). May and November, and such other times as Council may appoint.	After end of fourth year of professional education; in Surgical Anatomy, Surgery, and Medicine (Medicine not required from candidates holding approved diplomas, degrees, or licenses, or from those intending to obtain a medical qualification; in the latter case, the diploma of the College is not issued until proof of having passed the medical examination is produced). January, April, May, July, November; week after Primary Examination.	After end of medical studies, in Medicine, Pathology, Therapeutics, Midwifery and Diseases of Women and Children, Forensic Medicine, Toxicology and Microscopical Pathology. Every Wednesday and Thursday.
FEES PAYABLE.....	£31.	£15 15s.; £5 5s. at first examination, not returned in case of rejection, but candidate admitted to one subsequent first examination without additional fee. After rejection at second examination, fee returned, minus £3 3s.	£5 5s. at first examination, retained in case of rejection. At second examination, if a member, £5 5s.; if not a member, £26 5s. (over and above charges for stamps); £5 5s. is retained in case of rejection.	£22; £5 5s. at first examination; after two failures at this examination, candidate must pay an additional £5 5s. before being again admitted. At Pass Examination, £5 5s. retained; after two failures, an additional £5 5s.	Certificate of qualification to practise, £6 6s.; half retained in case of rejection, and accounted for at subsequent examination. First examination, £3 3s., retained in case of rejection and accounted for subsequently.
REJECTED CANDIDATES.....	After first examination, not admitted within three months; after second examination, not till end of six months. In each case, evidence of professional study in interval required. After third examination, not re-admitted (except by special permission) within one year.	After rejection at first examination, not again admitted until end of three months; after second examination, not till end of six months. Evidence of professional study during interval required in both cases.	After rejection at first examination, candidate is not again admitted for six months; after second examination, not till end of one year, unless Court of Examiners shall otherwise determine.	After rejection at primary examination, candidate must dissect for three months; after rejection at second examination, must attend Surgical Hospital Practice and Lectures on Clinical Surgery for six months.	After rejection at first examination, candidate cannot be again admitted till after three months; after examination for licence, not till after six months.
CANDIDATES (1) EXEMPTED FROM CERTAIN PORTIONS OF THE EXAMINATIONS, OR (2) ADMITTED UNDER SPECIAL REGULATIONS.	(1) Candidates who have passed examinations in Anatomy and Physiology of any other licensing body; who have obtained Degrees in Surgery; or have passed examination in Surgery of a College of Surgeons; or who have obtained degrees in Medicine. (2) Candidates who are above forty years of age; provided that the evidence and testimonials are satisfactory.	(1) Candidates who have passed examinations in Anatomy and Physiology of other licensing body; who have obtained Degrees in Medicine or in Surgery at a recognised University; who have passed an examination in Surgery at a College of Surgeons; Registered medical practitioners, with qualifications obtained before January 1st, 1861.	(2) Candidates who have degrees in Arts of a recognised University in the United Kingdom are required to study for five years only; and members of College, after eight years, admitted to professional examination, on production of certificate of fitness signed by three Fellows.	(2) Candidates who have studied in Scotland or in Ireland, or at recognised Foreign or Colonial Universities; members or licentiates of the other Colleges of Surgeons in the United Kingdom; and Graduates in Medicine or Surgery of a recognised University; admitted to professional examination on production of the necessary certificates or diplomas.	Graduates in Medicine of British Universities; licentiates and members of Colleges of Physicians and Surgeons in the United Kingdom or of Apothecaries' Hall in Ireland; candidates who have passed the first professional examination of other boards.

country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the Pass Examination, and shall be exempt from re-examination on such subjects as shall in each case be considered by the Censors' Board to be unnecessary. Any "registered medical practitioner", whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been with the consent of the College admitted a candidate for the Licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the Examiners to render in his case unnecessary.

First Examinations for the Licence will be held on Monday, October 6th, and December 1st, 1879; and February 2nd, April 5th, July 5th, October 4th, and December 6th, 1880. The Second Examinations commence on the following Mondays.

Licentiates of the College shall not compound or dispense medicines, except for patients under their own care.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

DIPLOMA OF MEMBER.

FOR synopsis of Regulations, *see* pages 400-401.

I. *Preliminary General Education and Examination.*—Candidates who commenced their professional education on and after the 1st of January, 1861, will be required to produce one or other of the following certificates :—1. Of graduation in Arts at an University recognised for this purpose : viz., Oxford ; Cambridge ; Dublin ; London ; Durham ; Queen's University in Ireland ; Edinburgh ; Glasgow ; Aberdeen ; St. Andrew's ; Calcutta ; Madras ; Bombay; McGill College, Montreal ; Queen's College, Kingston, Canada ; and University of Adelaide, Australia : or of having passed one of the following examinations ; 2. Matriculation, or such other examinations as shall from time to time be sanctioned by the Council of this College, at an University in the United Kingdom, or at a Colonial or Foreign University recognised by the Council of the College ; 3. The preliminary examination for the Fellowship of this College ; or (4) that of the Royal College of Surgeons in Ireland or of Edinburgh, or of the Faculty of Physicians and Surgeons of Glasgow ; 5. The Examination in Arts of the Society of Apothecaries of London, or of the Apothecaries' Hall of Ireland ; 6. The first class examination of the Royal College of Preceptors ; 7. Testamur of the Codrington College, Barbadoes ; 8. Degree of Associate of Arts granted by the Tasmanian Council of Education, with a certificate of examination in Latin and Mathematics ; 9. Of having passed the Voluntary examinations of Christ's College, Canterbury, New Zealand ; the certificate to include all the subjects required in the Preliminary Examination of the College. Candidates who cannot produce any of the foregoing certificates must pass an examination, conducted by the Board of Examiners of the College of Preceptors, under the direction and supervision of this College.*

II. *Professional Education.*—Professional studies prior to the date of examination in general knowledge, are not recognised. The following will be considered as the commencement of professional education :—1. Attendance on the practice of a Hospital, or other public institution recognised by this College. 2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council. 3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

a. By the Practical Course, General Anatomy and Physiology, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, etc.; but it is not intended that the learners shall perform vivisections.

b. The certificates of attendance on Lectures must include evidence that the student has attended the practical instructions and examinations in each course.

c. The Course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of Anatomical facts to Surgery, on the living person or on the dead body ; the methods of proceeding and the manipulations necessary in order to detect the effects of diseases or accidents on the living person or on the dead body ; the performance, where practicable, of the operations of Surgery on the dead body ; the use of Surgical Apparatus ; the examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

d. The Course of Lectures on Chemistry is not required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

III. *Certificates, etc.*—Certificates of Attendance upon the practice of a recognised Provincial or Colonial Hospital unconnected with, or not in convenient proximity to, a recognised Medical School, will not be received for more than one Winter and one Summer Session of the Hospital Attendance required by the Regulations of this College, and in such cases Clinical Lectures will not be necessary, but a Certificate of having acted as Dresser for a period of at least six months will be required.

IV. *Professional Examinations.*—The First or Primary Examination is partly written and partly demonstrative. The Second or Pass Examination is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. A candidate, having entered his name for either the primary or the pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, cannot present himself for examination within three months afterwards.

The candidates under the special regulations referred to in the table at page 401 must produce, *a.* the several certificates required for the degrees or diplomas in the respective countries ; *b.* the diploma, licence, or degree of the College or University ; together with, in each case, a Certificate of instruction and proficiency in Vaccination, and satisfactory evidence of having been occupied, after passing the Preliminary Examination, at least four years, or during four Winter and four Summer Sessions, in the acquirement of professional knowledge.

DIPLOMA OF FELLOW.

For synopsis of Regulations, see pages 400-401.

The paragraphs marked *a*, *b*, *c*, *d*, in the regulations for the Membership, are also applicable to the Fellowship.

SOCIETY OF APOTHECARIES, LONDON.

FOR synopsis of Regulations, see pages 400-401.

Examination in Arts.—Examinations in the subject of preliminary education will be held at the Hall of the Society on January 23rd and 24th, April 23rd and 24th, and September 17th and 18th. Candidates will be examined in the following branches, and no candidate will be approved unless he show a competent knowledge of each branch :—1. The English Language ; 2. The Latin Language ; 3. Mathematics ; 4. One of the following subjects, at the option of the candidate : (*a*) Greek ; (*b*) French ; (*c*) German ; (*d*) Natural Philosophy.* The Examinations will take place in the following order : Friday, 10 to 11.30, English ; 11.30 to 1, Latin ; 2 and 4, Mathematics ; Saturday, 10 and 12, Optional Subjects. Candidates who pass are arranged in two classes, the first in order of merit ; the second in alphabetical

* The following are the subjects of the examination, viz.—Part I. *Compulsory Subjects.* 1. Writing from dictation. 2. English Grammar. 3. Writing a short English composition, such as a description of a place, an account of some useful or natural product, or the like. 4. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple or compound, of Vulgar Fractions, and of Decimals. 5. Geography of Europe, and particularly of the British Isles. 6. Outlines of English History ; that is, the succession of the Sovereigns and the leading events of each reign. 8. Mathematics ; Euclid, Books I and II ; Algebra to Simple Equations inclusive. 9. Translation of a passage from the second book of Cæsar's *Commentaries De Bello Gallico.*—Part II. *Optional Subjects.* Papers will be set on the following seven subjects ; and each candidate must offer himself for examination on one subject at least, at his option ; but no candidate will be examined on more than four subjects :—Translations of passages from : 1. The first book of the *Anabasis* of Xenophon. 2. X. B. Saintine's *Picciola.* 3. Schiller's *Wilhelm Tell.* The candidate must also answer questions on the grammar of each subject, whether compulsory or optional. 4. Mechanics : chiefly elementary. 5. Chemistry : elementary facts. 6. Botany and Zoology : Classification of Plants and Animals. 7. Euclid, Books III, IV, V, and VI. The quality of the handwriting and the spelling will be taken into account. Failure in any one subject necessitates re-examination in all. N.B.—Each candidate (who has not, at a previous examination, paid the amount) pays a Fee of £2 prior to his admission to examination. Particulars respecting the examination are advertised in the Medical journals. Candidates are required to apply for the prescribed forms of application a month, and to send them in not less than three weeks, before each examination. A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I, to pass in not less than four, at his option, of the subjects in Part II.

* The following are the subjects for examination in 1880. 1. The English Language : The Leading Features of the Language ; its Structure and Grammar ; English Composition.—2. Latin : January—Cicero, *De Amicitiâ ;* April—Virgil, *Georgics*, Book IV ; September—Ovid, *Metamorphoses*, Book I ; Retranslation of easy sentences ; Answers to Grammatical Questions.—3. Mathematics : The Ordinary Rules of Arithmetic ; Vulgar and Decimal Fractions ; Addition, Subtraction, Multiplication, and Division of Algebraical Quantities ; Simple Equations ; The First Two Books of Euclid.—4. *a.* Greek ; Xenophon, *Anabasis*, Books I and II. *b.* French : St. Pierre, *Paul et Virginie ;* Translation from English into French. *c.* German : Goethe, *Egmont ;* Translation from English into German ; Grammatical Questions in each Language. *d.* Natural Philosophy : Mechanics, Hydrostatics, and Pneumatics.

order. Candidates must pay the fee (One Guinea) at least one week before the examination.* If a candidate fail to pass the examination, the fee will not be returned to him; but he will be admissible to either or both of the two next following examinations in Arts without additional fee, upon giving at least one week's notice. Certificates in Arts granted by any of the bodies whose certificate are recognised by the Medical Council will be accepted as equivalent to having passed the above examination.

Professional Examinations.—The Court meets every Wednesday and Thursday; and candidates are required to attend at 4.30 P.M. Every candidate intending to offer himself for examination must give seven days' notice, and must at the same time deposit all the required testimonials, with the fee, at the office of the beadle, where attendance is given every day, except Sunday, from 10 to 4 o'clock; Saturdays, 10 to 2.

Modified Examinations.—1. All Graduates in Medicine of British Universities will be admitted to a clinical and general examination in the practice of Medicine and Midwifery. 2. Licentiates of the Royal College of Physicians of London or of Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall, Dublin, will be admitted to a *vivâ voce* and clinical examination in the Practice of Medicine, Midwifery, Forensic Medicine, and Toxicology. 3. Any candidate who has passed his first examination for the Licence of the King and Queen's College of Physicians in Ireland, or for the joint Licence of the Colleges of Physicians and Surgeons of Edinburgh, the Licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the Degree of M.B., or Master in Surgery, in the Universities of Oxford, Cambridge, Durham, or London; or the second part of the professional examination for the Degree of M.B., or Master in Surgery, in the Universities of Edinburgh, Aberdeen, St. Andrew's, and Glasgow; or the first examination for medical and surgical degrees in the Irish Universities; or the first examination for the Licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Materia Medica and Anatomy (to those candidates who have not undergone an examination in those subjects), Practice of Medicine (including Clinical Medicine), Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, which examination will be partly written and partly *vivâ voce*. 4. Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland; and all candidates who have passed the first Anatomical examination of the Royal College of Surgeons, London; the Royal College of Surgeons, Edinburgh; the Royal College of Surgeons, Ireland, will have to undergo the two examinations, but are only exempt from writing on Anatomy and Physiology in their first examinations. 5. The cases of Graduates of Foreign and Colonial Colleges and Universities will be considered on their respective merits. All qualified candidates, unless registered, will be required to produce their diplomas.

UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student must reside either in one of the Colleges or Halls, or in a Licensed Lodging-House, for three years. During these three years, he has to pass two examinations in Arts and one in either Mathematics, Natural Science, or Law and Modern History; when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honours, he has to pass a third examination *in Literis Humanioribus*. A student deciding to graduate in medicine must, after passing the requisite examination for the degree of B.A., spend eight terms (two years) in study prior to a scientific examination for the degree of Bachelor of Medicine, unless he shall have taken a first or second class in the natural science school, when he may go in at the first opportunity for the first M.B. Examination. Two years after passing this examination, and after four years of professional and scientific study, he may go in for the second or practical examination for the M.B. degree. These four years of medical study may be spent either in or out of Oxford, in an approved medical school. Each examination is conducted partly in writing and partly *vivâ voce*, and part of each is practical. The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine; those of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), Materia Medica, Therapeutics, Pathology, the principles of Surgery and Midwifery, Medical Jurisprudence and General Hygiene. Every candidate at the second examination is examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus; or in one of these and in some modern author approved by the Regius Professor (such as Morgagni, Sydenham, or Boerhaave).

For the Degree of Doctor in Medicine, a dissertation has to be publicly read three years after taking the M.B. Degree.

The medical examinations take place annually in Michaelmas Term.

Scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other Colleges, by competitive examination in natural science. Each year, a Radcliffe Travelling Fellowship is competed for by anyone who, having taken a first-class at any of the Public Examinations of the University, or having obtained some University Prize or Scholarship open to general competition, proposes to graduate in medicine. The Travelling Fellows receive £200 a-year for three years, half this period being spent in study abroad.

* The following form of notice must be copied and written in full by the candidate. I (name in full), residing at (address), intend to present myself for the Preliminary Examination in Arts, at the Apothecaries' Hall, London, on the , and that I intend to take as my optional subject. Signature . The above has been written and signed in my presence, by the abovenamed candidate, with whom I am personally acquainted. Sign. A. B. Address, X. Date

UNIVERSITY OF CAMBRIDGE.

BACHELOR OF MEDICINE.

A STUDENT proceeding to this degree must—1. Reside in the University two-thirds of each of nine terms; 2. Pass the previous examination (both classical and mathematical); 3. Pursue medical study for five years, unless he have obtained honours in the Mathematical, Classical, Moral Sciences, or Natural Sciences Tripos, in which case four years only are required.

There are three examinations for the degree of Bachelor of Medicine. They are partly in writing, partly oral, and partly practical, and include chemical analysis, the recognition and description of specimens (healthy, morbid, and microscopical), dissections, and the examination of patients. They take place twice annually, commencing on December 13th; and in the Easter Term, on the Thursday next but one preceding the general admission to the B.A. degree.

The subjects of the first examination are—1. Chemistry and other branches of Physics; 2. Botany. The student may present himself for this examination at any time after he has passed the previous examination. He is required to produce certificates of having diligently attended one course of lectures on Chemistry, including manipulations, and one course on Botany.

The subjects of the second examination are—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacy and Pharmaceutical Chemistry. Before presenting himself for this examination, the student must have completed two years of medical study; he must have attended hospital practice during one year, have practised dissection during one season, and must produce certificates of having diligently attended a course of lectures on each of the subjects of examination.

Each candidate pays three guineas to the registrary of the University on giving notice of his intention to offer himself for his first examination. He pays two guineas before the second examination.

The third examination is divided into two parts. The subjects of Part I are—1. Principles of Surgery; 2. Midwifery. The subjects of Part II are—1. Pathology and the Practice of Physic (two papers); 2. Medical Jurisprudence; 3. Clinical Medicine. Candidates are allowed to enter the two parts at different times; but before presenting themselves for either part they must have completed the course of medical study, must have attended the medical practice of a recognised hospital during three years, and the surgical practice during one year at least, and must produce certificates of having attended one course of lectures on each of the following subjects: 1. Pathological Anatomy; 2. The Physiological and Therapeutical Action of Remedies; 3. Principles and Practice of Physic; 4. Clinical Medicine; 5. Clinical Surgery; 6. Medical Jurisprudence; 7. Midwifery; 8. Of having attended ten cases of Midwifery; 9. Of having acquired proficiency in Vaccination;* 10. And of having been Clinical Clerk for six months at least at a recognised hospital; or of having, subsequently to the completion of his attendance on hospital practice, attended to practical medicine, with special charge of patients, in a hospital, dispensary, or parochial union, under superintendence of a qualified practitioner, unless he himself be duly qualified.

* The Certificate must be from one of the vaccinators authorised by the Local Government Board.

After these examinations have been passed, an Act must be kept in the Schools in the following manner. The Professor of Physic assigns the day and hour for keeping the Act, of which public notice has to be given eight days before. The candidate reads a thesis, composed by himself, on some subject approved by the professor; the professor brings forward arguments or objections for the candidate to answer, and examines him *vivâ voce* as well on questions connected with his thesis as on other subjects in the faculty of a more general nature.

DOCTOR OF MEDICINE.

This degree may be taken by a Bachelor of Medicine in the ninth term after his inauguration (this occurs on the commencement day next following the admission to the degree). He is required to produce certificates of having been engaged five years in medical study, to keep an Act similar to that for M.B., and to write a short extempore essay on some one (at his choice) of four topics relating severally to Physiology, Pathology, Practice of Medicine, and State Medicine.

A Master of Arts may proceed to the degree of M.D. in the twelfth term after his inauguration as M.A. without having taken the degree of M.B. He must pass the three examinations for M.B., and keep the Act and write the extempore essay for the M.D. degree. He must produce certificates of having been engaged five years in medical study, and the same certificates of attendance on lectures and hospital practice as are required of the candidate for the degree of M.B.

MASTER IN SURGERY.

The subjects of the examination for this degree are—1. Surgical Anatomy; 2. Pathology and the Principles and Practice of Surgery; 3. Clinical Surgery.

Before admission to this examination, the candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended the surgical practice of a hospital for three years, of having been house-surgeon or dresser for six months, and of having attended—1. A second course of lectures on Human Anatomy; 2. One course of lectures on the Principles and Practice of Surgery; 3. Lectures on Clinical Surgery during one year; 4. Of having practised Dissection during a second season.

The examination takes place at the same times as those for M.B., and in a similar manner. The candidate is required to perform operations on the dead body, and to examine patients in the hospital.

UNIVERSITY OF LONDON.

THE following Examinations will be held in the University of London in 1879-80.

Preliminary Scientific Examination: Monday, July 21st.

Bachelor of Medicine (M.B.) First Examination: Monday, July 28th.

Bachelor of Medicine (M.B.) Second Examination: Monday, November 3rd.

Bachelor of Surgery (B.S.): Tuesday, November 25th.

Master in Surgery (M.S.) and Doctor of Medicine (M.D.): Monday, November 24th.

Subjects relating to Public Health: Monday, December 8th.

The certificates in each case must be transmitted to the Registrar at least fourteen days before the commencement of the examination.

The fee for each examination is Five Pounds.* If a candidate withdraw, or fail to pass either of the examinations, the fee is not returned; but he is admitted without further payment to *two* subsequent preliminary scientific, first M.B., second M.B. or B.S. examinations, or to *one* subsequent M.S. or M.D. examination, provided that he give notice to the Registrar at least fourteen days before the commencement of the examination.

BACHELOR OF MEDICINE.

Every candidate for the degree of Bachelor of Medicine is required —1. To have passed the Matriculation Examination (unless he has taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras, and Latin was one of the subjects in which he passed); 2. To have passed the Preliminary Scientific Examination; 3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, in one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom; 4. To pass two examinations in Medicine.

* For the degree of Doctor of Medicine, the fee will continue to be Ten Pounds to all such as, having taken their M.B. degree under the former regulations, shall not have paid the fee of Five Pounds at the Preliminary Scientific Examination.

Preliminary Scientific Examination.—Candidates are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies. For the Preliminary Scientific Examination, candidates are examined in Inorganic Chemistry; Experimental Physics; Botany and Vegetable Physiology; Zoology. They must show a competent knowledge in all the subjects.

First M.B. Examination.—The candidate must have passed the Preliminary Scientific Examination at least one year previously, and must produce certificates—1. Of having completed his nineteenth year; 2. Of having been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of the three following subjects: Descriptive and Surgical Anatomy, Histology and Physiology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine;* 3. Of having dissected during two winter sessions; 4. Of having attended a course of Practical Chemistry; 5. Of having attended to Practical Pharmacy, and having acquired a practical knowledge of the preparation of medicines. Candidates are examined in Anatomy, Histology and Physiology,† Materia Medica and Pharmaceutical Chemistry, Organic Chemistry. Candidates must show a competent knowledge in all the subjects. The examinations are conducted by printed papers and *vivâ voce* interrogation, by demonstration from preparations and specimens, and by dissections.

Examinations for Honours.—Any candidate who has been placed in the first division may be examined for Honours in—1. Anatomy; 2. Histology and Physiology; 3. Organic Chemistry; 4. Materia Medica and Pharmaceutical Chemistry. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself most in each of the first two divisions receives an exhibition of £40 *per annum*, and in each of the second two £30 *per annum*, for the next two years, payable in quarterly instalments; provided that, on receiving each instalment, he declare his intention of presenting himself at the second M.B. examination within three years from the time of passing the first M.B. examination. Under the same circumstances, the first and second candidates in subjects 1 and 2, and the first candidate in subjects 3 and 4, receive each a gold medal of the value of five pounds.

Second M.B. Examination.‡—No candidate is admitted to this examination within two academical years of the time of his passing the first examination, nor without certificates:—1. Of having passed the first M.B. examination; 2. Of having subsequently attended a course of lectures on each of two of the subjects for which he had not presented certificates at the first examination; 3. Of having conducted at least twenty labours;§ 4 and 5. Of having attended the Surgical and the Medical Practice of a recognised Hospital or Hospitals during two years, with Clinical Instruction and Lectures on Clinical Surgery and Clinical Medicine;‖ 6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, and Midwifery, with special charge of patients, in a Hospital, Infirmary, Dispensary, or Parochial Union, during six months; 6. Of having acquired proficiency in vaccination.¶ The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. Candidates are examined in General Pathology, General Therapeutics and Hygiene, Surgery, Medicine, Midwifery, Forensic

* The subjects numbered 2, 3, and 4, must be attended after passing the Matriculation Examination, or taking a degree in Arts.

† Any candidate may postpone his examination in Histology and Physiology from the First M.B. Examination at which he presents himself for examination in the remaining subjects until the First M.B. Examination in any subsequent year; but he cannot compete for honours on either occasion; and he cannot be admitted as a candidate at the Second M.B. Examination until at least twelve months after he has passed his examination in Histology and Physiology.

‡ Any candidate for the Second M.B. Examination who has passed the First M.B. Examination under the former regulations, is required to have also passed the Examination in Physiology at some previous First M.B. Examination carried on under the present regulations; at which examination he is not allowed to compete for honours.

§ Certificates will be received from any legally qualified practitioner.

‖ The student's attendance on the Surgical and on the Medical Hospital Practice specified in Regulations 4 and 5, may commence at any date after his passing the Preliminary Scientific Examination, and may be comprised either within the same or within different years; provided that in every case his attendance on Hospital Practice be continued for at least eighteen months subsequently to his passing the First M.B. Examination. Attendance during three months in the wards of a Lunatic Asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

¶ Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.

Medicine. The examinations include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. The examinations are conducted by printed papers and *vivâ voce* interrogations; by practical examinations in obstetric preparations and apparatus; by examination, and report on cases, of medical patients in the wards of a hospital; demonstrations from specimens and preparations. Candidates are expected to write prescriptions in Latin, without abbreviations.

Bachelors of Medicine of the University of London have no right, as such, to assume the title of Doctor of Medicine.

Examination for Honours.—Any candidate who has been placed in the first division may be examined for Honours in—1. Medicine; 2. Obstetric Medicine; and 3. Forensic Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most in Medicine receives £50 *per annum* for the next two years, with the style of University Scholar in Medicine; and the candidates who distinguish themselves the most in Obstetric Medicine and in Forensic Medicine receive each £30 *per annum* for the next two years, with the style of University Scholar in Obstetric Medicine and in Forensic Medicine respectively. The first and second candidates in each of the preceding subjects each receive a gold medal of the value of five pounds.

BACHELOR OF SURGERY.

The candidates must produce certificates—1. Of having passed the second examination for the degree of Bachelor of Medicine in this University; 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. The examinations are conducted by printed papers on Surgical Anatomy and Surgical Operations; by examination and report on cases of surgical patients; by performance of operations upon the dead subject; by application of surgical apparatus; and by *vivâ voce* interrogation.

Examination for Honours.—Any candidate who has been placed in the first division at the examination may be examined for Honours in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives £50 *per annum* for the next two years, with the style of University Scholar in Surgery; and the first and second candidates each receive a gold medal of the value of five pounds.

MASTER IN SURGERY.

The candidate must produce certificates—1. Of having taken the degree of Bachelor of Surgery* in this University; 2. Of having attended subsequently—(*a*) to Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University; (*b*) or to Clinical or Practical Surgery during one year in a recognised hospital or medical institution, and of having been engaged during three years in the practice of his profession; (*c*) or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University.† 3. Of moral character, signed by two persons of respectability. The examination is conducted by means of printed papers and *vivâ voce* interrogation; and the candidates are examined in Logic and Moral Philosophy,‡ and in Surgery. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a gold medal of the value of twenty pounds.

DOCTOR OF MEDICINE.

The candidate must produce certificates analogous to those required for candidates for the degree of Master in Surgery, but having special relation to Medicine. The examination is conducted by printed papers and *vivâ voce* interrogations; and candidates are examined in Logic and Moral Philosophy, and in Medicine. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most at this examination receives a gold medal of the value of twenty pounds.

* Candidates who have obtained the degree of Bachelor of Medicine previously to 1866, will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and their attendance on surgical practice required by Regulation 2, may commence from the date of the M.B. Degree.

† One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division.

‡ Any candidate who has taken the degree either of B.A., B.Sc., or M.D., in this University, is exempted from this part of the examination; and any candidate who has passed the Second M.B. Examination, may at any subsequent M.S. Examination present himself for Logic and Moral Philosophy alone, if he so prefer; thereby gaining exemption, if he should pass, from examination in that subject when he presents himself to be examined for the degree of Master in Surgery.—An analogous exemption is allowed in the case of candidates for the degree of M.D.

UNIVERSITY OF DURHAM.

THERE are two Licences and three degrees conferred; viz., a Licence in Medicine and a Licence in Surgery, and the Degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. A certificate of proficiency in Sanitary Science is also awarded.

BACHELOR OF MEDICINE.

For the Degree of Bachelor of Medicine, there are two Professional Examinations, the first being held at the end of the Winter Session, the second during the Summer Session. In 1880, the first will commence on April 19th, and the second on June 14th. The subjects for the First Examination are Anatomy, Physiology, Chemistry, and Botany. The condidates must produce the following certificates: 1. Of Registration as a Medical Student; 2. Of having passed one of the following examinations in Arts, viz., (*a*) the Examination for Graduation in Arts at one of the following Universities, viz., Oxford, Cambridge, Durham, Dublin, London, Queen's (Ireland), Edinburgh, Glasgow, St. Andrew's, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), and Queen's College (Kingston); or (*b*) the Preliminary or Extra-Professional Examination for Graduation in Medicine at one of the following Universities, viz., London, Edinburgh, Glasgow, St. Andrew's, Aberdeen, and Queen's (Ireland); or (*c*) the Preliminary Examination in Arts qualifying for the Membership of the Royal College of Physicians of London, or for the Fellowship of the Royal College of Surgeons of England. Candidates who, at the commencement of their professional education, passed the Arts Examination for registration only, may pass in the extra subjects required for the M.B. Durham either before or after presenting themselves for the first examination for the Degree, but must do so before presenting themselves for the Final Examination. 3. Of attendance on two courses of Anatomy, on one of Physiology, on one of Theoretical and one of Practical Chemistry, and on one of Botany of twelve months; Dissection; and of attendance on a course of Practical Physiology of not less than thirty lessons.

The subjects for the Second Examination are Medicine, Surgery, Pathology, Materia Medica and Therapeutics, and Midwifery and Diseases of Women and Children. Candidates must produce the following certificates: 1. Of being not less than twenty-one years of age; 2. Of good moral character; and 3. Of attendance on the remainder of the course of medical and surgical study as prescribed by the Royal College of Surgeons of England; together with the following additional subjects, viz., one course of lectures on Medicine, one on Therapeutics, and one on Public Health, and Medical Hospital Practice with Clinical Lectures during one Winter and one Summer Session. There must be proof that the whole course of professional study has occupied at least four years.

One of the four years of professional education must be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent, the candidate must attend at least two courses of lectures in the Winter Session and two in the Summer Session, together with the Class and Test Examinations held in connection with those classes; and must also attend Hospital Practice and Clinical Lectures at the Infirmary during the same period. Candidates may fulfil this portion of the curriculum at any period before they present themselves for the Final Examination for the Degree, but are strongly recommended to do so previously to the First Examination. They are not required to reside at Durham. The other three years of the curriculum may be spent either at Newcastle-upon-Tyne or at one or more of the Schools recognised by the Licensing Bodies named in Schedule A of the Medical Act (1858).

Candidates who are already qualified by other of the Licensing Bodies are requested to attend for one Winter and one Summer Session at the College of Medicine, Newcastle-upon-Tyne, in the manner indicated in the preceding paragraph.

DEGREE OF MASTER IN SURGERY.

The regulations are the same as those for the Degree of Bachelor of Medicine; but the Final Examination is devoted more particularly to Surgery.

DEGREE OF DOCTOR OF MEDICINE.

Candidates must be not less than twenty-four years of age, must have obtained the Degree of Bachelor of Medicine at least two years previously, and in the interim have been engaged in medical and surgical practice. Each candidate will be required to write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and to pass an examination thereon; and must be prepared to answer questions on the other subjects of his curriculum, in so far as they are related to the subject of his essay.

Candidates for any of the above Degrees must give at least twenty-eight days' notice to the Registrar of the College, sending at the same time the fee and the necessary certificates.

THE DEGREE OF DOCTOR OF MEDICINE, FOR MEDICAL PRACTITIONERS OF FIFTEEN YEARS' STANDING, WITHOUT RESIDENCE.

The Warden and Senate of the University of Durham, with the view of affording to Practitioners of fifteen years' standing an opportunity of obtaining the Degree of Doctor of Medicine, have instituted a Special Examination, under the following regulations. 1. The candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom. 2. He shall have been in the active practice of his profession for fifteen years as a qualified practitioner. 3. He shall not be under forty years of age. 4. He shall produce a certificate of moral character from three registered members of the medical profession. 5. If the candidate shall not have passed, previously to his Professional Examination (in virtue of which he has been placed on the *Register*), an Examination in Arts, he shall be required to pass an Examination in Classics and Mathematics.* 6. If the candidate shall have passed, previously to his Professional Examination (in virtue of which he has been placed on the *Register*), a Preliminary Examination, he shall be required to translate into English passages in any of the parts specified below of any one of the Latin authors mentioned:—Cæsar—*De Bello Gallico*, first three books; Virgil—first three books of the *Æneid;* Celsus—first three books.† The candidate shall have an opportunity of showing proficiency in Greek, Moral Philosophy, or some Modern Language.‡ 7. The candidate shall be required to pass an Examination in the following subjects:—i. Principles and Practice of Medicine, including Psychological Medicine and Hygiene; ii. Principles and Practice of Surgery; iii. Midwifery and Diseases peculiar to Women and Children; iv. Pathology—Medical and Surgical; v. Anatomy—Medical and Surgical; vi. Medical Jurisprudence and Toxicology; vii. Therapeutics. 8. The fee shall be Fifty Guineas. 9. If the candidate shall fail to satisfy the Examiners, the sum of Twenty Guineas shall be retained; but, if he shall again offer himself for the Examination, the sum of Forty Guineas only shall then be required.

An Examination, in accordance with the above regulations, will commence on June 14th, 1880, in the College of Medicine, Newcastle-on-Tyne. Gentlemen intending to offer themselves as candidates are requested to forward their names to Dr. Luke Armstrong, Registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, on or before May 1st, 1880, together with the fee and the before-mentioned certificates.

The Fees for the Examinations, Licences, Degrees, and Certificates, are as follows:—Registration Examination, £1; Extraordinary Registration Examination, £2; Registration, 5s.; Public Examination in Medicine or in Surgery, each £5; Licence in Medicine and Licence in Surgery, each £3; Degree of Master in Surgery, of Bachelor in Medicine, and of Doctor in Medicine, each £6; Degree of Doctor in Medicine for Practitioners of fifteen years' standing, £52 10s.; Certificate in Sanitary Science, £5 5s.; Certificate in Sanitary Science for Medical Officers of Health, £10 10s.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

REGULATIONS FOR THE LICENCE.

No one can obtain the Licence of the College under the age of twenty-one years. Every applicant must produce satisfactory evidence of having been engaged in the study of Medicine during at least four years subsequently to registration as a student, including attendance during not less than four winter sessions or three winter and two summer sessions at a recognised medical school. He must produce certificates of having attended the following courses at an university or medical school: Anatomy, Practical Anatomy, Chemistry, Practice of Medicine, Clinical Medicine, and Principles and Practice of Surgery, each a six months' course; Practical Chemistry, Materia Medica and Pharmacy, Physiology, Clinical Surgery, Midwifery, Medical Jurisprudence, General Pathology or Pathological Anatomy, and Practical Pharmacy, each a three months' course. He must have attended the practice of a public hospital (containing not fewer than eighty beds) during not less than twenty-four months, twelve of which must have been spent in the medical wards. He must also have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital; or have been engaged during six months as visiting assistant to a registered practitioner. He must also have attended at least six cases of labour under the superintendence of a qualified medical practitioner, and have studied vaccination under a competent and recognised teacher. He must have passed the Preliminary Examination in Literature and Science,* and had his name inscribed in the General Medical Council's *Register* of Medical Students, previously to the commencement of his medical studies. Masters and Bachelors of Arts of any British or foreign university, whose course of study may be approved of by the College, will be exempted from the preliminary examination; also those who have passed the examination of the national educational bodies, or of any of the licensing boards recognised by the Medical Act.

The Professional Examination will be divided into two parts: 1. Anatomy, Physiology, Chemistry; 2. Materia Medica and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until the end of the second winter session, or to the second until he has completed four years of professional study. The preliminary examinations will be held on October 25th and 27th, 1879; April 13th and 14th, and July 10th and 12th, 1880. The first professional examinations on October 8th, 1879; January 14th, April 21st, July 21st, and October 6th, 1880. The second professional examinations will be held on Thursdays and Fridays following the first professional examination.

Candidates who have passed the first professional examination before a qualifying body (provided it be as extensive as that required by this College) will be at once admitted to the second examination.

No candidate is admissible to examination who has been rejected by any other licensing board within the previous three months.

The Fee for the Licence is £15 15s. Candidates who passed the first professional examination before the 31st of December, 1877, pay £10 10s., provided they pass the second examination before the 1st of January, 1880. A candidate for the first professional examination pays £6 6s., and for the second or final, £9 9s.; but, if exempted from the first professional examination, he shall, before appearing for the final, pay the whole fee of £15 15s. If a candidate be unsuccessful at the first professional examination, £3 3s.; and at the second or final, £4 4s. will be retained. This regulation will also apply to cases in which the candidate may have been previously rejected.

Candidates may be admitted to special examination on bringing forward satisfactory reasons and paying an extra fee of £5 5s. Should the candidate be unsuccessful, £11 11s. will be returned to him.

FELLOWSHIP AND MEMBERSHIP.

No one can be elected a Fellow of the College until he has been at least one year a Member, and has attained the age of twenty-five years.

Any Licentiate of a College of Physicians, or Graduate of a British or Irish University, with whose knowledge of Medical and General Science the College may be satisfied, may be admitted a Member of the College, provided he shall have attained the age of twenty-four years.

Every motion for the election of a Fellow or Member shall be made at a quarterly meeting of Fellows by one of the Fellows present, and seconded by another; and this motion shall be determined by ballot at the next quarterly meeting—a majority of three-fourths being necessary to carry it in the affirmative.

Fees.—The fee to be paid by a Member shall be £31 10s. A Licentiate who has obtained the Licence prior to the 1st of August 1876, when raised to the rank of Member, pays £21; a Licentiate obtaining the Licence subsequent to that date, when raised to the rank of Member, pays £15 15s. When a Member is raised to the rank of Fellow, he pays £31 10s., exclusive of stamp-duty (£25). All candidates for Fellowship or Membership must lodge their fees and the amount of stamp-duty payable with the Treasurer previously to presenting their petitions.

* The subjects for this examination shall be as follows:—1. An English Essay. (A short essay on some subject to be specified at the time of the examination.) 2. Arithmetic. 3. Euclid—Books I and II. 4. Latin—Translation from Virgil, *Æneid*, Books I and II, together with Grammatical Questions. 5. One of the following subjects:—i. Greek—Translation from Xenophon's *Memorabilia*, Books I and II, with Grammatical Questions; ii. French—Translation from Voltaire's *Charles XII*, with Grammatical Questions; iii. German—Translation from Goethe's *Dichtung und Wahrheit*, Book I, with Grammatical Questions; iv. Elements of Mechanics, Pneumatics, and Hydrostatics; v. Some Treatise on Moral, Political, or Metaphysical Philosophy.

† The candidate may choose for himself any one of the three above-named authors on whose works to be examined.

‡ For these subjects no extra marks are awarded.

* For the subjects, see note to regulations for double qualification.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

REGULATIONS FOR CANDIDATES FOR THE DIPLOMA.

THE regulations regarding schools of medicine, preliminary examination, and professional study and examination, are similar to those for the double qualification (see below), except that the third course of Medicine is not required. The first professional examinations will be held on October 21st, 1879; January 26th, March 29th, April 20th, and July 20th, 1880. The second examination takes place immediately after the conclusion of the first.

At the second examination, the student, in furnishing the statement of his professional study, must, if he have been an apprentice, insert the name of his master, the date of his indenture, and the length of time for which he was bound. If he have been apprenticed to a Fellow of the College, he must also produce his discharged indenture.

Recent Dissections, Anatomical Specimens, and articles of the Materia Medica are employed in the examinations; and all candidates are required to write out formulæ of prescriptions, and are subjected to a practical examination in the Surgical Hospital.

The Fees are: for the first examination, £6 6s.; for the second, £9 9s. At the first examination, £3 3s., and at the second £5 5s., will be returned to unsuccessful candidates. Candidates who passed the first Professional Examination before December 31st, 1877, will be required to pay, as under the old regulation, a fee of £6 for the second examination, provided they appear for that examination prior to January 1st, 1880; and, in the event of being unsuccessful, £2 will be retained.

Candidates who have passed the first examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second Professional Examination under the same conditions as are described in the regulations for the double qualification. The fee will be £15 15s.; and unsuccessful candidates will receive back £11 11s.

Candidates desirous of special examinations on other days than those fixed must prepare a case to be submitted to the consideration of the authorities of the College. They must produce certificates of the whole of the prescribed course of study, and of having passed the preliminary examination, and must state the earliest and the latest days within which they can present themselves. All such candidates should present their applications as long beforehand as possible. The fees, which must be lodged by 9 A.M. of the day preceding the examination-day, are as follows: viz., £20 for first and second examinations, of which £12 will be returned to candidates remitted on the first examination; but no part of the money will be repaid to candidates who, having passed the first, are unsuccessful in the second examination; £17 for second examination. Of this, no part will be returned to the candidate, if unsuccessful.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Royal College of Physicians of Edinburgh and the Royal College of Surgeons of Edinburgh, while they still give their Diplomas separately, have made arrangements by which, after one series of examinations, the student may obtain the Diplomas of both Colleges. This joint examination is conducted by a Board, in which each body is represented for examination in the branches common to both Medicine and Surgery; but the College of Physicians takes exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. Students passing that examination are enabled to register two qualifications: Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh.

Every candidate must have followed his course of study in an University, or in an established School of Medicine, or in a Provincial School specially recognised by the Colleges of Physicians and of Surgeons of that division of the United Kingdom in which it is situate. Under the title of *Established School of Medicine* are comprehended the medical schools of those cities of Great Britain and Ireland in which Diplomas in Medicine or Surgery are granted, and such Colonial and Foreign Schools as are similarly circumstanced in the countries in which they exist.

Preliminary Examination in General Education.—All candidates for the Diplomas of the Colleges must have passed the complete examination in General Education,* and have had their names inscribed in the General Medical Council's Register of Medical Students at the commencement of their professional studies. Certificates of having passed the examinations in General Education, conducted by other bodies (viz., those recognised by the General Medical Council), will be accepted. Each candidate who intends to undergo the preliminary examination must give in his name to the officer of either College not less than two days before the day of examination. He must pay a fee of Ten Shillings. If unsuccessful, he must pay Five Shillings for each subsequent examination.

Professional Education.—1. Candidates must have been engaged during forty-five months after the preliminary examination, in not less than four winter sessions', or three winter and two summer sessions', attendance at a recognised medical school. 2. The candidate must have attended the following courses of lectures: Anatomy, two courses† of six months each, and Practical Anatomy, twelve months; or Anatomy, one course of six months, and Practical Anatomy, eighteen months; Physiology, not less than fifty lectures; Chemistry, Practice of Medicine, Clinical Medicine,‡ Medicine (a third course, either Practice or Clinical, at option),‡ Principles and Practice of Surgery, Clinical Surgery,‡ Surgery (a third course, either Principles and Practice or Clinical Surgery, at option),‡ each six months; Practical or Analytical Chemistry, Materia Medica, Midwifery, and Diseases of Women and Children, Medical Jurisprudence, and Pathological Anatomy,§ each three months.‖ 3. He must also produce certificates:—*a.* Of having attended at least six cases of labour under the superintendence of a registered medical practitioner. *b.* Of having attended, for three months, instruction in Practical Pharmacy. The teacher signing the certificate must be a Member of the Pharmaceutical Society of Great Britain, or a chemist and druggist recognised by either College on special application, or the superintendent of the laboratory of a public hospital or dispensary, or a registered practitioner who dispenses medicine to his own patients. *c.* Of having attended, for twenty-four months, a public general hospital containing, on an average, at least eighty patients. *d.* Of having attended, for six months, the practice of a public dispensary specially recognised by either College; or of having been engaged for six months as assistant to a registered practitioner. *e.* Of having been instructed in vaccination; the teacher signing the certificate must be a registered practitioner. It is strongly recommended to students to avail themselves of opportunities of attending lectures on Ophthalmic and Mental Diseases, also on Natural History and Comparative Anatomy; and of obtaining practical instruction in the use of the Microscope.

Professional Examination.—1. Candidates for the double qualification are subjected to two professional examinations. 2. Opportunities for both examinations are presented six times in each year. On each occasion, the candidates write answers to the questions proposed; and are examined orally on the days immediately succeeding. 3. Unsuccessful candidates are remitted to their studies for not less than three months. 4. The first examination embraces Anatomy, Physiology, and Chemistry; and takes place not sooner than the end of the second winter season. 5. Candidates must apply to the Inspector of Certificates on or before the Saturday preceding the day of examination; and must produce certificates of attendance on those courses of lectures which have reference to the subjects of the examination, and evidence of having passed the preliminary examination. 6. The sum of £8 8s. must be paid to the Inspector of Certificates for this examination not later than 9 A.M. of the Saturday preceding it. This sum will be considered as paid to account for the entire fee of £21 payable for the two Diplomas. 7. In the case of a candidate being unsuccessful at this examination, £5 5s. will be returned to him. 8. The second examination embraces Medicine, Surgery, and Surgical Anatomy, Midwifery, Pathological Anatomy, Materia Medica and Pharmacy, and Medical Jurisprudence; and takes place after the termination of the winter session of the last year of study, at least forty-five months after the examination in general education. 9. Application for examination must

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* The examination will embrace the following subjects:—1. English Language, including Grammar and Composition. 2. Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First two Books of Euclid. 4. Latin: Cicero *de Naturâ Deorum*; Virgil, *Æneid*, Book II; Grammar, and a passage from an unprescribed author. 5. One of the following subjects, at the option of the candidate:—(1) Greek: Xenophon, *Anabasis*, Book III; and Homer, *Iliad*, Book III. (2) French: Molière, *Les Femmes Savantes*. (3) German: Schiller's *Maria Stuart*. (4) Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics. In Latin, Greek, French, and German, parsing, and translation of short sentences from English into the respective languages, will be required.

† The two courses must not be attended in the same session.

‡ Two courses of Clinical Medicine or of Clinical Surgery of three months each, if not simultaneous, will be held equivalent to one course of six months. They must be attended during the attendance at the Hospital where they are delivered.

§ A certificate of attendance at the *Post Mortem* Examination at a General Hospital will be accepted in lieu of this course.

‖ The six months' courses delivered in Scotland must consist of not fewer than one hundred lectures, with the exception of Clinical Medicine and Clinical Surgery. The three months' courses must consist of not fewer than fifty lectures.

be made to the Inspector of Certificates not later than the Monday previous to the day of examination. 10. Every candidate must produce —*a*. Satisfactory evidence of having attained the age of twenty-one years; *b*. A certificate of having passed the preliminary examination, unless this certificate have been already seen by the Inspector; *c*. A certificate of registration in the books of the General Medical Council; *d*. A certificate of having passed the first professional examination; *e*. The certificates mentioned under Professional Education, Section 3 (above); *f*. A tabular statement (for which a printed form will be furnished), exhibiting the whole of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session. 11. The fee for this examination is £12 12s., which must be lodged with the Inspector not later than 9 A.M. of the Tuesday preceding the examination. 12. On the production of the above documents, and after receiving the fees, the Inspector gives the candidate a letter authorising the examiners to take him on trial. 13. In case of a candidate being unsuccessful at this examination, £8 8s. will be returned to him. 14. Candidates who have passed the first professional examination before December 31st, 1877, will pay, as before, £10 for the second examination if they appear for that examination before January 1st, 1880. If unsuccessful, £2 will be retained. 15. Candidates who have passed the first professional examination in Anatomy, Physiology, and Chemistry, at any of the Licensing Boards recognised by the Medical Act, will be admissible to the second professional examination on producing certificates of the whole course of study prescribed, of having passed their preliminary and first professional examinations, and of having been registered as students. If any of the three subjects of the first examination have been omitted, the candidate will have to undergo an examination on the omitted subjects; and none of the subjects set down in Section 8 will be omitted at the second examination. The fee payable by such candidates is £21, and unsuccessful candidates will receive back £16 16s. 16. In addition to the written and oral examinations, all candidates are subjected to practical Clinical Examinations in Medicine and Surgery. 17. No candidate is admissible to examination who has been rejected by any other Licensing Board within the preceding three months.

Communications from candidates to be addressed to Mr. Joseph Bell, 20, Melville Street, Edinburgh.

The following will be the periods of examinations for the Double Qualification for the year 1879-80. *Preliminary Examination in General Education*, October 25th and 27th, 1879; April 13th and 14th, and July 10th and 12th, 1880. *First Professional Examinations.*—Tuesdays, October 28th, 1879; February 3rd, April 6th and 27th, July 13th and 27th, 1880. *Second Professional Examinations.*—These will take place immediately after the conclusion of the first professional examinations. In no case will they be begun on an earlier day than the Thursday of any period.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

REGULATIONS FOR THE DIPLOMA.

THE regulations respecting the Curriculum of Professional Study, and the Fees, are similar to those of the Royal College of Surgeons of Edinburgh.

Preliminary Examinations in General Literature will be held on April 16th, July 16th, September 10th, and October 22nd, 1880.* The Fee is Ten Shillings. Candidates will be furnished, on application to the Secretary, with a form of application, which they must fill up and transmit to him at least four days before the examination.

The First Professional Examinations take place on October 7th, 1879, and January 6th, April 6th, July 20th, and October 12th, 1880; *the Second Professional Examinations* on October 9th, 1879, and January 8th, April 9th, July 22nd, and October 14th, 1880. Applications for admission to the first examination must be made four days, and to the second examination a week, before the respective examinations.

The examinations are conducted partly in writing and partly orally. Recent Dissections, Anatomical Specimens, the Microscope, Chemical Tests, Surgical and Obstetrical Instruments and Apparatus, Articles of the Materia Medica, Pathological Specimens and Toxicological Tests and Specimens, may be employed. Candidates are also subjected, at the second examination, to a Practical Clinical Examination at the Hospital.

Candidates who have passed the examination in Anatomy, Physiology, and Chemistry, before any of the Licensing Bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, are admitted to the second professional examination. Graduates and Licentiates in Medicine of other bodies are exempt from examination in Medicine and Materia Medica.

The Fee for the diploma is £15 15s.; £6 6s. is paid at the first examination, of which £3 3s. is retained in case of rejection; and £9 9s. for the second examination, of which £4 4s. is retained if the candidate be rejected.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee of £5 5s.

The Dr. James Watson Prizes.—These prizes are awarded to those candidates who have attained respectively the highest and next highest aggregate number of marks at the first professional examination, either for the single or the double qualification. The first prize consists of a gold medal worth five sovereigns and five sovereigns in money. The second prize consists of three sovereigns in books or money. The trustees of the prize-fund reserve to themselves the power of not awarding the prizes, or either of them, if no candidate obtain sufficiently high marks.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

DOUBLE QUALIFICATION IN MEDICINE AND IN SURGERY.

THE Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Physicians of Edinburgh, conjointly grant their Diplomas after one series of examinations before a Board of Examiners in which each body is represented. The regulations as to the curriculum of study, and the fees, are similar to those for the conjoined examinations of the Royal Colleges of Physicians and Surgeons of Edinburgh. The first examinations will be held on October 7th, 1879, and January 6th, April 6th, July 20th, and October 12th, 1880; the second examinations on October 14th, 1879, and January 13th, April 13th, July 27th, and October 19th, 1880.

UNIVERSITIES OF EDINBURGH, GLASGOW, ABERDEEN, AND ST. ANDREW'S.

REGULATIONS RESPECTING DEGREES IN MEDICINE.

[THE Regulations of these Universities are nearly similar. We therefore give but one statement, noticing points of difference when necessary.]

Three Medical Degrees are conferred by each University; viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degree of C.M. is not conferred on any person who does not also at the same time obtain the Degree of Bachelor of Medicine.

Preliminary Education.—The preliminary branches of extraprofessional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and candidates must also pass a satisfactory examination in at least two of the following subjects: Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy.* The examinations on both classes of subjects take place† before the commencement of medical study.‡

* The examinations will embrace the following subjects:—1. English Language, including Writing to Dictation, Grammar, and Composition. 2. Latin: Translation from Cæsar, *De Bello Gallico*, Book II; Virgil, *Æneid*, Book IV; and from an author not presented; Questions in Grammar, History, and Geography; an Exercise in rendering English correctly into Latin, the Latin words being supplied. 3. Arithmetic, to Vulgar and Decimal Fractions inclusive; Algebra, including Simple Equations. 4. Geometry: First two Books of Euclid (questions will be given on the third Book of Euclid, but the answering of them will be optional). 5. One of the following subjects at the option of the candidate. *a*. Natural Philosophy: Mechanics, Hydrostatics, and Pneumatics. *b*. Greek: Xenophon's *Anabasis*, Book II. *c*. French: Voltaire, *Histoire de Charles XII*. *d*. German: Schiller's *Wilhelm Tell*. In the English, Latin, Greek, French, and German papers, special stress will be laid on accurate grammatical knowledge. Translations of English into Greek, French, and German, will be required from candidates examined in these languages.

* The Universities of Glasgow, Aberdeen, and St. Andrew's, include Natural History.

† As far as possible—*Aberdeen.*—At *Glasgow*, the examination in the second class must take place previously to the first professional examination.

‡ In Edinburgh, examinations on these subjects will be held on October 7th, 8th, 9th, and 10th, 1879, and March 9th, 10th, 11th, and 12th, 1880. 1. English: Writing a passage from dictation; Composition, with correction of sentences of bad English; Grammar, with analysis of sentences and derivation and definition of some common English words; History and Geography. 2. Latin: For October 1879 and March 1880, Livy, Book XXIII; for October 1880 and March 1881, Livy, Book XXII; an easy passage from a Latin Prose author, and a single passage of English (translated from a Latin Author) to be re-translated into Latin, the more difficult Latin words being given. 3. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. 4. Elements of Mathematics: Euclid, Books I, II, and III;

A Degree in Arts (not honorary) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University specially recognised by the University Courts, exempts from preliminary examination. The Universities also recognise examination in Arts by any corporate body whose examination has been recognised by the General Medical Council, and also approved by the University Court, so far as regards all subjects comprised in the examination of the said corporate body.

DEGREE OF BACHELOR IN MEDICINE AND MASTER IN SURGERY.

Candidates for the Degree of Bachelor in Medicine or Master in Surgery must have been engaged in medical and surgical study for four years—each *Annus Medicus* being constituted by at least two courses of not less than 100 lectures each, or by one such course, and two courses of not less than 50 lectures each; with the exception of the clinical course, in which lectures are to be given at least twice a week.

Every candidate for the Degree of M.B. and C.M. must give sufficient evidence by certificates—1. That he has studied Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine and of Surgery, Midwifery and the Diseases of Women and Children,* General Pathology,† during courses including not less than 100 lectures; Practical Anatomy, a course of the same duration as the preceding; Practical Chemistry, three months; Practical Midwifery, three months at a Midwifery Hospital, or attendance on six cases under a registered medical practitioner; Clinical Medicine and Clinical Surgery, each course of not less than 100 lectures, or two courses of three months; Medical Jurisprudence, Botany, Natural History, including Zoology, courses of not less than 50 lectures. 2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital with not fewer than 80 patients. 3. That he has been engaged for at least three months in compounding and dispensing drugs at the Laboratory of a Hospital or Dispensary, of a Member of a Surgical College or Faculty, Licentiate of the London or Dublin Societies of Apothecaries, or a Member of the Pharmaceutical Society of Great Britain.* 4. That he has attended, for at least six months, the out-practice of a hospital or the practice of a dispensary, or of a registered practitioner. Evidence of a practical knowledge of vaccination is also required.

One of the four years of medical and surgical study must be in the University granting the degree sought. Another year must be either in the same University, or in some other University entitled to give the Degree of Doctor of Medicine.† [At St. Andrew's, no one can be received as a candidate for the Degree of Bachelor of Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following Universities and Colleges; viz., the Universities of St. Andrew's, Glasgow, Aberdeen, Edinburgh, Oxford, or Cambridge; Trinity College, Dublin; and Queen's College, Belfast, Cork, or Galway.] Attendance during at least six winter months on the medical or surgical practice of a General Hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy; and one year's attendance, to the extent of four of the departments of medical study required, on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Ireland, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the University Court, may be reckoned as one of the four years.‡ All candidates not students of the University attending the lectures of Extra-academical Teachers, must, at the commencement of each year of attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the Matriculation Fee.

Every candidate must deliver, at such time of the year as may be fixed by the Senatus Academicus—1. A declaration, in his own handwriting, that he is twenty-one years of age, or that he will be so on or before the day of graduation; and that he will not be, on the day of graduation, under articles of apprenticeship. 2. A statement of his studies, general and professional, accompanied with proper certificates.§

In the University of Edinburgh, there are four professional examinations. Candidates are examined in writing and *viva voce*—1. On Chemistry, Botany, and Natural History; 2. On Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; 3. On Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; 4. Clinically on Medicine and on Surgery in a hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects. Students may be admitted to examination on the first divisions of these subjects at the end of their second year, and on the second division at the end of their third year. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*. Candidates may be admitted to examination on the first two divisions at the end of their third year, or to the four examinations at the end of the fourth year. If any candidate be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other school of medicine.

In the University of Glasgow, there are also four examinations. Candidates for the Degrees of Bachelor of Medicine and Master in Surgery are examined both in writing and *viva voce*—1. On Chemistry, Botany, and Natural History; 2. On Anatomy and Physiology; 3. On

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and the Elementary Rules of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient. 5. Elements of Dynamics (Mechanics): Elementary Kinematics, Statics, Kinetics, and Hydrostatics; Text-book, Blaikie's *Elements of Dynamics*. At least two of the following subjects. 1. Greek: For October 1879 and March 1880, Xenophon, *Memorabilia*, Book I; for October 1880 and March 1881, Xenophon, *Cyropædia*, Book VIII. 2. French: For October 1879 and March 1880, Molière, *Les Femmes Savantes;* for October 1880 and March 1881, About, *La Mère de la Marquise*. 3. German: For October 1879 and March 1880, Schiller, *Marie Stuart;* for October 1880 and March 1881, Goethe, *Egmont*. 4. Higher Mathematics: Euclid, Books I to VI; Algebra, Trigonometry, and Conic Sections. 5. Natural Philosophy: Balfour Stewart's *Elementary Physics*. 6. Logic: Jevons's *Elementary Lessons in Logic*, or Fraser's *Selections from Berkeley*, 2nd edition, pp. 143—249. 7. Moral Philosophy: For October 1879 and March 1880, Calderwood's *Handbook;* for October 1880 and March 1881, Butler's *Ethical Theory Sermons*, 1, 2, 3. In Latin, Greek, French, and German, questions in Grammar will be set, and passages to be translated from English.

In Glasgow, examinations will take place as follows. *First or Elementary Part:* English: Writing correctly a passage to dictation; Composition of a short Essay on a given theme; Questions in Grammar. Text-book, Morell's *English Grammar*. Latin: Virgil, *Æneid*, Book IV; Sallust, *De Bello Jugurthino*, chap. 1.—Translations of passages from authors not prescribed, and of English passages into Latin, the principal Latin words being supplied; Questions in Grammar and Construction. Arithmetic: The Common Rules, including Vulgar and Decimal Fractions. Elements of Mathematics: Euclid, Books I, II, and III; Algebra, as far as Simple Equations. Elements of Mechanics: Questions, for which Bottomley's *Dynamics* may serve as a text-book. (For Registration, any subject in the second part may be substituted for Mechanics.) *Second Part:* Exercises in two subjects, to be selected by the candidate, are required. Greek: *Cyropædia* of Xenophon, Book II, and the Gospel according to St. John; Translations of passages from Greek authors not prescribed, and of English passages into Greek—the principal Greek words supplied; Questions in Grammar. French: Corneille's *Le Cid*—Translations and Exercises. German: Lessing's *Laocoon*—Translations and Exercises. Higher Mathematics: Euclid, Books I to VI; Algebra, including Quadratic Equations, and the Rudiments of Trigonometry. Natural Philosophy: Such a knowledge of the principles as may be obtained from Bottomley's *Handbook* and Balfour Stewart's *Elementary Lessons in Physics*. Natural History: Geology or Zoology. Text-books—Green, Lyell, Dana, Nicholson, and A. Wilson. Logic: Whately's *Logic*, Books II and III. Moral Philosophy: The General Principles, as stated in Dugald Stewart on the Active Powers or Dr. Fleming's Manual.

At St. Andrew's, the Examination takes place during the first week of the session. The following are the subjects. English: The qualifications of candidates will be tested by the style and general character of their written translations and answers, and by their knowledge of the derivations of words employed in Medicine. Latin: Cicero, *De Officiis*, Book I; Virgil, *Æneid*, Book II. Mathematics: Elementary Rules of Arithmetic, including Vulgar and Decimal Fractions; Euclid: Books I and II; Algebra, as far as Simple Equations and Proportions. Elements of Mechanics: Composition and Resolution of Forces; the Lever, the Wheel and Axle, the Pulley, and the Inclined Plane; and the Centre of Gravity (as in Snowball's *Cambridge Elementary Course of Natural Philosophy*, or in Newth's *First Book of Natural Philosophy*). Greek: Xenophon, *Anabasis*, Books I and II; or any one book of Herodotus, or two books of Homer. French: Voltaire, *Charles XII*. German: Schiller's *Thirty Years' War*, or any one of his dramas. Higher Mathematics: Euclid, Books I, II, III, IV, and V. Algebra, Plane Trigonometry, and the Elementary Propositions on the Straight Line, Circle, and Conic Sections, treated analytically. The Examiners recommend Pott's *Elements of Euclid;* Wood's or Todhunter's *Algebra;* Snowball's, Todhunter's, or Beasley's *Trigonometry;* and Todhunter's *Plane Co-ordinate Geometry*, with the omission of chapters iv, vii, xiv, xv, xvi. Natural Philosophy: Elementary Mechanics, Hydrostatics, and Optics. (A thorough knowledge of the manuals on these subjects by Galbraith and Haughton will enable candidates to pass this portion of the examination.) Natural History: Nicholson's *Advanced Text-book of Zoology*. Logic: Whately's *Logic*, or his *Easy Lessons on Reasoning*. Moral Philosophy: Paley's *Moral Philosophy*, or Macintosh's *Dissertation on the Progress of Ethical Philosophy*.

* Two courses of Midwifery, of three months each, are reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses.

† Or a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine. The course of Pathology is not required at Aberdeen.

* In the Laboratory of an Hospital, or Dispensary of a Registered Medical Practitioner, or of a Member of the Pharmaceutical Society of Great Britain.—*Glasgow.*

† Entitled to grant Degrees in Medicine.—*Glasgow.*

‡ The other two years may be constituted by attendance upon courses in the great Hospital Medical Schools of London or Dublin; and, in default of such attendance, one of the four years may be constituted by attendance on any general Hospital containing not less than eighty beds, provided attendance has been given at the same time on a course of Practical Anatomy.—*Glasgow.*

§ The Universities of Aberdeen and St. Andrew's require an Inaugural Dissertation to be presented previously to the final examination for M.B. In Edinburgh and Glasgow, no Thesis is required until the candidate seeks the Degree of M.D.

Regional Anatomy, Materia Medica and Pharmacy, and Pathology; 4. On Surgery, Clinical Surgery, Medicine, Clinical Medicine, Therapeutics, Midwifery, and Medical Jurisprudence. The examination in Chemistry includes Practical Chemistry; and the examinations in Anatomy and Physiology include Practical Anatomy, Histology, and Practical Physiology; and the examination in Surgery includes Operative Surgery. Students may be examined in the first division of subjects after attending the required courses during one winter and two summer sessions, or during one summer and two winter sessions. Students who have passed the first examination may be examined in the second division after attending the courses during two winter and three summer sessions, or of three winter and two summer sessions, from the time of the commencement of their studies. Students who have passed the two previous examinations may be examined in the third division after the conclusion of the third winter's session of attendance upon medical classes (including those of the required subjects). Students who have passed the examinations in the subjects of the three previous divisions may be examined in the fourth division at the first term for the final examination after the conclusion of their curriculum of study. Candidates who are found unqualified cannot be again admitted to examination until they shall have completed another year of study, or such portion of a year as may be fixed by the examiners.

In the Universities of Aberdeen and St. Andrew's, every candidate for the Degree of Bachelor of Medicine or Master in Surgery must undergo three professional examinations, conducted in writing and *viva voce*. The first examination (not to be taken before the end of the second year of study) includes Chemistry, Botany, Elementary Anatomy, and Materia Medica. The second examination (not to be taken before the end of the third year) includes advanced Anatomy, Physiology, Zoology with Comparative Anatomy, and Surgery. The third examination (not to be taken before the end of the fourth year) includes General Pathology, Surgery, Practice of Medicine, Midwifery, Medical Jurisprudence, Clinical Medicine, and Clinical Surgery. The examinations in Anatomy, Chemistry, Physiology, Botany, Zoology, and Materia Medica are conducted, as far as possible, by demonstrations of objects; and those on Medicine and Surgery, in part, by clinical demonstrations. Candidates may be admitted to examination on the first two divisions at the end of the third year, or to the three examinations at the end of the fourth year. If any candidate be found unqualified, he is not again admitted to examination unless he shall have completed another year of medical study, or such portion of another year as may be prescribed by the examiners.

DEGREE OF DOCTOR OF MEDICINE.

The Degree of Doctor of Medicine may be conferred on any candidate who has obtained the Degree of Bachelor of Medicine, and is of the age of twenty-four years, and has been engaged, subsequently to having received the Degree of Bachelor of Medicine, for at least two years in attendance on a Hospital, or in the Military or Naval Medical Service, or in Medical and Surgical Practice. The candidate must be a Graduate in Arts, or must, before or at the time of obtaining his Degree of Bachelor of Medicine,* have passed a satisfactory examination in Greek and in Logic or Moral Philosophy, and in one at least of the following subjects; viz., French, German, Higher Mathematics, and Natural Philosophy.† At Edinburgh and Glasgow, he must submit to the Medical Faculty a thesis composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree.‡

Candidates who commenced their medical studies in Edinburgh before February 4th, 1861, and in Aberdeen before November 1861, are entitled to be examined for the Degree of Doctor of Medicine, under the regulations then in force in each University respectively. At Edinburgh, candidates settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

The Degree of Doctor of Medicine may be conferred by the University of St. Andrew's on any Registered Medical Practitioner above the age of forty years, whose professional position and experience are such as, in the estimation of the University, to entitle him to that Degree, and who shall, on examination, satisfy the Medical Examiner of the sufficiency of his professional knowledge, provided always that such degrees shall not be conferred on more than ten in any one year. The candidate must produce a certificate of age, and three certificates from medical men of acknowledged reputation as to his professional position and experience. The examination is conducted in writing and *viva voce* on Materia Medica and General Therapeutics, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery and Diseases of Women and Children.

The Graduation Fees in each of the Universities are—for the Degree of M.B., three examinations, each £5 5s.=£15 15s.; for the Degree of C.M., £5 5s. additional; for the Degree of M.D., £5 5s. additional to that for M.B., together with Government stamp duty (£10).

The fee for graduating under the old Regulations in Edinburgh is £25. At St. Andrew's, the fee for the Degree of M.D. under the Section relative to Registered Medical Practitioners is 50 guineas; if the candidate fail to pass, £10 10s. (which is to be paid before the examination) is retained. Stamp duty is included in both cases.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

EXAMINATIONS for the licences of the College in Medicine and Midwifery are held in the week following the first Friday in each month, except August and September. Every candidate for a licence must return his name to the Registrar of the College, and lodge with him his certificates, bank receipt of fees, and his schedule,* at least *four* days before the first Friday in each month. Special examinations will be held at such times as the President may appoint.

LICENCE IN MEDICINE.

Every candidate for the licence of the College to practise Medicine must produce satisfactory evidence—1. Of character, from a Fellow of the College, or from two registered practitioners. 2. Of having passed an examination in general education, held by some one of the examining bodies recognised by the General Medical Council. 3. Of having been engaged during a period of four years in the study of Medicine. 4. Of having attended courses of lectures on the following subjects, at schools recognised by the College: Practical Anatomy, two courses; Physiology or Institutes of Medicine, Chemistry, Practical Chemistry, Materia Medica, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery—each one course. 5. Of having attended for twenty-seven months a recognised Medico-Chirurgical Hospital, in which clinical lectures and clinical instruction in Medicine are given, the attendance not to be for more than nine months in any one year, viz., six winter, and three summer months; including attendance during at least nine months on a clinical hospital which contains wards for the treatment of the infectious fevers. 6. Of having attended Practical Midwifery and Diseases of Women for six months at a Lying-in Hospital or Maternity recognised by the College; or, where such hospital attendance cannot have been obtained during the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; in either case, not less than twenty labour-cases must have been actually attended. 7. Of having lodged the admission fee in the Royal Bank of Ireland to the credit of the College.

Examinations.—The professional examination is divided into two parts: 1. Anatomy, Physiology, Chemistry, and Materia Medica; 2. Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Candidates may be examined in the subjects of the first part at the termination of the second year of study, on producing the certificates in these subjects, or in all the subjects of their education, on the completion of their medical studies. No candidate can be examined in all the subjects of the first and second parts in the same month.

The examination in the subjects of the first part is conducted as follows: *Monday*, Printed papers of six questions on distinct subjects. *Tuesday*, Practical examination. Each candidate must demonstrate on the dead subject, recognise specimens of materia medica, and perform chemical manipulations. *Wednesday*, Oral examination. The examination in the subjects of the second part for the licence in medicine

* Or within three years thereafter.—*St. Andrew's.*

† In Greek and in Logic or Moral Philosophy, and in any one of the other optional subjects in the examination in General Education.—*Glasgow.* Natural History added in optional subjects.—*Aberdeen and St. Andrew's.*

‡ No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's Degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise reference to the publications quoted, so that due verification may be facilitated.—*Edinburgh.* There is a similar regulation in the University of Glasgow.

* Blank schedules are to be obtained on application at the College, or by letter addressed to the Registrar, College Hall, Kildare Street, Dublin. Candidates applying by letter should state whether they already possess any qualification.

is conducted as follows: *Monday*, Printed papers of six questions on distinct subjects. *Tuesday*, Clinical examination in a hospital. *Wednesday*, Oral examination. Each candidate is examined separately, and is required to recognise pathological specimens and undergo such other practical tests as the examiners shall select.

Exempted Cases.—Candidates qualified as follows are required to undergo the second part only of the professional examination, viz.: 1. Graduates in Medicine of any University in the United Kingdom, or of any Foreign University approved by the College;* 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh; 3. Graduates or Licentiates in Surgery; 4. Candidates who, having completed the curriculum laid down above, shall have passed the previous professional examination or examinations of any of the licensing medical authorities in the United Kingdom. Candidates thus qualified, as specified in Sections 1, 2, and 3, must fill up a schedule and present their registration certificate (or their medical or surgical qualification), as well as certificates of character, of practical midwifery, and of attendance on a clinical hospital which receives cases of fever. Candidates whose case is met by Section 4 must produce, in addition to the certificates required from candidates for the licence, a certificate from the licensing medical authority to the effect that such previous professional examination has been successfully passed.

Candidates who have passed the examinations for the licence in medicine must attend at the College on the Friday following, to subscribe the declaration, and to sign the roll of licentiates in medicine.

Unsuccessful candidates may be admitted to re-examination after not less than two months.

LICENCE IN MIDWIFERY.

Candidates for the licence in midwifery, who are not licentiates in medicine, may be admitted to examination on the following qualifications: 1. The degree or licence in medicine or surgery from any University or College of Physicians or Surgeons in the United Kingdom; 2. Testimonials as to character; 3. Certificates of having attended (*a*) a course of lectures on midwifery in a school recognised by the College; (*b*) practical midwifery and diseases of women, as in Section 6 of the regulations for the Licence in Medicine.

Candidates who are licentiates in medicine of the College, or who have passed the examination for such licence, may be admitted to examination for the licence in midwifery on lodging their fees and signifying their wish to the registrar a week at least before such examination.

The examination for the licence in midwifery is conducted as follows: *Thursday*, Printed papers of six questions, each relating to a distinct subject; oral examination.

Registered practitioners of *five* years' standing are admitted to examination for the licence in medicine or the licence in midwifery on producing their certificate of registration with satisfactory reference, and are exempted from the examination by printed questions.

The fees are—For the licence to practise medicine, £15 15s., which may be divided as follows, viz.: examination at the termination of the first period of study, £5 5s.; final examination, £10 10s. Examination for the licence to practise midwifery, £3 3s. Examination for the licences in medicine and midwifery, if obtained within a month, to be lodged in one sum,† £16 16s. Special examination for the licence to practise medicine, £21; for the licence to practise midwifery, £5 5s. The admission fee, less the sum paid to the examiners, is returned to any candidate rejected at any of the College examinations.

* Foreign univererersities and colleges already recognised by the College are: the Universities of Bern; France; Geneva; Zurich; Melbourne; Trinity College, Toronto; M'Gill; New York; Pennsylvania; Harvard; New York Medical College (M.D.).

† Any candidate rejected at the Examination for the Licence in Medicine must pay the full fee of £3 3s. for the Licence in Midwifery.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

LETTERS TESTIMONIAL.

EVERY person requiring to be registered as a pupil on the College books shall, if the Council think fit, be so registered on the payment of five guineas. Registered pupils are admitted to the Preliminary Examination of the College without further fee, and are permitted to study each weekday in the Museum, to read in the Library; also to attend the Lectures on Comparative Anatomy, and to obtain a certificate for such attendance, without payment of any fee. No student can be admitted as a candidate to any of the stated examinations, or to the special examinations for the Letters Testimonial, until he has been enrolled as a registered pupil, and also passed a preliminary examination.

Registered pupils may present themselves, without payment of any further fee, for the Preliminary Examination at any period previous to their first professional examination; but are expected to do so before the commencement of professional studies. Students who are not registered pupils are admitted to the Preliminary Examination upon payment of one guinea.* Students who have passed any of the Preliminary Examinations recognised by the General Medical Council, in which the Greek language is compulsory, are exempt from any further preliminary examination, and are entitled to become registered pupils.

Candidates for Letters Testimonial may present themselves either at a special or at a stated examination.

Special Examinations.—Every registered pupil shall be admitted, upon payment of a special fee of £5 5s. in addition to the ordinary fee of £21, to a special examination for Letters Testimonial, on producing evidence that he has passed a Preliminary Examination in which Greek is compulsory; that he has been engaged in the study of his profession for not less than four years; that he has attended during three years a recognised Hospital where Clinical Instruction is given; that he has attended three courses each of Lectures on Anatomy and Physiology, and on the Theory and Practice of Surgery and of Dissections, accompanied by demonstrations; two courses of Lectures on Chemistry, or one course of Lectures on General and one on Practical Chemistry; one course each of Lectures on Materia Medica, Practice of Medicine, Midwifery, Medical Jurisprudence, and Botany; and that he has received instruction in vaccination under a recognised vaccinator, and is practically acquainted therewith.

The subjects for examination are the same as for the Stated Examinations. A rejected candidate will only be entitled to receive back £15 15s.

Stated Examinations are held in April, July, and November. Candidates must be registered pupils, and are divided into two classes—Junior and Senior.

The Junior Class must produce certificates of having passed a Preliminary Examination in which the Greek language is compulsory, and of having attended three courses each of Lectures on Anatomy and Physiology, and on Practical Anatomy with Dissections; two courses of Lectures on Chemistry; one course each of Lectures on Materia Medica, Botany, and Forensic Medicine. This class is examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry.

The fee for this examination is £5 5s., in addition to the registration fee; it is not returned in case of rejection, but is allowed the candidate in case he presents himself a second time for examination.

The Senior Class must produce certificates of having attended three courses of Lectures on the Theory and Practice of Surgery, one course each of Lectures on the Practice of Medicine, and on Midwifery; also of attendance on a recognised Hospital for three Winter and three Summer Sessions. This class is examined in Surgery, Operative Surgery and Surgical Appliances, Practice of Medicine, Medical Jurisprudence, and Prescriptions.

The fee for the Senior Class Examination is £15 15s., returnable to the candidate in case of rejection.

The examinations are partly written and partly oral.

In addition to the foregoing fees, a fee of £1 1s. is paid to the Registrar. Every candidate rejected at a Stated Examination, on applying for re-examination, must pay £2 2s., in addition to the regular fees.

FELLOWSHIP.

Every registered pupil or licentiate may be admitted to examination for the Fellowship on producing a certificate that he is twenty-five years of age, and that he is a Bachelor of Arts, or has been examined with a view to ascertain that he has obtained a liberal preliminary education; also a certificate, signed by two or more Fellows of the College, of general good conduct. He must have been engaged in the acquisition of professional knowledge not less than six years (five years being required in the case of Bachelor of Arts), during three of which he must have studied in one or more of the schools and hospitals recognised by the Council. The other three years may have been passed in any approved school. He must also have acted as House-Surgeon or Dresser in a recognised hospital; and must have attended the lectures required of candidates for Letters Testimonial, together with one course of

* The following are the subjects of the Preliminary Examination. The English Language, including Grammar and Composition; Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations; Geometry, first two Books of Euclid; Greek and Latin, including Translation and Grammar. Greek: The Gospel of St. John, or the First Book of Xenophon's *Anabasis*, or the Dialogue of Lucian, entitled *Menippus or the Necromancer*. Latin: The First and Second Books of the *Æneid* of Virgil, or the *Jugurthine War* of Sallust, or the Third Book of Livy. These examinations are held on the third Wednesday in January, April, July, and October in each year.

lectures on Comparative Anatomy, and one on Natural Philosophy. He must present a thesis on some medical subject, or clinical reports, with observations of six or more medical or surgical cases taken by himself.

Licentiates of the College, who cannot show that they have followed the course of study specified, may, at the expiration of ten years from the date of their diploma, be admitted to the examination for the Fellowship, on producing satisfactory evidence that they have conducted themselves honourably in the practice of their profession.

Each candidate for the Fellowship is examined on two days. The subjects of the first examination are Anatomy and Physiology (Human and Comparative); those of the second—Pathology, Therapeutics, the Theory and Practice of Medicine and Surgery, and such other branch of medical science as the Council may direct. The examinations are both oral and written. The candidates must perform Dissections and Operations on the dead bodies. Rejected candidates cannot present themselves a second time until after one year.

The fee payable is £21 if the candidate be a Licentiate, or £36 15s. if he be only a registered pupil; provided in either case he intends to reside beyond ten miles from Dublin. Should the candidate intend to reside in Dublin, or within ten miles thereof, he pays, if a Licentiate, £31 10s.; if only a registered pupil, £47 5s. Fellows entering on the country list, who may subsequently settle as practitioners in Dublin, or within ten miles thereof, must pay £10 10s. to the College.

DIPLOMA IN MIDWIFERY.

Any Fellow or Licentiate of the College is admissible to the examination for a Diploma in Midwifery on producing certificates of having attended a course of Lectures on Midwifery and Diseases of Women and Children, the Practice (for six months) of a Lying-in Hospital, or of a Dispensary for Lying-in Women and Children, and that he has attended at least thirty labours.

Candidates are examined on the Organisation of the Female; the Growth and Peculiarities of the Fœtus; the Practice of Midwifery, and the Diseases of Women and Children; and, if approved of, receive a licence or diploma.

A rejected candidate is not again admitted to examination within three months, nor unless he produces satisfactory evidence of having been engaged in the study of Midwifery subsequently to his rejection.

The fee is £1 6s. if the Midwifery Diploma be taken out within one month from the date of the Letters Testimonial; afterwards it is £2 2s.

APOTHECARIES' HALL OF IRELAND.

EVERY candidate for the Licence to Practice is required to undergo a Preliminary and a Professional Education and Examination.* The Arts Examination will be held at the Hall four times in the year; viz., the third Thursday in the months of January, April, July, and October. Unsuccessful candidates will be remitted to their studies for six months.

Professional Education and Examinations.—Every candidate for the Licence to Practise Medicine and Pharmacy must produce certificates: 1. Of having passed an examination in Arts previously to entering on professional study. 2. Of registration as a medical student. 3. Of being at least twenty-one years of age, and of good moral character. 4. Of pupilage to a qualified apothecary, or of having been otherwise engaged at Practical Pharmacy for twelve months subsequently to having passed the examination in Arts. 5. Of having spent four years in professional study. 6. Of having attended the following courses, viz.: Chemistry, Principles and Practice of Medicine and Surgery, each during one winter session; Anatomy and Physiology, Demonstrations and Dissections, each during two winter sessions; Botany and Natural History, and Forensic Medicine, each during one summer session; Practical Chemistry (in a recognised Laboratory) and Materia Medica, each during three months; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised Hospital (twenty cases); instruction in Vaccination. 7. Of having attended, at a recognised Hospital or Hospitals, the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. 8. Of Practical Study, with care of patients, as apprentice, pupil, assistant, clinical clerk, or dresser in Hospital, Dispensary, or with a registered Practitioner. 9. Of having performed the operation of Vaccination successfully under a recognised Vaccinator.

The examination for the Licence to Practise is divided into two parts. The first part comprehends Chemistry, including Physics, Botany, Anatomy, Physiology, Materia Medica, and Pharmacy; the second, Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene. The first part may be undergone after the candidate has passed an examination in Arts and attended the requisite courses of Lectures; and the second after the completion of his studies at the termination of the fourth winter session. Candidates may undergo an examination in any of the subjects included in the first part before the end of the first year of professional study, and defer the remaining subjects; but all the subjects included in the first part must be passed within the first two years of studentship.

Candidates at the examination on Anatomy are liable to be called on to perform Dissections; and at the examination on Surgery to perform one or more Operations on the dead subject.

The professional examinations will be held on the first and second Mondays in January, April, July, and October. The first two hours of each day will be devoted to writing answers to papers, and afterwards there will be an oral and practical examination on the subjects.

Candidates who fail to pass the first part of the professional examination will be remitted to their studies for three months; and, at the final examination, for six months.

Doctors of Medicine of any of the Universities of the United Kingdom, and Licentiates of a Royal College of Physicians, or Surgeons of any of the Royal Colleges of Surgeons, whose qualifications as such appear in the *Medical Register*, and who, having first passed an examination in Arts, have also spent twelve months at practical Pharmacy, may obtain the Licence of the Hall by undergoing an examination—the former in Pharmacy, and the latter in Medicine and Pharmacy. Licentiates of the London Society of Apothecaries are admitted *ad eundem*, on presenting the certificate of their registration.

Candidates must lodge their testimonials, and the fees, and enrol their names and addresses with Mr. Charles Wright, at the Hall, in Dublin, a clear week prior to the day of examination.

UNIVERSITY OF DUBLIN.

THE degrees in Medicine and Surgery granted by the University are: 1. Bachelor of Medicine; 2. Doctor of Medicine; 3. Bachelor in Surgery; 4. Master in Surgery; 5. Master in Obstetric Science. It also grants Licences in Medicine, Surgery, and Obstetric Science.

BACHELOR IN MEDICINE.

A candidate for the Degree of Bachelor in Medicine must be a Graduate in Arts, and may obtain the Degree of Bachelor in Medicine at the same commencement as that at which he receives his Degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education is of four years' duration, and comprises attendance on a course of each of the following lectures: *Winter*—Anatomy; Practical Anatomy; Theoretical and Operative Surgery; Chemistry; Practical Course of Institutes of Medicine; Practice of Medicine; Midwifery. *Summer*—Botany; Institutes of Medicine; Comparative Anatomy; Materia Medica and Pharmacy; Medical Jurisprudence. *Term Courses*—Heat (Michaelmas); Electricity and Magnetism (Hilary). Six months' dissection, and three months' laboratory instruction in Chemistry. Three courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board.* A certificate of personal attendance on fever cases, with names and dates of cases. Six months' instruction in Practical Midwifery,† including clinical lectures. Practical instruction in Vaccination. Any of the winter or summer courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows.‡

* The following are the subjects of Preliminary Examination:—*Compulsory.* 1. English: Grammar, Composition, and the leading events of English History. 2. Arithmetic and Algebra: Arithmetic, including Vulgar and Decimal Fractions; Algebra, including Simple Equations. 3. Geometry: First Two Books of Euclid. 4. Latin: The First Two Books of Livy, or the First Two Books of the *Æneid* of Virgil, and Latin Prose Composition. 5. Greek: the First Book of the *Anabasis* of Xenophon, or the First Book of the *Iliad* of Homer. 6. French: *Charles XII, Histoire de Vie*, of Voltaire, or *Voyage en Orient* of Lamartine. 7. German: *Wilhelm Tell* of Schiller.—Candidates will be examined in either French or German, as they may select.—*Optional.* 1. Natural Philosophy: Mechanics, Hydrostatics, Pneumatics, and Hydraulics. 2. Natural History: The Classification, Elementary Structure, and General Physiology of Vegetables and Animals.

* The following Hospitals are recognised:—Sir Patrick Dun's Hospital, Meath Hospital, House of Industry Hospitals, Dr. Steevens' Hospital, Jervis Street Infirmary, City of Dublin Hospital, Mercer's Hospital, St. Vincent's Hospital, Adelaide Hospital, Mater Misericordiæ Hospital, St. Mark's Ophthalmic Hospital, and the National Eye and Ear Infirmary.

† Certificates of Practical Midwifery are received from the Rotunda Hospital, the Coombe Hospital, Sir P. Dun's Hospital Maternity, Dr. Steevens' Hospital Maternity.

‡ The following schools, in addition to the School of Physic of Trinity College, are recognised:—The School of the Royal College of Surgeons in Ireland, the Carmichael School, the school of Dr. Steevens' Hospital, the School of the Catholic University. The recognition of schools and hospitals is conditional on the students

Students who shall have diligently attended the practice of a recognised county infirmary for two years previous to the commencement of their metropolitan medical studies are allowed to count those two years as equivalent to one year spent in a recognised metropolitan hospital.

Candidates for the Degree of M.B. must pass the Previous Medical Examination and the Bachelor of Medicine Examination.

The *Previous Examination* comprises Botany and Materia Medica; Physics and Chemistry; Descriptive Anatomy and Institutes of Medicine (Practical Histology and Physiology). The Examination in Descriptive Anatomy includes examination on the dead subject. It is not necessary that the student should pass in all these subjects at the same examination.

There are three Previous (Half M.B.) Medical Examinations held each year, immediately before each M.B. examination, together with a Supplemental Examination in the same subjects, at the close of the summer session.

Bachelor of Medicine Examination.—The candidate for the M.B. Examination must have previously passed the Previous Medical Examination in all the subjects; and have lodged with the Medical Registrar, on a certain day to be duly advertised, Certificates of Attendance upon all the courses of study above prescribed.

Candidates must pass a final examination in the following subjects: Physiological Anatomy; Practice of Medicine; Surgery; Midwifery; Medical Jurisprudence; Institutes of Medicine (Pathology and Hygiene). The fee for the *Liceat ad Examinandum* is £5; for the Degree of M.B., £11.

Members of the Royal Colleges of Physicians or Surgeons of Dublin, London, or Edinburgh, who are Graduates in Arts of Oxford, Cambridge, or Dublin, are admissible to the Examination for M.B. They must first take the B.A. Degree *ad eundem*.

DOCTOR IN MEDICINE.

A Doctor in Medicine must be a Bachelor in Medicine of three years' standing, or have been qualified to take the Degree of Bachelor in Medicine for three years. He must also read a Thesis publicly before the Regius Professor of Physic, or must undergo an examination before the Regius Professor of Physic. The total amount of fees for this degree is £13.

BACHELOR IN SURGERY.

A Bachelor in Surgery must be a Bachelor in Arts, and have spent four years in the study of Surgery and Anatomy. He must also pass a public examination. The Curriculum of study comprises the following, in addition to the complete Course for the Degree of Bachelor in Medicine: Theoretical and Operative Surgery and Ophthalmic Surgery, each one course; Dissections, two courses. Candidates are required to perform surgical operations on the dead subject, and are examined in Bandaging and Minor Surgery, and in Surgical Pathology. Candidates for the Degree of Bachelor in Surgery, who have already passed the examination for the Degree of Bachelor in Medicine are examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5; for the Degree of Bachelor in Surgery, £5.

MASTER IN SURGERY.

A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the Degree of Bachelor in Surgery for three years; and must read a Thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor. Fee for the Degree of Master in Surgery, £11.

MASTER IN OBSTETRIC SCIENCE.

A Master in Obstetric Science must have passed the M.B. and B.Ch. Examinations, and produce certificates of having attended: 1. One winter course in Midwifery; 2. Six months' practice in a recognised Lying-in Hospital or Maternity; 3. A summer course of Obstetric Medicine and Surgery; 4. Two months' practice in the Cowpock Institution. Existing Graduates in Medicine, of the standing of M.D., may present themselves for examination without producing certificates of attending 3 and 4. Fee for the Degree of Master in Obstetric Science, £5.

UNIVERSITY LICENCES.

Candidates for the Licences in Medicine, Surgery, or Obstetric Science must be matriculated in Medicine, and must have completed two years in Arts and four years in Medical Studies.

Licentiate in Medicine.—The medical course and examination necessary for the Licence in Medicine are the same as for the Degree of M.B.

being furnished with *bonâ fide* certificates of regular attendance equivalent to that required by the University; *i.e.*, three-fourths of the entire Lectures in each course.

A Licentiate in Medicine, on completing his Course in Arts, and proceeding to the Degree of B.A., may become a Bachelor in Medicine, on paying the degree fees, without further examination in Medicine.

Licentiate in Surgery.—The surgical course and examination are the same as for the Degree of Bachelor in Surgery.

Licentiate in Obstetric Science.—The Course of study and examination are the same as for the Degree in Obstetric Science.

Fee for the *Liceat ad Examinandum* in Medicine or Surgery, £5; for the Licence in each of the three cases, £5.

QUEEN'S UNIVERSITY IN IRELAND.

DEGREES IN MEDICINE AND SURGERY.

THIS University grants the Degrees of Doctor in Medicine and Master in Surgery, and a Diploma in Midwifery. It includes three Colleges—the Queen's Colleges of Belfast, Cork, and Galway—each of which possesses a Faculty of Medicine. The curriculum of medical study extends over a period of four years, and is divided into two periods of two years each. The first period comprises attendance on Chemistry, Botany, Anatomy and Physiology, Practical Anatomy, Materia Medica and Pharmacy. The second period comprises attendance on Anatomy and Physiology, Practical Anatomy, Theory and Practice of Surgery, Midwifery, Theory and Practice of Medicine, Medical Jurisprudence. At least two of the above courses of lectures must be attended in one of the Queen's Colleges; the remainder may be taken, at the option of the candidate, in any University, College, or School, recognised by the Senate of the Queen's University. Candidates are required, before graduating, to have also attended, in one of the Colleges of the Queen's University, Lectures on Experimental Physics and one Modern Continental Language, and to have passed the Matriculation Examination. They are further required to attend, during the first period, Practical Chemistry in a recognised Laboratory, and the practice during six months of a recognised Medico-Chirurgical Hospital containing at least sixty beds, together with clinical lectures delivered therein; and, during the second period, a recognised Midwifery Hospital, with clinical lectures therein delivered, for three months; or a Midwifery Dispensary for the same period; or ten cases of labour, under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated; and eighteen months' practice of a recognised Medico-Chirurgical Hospital containing at least sixty beds, with clinical instruction.

Candidates must pass three Examinations — the First University Examination, the Second University Examination, and the Degree Examination.

The First University Examination may be passed either in June or in September. It comprises a Modern Language, Experimental Physics, Zoology, and Botany. Students may present themselves for examination at any time after the close of the first Winter Session. Before being admitted to examination, each candidate must produce satisfactory evidence of having completed the prescribed course of study in the subjects of examination.

The Second University Examination may be passed either in June or September. It comprises Anatomy, Physiology, Materia Medica, and Chemistry; to which will be added Zoology and Botany in the examination of candidates who have not previously passed the First University Examination. Candidates who are in this position may either undergo their examination in Modern Languages and Experimental Physics as a part of the Second Examination, or may present themselves for examination in these subjects at any time between the Second University Examination and the Degree Examination. Students may present themselves for the Second University Examination at the termination of the first period of the curriculum, or at any subsequent period; but no student can postpone his Second University Examination until he presents himself for his Degree Examination, unless the Senate shall have passed a grace permitting him to do so. Before being admitted to examination, each candidate must produce satisfactory evidence of having completed the course recommended for study during the first period.

Examinations for the Degree of M.D., M.Ch., and the Diploma in Midwifery, will be held in June and September. The Fee for each Degree is £5, and the Fee for the Diploma in Midwifery is £2. Each Fee must be lodged with the Secretary before the corresponding examination begins.

Degrees in Surgery and Diplomas in Midwifery will only be conferred on candidates who hold the Degree of Doctor in Medicine of the University. The Examination for the Degree of M.D. comprises the subjects recommended for study during the second period of medical education. The Examination for the Degree of M.Ch. com-

prises an examination in the Theory and Practice of Surgery, including Operative and Clinical Surgery.* The Examination for the Diploma in Midwifery comprises an examination in the Theory and Practice of Midwifery and the use of obstetrical instruments and appliances.†

Candidates who graduate with honours will be arranged in two classes. Candidates who take a First Class will receive a Medal and Prize; candidates who take a Second Class will receive a Prize. Both Honour and Pass Examinations are held in September. The Examination held in June is a Pass Examination.

Two Exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be awarded annually at the First University Examination in Medicine. The regulations concerning these Exhibitions, and all other information, will be found in the *Queen's University Calendar*, or may be obtained by application to the Secretary, Queen's University, Dublin Castle.

NOTES CONCERNING THE HOSPITALS AND MEDICAL SCHOOLS IN LONDON.

In addition to the Tables of the Classes, hours of attendance, and fees, given at pages 416-19, we subjoin the points of most interest in the Programmes issued by the several Medical Schools. At each hospital, clinical instruction in Medicine, Surgery, and Midwifery, is given in the wards and in the out-patient department; and also in various special departments, as stated in the table at pages 416-17, and in the subjoined notes. All hospital appointments, except where otherwise specified, are made without extra fee.

ST. BARTHOLOMEW'S HOSPITAL.—*The Hospital* contains 710 beds: viz., 227 for medical cases, 322 for surgical cases, 26 for diseases of the eye, 20 for diseases of women, and 81 for syphilitic cases; while 34 are at the Convalescent Hospital at Highgate. Children are admitted into both the medical and surgical wards.

Museums, etc.—The Anatomical Museum, and the Museum of Materia Medica and of Botany, are open to students daily from 10 A.M. to 4 P.M. The Reading Room is open every day; during winter from 10 to 5; summer, 9 to 5; vacations, 10 to 2.30.

College.—Students are admitted to residence on the recommendation of a medical officer of the hospital, which may be obtained by adducing satisfactory evidence of good moral character. The entrance fee is £2 2s.; and a deposit of £3 3s. is required, which will be returned to the student on leaving the College, subject to deduction of whole or part for wilful damage to furniture.

Special Departments, etc.—Surgical consultations are held on Thursdays at 1.30. In addition to the courses mentioned at page 416, Dr. Matthews Duncan teaches Practical Gynæcology in the wards for Diseases of Women, on Tuesdays, Thursdays, and Saturdays. The Demonstrator of Morbid Anatomy gives a detailed demonstration at 11 on Fridays, winter and summer. The Ophthalmic wards are visited at 1.30, on Tuesdays and Thursdays by Mr. Power, and on Thursdays and Saturdays by Mr. Vernon; the ophthalmic out-patients are seen at 2 o'clock, on Tuesdays and Thursdays by Mr. Power, and on Wednesdays and Saturdays by Mr. Vernon. Mr. Willett sees orthopædic cases at 12.30 on Fridays, and Dr. Brunton patients with diseases of the larynx at 11.30 on Wednesdays.

Appointments.—Four House-Physicians and four House-Surgeons (who must be qualified to practise), and an Assistant Chloroformist, are appointed annually. A resident Midwifery Assistant and an Ophthalmic House-Surgeon are appointed every six months. Each of these officers is provided with rooms, and receives a salary of £25 a year. The Clinical Clerks to the medical in-patients, and the Clerks to the Physician-Accoucheur, are chosen from the most diligent students. Sixteen dressers to the surgical in-patients and the surgical casualty department are selected each year from the students of the second year. Other in-patient dresserships may be obtained by payment of the usual fees (see p. 418). There are also clerks and dressers to the Assistant-Physicians and Assistant-Surgeons in the general and special departments.

* Candidates for the Degree of Master in Surgery, who obtained the Degree of M.D. in this University before January 1st, 1865, will be exempted from the examination in Surgery. Candidates for the Degree in Surgery, who graduated in Medicine at a later period, will be required to undergo a paper and oral examination in the Theory and Practice of Surgery, and an examination in Operative and Clinical Surgery.

† Candidates for the Diploma in Midwifery who obtained the Degree of M.D. in the University before January 1st, 1872, will be exempted from this further examination.

Exhibitions, Scholarships, and Prizes.—Two Open Scholarships in Science, value of each £130, tenable for one year, to be competed for on September 25th. For one of the scholarships, candidates must be under twenty; for the other, under twenty-five years of age. The subjects are Physics, Chemistry (theoretical and practical), Botany, and Zoology. The successful candidates must enter at St. Bartholomew's Hospital in the October succeeding the examination. Jeaffreson Exhibition: £50; examination on September 25th; subjects, Latin, Mathematics, and any two of the following languages—Greek, French, German. Candidates for the Open Scholarships and the Jeaffreson Exhibition must not have entered to the hospital practice of any metropolitan medical school. Preliminary Scientific Exhibition, £50, for one year, on October 21st, for students of less than six months' standing; holder of Open Scholarship not eligible; subjects, Physics, Chemistry (theoretical and practical), Botany, and Zoology. Three Junior Scholarships, of the value of £50, £30, and £20, after the general examination in first year's subjects at the end of the winter and summer sessions. Treasurer's Prize for Practical Anatomy, junior. *Second Year.*—Foster Prize for Practical Anatomy, senior. *Second or Third Year.*—Senior Scholarship, value £50, in Anatomy, Physiology, and Chemistry. Wix Prize: subject, "The Works and Life of Percival Pott". Hichens Prize: subject, Bishop Butler's *Analogy*. *Third or Fourth Year.*—Lawrence Scholarship and Gold Medal, value £42: subjects, Medicine, Surgery, and Midwifery. Two Brackenbury Scholarships in Medicine and Surgery. Candidates for the Lawrence and Brackenbury Scholarships may not compete before the end of the third winter session, nor later than the beginning of the fifth winter session in the hospital. Bentley Prize, for the best report of not less than twelve surgical cases occurring in the hospital during the previous year. The Kirkes Gold Medal for Clinical Medicine; open to students of not less than two or not more than four years' standing.

Examinations.—Students preparing for their examinations are arranged in classes, and examined by the lecturers, demonstrators, and the medical tutor, Dr. Moore. All students of the first year are examined at the close of the first winter and first summer sessions. Classes are held to prepare candidates for the examinations of the University of London.

The Abernethian Society, composed of the teachers and students of the hospital, meets every Thursday at 8 P.M. during the winter.

Communications regarding the Hospital and Medical College must be addressed to Dr. Norman Moore, the Warden of the College, St. Bartholomew's Hospital.

CHARING CROSS HOSPITAL.—The hospital contains 180 beds, of which some are set apart for Diseases of Women and of Children.

The Library is open daily from 9 A.M. to 4.30 P.M.

Special Courses.—Matriculated students* are admitted to the practice of the Royal Westminster Ophthalmic Hospital (50 beds). Clinical instruction in the Diseases of Children is given twice a week by Dr. Houghton.—Dr. Irvine will give practical instruction in Auscultation in Health and Disease on Tuesdays, at 1.15, and, in February and March, a course of six demonstrations on the Use of the Laryngoscope.—Practical instruction in preparing and mounting morbid specimens for microscopical examination will be given by Mr. Cantlie during the summer.—Dr. Houghton will instruct in case-taking.—Mr. Amphlett will give instruction in the use of the Ophthalmoscope.—Mr. Woodhouse Braine and Mr. G. H. Bailey give instruction in the administration of Anæsthetics.

Appointments.—A Medical and a Surgical Registrar, each with a salary of £40 a year, are appointed. Resident Medical and Surgical Officers (who must be qualified to practise), and Obstetrical Officers, Assistant Medical and Surgical Officers, are appointed by competitive examination for six months. Clinical Clerks and Surgeons' Dressers are appointed for four months, and a Pathological Assistant for three months. All Students must hold an In-Patient Clerkship and an In-Patient Dressership, after the first professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistant to the Dental Surgeon for three months.

Scholarships, Medals, and Prizes.—Two Entrance Scholarships, value £30 and £20, tenable for one year, awarded in October, after examination in English, Latin, French or German, and Mathematics, with either Chemistry, Mechanics, German, or French. Intending candidates must give notice before September 20th. The Llewellyn Scholarship of £25, open to all matriculated students who have just completed their second year; examination in Descriptive and Surgical

* Matriculated students are those who enter for their entire medical education at the hospital. They pay a lower amount of fees, are eligible for hospital appointments, and are admitted without extra fee to special courses of instruction and to the lectures on Psychological Medicine.

Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery. The Golding Scholarship, £15 a year, open to all matriculated students who have just completed their first year; subjects of examination, Descriptive Anatomy, Physiology, Materia Medica, and Chemistry. The Pereira Prize of £5, to matriculated students who have completed their third year, for the best clinical reports of cases in the hospital (medical and surgical in alternate years). The Governors' Clinical Gold Medal; examination on subjects of clinical lectures during the session, and on medical and surgical cases in the hospital. Silver and Bronze Medals and Certificates of Honour in all the classes.

Residence.—Arrangements have been made with several members of the hospital staff to receive resident pupils.

Information may be had of the Dean, Mr. Francis Hird; or the Sub-Dean, Dr. J. P. Irvine.

ST. GEORGE'S HOSPITAL.—*The Hospital* contains 353 beds, of which 205 are devoted to surgical, and 148 to medical, cases. There are special wards for cases of diseases of the eye and diseases of women. Children are received into the women's wards.

The Library and Reading Room and the Museum are open daily.

Special Subjects.—Orthopædic out-patients are seen by Mr. J. W. Haward every Wednesday at 2.—Dr. Whipham sees patients with Diseases of the Throat on Mondays at 2.—Dr. Ralfe will give a course of demonstrations on Physiological Chemistry on Monday, Wednesday, and Friday at 10 during the winter session.—Mr. Turner will give demonstrations in Osteology daily (except Mondays) at 10.

Hospital Appointments.—House-Physicians, House-Surgeons, an Assistant House Physician, and an Assistant House-Surgeon, half-yearly, from among the perpetual pupils.* The House-Physicians and House-Surgeons are appointed on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit 50 guineas with the Treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties.—An Obstetric Assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100.—A Curator of the Pathological Museum, a Medical and a Surgical Registrar, and a Demonstrator of Anatomy are appointed annually from among the senior pupils, each with a salary of £50.—A Microscopical Pathologist and an Ophthalmic Registrar are appointed annually, each with a salary of £25.—Two Assistant Medical Registrars are appointed every six months by competition. This office must be held before competing for that of House-Physician.—An Assistant Surgical Registrar is also appointed; this office must be held, alternately with that of Ophthalmic Assistant, before competing for the office of Assistant House-Surgeon.—A Senior Assistant Demonstrator is appointed at a salary of £20.—The pupils of the hospital are placed under the superintendence of the physicians and surgeons in rotation, and have charge of cases as Clerks and Dressers.

Exhibitions and Prizes.—The William Brown Exhibitions: 1. £100 *per annum* for two years, open to perpetual pupils of the hospital under the age of 25, who have become entitled to be registered under the Medical Act within two years previously; examinations in July; subjects, Medicine, Midwifery, and Surgery, including Ophthalmic Surgery. 2. £40 *per annum* for three years to perpetual pupils of the third and fourth winter sessions.—Brackenbury Prizes in Medicine and in Surgery, each, interest of £1,000 three per cent. consols, open to all pupils who have not completed the fourth year; examinations in May.—Sir Charles Clarke's Prize, interest of £200 annually, for good conduct; awarded at end of summer session.—The Thompson Silver Medal, and the Treasurer's Prize, at close of winter session, for proficiency in the clinical examination of three Medical and three Surgical cases (including one case of Obstetric Medicine and one of Ophthalmic Surgery).—Sir Benjamin Brodie's Clinical Prize in Surgery, for the best report (wth notes) of not more than twelve surgical cases in the hospital during the preceding twelve months.—Dr. Acland's Clinical Prize in Medicine, for the best record of not more than twelve cases of disease treated in the preceding twelve months.—(The Clinical Prizes are open to fourth year's students. Reports must be sent in on or before May 1st.)—The Henry Charles Johnson Memorial Prize, for Practical Anatomy.—General Proficiency Prizes, £10 10s., for students of each year: first year, Anatomy, Physiology, Chemistry, and Botany; second year, Anatomy, Physiology, Chemistry, and Materia Medica; third year, Medicine, Surgery, Pathology, and Midwifery.

The Medical Society meets once a week at the hospital during the winter session. All former and present pupils of St. George's Hospital are eligible as members.

Further Information may be obtained from Dr. Barclay, the Treasurer of the School; from Dr. Wadham, the Dean; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

* The physicians' perpetual pupils are alone eligible for the office of House-Physician, and the surgeons' perpetual pupils for the office of House-Surgeon. All pupils of the hospital may become candidates for the offices of Medical and Surgical Registrar, Obstetric Assistant, Curator of the Museum, and Demonstrator of Anatomy. They are also entitled to attendance on the Maternity Department, and the practice of Ophthalmic, Aural, and Dental Surgery, without additional fee.

GUY'S HOSPITAL.—The hospital contains 695 beds. There are 50 beds for ophthalmic and 26 for obstetric cases. Children are received into the female wards.

Museums, &c.—The Museums of Human Anatomy, Comparative Anatomy (above 2,000 specimens), Pathological Anatomy (above 5,000 specimens) and Materia Medica are open to the students. The Library is open to the students daily from 9.30 A.M. to 5.30 P.M., except on Saturdays, when it is closed at 4 P.M.

Special Courses.—The Dissecting-room is open at stated periods during the summer; and students who desire to dissect in September have facilities for doing so.—A Laboratory Class for advanced students in Physiology is held at 3 on Mondays and Wednesdays in the summer.—Students are allowed to visit Bethlem Hospital on field days in the snmmer; and gentlemen can enter as extern students for three months by arrangement with Dr. Savage.—A course of Lectures on Experimental Physics is given by Mr. Reinold at 11 on Mondays during the winter session.

Appointments.—All appointments are given according to the respective merits of the candidates. The numbers appointed annually are as follows: 6 House-Physicians, for six months; 6 House-Surgeons, six months; 12 Obstetric Residents, two months; 24 Surgeons' Dressers, six months; 18 Clinical Assistants, three months; 18 Dressers in the Eye Wards, four months; 24 *Post Mortem* Clerks, two months; 24 Obstetric Out-Patient Clerks, six weeks; 32 Assistant-Physicians' Clerks, three months; 12 Dental Surgeons' Dressers, two months; 12 Aural Surgeons' Dressers, two months; 64 Medical Clinical Clerks, three months; 72 or more Assistant-Surgeons' Dressers, and a similar number of Dressers in the Surgery, three months; 80 Surgical Clinical Clerks, three months; 32 Assistant-Surgeons' Clerks, three months; 60 Extern Obstetric Attendants, one month; also Clerks in the Room for applying Electricity. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

Scholarships and Prizes.—Two Entrance Scholarships, each 125 guineas, to be competed for on September 25th and two following days: one in Arts*, and one in Science†. Candidates must be under twenty-five years of age, and must not compete for both Scholarships. The successful candidates must enter into the Hospital in the October immediately following. *First Year:* At end of summer session, in the subjects of the year; three prizes of £50, £25, and £10 10s.; subjects, Anatomy of Bones, Ligaments, and Muscles, Physiology, Materia Medica, Chemistry (including Practical Chemistry), and Botany or Comparative Anatomy. *Second Year:* At end of summer session, the Joseph Hoare Prizes of £25 and £10; subjects, Anatomy and Physiology (including Practical Physiology). At end of winter session, the Michael Harris Prize of £10 for Human Anatomy (including Minute Anatomy); the Sands Cox Scholarship, value £15, tenable for three years; subjects, Physiology (including Physiological Physics), Histology, and Physiological Chemistry. *Third Year:* At end of summer session, two prizes of £35 and £20, in Medicine, Surgery (including Practical Surgery), Midwifery and Diseases of Women, and Medical Jurisprudence. *Third and Fourth Years:* Treasurer's Gold Medals, in Medicine and Surgery. *Fourth and Fifth Years:* Gurney Hoare Prize of £25, for best reports of three Medical and three Surgical cases, with Commentaries. Honorary certificates are given to those candidates who pass creditable examinations. Special certificates are given to gentlemen who have attended 100 cases of Midwifery.

The Registrars and the Demonstrators of Anatomy and Chemistry

[*Continued on p.* 420.]

* The subjects are—*Latin:* Virgil, *Æneid*, Book I; Cæsar, *De Bello Gallico*, Books I and II. *Greek:* Homer, *Iliad*, Book III; Herodotus, Book I. *German:* Schiller, *Wallenstein's Tod*; Helmholtz, *Ueber das Ziel und die Fortschritte der Naturwissenschaft*. *French:* Pascal, *Pensées*; Molière, *Le Malade Imaginaire*. Euclid, the first four Books; Algebra to Simple Equations; Arithmetic. Candidates may choose between Greek or German, but will not be allowed marks in more than one of these subjects.

† The subjects are—Inorganic Chemistry; Zoology; Botany; Physics, including general properties of solid, liquid, and gaseous bodies; Acoustics, Heat, Magnetism, Electricity, and Optics.

GUIDE TO LONDON HOSPITALS AND MEDICAL SCHOOLS: 1879-80.

For further particulars regarding each Hospital and Medical School, see p.p 414-15 *and* 420, *et seq.*

Lectures, etc.	St. Bartholomew's Hospital.	Charing Cross Hospital.	St. George's Hospital.	Guy's Hospital.	King's College and Hospital.
WINTER SESSION.					
Physiology	Mr. Baker..M.Tu.Th., 2.30 Dr. Klein (Histol.), M., 2.30	Dr. Silver.. M. Tu. W. F., 3	Dr. Cavafy .. Tu. W., 3; F., 11	Dr. Pye-Smith..M. W. F., 4.15	Dr. G. F. Yeo..Daily, 12.15.
Anatomy, Descriptive & Surgical	Mr. Langton & Mr. Marsh ..Tu. W. Th. F., 9	Mr. Bellamy..M.W.F., 9; Th., 4	Mr. Pick..M. W. F., 3	Mr. Howse & Mr. Davies-Colley..Tu. W. Th. F., 9	Dr. Curnow, sen...M. Tu.. W. Th., 9; jun., W. Th., 11.15; F. S., 9
Anatomical Demonstrations	Mr. Cumberbatch, Mr. Walsham, Mr. Shuter, Mr. Roeckel..10.15 to 4	Mr. Cantlie..daily, 10 to 4; S., 10 to 1	Mr. Turner	Mr. Jacobson, Mr. Carrington, and Dr. Horrocks.. daily, 10 to 4	Dr. Curnow
Chemistry	Dr. Russell..M. W. F., 10	Mr. Heaton..M. W. F., 11	Mr. Wanklyn..Tu. Th. S., 11.30	Dr. Debus and Dr. Stevenson..Tu. Th. S., 11	Mr. Bloxam .. M. W. Th.,. 10.15
Medicine	Dr. Andrew and Dr. Gee.. M. Tu. Th., 3.30	Dr. Pollock..M. W. F., 4	Dr. Barclay and Dr. Dickinson..Tu. Th. S., 9	Dr. Wilks and Dr. Pavy.. M. W. F., 3	Dr. Beale.. M., 4; W. Th., 5
Surgery	Mr. Savory & Mr. Callender ..W. F., 2.30; S., 12.45	Mr. Barwell..Tu. Th. S. 9	Mr. Holmes & Mr. Rouse M. W. F., 9	Mr. Bryant & Mr. Durham ..Tu. Th., 3.30; S.	Mr. H. Smith..Tu. W. Th., 4.
Hospital Practice:					
Physicians	Dr. Andrew..M. F. S., 1.30 Dr. Southey .. M. W. Th. S., 1.30 Dr. Church.... daily, exc. W., 1.30 Dr. Gee..Tu.W. F. S., 1.30	Dr. Pollock..M. Th. Dr. Silver..Tu. F. Dr. Green..W.S.	Dr. Barclay..M. F., 1 Dr. Wadham..M. F., 1 Dr. Dickinson..Tu. S., 1 Dr. Whipham..Tu. S., 1	Dr. Habershon..M. Th. S., 1.30 Dr. Wilks..M. Th. S., 1.30 Dr. Pavy..M. W. F., 1.30 Dr. Moxon.... M. Th. F., 1.30	Dr. Johnson..M. Th., 2 Dr. Beale..Tu. F., 2 Dr. Duffin..W. S., 2 Dr. I. B. Yeo..Tu. F., 1.30.
Obstetric Physicians	Dr. M. Duncan ..Tu. Th. S., 2	Dr. J. W. Black, Tu. F.	Dr. Barnes..in-p., Tu. S., 1; out-p., Th., 2	Dr. Braxton Hicks....Tu. F., 1.30	Dr. Playfair..Tu. Th. S., 2.
Assistant-Physicians	Dr. Duckworth..W. S., 11 Dr. Hensley..M. Th., 11 Dr. Brunton..Tu. F., 11 Dr. Legg Dr. Godson (*obst.*)..W.S., 9	Dr. Bruce..Tu. F. Dr. Irvine..M. Th. Dr. Lees..W. S. Dr. Houghton.. W. S.	Dr. Cavafy..M. F., 12 Dr. Watney..Tu. S., 12	Dr. Fagge..M., 12.30 Dr. Pye-Smith (below) Dr. F. Taylor..F., 12.30 Dr. Goodhart..W., 12.30 Dr. Galabin..(*obst.*) M. F., 1.30; (o.-p.), Th.S., 12.30	Dr. Ferrier..M. Th., 1.30 Dr. Baxter..W. S., 1.30 Dr. Curnow..W. S., 1.30 Dr. Hayes (*obst.*)..M. W. F.,
Surgeons	Mr. Holden..Tu.F.S., 1.30 Mr. Savory..—M., 1; Tu. W. Th. F. S., 1.30 Mr. Callender..M. Tu. F., 1.45; W. Th. S., 1.30 Mr. T. Smith..daily, 1.30	Mr. Hird..M. Th. Mr. Barwell..Tu. F. Mr. Bellamy..W. S.	Mr. Pollock..M. F., 1 Mr. Holmes..M. F., 1 Mr. Rouse..Tu. S., 1 Mr. Pick..Tu. S., 1	Mr. C. Forster....M. Th., 1.30 Mr. Bryant..M. Th., 1.30 Mr. Durham .. M. Th. F., 1.30 Mr. Howse..W. S., 1.30	Mr. Wood..Tu. Th. S., 1.30 Mr. Lister..M. W. F., 1.30 Mr. H. Smith..M. W. F., 1.30 Mr. Bell.. M. Th., 1.30
Assistant-Surgeons	Mr. Willett..W. S., 12.30 Mr. Langton..Tu. F., 12.30 Mr. M. Baker..M. Th., 12.30 Mr. Marsh	Mr. Bloxam..M. Th. Mr. Cantlie..Tu. F. Mr. Amphlett..W. S.	Mr. Haward..Tu. S., 12 Mr. Stirling..M. F., 12	Mr. Davies-Colley, W., 12.30 Mr. R. C. Lucas..Th., 12.30 Mr. Golding-Bird..M., 12.30 Mr. Jacobson..S., 12.30	Mr. Rose..Tu. F., 1.30 Dr. G. F. Yeo..W. S., 1.30.
Clinical Medicine	The Physicians..weekly	The Physicians	The Physicians..M., 2	The Physicians (Win.)..S., 1.30; the Assistant-Physicians (Sum.)..W., 1.30	Dr. Johnson..alt. M., 3 Dr. Beale..alt. Tu., 3 Dr. Duffin..alt. F. (Win.) 3 Dr. B. Yeo..alt. Tu. (Sm.) 1.30
Clinical Surgery	The Surgeons..weekly	The Surgeons	The Surgeons..Tu., 2	The Surgeons (Win.)..W., 1.30; the Assistant-Surgeons (Sum.)..F., 1.30	Mr. Wood..Tu. Th., 1.30 Mr. Lister..M. F., 1.30
Clinical Midwifery and Diseases of Women	Dr. Matthews Duncan .. (Dis. of Women) alt. Th.	Dr. J. W. Black..Twice a week	Dr. Barnes..F., 2	Dr. Hicks (Winter)....W., 1.30; Dr. Galabin (Sum.) ..Tu., 3	Dr. Playfair....alt. Th. in winter,
Operations	Wed. and Sat., 1.30; on Eye, Tu. Th., 1.30	Thursday..2	Thursday, 1; Eye, F., 1.15	Tuesday and Friday, 1.30; Eye, M. F., 1.30	Wed., 1.30; Sat., 1
SUMMER SESSION.					
Materia Medica	Dr. Lauder Brunton .. Tu. W. Th. S., 10	Dr. Bruce..Tu. Th. S., 9	Dr. Watney..M. W. F., 3	Dr. Moxon..Tu. Th. F., 3	Dr. Baxter..Tu. W. Th. F., 9
Botany	Rev. G. Henslow..M. F., 10; W., 11.30	Rev. J. C. Saunders..Tu. Th. S., 4	Dr. Owen..Tu. Th., 3; F., 9	Mr. Bettany..Tu. Th. S., 11.30	Mr. Bentley..M. Tu. Th. F., 12.15.
Midwifery	Dr. Matthews Duncan.... daily, 9	Dr. J. W. Black....M., 4; Tu. W. F., 3	Dr. Barnes..M. W. F., 9	Dr. Braxton Hicks and Dr. Galabin..Tu. W. Th. F., 9	Dr. Playfair....Tu. W. Th. F., 9
Forensic Medicine	Dr. R. Southey .. Tu. F., 2.30; Th., 3.30	Dr. Irvine..M. W. F., 9	Dr. Wadham..Tu. Th. S., 9	Dr. Stevenson..Tu. Th., S., 10	Dr. Ferrier..M. Tu. W. F., 4
Practical Chemistry	Dr. Russell..M. Tu. F., 11	Mr. Heaton..M. W., 10	Mr. Wanklyn..M. W. Th. F., 10	Dr. Debus..M. W. F., 10 to 1	Mr. Bloxam .. M. W. Th., 10.15.
Comparative Anatomy	Dr. N. Moore (Winter).. Tu. Th., 11.15	Mr. J. F. Blake (Sum.).. M. F., 9	Dr. Brailey (Sum.)..M. F., 4	Dr. Brailey (Sum.)....Tu. Th., 2.15	Mr. F. J. Bell (Win.)..M.F., 4
Practical Physiology & Histology	Dr. V. D. Harris and Mr. D'A. Power (Win.)	Mr. Colquhoun (Sum.).... Tu. F., 10	Mr. Stirling..M. W. F., 11; Tu., 2	Mr. Golding-Bird (Histol.) (Win.)..M. S., 10; W., 1	Dr. G. F. Yeo (Sum.) .. Tu. F. S., 10.15.
Pathology and Morbid Anatomy	Dr. Legg (lect.)... W., 10; (demons.), Medical, 12; Surgical, 2.30	Dr. Green (Sum.)..M. Th., 3; W., 4; Mr. Amphlett (Surg.) Th., 1 (Sum.)	Dr. Whipham (Winter) .. Th., 3; Dr. W. Ewart (demons.), W., 12	Dr. Fagge (lect.) (Sum.).. S., 9; Mr. Jacobson (dem.) .. Three days a week	Dr. Duffin (Sum.)..W. Th. F., 3.
Psychological Medicine.	Dr. Claye Shaw (Sum.).. Th., 12.30	Dr. L. F. Winslow (Sum.) ..W., 11	Dr. Blandford	Dr. Savage (Sum.)....Tu., 11; F., 10.30	Dr. Sheppard (Summer)
Public Health	Dr. Thorne Thorne (Sum.) ..M., 10	Mr. Heaton, Dr. Irvine, & Mr. Eassie	With Medicine	Dr. F. Taylor (Sum.)..M. Th., 1.15	Dr. Kelly (Win.)..F., 3.
Practical & Operative Surgery	Mr. Butlin....M. W. F., 3.30	Mr. Bloxam (Sum.) .. Tu. Th. S., 9; Mr. Cantlie, twice weekly	Mr. Haward and Mr. Stirling (Sum.)..M. W. F., 3	Mr. Clement Lucas, Pract. Surg. winter; Oper. Surg. in May	—
Ophthalmic Medicine & Surgery	Mr. Power (lect.)..Tu. W., 12.45; Mr. Vernon (dem.), M., 2 (see also page 414)	At the Royal Westminster Ophthalmic Hospital	Mr. R. B. Carter (vis.)..W. S., 2; (Win.) (lect.) F., 3	Mr. Bader (vis.) .. Tu. F., 1.30; (lect.) (Sum.), Th., 3; Mr. Higgens (out-p.), Tu. F., 12.30	Mr. Soelberg Wells (vis.).. Tu. Th., 1; (clin. lect.), (Win.), alt. M., 3
Dental Surgery	Mr. Coleman (vis.)..F., 9; (lect.) S., 10.30 (October-December)	Mr. Fairbank..(vis.) M.W. F., 9.30; (lect.) in Sum.	Mr. Winterbottom (vis.) .. Tu. S., 9; Th., 1; (lect.) (Sum.), Tu., 10	Mr. Salter..Th., 12; Mr. Moon..Tu. F., 12.30	Mr. Cartwright..Tu. F., 10; (clin.) (Win.) .. alt. Tu., 10.30
Aural Surgery	Mr. Langton (vis.)..M., 2.30	Mr. Bloxam..(vis.) weekly; demon. in Summer	Mr. Dalby (vis.)..Tu., 2; (lect.) (Sum.), W., 2	Mr. Purves..Tu. F., 1	Dr. U. Pritchard (vis.)..Th., 2; (lect.) W., 9 Oct.-Dec.
Diseases of Skin	Mr. M. Baker (vis.)..F., 1.30	Dr. Sangster..(vis.) M. Th.; (lect.) F., 4, Sum.	Dr. Cavafy (vis.)..Th., 1; (lect.) (Sum.), Th., 1	Dr. Pye-Smith..Tu., 12.30	Dr. Duffin..Tu.
Vaccination	—	Mr. R. W. Dunn	Obstetric Assistant .. Th., 10	—	Mr. R. W. Dunn
Miscellaneous....:	(See page 414)	(See page 414)	(See page 415)	(See page 415)	(See page 420)

Hour of Visit, 1 P.M.

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For further particulars regarding each Hospital and Medical School, see pp. 414-15, *and* 420 *et seq.*

London Hospital.	St. Mary's Hospital.	Middlesex Hospital.	St. Thomas's Hospital.	University College and Hospital.	Westminster Hospital.
Mr. McCarthy..Tu. Th. S., 10	Mr. Pye..M. W. F., 12	Mr. Lowne..M. W. F., 9	Dr. J. Harley..Tu. W. F., 4	Dr. Sanderson and Mr. Schäfer..daily, exc. S., 10	Dr. Allchin..M. W. F., 4
Mr. Rivington..M., 3; Tu. W. F., 9	Mr. Owen..M. Tu. Th. F., 9	Mr. Morris..M. Th., 4.30; Tu. F., 4	Mr. Mason & Mr. Wagstaffe ..daily, exc. Sat., 9	Mr. Thane..daily, 12; exam. jr., W., 2; sr., S., 12	Mr. Gould..Tu. W. Th. F. S., 9
Dr. Wilson..10 to 4, excepting Sat. aft.	Mr. Juler and Mr. Griffin.. Daily, 9 to 5, exc. S., 9 to 1	Mr. Hensman and Mr. Sutton..daily, 9 to 4	Mr. Wagstaffe, Dr. Reid, Mr. Taylor, Mr. Husband ..daily, 10 to 4	Mr. Thane, Mr. Godlee, & Mr. Miller..daily, 8 to 5	Mr. Gould and Mr. Black.. M., 9.30 to 1; other days, 10 to 1
Dr. Tidy..Tu. W. Th., 11	Dr. Wright.. M. Th., 10; W. S., 9	Mr. Foster..M. Th., 3.30; W. F., 3	Dr. Bernays..Tu. Th. F., 10	Dr. Williamson...daily, exc. S., 11; (exerc.) Tu. W. Th. F. 9	Dr. Dupré..W. Th. F., 3
Dr. Sutton..M. W. F., 5	Dr. Broadbent..M. W. Th., 4	Dr. Cayley..Tu. Th. S., 9	Dr. Bristowe and Dr. Ord ..M. Th., 4; W., 5	Dr. Ringer..Tu. W. Th. F., 9	Dr. Fincham & Dr. Sturges M. W. Th., 3
Mr. Couper..M. Th. S., 9	Mr. J. R. Lane and Mr. Norton..Tu. F., 4; W., 3	Mr. Hulke and Mr. Lawson ..M. W. Th., 3.30	Mr. S. Jones and Mr. Mac Cormac..M. or Tu. Th. F., 5	Mr. Marshall..Tu. W. F., 4	Mr. Cowell and Mr. Davy (System. and Pract. in alt. years)..Tu. Th., 4; F., 3
Dr. A. Clark..M. Th., 2	Dr. H. Jones..M. Th., 1.15	Dr. Greenhow..Tu. Th. S., 1.30	Dr. Bristowe..Tu. F., 2	Dr. Wilson Fox } 1 to 4 daily.	Dr. Fincham..M. Th., 1.30
Dr. Ramskill..W. F., 2	Dr. Sieveking..Tu. F., 1.15	Dr. Cayley .... M. W. F., 1.30	Dr. Stone..M. Th., 2	Dr. Ringer } 1 to 4 daily.	Dr. Sturges..W. S., 1.30
Dr. Down..Tu. F., 2	Dr. Broadbent..W.S., 1.15	Dr. R. King..Tu. Th. S., 1.30	Dr. Ord..M. Th., 2	Dr. C. Bastian } 1 to 4 daily.	Dr. Allchin..Tu. F., 1.30
Dr. H. Jackson..M. Th., 2			Dr. J. Harley..Tu. F., 2	Dr. F. T. Roberts } 1 to 4 daily.	
Dr. Sutton..M. Th., 2					
Dr. Fenwick..Tu. F., 1.30					
Dr. Palfrey..M. Th., 1.30	Dr. Meadows..Tu. F., 9.30	Dr. H. Davis..Tu. F., 1.30	Dr. Gervis....M. Th., 2; (o.p.) F., 12.30	Dr. Graily Hewitt..Twice weekly	Dr. Potter..Tu. F., 3
Dr. S. Mackenzie..W.S., 1.30	Dr. Cheadle, Tu. F., 1	Dr. Coupland..Tu., 3.30; F., 9	Dr. Payne..W. S., 12.30	Dr. Gowers	Dr. Donkin..W. S., 1.30
Dr. Sansom..M. Th., 1.30	Dr. Shepherd..M. Th., 1		Dr. Greenfield....M. Th., 12.30	Dr. Poore	Dr. Hall..M. Th., 1.30
Dr. Turner..Tu. F., 1.30	Dr. Farquharson..W. S., 1	Dr. D. Powell..M. W., 8.30	——..Tu. F., 12.30	Dr. J. Williams (*obst.*)	Dr. A. H. Bennett, Tu. F. 1.30
Dr. Barlow..M. Th., 1.30	Dr. Wiltshire (*obst.*)..Tu. F., 1.30	Dr. Finlay..Th., 8.30; S., 3.30	Dr. Cory (*obst.*)..W., 1.30		Dr. Grigg (*obst.*)..Tu. F., 1.30
Dr. G. Smith..W.S., 1.30		Dr. Edis (*obst.*)..W.S., 1.30			
Dr. Herman (*ob.*), W. S., 1.30					
Mr. Hutchinson..M. Th., 2	Mr. Walton..W. S., 1.15	Mr. Hulke..M. Th., 1.30	Mr. S. Jones..Tu. F., 2	Mr. Marshall } 1 to 4 daily.	Mr. Cowell..M. Th., 1.30
Mr. Couper..W. S., 1.30	Mr. J. R. Lane..Tu. F., 1.15	Mr. Lawson..M. Th., 1.30	Mr. Croft..M. Th., 2	Mr. Berkeley Hill } 1 to 4 daily.	Mr. Davy..Tu. F., 1.30
Mr. Rivington..Tu. F., 2		Mr. Morris..Tu. F., 1.30	Mr. Mac Cormac. M. Th., 2	Mr. C. Heath } 1 to 4 daily.	Mr. Macnamara..W., 1.30; S., 1
Mr. J. Adams..M. Th., 2	Mr. A. T. Norton..M. Th., 1.15		Mr. F. Mason..Tu. F., 2		
Mr. Tay..M. Th., 1.30					
Mr. McCarthy..Tu. F., 1.30					
Mr. Reeves..Tu. S., 1.30	Mr. E. Owen..Tu. F., 1.	Mr. A. Clark..M. Th., 1	Mr. Wagstaffe....Tu. F., 12.30	Mr. Marcus Beck	Mr. T. Cooke..M. Th., 1.30
	Mr. H. Page..M. Th., 1			Mr. A. E. Barker	Mr. Bond..Tu. F., 1.30
	Mr. Pye..W. S., 1	Mr. Lyell..Tu. F., 1	Mr. MacKellar, W.S., 12.30	Mr. R. J. Godlee	Mr. A. P. Gould..W.S., 1.30
			Mr. Clutton..M. Th., 12.30		
The Physicians	Dr. H. Jones..every 3rd Th. Dr. Sieveking..every 3rd F. Dr. Broadbent..every 3d W.	The Physicians..F., 3	The Physicians..weekly	Dr. W. Fox (Holme prof.), Dr. Ringer, and Dr. Bastian	Dr. Fincham..1st & 3rd Th. Mr. Sturges...2nd & 4th W. Dr. Allchin..2nd & 4th F.
The Surgeons	Mr. Walton..every 3rd S. Mr. J. B. Lane..every 3d Tu. Mr. Norton..every 3rd Th.	The Surgeons..Tu., 3	The Surgeons..weekly	Mr. Marshall, Mr. B. Hill, and Mr. Heath (Holme prof.)	Mr. Cowell..2nd & 4th Th. Mr. Davy..1st and 2nd F. Mr. Macnamara. 1st & 3rd W.
Dr. Palfrey (Win.)..2nd F. in month; (Sum.) alt. Tu., 2.30	Dr. A. Meadows—alt. Tu.	Dr. Hall Davis..Tu., 10	Dr. Gervis	Dr. G. Hewitt.. fortnightly	Dr. Potter..2nd and last F.
Wednesday, Thursday, and Saturday, 2	Wednesday....1.30; Eye, Mon. and Thurs., 1.30	Wednesday, 1	Wednesday and Saturday, 1.30; Eye, Friday, 2	Wednesday, 3	Tuesday and Saturday, 2
Dr. Prosser James..Tu. Th. F., 4	Dr. Farquharson..Tu. W. F. S., 12	Dr. Thorowgood..M. W. F., 4	Dr. Stone..M. W. F., 9	Dr. F. T. Roberts..M., 9; Tu. W. Th. F., 10	Dr. Phillips..Tu. Th. S., 9
——..M. W. F., 11	Rev. J. M. Crombie..M. W. F., 10	Mr. Hensman..M. W. F., 10	Mr. A. W. Bennett....Tu. W. S., 10	Mr. Oliver..daily, exc. S., 8 A.M.	Mr. Worsley-Benison..M. W. F., 9; Th., 10
Dr. Palfrey..daily, exc. S., 9 A.M.	Dr. A. Meadows and Dr. Wiltshire..Tu. W. Th. F., 9	Dr. Hall Davis..Tu. Th. S., 9	Dr. Gervis..M. Tu. Th. F., 4	Dr. Graily Hewitt..Tu. W. F. S., 9	Dr. Potter..Tu. W. Th., 9; F., 4
Mr. Rodgers and Dr. Tidy ..daily, exc. S., 10	Dr. Randall..M. W. Th., 10	Dr. R. King..M. W. F., 9	Dr. Payne and Dr. Cory..Tu. Th. S., 9	Dr. Maudsley..Tu. W. Th. F., 10	Dr. Dupré and Mr. Bond..M. Th. F., 3
Dr. Tidy..Tu. W. Th. F., 9.15 A.M.	Dr. Wright...Inorg., W. F. S., 9; Organ., W. F., 10	Mr. Foster..M. W. F., 3	Dr. Bernays..M. Th. F., 10	Dr. Williamson (jun.) Tu. W. Th. F., 11; (sen.) M. S., 10	Dr. Dupré..M. W. F., 10
Dr. E. B. Aveling..M. W., 4	Mr. St. G. Mivart (Sum.) W. Th., 10	Mr. Hensman (Sum.)..Tu. Th., 4	Mr. Stewart (Sum.)....M. Th., 12	Mr. Lankester (Win. and Sum.)..Tu. W. Th. F., 1	Dr. Carter Blake
Mr. MacCarthy (Sum.)..Tu. Th., 11	Dr. Shepherd (Win.)..Tu. W. F., 10	Mr. Lowne (Sum.)..M. W. Th., 9	Dr. T. C. Charles (Sum.)..Tu. W. F., 12.30; Mr. Rainey, Histology	Dr. Sanderson and Mr. Schäfer (Sum.)..daily, 12; adv. (Sum.) F., 10	Dr. Murrell (Win.)..Tu. W. F., 1
Dr. Sutton and Dr. S. Mackenzie (lect.) (Win.)..F., 9; (Sum.) Th. S.; (dem.) daily, 3.30	Dr. Cheadle (Win.)....M. Th., 2.30	Dr. Coupland (Win.)..M. Th., 4.30; S., 10	Dr. Payne (lect.)..Tu., 4	Dr. Bastian (Sum.)..M. 10; Th., 9; F., 4; Mr. Barker (Surg.) Jan.–March, M. Th., 4	Dr. Allchin..M. Th., 4; W., 3; Mr. Murrell and Mr. Neale (dem.), 2
			Dr. Greenfield (Path. Anat.) F., 4; S., 11.30		
	With Forensic Medicine	Mr. H. Case (Sum.)	Dr. H. Rayner (Sum)..F., 12		Dr. Sutherland (May)..M Th. F., 3
With Forensic Medicine	With Forensic Medicine	Dr. R. King (Sum.)	Dr. A. Carpenter (Sum.)..W., 4	Dr. Corfield (Sum.)..Tu. Th., 4	With Forensic Medicine
Mr. Reeves, Pract. Surg. winter; Oper. Surg. in summer	Mr. Page..M. Th., 11	Mr. Morris and Mr. A. Clark (Win.)..M., 3.30; W., 3; Oper. Surg. in April	Mr. Croft and Mr. Mac-Kellar (Win.)....S., 9; (Sum.) Tu. F., 5	Mr. Hill (Oct.–Dec.)..M. Th., 4; Sum., 3 to 5; Mr. Beck, Op. Surg., daily	Lecturers on Surgery: Operative and Minor Surg. in summer
Mr. Couper (lect.) (Sum.), Mr. J. Adams and Mr. Tay..W. S., 9	Mr. Walton (in-p.)..Tu. F., 1.30; (out-p.) M. Th., 1.30; (lect.) (Sum.) M., 2	Mr. Critchett..W. S., 8.30 (o.p.); 9 (in-p.) clin. lect., W., 3 (Sum.)	Mr. Nettleship (vis.)..M. Th., 2; (o.p.) daily, exc. S., 1.30; (lect.) (Sum.) M., 5	Mr. W. Jones & Mr. Streatfeild (vis.)..M. W. F., 2; (lect.) (Sum.), Tu., 3	Mr. Cowell (vis.)..M. Th., 2.30; (lect.) (Sum)., M., 3
Mr. Barrett (vis.)..Tu., 9; (lect.)	Mr. H. Hayward (vis.)..W. S., 9.30	Mr. Turner..daily, 9	Mr. Elliott and Mr. Ranger ..Tu. F., 10	Mr. Ibbetson (lect.)....M. Th., 4; (vis.) W., 10.30	Mr. J. Walker (vis.)..W.S., 9.15; (lect.) (Oct., Nov., Dec.), W., 9.30
Mr. A. G. Brown (lect.)..S., 9; (vis.) S., 9.30	Mr. Field (lect.)....F., 3; (vis.) Tu. F., 2	Mr. A. Clark..Tu., 9	Mr. Clutton..Tu., 12.30	Mr. Barker..S., 1.30	Mr. Keene (vis.)..Tu. F., 9; (lect.) in June
Dr. S. Mackenzie (vis.)..W., 9	Dr. Cheadle and Mr. M. Morris..Th., 1.30; (lec.) Th., 3 (Sum.)	Dr. R. Liveing..F., 4	Dr. Payne (out-p.)...Th., 12.30	Dr. H. R. Crocker (vis.)..Tu., 1.30; S., 9; (clin. lect. alt. weeks)	Mr. Bond (vis.)..Th., 1; (lect.) (Feb., Mar.), Th., 2.30
Assist. Obstet. Phys. & Resident Accoucheur	Mr. Sumner	Dr. W. Pearse and Mr. Sumner	Dr. Cory..W., 11.30	Mr. W. Pearse and Mr. Sumner	Mr. W. Pearse
(See page 420)	(See page 421)	(See page 421)	(See page 422)	(See page 422)	(See page 423)

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course: "p", perpetual or unlimited attendance.)

	St. Bartholomew's.	Charing Cross.	St. George's.	Guy's.	King's College.	London.	St. Mary's.	Middlesex.
Composition Fee for all Lectures and Hospital Practice required by Examining Boards	£131 5s.; or 1st win. £42 1st sum. £48 6s. 2nd win. £48 6s.	1st win. £23 2s. 1st sum. £17 17s. 2nd win. £21 2nd sum. £15 15s 3rd win. £10 10s.	1st year, £45 2nd year, £45 3rd year, £20 4th year, £20 (See note)	£131 5s.; or 1st win. and 1st sum., each £66; or 1st and 2nd year, each £50; 3rd yr. £37 10s.	£125; or On entr. £70 2nd win. £60 or on entr. £60 2nd win. £50 3rd win. £25	£94 10s. 1st year, £42 2nd yr. £36 15s. 3rd yr. £26 5s. (See note)	£106 1s.; or 1st yr. £52 10s. 2nd yr. £42 0s. 3rd yr. £17 17s.	£90; or 1st year, £35 2nd year, £35 3rd year, £20 Each add. yr. £10
Hospital Practice	*Medical.* 3 mos. £10 10s. 6 mos. £15 15s. 2 yrs. £23 12s. 6d. Unlim. £33 1s. 6d. *Surgical.* 3 mos. £13 2s. 6d. 6 mos. £19 19s. 12 mos. £26 5s. Unlim. £33 1s. 6d.	Total, full period, £31 10s. *Med. or Surg.* 3 mos. £6 6s. 6 mos. £10 10s. 12 mos. £15 15s. Full period, £21 *Med. and Surg.* 3 mos. £10 10s. 6 mos. £15 15s. 12 mos. £21 Full p. £31 10s.	*Med. or Surg.* 6 mos. £10 10s. 2 years. £21 Perp. £31 10s.	*Med. or Surg.* 3 mos. £10 10s. 6 mos. £15 15s. 1 year, £24 3s. Perp. £31 10s. *Med. and Surg.* 3 mos. £15 15s. 6 mos. £24 3s. 1 year, £31 10s. Perp. £47 5s.	*Med. or Surg.* 1 sum. £5 5s. 1 win. £9 9s. 1 year, £12 12s. Perp. £31 10s. *Med. and Surg.* 1 sum. £8 8s. 1 win. £14 14s. 1 year, £18 18s. Perp. £42	Perp. £52 10s. *Medical.* 6 mos. £6 6s. Per. req. by Hall, £12 12s. Perp. £21 *Surgical.* 6 mos. £8 8s. 12 mos. £12 12s. 18 mos. £18 18s. 3 years, £26 5s. Ditto, £31 10s.	Full p. £46 14s. 6d *Medical.* 3 mos. £6 16s. 6d. 6 mos. £9 9s. 12 mos. £15 15s. 18 mos. £19 19s. Perp. £26 5s. *Surgical.* 3 mos. £7 17s. 6d. 6 mos. £11 11s. 12 mos. £26 5s. Perp. £38 17s.	*Med. or Surg.* Perp. £15 15s. 1 year, £8 8s. 6 mos. £5 5s. *Med. and Surg.* Perp. £26 5s.; or 1st and 2nd yrs. each £10 10s., and £5 5s. 3rd year 1 year, £12 12s. 6 mos. £7 7s.
Fees for Students of Dental Surgery	£63; or 1st win. £31 10s. 1st sum. £31 10s.	1st Oct. £22 2nd Oct. £20 —	£55; or 1st year, £30 2nd year, £25	£63; or 1st year, £42 2nd yr. £24 3s.	— — —	£40 Dent. pr. perp., £10	£65 12s. 6d. — —	£42; or 1st win. £26 5s. 2nd win. £15 15s.
Anatomy	*s.* £9 9s. *p.* £13 2s. 6d.	1st year, £4 4s. 2nd year, £2 2s.	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £6 6s. *p.* £9 9s.	*s.* £5 5s. *p.* £8 8s.	*s.* £7 17s. 6d.	*s.* £8 8s. *p.* £12 12s.
Demonstrations and Dissections	*s.* £7 7s. — —	1st year, £3 3s. 2nd year, £2 2s. — —	*s.* £3 3s. — —	*s.* £7 7s. — —	*s.* £6 6s. *p.* £9 9s. —	*s.* £5 5s. *p.* £8 8s. —	— — —	*s.* £6 6s. *p.* £8 8s. —
Physiology	*s.* £9 9s. *p.* £13 2s. 6d.	1st year, £4 4s. 2nd year, £2 2s.	*s.* £7 7s. *p.* £8 16s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £11 11s.	*s.* £4 4s. *p.* £6 6s.	*s.* £4 4s. —	*s.* £6 6s. *p.* £8 8s.
Practical Physiology and Histology	*s.* £7 7s. —	*s.* £2 2s. —	(P.P.) *s.* £3 3s. (H.) *s.* £3 3s.	*s.* £7 7s. —	*s.* £6 6s. *p.* £8 8s.	*s.* £3 3s. *p.* £4 4s.	*s.* £4 4s. —	*s.* £4 4s. —
Comparative Anatomy	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £4 4s. —	*s.* £4 4s. —	*s.* £5 5s. —	*s.* £4 4s. *p.* £6 6s.	*s.* £3 3s. *p.* £4 4s.	*s.* £2 12s. 6d. —	*s.* £3 3s. —
Botany	*s.* £4 4s. *p.* £5 5s.	*s.* £3 3s. —	*s.* £3 13s. 6d. *p.* £4 14s. 6d.	*s.* £5 5s. —	*s.* £4 4s. *p.* £6 6s.	*s.* £3 3s. *p.* £4 4s.	*s.* £4 4s. —	*s.* £4 4s. *p.* £5 5s.
Chemistry	*s.* £6 16s. 6d. *p.* £9 9s.	*s.* £5 5s. —	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £11 11s.	*s.* £7 7s. *p.* £7 7s.	*s.* £6 16s. 6d. —	*s.* £6 6s. *p.* £8 8s.
Practical Chemistry	*s.* £3 3s.	*s.* £3 3s. —	*s.* £4 4s.	*s.* £7 7s. —	*s.* £6 6s. *p.* £8 8s.	*s.* to stud. £2 2s. to others, £5 5s.	*s.* £4 4s. —	*s.* £3 3s. —
Materia Medica	*s.* £6 16s. 6d. *p.* £7 17s. 6d.	*s.* £3 3s. —	*s.* £4 14s. 6d. *p* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £3 3s. *p.* £4 4s.	*s.* £5 5s. —	*s.* £4 4s. *p.* £5 5s.
Practical Pharmacy	— —	— —	*s.* £3 3s. —	*s.* £3 3s. —	— —	*s.* £4 4s. —	3 mos. £3 3s.; 6 mos. £6 6s.	£5 5s. —
Pathology and Morbid Anatomy	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £3 3s. (See note)	*s.* £3 3s. —	P. £3 3s. M.A. £7 7s.	*s.* £3 3s. *p.* £4 4s.	*s.* £3 3s. *p.* £6 6s.	*s.* £4 4s. —	*s.* £4 4s. *p.* £5 5s.
Medicine	*s.* £6 16s. 6d. *p.* £9 9s.	1st c. £4 4s. 2nd c. £2 2s.	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £9 9s.	*s.* £5 5s. *p.* £6 6s.	*s.* £5 5s. —	*s.* £6 6s. *p.* £8 8s.
Surgery	*s.* £6 16s. 6d. *p.* £9 9s.	1st c. £4 4s. 2nd c. £2 2s.	*s.* £7 7s. *p.* £8 18s. 6d.	*s.* £7 7s. —	*s.* £8 8s. *p.* £9 9s.	*s.* £5 5s. *p.* £6 6s.	*s.* £5 5s. —	*s.* £6 6s. *p.* £8 8s.
Practical Surgery	*s.* £6 16s. 6d. *p.* £9 9s.	— —	*s.* £4 4s. —	*s.* £4 4s. —	*s.* £3 3s. *p.* £5 5s.	*s.* £6 6s. —	*s.* £4 4s. —	*s.* £6 6s. —
Operative Surgery	*s.* £5 5s.	£2 2s.	*s.* £2 2s.	*s.* £7 7s. —	— —	— —	— —	*s.* £5 5s. —
Ophthalmic Surgery	*s.* £2 12s. 6d. *p.* £4 4s.	— —	inc. in Surg. —	— —	— —	*s.* £2 2s. *p.* £3 3s.	*s.* £2 12s. 6d. —	— —
Dental Surgery	*s.* £2 12s. 6d. *p.* £4 4s.	— —	— —	— —	— —	*s.* £2 2s. —	*s.* £2 12s. 6d. —	Occas. Stud., £5 5s.
Midwifery	*s.* £6 16s. 6d. *p.* £7 17s. 6d.	*s.* £3 3s. —	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £7 7s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £4 4s. *p.* £6 6s.	*s.* £5 5s. —	*s.* £4 4s. *p.* £5 5s.
Forensic Medicine	*s.* £4 4s. *p.* £5 5s.	*s.* £3 3s. —	*s.* £4 14s. 6d. *p.* £5 15s. 6d.	*s.* £5 5s. —	*s.* £5 5s. *p.* £6 6s.	*s.* £3 3s. *p.* £4 4s.	*s.* £4 4s. —	*s.* £4 4s. *p.* £5 5s.
Psychology	*s.* £2 12s. 6d. *p.* £4 4s.	*s.* £1 1s. —	— —	*s.* £3 3s. —	— —	— —	— —	*s.* £3 3s. —
Public Health or Hygiene	*s.* £2 12s. 6d.	*s.* £1 1s.	—	*s.* £3 3s.	*s.* £1 1s.	—	—	*s.* £3 3s.
Instruction in Vaccination	—	Not stated	—	—	Small fee	—	£1 1s.	£1 1s.
Library	1 year, 10s.	£1 1s.	Each yr. 10s. 6d.	£1 1s.	£1 1s.	£1 1s.	£1 1s.	£1 1s.

ADDITIONAL NOTES.

St. Bartholomew's Hospital.—The Composition Fee includes, besides the ordinary subjects, Ophthalmic Surgery, Dental Surgery, Mental Diseases, and Hygiene.—Histology (free to Students of Hospital), £2 12s. 6d.—Extra in-patient dresserships: 3 months, £12 12s.; 6 months, £18 18s.; 12 months, £26 5s.

Charing Cross Hospital.—Hospital Practice after third year, £5 5s. for each winter, and £3 3s. for each summer. Matriculated Students receive a reduction of 8 per cent., and may pay their fees in five instalments, viz.: 1st October, £23 7s. 0d.; 1st May, £16 8s. 6d.; 2nd October, £19 6s. 2d.; 2nd May, £14 9s. 10d.; 3rd October, £9 13s. 2d. Matriculated Students pay £3 3s. for Comparative Anatomy.—The Lectures on Psychology and on Normal Histology and Operative Surgery are free to matriculated students.—Morbid Histology: matriculated, £1 1s.; non-matriculated, £2 2s.—Operative Surgery: private class, whole body, £8 8s.; half body, £5 5s. Students dissecting in the summer pay an extra fee of £1 1s.—Primary Fellowship Class, £3 3s.; non-matriculated, £6 6s. The Matriculation Fee is £2 2s.

St. George's Hospital.—Perpetual pupils pay £125 at entrance; or 1st and 2nd years, each £45; 3rd year, £40. Gentlemen who have completed a year of professional study at an English University are allowed a reduction of £40 from the perpetual pupil's fee. A reduced fee is also paid by students who have attended lectures in other schools. The payments for courses required by the examining boards do not confer the privileges of perpetual pupils. Practical Medicine, £4 4s. Extra payment is required for Practical Pharmacy; Practical Chemistry; Subjects for Dissection (£3 3s.); Operative Surgery; Library; and Comparative Anatomy.

Guy's Hospital.—Morbid Histology and Natural Philosophy, each £5 5s.—Extra fees: Practical Chemistry, £1 10s.; Operative Surgery, £2 2s. (both included in fee in table).

King's College.—The Composition Fee includes perpetual attendance on Anatomy, Physiology, Chemistry, Medicine, Clinical Medicine, Surgery, Clinical Surgery (one Professor), Obstetric Medicine, Botany, Forensic Medicine, Materia Medica, Comparative Anatomy, Pathological Anatomy, and Hospital Practice; and one course each of Practical Surgery, Practical Chemistry, and Practical Physiology.—Clinical Surgery (win.), one professor, *s.* £6 6s.; *p.* £8 8s.; both professors, *s.* £8 8s.; *p.* £11 11s.; (sum.) one professor, *s.* £4 4s.; *p.* £5 5s.; both, *s.* £5 5s.; *p.* £6 6s.—Anatomy and Practical Anatomy, together, *s.* £9 9s.; *p.* £12 12s. Tutor, £3 3s. Students of Practical Physiology pay £1 1s. for use of apparatus, etc. Practical Biology and Experimental Physics, 3 terms, each £8 8s.; second year, each £3 3s.; Analytical and Experimental Chemistry (exclusive of materials) 1 month, £4 4s.; 3 months, £10 10s.; 6 months, £18 18s. Medical Tutor, one year, £3 3s.

London Hospital.—The Perpetual Fee for Lectures and Hospital Practice includes two years' Practical Anatomy. For students entering at or before beginning of second winter, £73 10s.; or two instalments of £42 and £36 15s.—Graduates of Universities who produce evidence of having attended Lectures in Anatomy, Physiology, Chemistry, Botany, or Comparative Anatomy, may become Pupils of the Hospital, eligible for all Hospital Prizes and Appointments, on payment of £52 10s. Graduates of any Indian, Canadian, or other Colonial or American University or

TABLE OF FEES FOR HOSPITAL ATTENDANCE AND LECTURES.

(The letter "s" denotes single course; "p", perpetual or unlimited attendance.

St. Thomas's.	University College.	Westminster.	Queen's Coll., Birmingham.	Bristol.	Leeds.	Liverpool.	Owens Coll. Manchester.	Newcastle.	Sheffield.
£125; or On entr. £70 2nd win. £60; or 1st year, £60 2nd year, £50 3rd year, £30	£131 5s.; or 1st year, £65 2nd yr. £52 10s. 3rd yr. £21	£92 10s.; or 1st year, £49 2nd year, £49 or 5 instalments of £34 13s.; £24; £23 2s.; £12 12s. and £15 15s.	Lect. £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	Lect. £63; or 1st sess. £42 2nd sess. £21	Lect. £50 8s.; or 1st yr. £26 5s. 2nd yr. £26 5s.	Lec. £52 10s.; or 1st yr. £26 5s. 2nd yr. £26 5s.	Lect. £63; or 1st yr. £31 10s. 2nd yr. £31 10s.	Lec. £52 10s.; or 2 instalmts. ea. £28 7s.; or 3 instalmts. ea. £21	Lectures, £45
Med. and Surg. 3 mos. £15 6 mos. £26 9 mos. £35 12 mos. £40 Perp. £55	*Med. and Surg.* Perp. £36 15s. 1 year, £15 15s. 6 mos. £10 10s.	*Med. or Surg.* 3 mos. £5 5s. 6 mos. £8 8s. Each subseqnt. 6 mos. £4 4s. 3 yrs. £21 *Med and Surg.* 3 mos. £9 9s. 6 mos. £12 12s. Each subseqnt. 6 mos. £6 6s. 3 yrs. £31 10s.	*General and Queen's Hospits.* 4 years, £42, or in two equal sums. 1 year, £21 6 mos. £14	*Royal Infirm. Med. or Surg.* 6 mos. £7 7s. 1 year, £12 12s. Perp. £21 *Med. and Surg.* 1 year, £21 Perp. £36 15s. *Gen. Hosp. Med. or Surg.* £6 mos. £6 1 year, £10 Perp. £20	*Infirmary. Med. or Surg.* 1 win. £7 7s. 1 sum. £6 6s. 12 mos. £12 12s. 18 mos. £15 15s. 3 years, £21 Perp. £6 5s.	*Royal Infirm.* Perp. £33 12s. *Medical.* 3 mos. £3 3s. 6 mos. £5 5s. 12 mos. £6 6s. *Surgical.* 3 mos. £4 4s. 6 mos. £6 6s. 12 mos. £8 8s.	*Royal Infirm.* Full per. £42; or 2 instalmnts. £22 *Medical.* 3 mos. £6 6s. 6 mos. £9 9s. 12 mos. £12 12s. Full per. £18 18s. *Surgical.* 3 mos. £9 9s. 6 mos. £12 12s. 12 mos. £18 18s. Full per. £31 10s.	*Infirmary.* 3 mos. £4 4s. 6 mos. £5 5s. 12 mos. £7 7s. Perp. £17 17s.; or 1st year, £7 7s.; 2nd year, £6 6s.; 3rd yr. £5 5s.	*Gen. Infirm., or Public Hospitl.* Perpetual Med. £15 15s.; perp. Sur., £21 *Med. or Surg.* 6 mos. £6 6s. 12 mos. £10 10s.
£55; or 1st year, £50 2nd year, £10	—	£45; or 1st year, £32 2nd year, £18	£26 5s.	—	—	—	—	—	—
s. £7 7s. *p.* £10 10s.	*s.* £8 8s. *p.* £10 10s.	1 c. £6 6s. Subsq. c. £2 2s.	*s.* £6 6s.	*s.* £5 5s.	*s.* £6 6s.	2 cs. each, £4 4s. 3rd c. £2 2s.	*s.* £5 5s.	*s.* £4 4s.	1st c. £4 4s. 2nd c. £2 2s.
3 mos. £4 4s. 6 mos. £6 6s. Perp. £10 10s.	3 mos. £3 3s. 3 yrs. £6 6s. Ea. add.yr. £1 1s.	3 mos. £4 4s. 6 mos. 6 6s.	*s.* £5 5s.			*s.* £3 3s. Sum. £2 2s.	6 mos. £3 3s. 3 mos. £2 2s.		
s. £7 7s. *p.* £10 10s. *s.* £6 6s.	*s.* £8 8s. *p.* £10 10s. *s.* £8 8s.	1 c. £6 6s. Subsq. c. £2 2s. £7 7s.	*s.* £6 6s.	*s.* £5 5s. *s.* £3 3s.	*s.* £6 6s. *s.* £6 6s.	2 cs. ea. £4 4s. 3rd c. £2 2s.	*s.* £5 5s. *s.* £5 5s.	*s.* £4 4s.	1st c. £3 3s. 2nd c. £2 2s. *s.* £3 3s.
— *s.* £4 4s. *p.* £5 5s.	Sec. c. £2 2s. (See note below)	Each div. £3 3s. 1 c. £2 2s. 2 cs. £3 3s.	*s.* £3 3s.	*s.* £4 4s.	*s.* £1 1s.	1st c. £3 3s.; 2nd, £2 2s.; 3d, £1 1s.	*s.* £4 14s. 6d.		
s. £4 4s. *p.* £5 5s. *s.* £7 7s. *p.* £10 10s. *s.* £6 6s.	*s.* £3 13s. 6d. *p.* £5 5s. *s.* £7 7s. *p.* £9 9s. *s.* £5 5s.	1 c. £3 3s. 2 cs. £4 4s. 1 c. £6 6s. Subseq. c. £2 2s. *s.* £4 4s.	*s.* £4 4s. *s.* £5 5s. *s.* £4 4s.	*s.* £3 3s. *s.* £5 5s. *s.* £3 3s.	*s.* £4 4s. *s.* £5 5s. *s.* £4 4s.	1st c. £3 3s.; 2 & 3, £1 11s. 6d. 1st c. £5 5s.; 2 & 3 ea. £2 12s. 6d. *s.* £3 3s.	*s.* £2 12s. 6d. *s.* £4 14s. 6d. *s.* £4 4s.	*s.* £4 4s. *s.* £5 5s. —	*s.* £3 3s. *s.* £4 4s. *s.* £3 3s.
— *s.* £4 4s. *p.* £5 5s. *s.* £7 7s. *p.* £10 10s. *s.* £6 6s.	Sec. c. £3 3s. *s.* £6 6s. *p.* £7 7s. 3 mos. £5 5s. — *s.* £6 6s. *p.* £7 7s. *s.* £9 9s. *p.* £11 11s. *s.* £7 7s. *p.* £8 8s. *s.* £6 6s.	1 c. £3 3s. 2 c. £4 4s. 3 mos. £3 3s. 6 mos. £5 5s. 1 c. £3 3s. 2 c. £4 4s. 1 c. £5 5s. Subsq. c. £2 2s. 1 c. £5 5s. Subsq. c. £2 2s. As above; op. S. half £4 4s. whole, £6 6s.	*s.* £4 4s. *s.* £6 6s.	*s.* £3 3s. *s.* £5 5s. *s.* £5 5s. Each £3 3s.; both togeth. £5 5s.	*s.* £4 4s. *s.* £5 5s. *s.* £5 5s.	1st c. £4 4s.; 2 & 3, each £2 2s. £3 3s. 1st c. £3 3s.; 2 & 3, ea. £1 11s. 6d. 1st & 2nd cs. £4 4s.; 3rd, £2 2s. 1st c. £4 4s.; 2 & 3, each £1 1s. 1st c. £4 4s.; 2 & 3, each £2 2s.	3 mos. £3 3s. 6 mos. £5 5s. *s.* £4 4s. *s.* £5 5s. *s.* £5 5s. *s.* £4 4s.	*s.* £4 4s. *s.* £4 4s. *s.* £4 4s.	1st c. £4 4s. 2nd c. £2 2s. *s.* £4 4s. *s.* £3 3s.
s. £2 2s. *p.* £3 3s. *s.* £2 2s. *p.* £3 3s. *s.* £5 5s. *p.* £6 6s. *s.* £4 4s. *p.* £5 5s. *s.* £2 2s. *p.* £3 3s. *s.* £2 2s. £1 1s. £1 1s.	*s.* £1 1s. *s.* £2 2s. *s.* £6 6s. *p.* £7 7s. *s.* £5 5s. *p.* £6 6s. *s.* £2 2s. £1 1s. —	*s.* £1 1s. *s.* £2 2s. 1 c. £3 3s. 2 cs. £4 4s. 1 c. £3 3s. 2 cs. £4 4s. *s.* £1 1s. £1 1s. £1 1s.	*s.* £3 3s. *s.* £3 3s. *s.* £5 5s. *s.* £4 4s.	*s.* £2 2s. £1 1s.	*s.* £4 4s. *s.* £4 4s.	*s.* £2 2s. *s.* £1 1s. *s.* £2 2s. Mich. s. £2 2s. 1st c. £4 4s.; 2 & 3, each £2 2s. 1st c. £3 3s.; 2 & 3, ea. £1 11s. 6d. £1 1s. *s.* 10s. 6d. *p.* £1 1s.	*s.* £2 2s. *s.* £3 3s. *s.* £4 4s. *s.* £4 4s. A fee	*s.* £4 4s. *s.* £4 4s. *s.* £4 4s. *s.* £4 4s. £1 1s. 1 yr. 10s.; longer, 15s.	£1 1s.

Medical College, may be admitted to three months' Dressership and Perpetual Hospital Practice for £10 10s.—The fees for Surgical Hospital Practice include Dresserships for 3, 6, and 12 months, and 2 years. Twelve months' Dressership after three years, £8 8s. Perpetual Fee for Lectures or Hospital Practice alone, £52 10s. Diseases of Throat and Aural Surgery, each, *s.* £2 2s.; *p.* £3 3s. Extra for use of Apparatus, etc., in Practical Physiology, £1 1s. The Subscription to the Library, and the fees for Practical Pharmacy and Apparatus in Practical Physiology, are also extra.

St. Mary's Hospital.—Entrance Fees for unlimited attendance on Hospital Practice and Lectures (including one course of Practical Chemistry), £131 5s. in instalments, or £124 19s. in one sum; hospital alone, £46 14s. 6d.; lectures alone, £65 12s. 6d. Students who have studied medicine two years at the University of Cambridge are admitted as perpetual pupils on payment of £72 9s.; and students who have kept a portion of the course there or elsewhere, at a proportionate reduction. Subjects for dissection £1 15s. each of two winter sessions. Use of Microscope, (unless possessing one), £1 1s. Inorganic Practical Chemistry is included in the General Fee. Aural Surgery, Diseases of Skin, each £2 12s. 6d. Practical Pharmacy, 12 months, £10 10s.

Middlesex Hospital.—The composition fee ineludes all the lectures required by the London licensing boards, one course of Practical Chemistry and two courses of Dissections, the use of the Library, and the instruction oi the Tutor. Members of English Universities who have completed one year of medical study in University, are admitted to all lectures and hospital practice required (except Practical Chemistry) for £55; this may be paid in instalments of £35 and £20; in the latter case, £10 must be paid for each additional year. Occasional students entering to the Hospital Practice pay a registration fee of £1 6s. Anatomy, including Dissection, *s.* £10 10s.; *p.* £14 14s.

St. Thomas's Hospital.—Perpetual Fee; for students entering in second year, £85 in one sum; or 2nd year, £65; 3rd year, £25; for students entering in third year, £55 on entrance; or £40, and the next year £20. Qualified Medical Practitioners are admitted to Hospital Practice and Lectures on payment of £12 10s. for unlimited attendance. Students dissecting or attending Operative Surgery pay for the parts they use. Practical Physiology and Practical Chemistry, each £1 11s. 6d. (extra) for materials. Pathological Anatomy, £6 6s., with 10s. 6d. (extra) for apparatus, etc. Experimental Physics, *s.* £4 4s.; *p.* £5 5s.

University College.—The Composition Fee admits to perpetual attendance on Hospital Practice and Lectures on Anatomy, Physiology, Chemistry, Surgery, Medicine, and Midwifery, and three years' Practical Anatomy; and to one course each of Botany, Materia Medica, Practical Chemistry, Practical Physiology, Medical Jurisprudence, Pathological Anatomy, Practical Surgery, and Pharmacy. Additional, for perpetual attendance on Materia Medica, Medical Jurisprudence, and Pathological Anatomy, £1 1s. each; Practical Anatomy, each additional year, £1 1s.; second courses of Practical Physiology, of Practical Chemistry, of Practical Surgery, are also extra—*Physiology:* Histology alone, £3 3s.; Physiology alone, £5 5s.; Laboratory fees (winter), first month, £2 2s.; each succeeding month, £1 1s.; additional for Instruction. Embryology, Lectures £2 2s.; Practical Course, £3 3s.; both, £5 5s.—*Zoology and Comparative Anatomy.*—General Course, *s.* £6 6s.; *p.* £8 8s.; Second

[*Continued on next page.*

assist the pupils in their studies. Classes for the preparation of candidates for the Examinations of the University of London are held.

The Pupils' Physical Society meets on alternate Saturdays, at 7.30 P.M. Two prizes of £5 and £10 in books or instruments will be awarded for the best papers read during the session. Two prizes, value £5 each, will be given for the best essays on selected subjects. A prize of £5 is also given to the member who has most distinguished himself in the debates.

Several of the Lecturers have vacancies for Resident Private Pupils.

Information may be obtained from the Dean, Dr. F. Taylor, at the hospital.

KING'S COLLEGE AND HOSPITAL.—*The Hospital* contains 170 beds in use.

The Museums of Anatomy, Materia Medica, Natural History, etc., are open daily from 10 till 4. *The Medical Library* is open daily.

Special Courses.—Special clinical instruction is given on Tuesday, Thursday, and Friday, by the Assistant-Physicians. Instruction is given in the Diseases of Women and Children, and in Throat-Diseases, with Laryngoscopic Demonstrations, by Dr. Baxter, every Thursday at 3.—Demonstrations and practical instruction in Morbid Anatomy are given in the *Post Mortem* theatre.—Special Instruction is given in Medical Chemistry and the Microscope by the Physicians.

Appointments.—Resident Medical Officers, Clinical Clerks, and Dressers are chosen by examination from matriculated students* who are pupils at the Hospital.

Scholarships and Prizes.—Three Warneford Scholarships, for the encouragement of previous education,† each £25 *per annum*, two for three years, and one for two years; and one Warneford Scholarship of £25 *per annum* at the close of the winter session, for two years, for third year resident medical students.—Medical Scholarships given yearly to matriculated students—one of £40 for two years, open to students of the third and fourth year; one of £30 for one year, to students of the second and third year; three of £20 for one year, to students of the first year.—Daniell Scholarship, open to students who have worked in the laboratory six months, £20 *per annum* for two years.—Sambrooke Registrarships, two of annual value of £50 each, open to matriculated students who have filled any of the higher appointments at the hospital.—Science Exhibition given by the Clothworkers' Company; £100 annually, for proficiency in four of the following subjects: Mathematics, Mechanics, Physics, Chemistry, Botany, Geology, Mineralogy, and Zoology; open to all candidates under 19 at time of sending in their names (September 29th).—Inglis Scholarships: two annually, £50 each, for proficiency in Modern History and English Literature.—Leathes' Prizes: Interest of £300 applied in purchase of a Bible and Prayer-Book, as annual prizes to two matriculated medical students.—Warneford Prizes: £40 in medals and books, to two matriculated medical students.—Class Prizes: Books of the value of £3, and certificates of honour, are awarded annually for proficiency in each of the several subjects taught in the classes.—Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and Two Surgical Clinical Prizes of the same value. Todd Medical Clinical Prize: Bronze Medal and Books, value £4 4s.—Jelf Medal, to the candidate at the senior scholarship examination who is second in order of merit.—Tanner Prize, value £10, for proficiency in Diseases of Women and Children, and in Obstetrics.

The Medical Tutor assists, by instruction and examination, all students in the subjects of the first winter and summer sessions, as well as those preparing for the Preliminary Scientific Examination of the University of London. Classes are held for the latter examination.

Associates of King's College.—At the end of each winter session, the professors recommend to the Council the names of medical students to be elected associates.

Residence.—Rooms are provided within the College for a limited number of matriculated students under the supervision of the Censor. The cost of the academical year varies from £50 to £60.

The Medical Society meets on Thursdays, at 8.30 P.M.

The Dean of the Medical Department, or the Subdean, attends daily, Saturday excepted, at King's College, from 11 A.M. to 1 P.M., for the purpose of seeing students and their friends. Any letter addressed to the Dean during the vacation will receive early attention.

LONDON HOSPITAL.—*The Hospital* contains about 800 beds, thus allotted: Accidents and surgical cases, 334; medical cases, 300; diseases of women, 26; children under seven years of age, 68; ophthalmic cases, 12; out-door wards, 60.

Museums, etc.—The Anatomical and Pathological Museum, the Materia Medica Museum, and the Library are open daily.

Special Courses.—Students desirous of obtaining a practical know-

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Course of Zoology and Embryology, £4 4s.; General and Second Courses, £9 9s; both, and Long Practical Course, £21. Shorter Practical Courses (three in year), £4 4s., and 5s. for Specimens; Longer Practical Course, winter, £7 7s.; summer, £5 5s.; both, £11 11s.; animals charged for separately. Special Course of Vertebrate Osteology (summer) £3 3s. Advanced Practical Course (summer) £4 4s. Separate Laboratory Work (winter and summer) per month, two days a-week, £2 2s.; three days, £3 3s.; every day, £4 4s. Elementary Biology, £7 7s., and 5s. for Specimens.—*Chemistry*, Half Course, £4 4s.; Organic Course alone, £2 2s.; Exercise Class, £2 2s.—*Anatomy:* Lectures and Practical Anatomy, Course, £11 11s.; Perpetual Lectures and three years' Practical Anatomy, £16 16s.—*Botany:* Practical Classes, Senior, £4 4s. (with charge for materials); Junior, £1 11s. 6d.—*Hygiene and Public Health;* Laboratory Instruction (exclusive of materials), three months, £10 10s.; one month, £4 4s. Special Practical Course, £12 12s.; in each case exclusive of materials.

WESTMINSTER HOSPITAL.—The payments include all extras except parts for dissection.—A fee of £4 4s. is charged for every session after the fourth winter, in addition to special fees.—Students who have completed a year of study elsewhere pay £60 on entrance, or two instalments of £40 and £25. These payments do not include the Library Fee, the Lectures or Comparative Anatomy, nor the special course of Operative Surgery. Diseases of Skin, £1 1s. Aural Surgery, £1 1s. Obstetric, Ophthalmic, Aural, Skin, and Dental Clinical Departments, 3 months, £2 2s.; 6 months, £3 3s. Special Clinical Departments, and Lectures on Psychological Medicine, Ophthalmic, Aural, and Dental Surgery, Diseases of Skin, and Comparative Anatomy, are free to general students, unless a special certificate is required.

QUEEN'S COLLEGE, BIRMINGHAM.—Ophthalmic Medicine and Surgery, Dental Surgery, and Comparative Anatomy are not included in the composition fee. Each student also deposits £2 as "caution money", which is returned when he has passed his final examination, with such deduction as may be ordered by the warden.

BRISTOL MEDICAL SCHOOL.—Students of Anatomy or Physiology pay a Medical Tutor Fee of £2 2s. *per annum;* this (for 2 years) is included in the Composition Fee. Students not belonging to the Anatomical Class may dissect on paying £3 3s. each session, besides Tutor's fee.—*Royal Infirmary:* Entrance fee, £2 2s.; and £1 1s. *per annum* to Library; Clinical Clerk, 6 months, £5 5s.; 1 year, £8 8s.; Dresser, each, 6 months, £5 5s.; Obstetric Clerk, each 3 months, £3 3s.; Medical Superintendent's Resident Pupil, including five years' residence and attendance on Hospital Practice (except dresser's or clerk's fees), £315. Resident pupils for shorter periods, £52 10s. *per annum* to Infirmary, and £52 10s. to Medical Superintendent. *General Hospital:* Extra fee for clerk or dresser, £5 5s. for six months. Obstetric Clerk, £3 3s. for three months. Library, £1 1s. *per annum.* Resident pupils, £100 for the first year; £60 for each subsequent year; or five years, with apprenticeship, £260.

LEEDS SCHOOL OF MEDICINE.—An Entrance Fee of £1 1s. is paid by all students. This and the fees for Vaccination and Comparative Anatomy are not included in the composition fee.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—The Composition Fee includes Library and Ophthalmology. The aggregate fee of £86 2s. for Lectures and Hospital Practice is exclusive of Vaccination (£1 1s.), Dissections (£3 3s.), and Practical Anatomy in summer (£2 2s.). Demonstrations in Morbid Histology, £1 1s.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.—The Composition Fee admits to four years of study. It does not include Practical Anatomy, after two sessions, 3 months, £2 2s.; 6 months, £3 3s.; Operative Surgery, £2 2s.; Organic Chemistry (extended course), £1 11s. 6d.; Demonstrations in Comparative Anatomy and Botany, each, £1 1s.; Tutorial Class in Anatomy and Physiology, £2 2s.; Tutorial Classes in Chemistry and Botany, each £10s. 6d.; Deposit Fee (Dissection), £2 5s.; Practical Chemistry, for chemicals, £1 1s.—Zoology and Comparative Anatomy, without Demonstrations, £3 3s.; Morbid Histology, £3 3s. Practical Physiology and Histology, extended course (October to end of July), six days per week, £18 18s.; four days, £15 15s.; three days, £11 11s.; two days, £7 7s.; one day, £4 4s. Students entering at or after Christmas pay two-thirds of the fees, if they enter for not less than two days a week. For shorter periods the fees, entitling the student to work every class in the week, are, six months, £15 15s.; three months, £9 9s.; one month, £4 4s.

NEWCASTLE-ON-TYNE COLLEGE OF MEDICINE.—Caution-Money: Library, £1 1s.; Chemical Apparatus, £1 1s.; Use of Bones, 5s. The perpetual fee does not include Chemistry and Practical Physiology.

SHEFFIELD SCHOOL OF MEDICINE.—Tutor's Fee, £2 2s.

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* Matriculated students are those who receive their entire medical education at King's College, and those who, after having received a portion of their medical education at other Schools, come to King's College to complete their studies. They have the privilege of filling the various hospital offices; and of becoming candidates for the Scholarships, for the Sambrooke Registrarships, and for the endowed prizes. Occasional Students, who enter no particular classes, on payment of the prescribed fees, have the privilege of competing for Class Prizes and Certificates.

† Candidates for these three Scholarships must be matriculated students of the Medical Department, and perpetual pupils of the Hospital. Their first Winter Session must commence in October 1879. The examination will be in the following subjects. 1. Divinity: The Books of Joshua and Judges; The Gospel of St. John; The Church Catechism. 2. English Language and Literature: Shakespeare, *Othello;* English History—History of England from 1660 to 1714. 3. Latin: Cicero, *De Senectute*, and *First Speech against Catiline.* 4. Mathematics, Arithmetic; the ordinary rules, with Vulgar and Decimal Fractions; Algebra, as far as and including Quadratic Equations; Euclid, Book I, Book II (except props. 8, 9, 10), Book III. 5. Greek: Xenophon's *Anabasis*, Book III. 6. French: Montaigne, *Essais*, Book III. 7. German: Schiller, *Wallenstein's Tod.* 8. Chemistry: Miller's *Inorganic Chemistry* (in Longman's Series of Text-Books on Science). 9. Natural Philosophy: Deschanel's *Natural Philosophy*, translated by Professor Everett, Part I and Part IV. 10. Botany: Bentley's *Manual of Botany*, third edition, to page 203, together with chapters on the General Principles of Classification, and Diagnosis of Ranunculaceæ, Rosaceæ, Compositæ, Labiatæ, Scrofulariaceæ, and Liliaceæ. Subjects 1, 2, 3, 4, are compulsory; candidates may also select one subject out of 5, 6, and 7, and another either out of 5, 6, 7, or out of 8, 9, 10.—The days of examination are fixed as follows: Monday, September 29th, Divinity; Tuesday, September 30th, Mathematics and Latin; Wednesday, October 1st, History and English Literature. The other subjects will be arranged as most convenient.

ledge of Mental Diseases can attend, without additional fee, the practice of Mr. Millar, at the Bethnal House Asylum, every Wednesday from 10 to 12.—Dr. Morell Mackenzie gives a course of lectures on Diseases of the Throat, at 4 A.M. on Wednesdays in February and March.

Appointments.—Five House-Physicians, who must be qualified for registration, are appointed every six months.—Clinical Clerks are appointed for six months. Every student must act as Clinical Clerk for six weeks in the Medical and as Dresser for three months in the Surgical out-patient department, after passing the first College of Surgeons examination.—A Resident Accoucheur is appointed for six months, and a Clinical Obstetric Clerk every three months. All students who have attended a course of instruction in Midwifery can place their name on the list of Maternity Pupils. Two reside in the hospital for a week.—Four House-Surgeons are elected, usually for six months. Any student who has passed the primary examination at the College of Surgeons may enter his name on the list as a Dresser. Two Dressers reside and board in the hospital every week.—Three Clinical Assistants are appointed every three months for the Medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 *per annum*.—An unpaid Clinical Assistant is appointed in the Ophthalmic department.—A Medical Registrar and a Surgical Registrar are appointed annually; each receives £100.—A Dental Assistant, *Post Mortem* Clerks, Prosectors of Anatomy, and Dressers in the Ophthalmic and Aural departments are also appointed.—Full pupils, and those who, having commenced elsewhere, pay the general fee to the hospital and college, at or before the beginning of the second winter, are eligible for appointments. The holders of resident appointments are provided with rooms and board.

Scholarships and Prizes.—Nine scholarships will be offered for competition. 1 and 2. Two Entrance scholarships, value £60 and £40; examination on September 22nd, 23rd, and 24th; subjects, Physics, Botany, Zoology, and Inorganic Chemistry. Successful candidates must forthwith become pupils of the hospital and school. 3 and 4. Two Buxton scholarships, value £30 and £20; examination on September 25th, 26th, and 27th.* These scholarships are open to full students of less than six months' standing. 5. A scholarship at the end of the winter session, value £20, to a first year's student: subject, Human Anatomy. 6. A scholarship, value £25, to a first or second year's student, at the end of the winter session: subjects, Anatomy, Physiology, and Chemistry. 7, 8, 9. Hospital scholarships, value each £20, for proficiency and zeal in Clinical Medicine, Surgery, and Obstetrics. The Duckworth Nelson Prize, value £10, awarded biennially; open to all students who have not completed their education: subjects, Practical Medicine and Surgery.—Money Prizes to the value of £60 *per annum* to the most meritorious of the Dressers in the out-patient rooms. Special certificates to those gentlemen who have faithfully performed their duties in the hospital, and to those who have distinguished themselves at the examinations.

Special attention is paid to the preparation of students for the examinations of the Colleges of Physicians and Surgeons, the Apothecaries' Hall, and the University of London.

The Medical Society meets for the reading and discussion of papers at 7.30 P.M. on alternate Wednesdays during the winter session.

Information may be obtained from the Principal, Dr. Norman Chevers, at the College.

ST. MARY'S HOSPITAL.—*The Hospital* contains 190 beds; 88 medical and 102 surgical. Two wards are appropriated to Diseases of Children and one to those of Women; there are also beds for ophthalmic cases.

The Reading Room and Library are open daily. The *Museum* is open daily to students. It contains about 3,000 specimens of healthy and morbid anatomy. There are also a Materia Medica Department and a collection of specimens illustrative of Comparative Anatomy. A Histological Room is open daily.

Clinical Demonstrations on Diseases of the Skin and of the Throat are given. The students are carefully trained to the use of the Microscope.

Appointments.—Three Resident Medical Officers are appointed for twelve months, and an Obstetric Officer for six months; all live free of expense in the hospital.—A Demonstrator of Anatomy, a Medical Tutor, and a Resident Registrar, with salaries of £100, are appointed annually, and may be re-elected.—All students must act as clinical clerks and dressers for six months after passing the Primary Examination. Students of the third year are appointed to assist the Physicians and Surgeons in charge of the out-patients for four months each. Two Prosectors are appointed annually; each receives a certificate and £5.

Scholarships and Prizes.—Two Scholarships in Natural Science, tenable for three years; one of £75 the first year, £50 the second year, and £25 the third year; subjects, Inorganic Chemistry, with either Experimental Physics, Botany, and Vegetable Physiology or Zoology; and another, value £65 the first year, £40 the second year, and £20 the third year, for special excellence in either of the above-named subjects. The examinations will take place on October 2nd and 3rd. The successful candidates must enter as perpetual pupils of the hospital.—Scholarship in Anatomy, value £40, tenable for one year, to students who have completed the second winter session. The successful candidate will be styled Assistant-Demonstrator.—Scholarship in Pathological Anatomy, value £40, tenable for one year, open to students who have completed the third winter session. The holder of this scholarship will be styled Assistant-Curator.—*First Year:* Winter Session: Prize of £4 4s. in Anatomy and Histology; one of £2 2s. in Chemistry. Summer Session: Three Prizes, value £2 2s. each, in Materia Medica, Botany, and Inorganic Practical Chemistry.—*Second Year:* Winter: Prize of £4 4s. for Anatomy and General Physiology. Summer: Prizes, value £2 2s. each, for Midwifery and Medical Jurisprudence.—*Second and Third Year:* Winter: Prizes of £3 3s. each, for Medicine and Surgery, and of £2 2s. each, for Pathology and Operative Surgery. Summer: Prize of £2 2s. for Comparative Anatomy.—*Third and Fourth Year:* At end of the winter session, Prizes of £3 3s. each to the Clinical Clerk, and to the In-Patients' Dresser, who have discharged their duties in the most satisfactory manner, for the usual term, during the previous twelve months.

The Medical Tutor assists the students in preparing for their final examination, testing their knowledge of the preparations in the museum, specimens from the dead-house, and other means at his disposal.

The Medical Society meets on alternate Wednesday evenings, during the winter session, at 8 P.M.

Further information may be obtained from Dr. Shepherd, Dean of the School.

MIDDLESEX HOSPITAL.—*The Hospital* contains upwards of 300 beds, of which 185 are devoted to surgical and 120 to medical cases. There are 33 beds for cases of cancer; also wards for cases of uterine disease and of syphilis, and beds for cases of diseases of the eye.

The Museum is open to students daily from 9 to 5. It contains above 5,000 specimens.—*The Library and Reading Room* are open to all general students.

Special Subjects.—Mr. Morris sees out-patient cancer cases at 1.30 on Thursdays.—Practical instruction in Mental Diseases is given at the Leavesden Asylum.

Appointments, etc.—Two House-Surgeons are appointed for six months, after competitive examination, in April and October. The Junior House-Surgeon succeeds to the office of Senior House-Surgeon if he have performed his duties satisfactorily. Each House-Surgeon pays £21 on appointment if he have been a surgical pupil of the hospital; if not, £31 10s. Three Resident Physicians'-Assistants are appointed from time to time for six months, after competitive examination. They must have a legal medical qualification. Each Resident Physicians'-Assistant pays £10 10s. on appointment; and, if he have been a medical pupil of the hospital for a limited time, a sum sufficient to make him a perpetual student of the medical practice; if he have been neither a general nor an occasional pupil of the hospital, he pays £21. A Resident Obstetric Assistant (qualified to practise) is appointed for six months. He pays £10 10s. Clinical Clerks and Dressers are appointed for six months. An Obstetric Physician's Clerk and Ophthalmic Dresser are appointed. The appointments are so arranged that every student may take both a clerkship and a dressership. Each student must be an out-patient clerk and an out-patient dresser for six months respectively, before being eligible to an in-patient clerkship or dressership.

Scholarships and Prizes.—Two Broderip Scholarships, value £30 and £20, tenable for two years, to students who have completed the third year, for reports or comments on selected medical and surgical cases.—Two Entrance Scholarships, value £25 and £20, tenable for

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* The subjects are:—1. The English Language and Literature. The Examination will include Writing from Dictation, *précis* Writing, the Composition of a Short Essay or Letter on a given theme, Questions on the History and Development of the Language and its Literature, and Questions based on Shakespeare's Play of *Hamlet*. 2. Arithmetic, including Vulgar and Decimal Fractions. 3. Algebra, including Quadratic Equations. 4. Geometry—first Four Books of Euclid. 5. Latin: Virgil, *Eclogues*, the first six. 6. One of the following subjects at the discretion of the candidate: *(a)* Greek—Herodotus, Book II; *(b)* French—Molière, *Les Femmes Savantes*, and *Le Malade Imaginaire*; *(c)* German—Schiller's *Wilhelm Tell*; *(d)* Natural Philosophy, including Mechanics, Hydrostatics, and Pneumatics.

two years,* open to all gentlemen commencing their medical studies at the hospital in October 1879.—The John Murray Scholarship and Gold Medal will be awarded in May 1880; open to general students who have entered since April 30th, 1876; subjects, Written and Clinical Examinations in Medicine, Surgery, and Obstetrics.—The Governors' Prize, value £21, to the student who, at the end of the third winter session, shall have been most diligent in the wards, and have attained the highest proficiency.—A Clinical Prize of £10 10s. to the candidate who stands third in the competition for the Broderip Scholarship.—Class Prizes and Certificates of Honour are given in each subject.

The College Tutors assist all general students of the hospital, especially those who are preparing for primary examination before the licensing boards.

The Students' Medical Society meets in the Board Room of the Hospital once a fortnight during the winter session.

Information may be obtained from Mr. Andrew Clark, the Dean; from Dr. Cayley, Treasurer of the College; from any of the Lecturers; or from the Resident Medical Officer at the Hospital.

ST. THOMAS'S HOSPITAL.—*The Hospital* contains 572 beds, of which about 180 are appropriated to ordinary medical and 230 to ordinary surgical cases. There are also special wards for diseases of women, diseases of the eye, venereal affections, children under six years of age, and (in a separate block) infectious diseases.

Museum, etc.—Students have access to the library and to the Museums of Human Anatomy, of Comparative Anatomy, of Materia Medica, and of Chemistry and Mineralogy, and to the Laboratories of Practical Physiology and Practical Chemistry.

Special Subjects.—A course of lectures on Physics and Natural Philosophy is given by Dr. Stone. Physiological Demonstrations are given at 1 on Mondays, Wednesdays, and Fridays in the winter session; and Demonstrations of Pathological Anatomy at 2 P.M. daily. Dr. Cory sees children's cases at 12.30 on Saturdays.

Appointments.—Two House-Physicians and two Assistant House-Physicians, two House-Surgeons and two Assistant House-Surgeons, and a Resident Accoucheur, are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. An Ophthalmic Clinical Assistant is appointed for six months, with a salary at the rate of £50 *per annum*. Four Surgical Ward Clerks, each holding office for six months, are appointed twice a year. Clinical Clerks and Dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Obstetric Clerks are from time to time appointed; also Prosectors and Assistants to the Demonstrator of Pathological Anatomy. All students have the opportunity of being engaged in the performance of practical duties in connection with the Medical, Surgical, Obstetrical, Ophthalmic, and Pathological Departments of the Hospital. The House-Physicians, House-Surgeons, the Resident Accoucheur, and Dressers and Clinical Clerks, are provided with rooms and commons. Two Registrars are appointed at an annual salary of £100.

Scholarships and Prizes.—Two Open Scholarships in Natural Science, value £60 and £40, in first week in October; subjects, Physics, Chemistry, and either Botany or Zoology. Successful candidates must become students of the hospital.—The William Tite Scholarship, £30, to the student highest on the first-class list at the examination at the end of the first winter session.—The Musgrove Scholarship, value £42 *per annum*, biennially to the student highest in the first-class list at the end of the second winter session.—A College Scholarship of same value, alternately with the Musgrove Scholarship.—College Prizes each winter for first and second years' students, of £20 and £10 each winter; and for third year's students, of £20, £15, and £10; and £15, £10, and £5 each of two summers.—The Cheselden Medal, annually, to a fourth year's student, for Surgery and Surgical Anatomy.—The Mead Medal, annually, to a fourth year's student, for practical examination in Medicine, Pathology, and Hygiene.—The Treasurer's Gold Medal, annually, to a fourth year's student, for general proficiency and good conduct.—The Grainger Testimonial Prize, value £20 biennially, to students of from three to six years' standing, for a Physiological Essay.—The Solly Medal, with a Prize in money, every two years, for Reports of Surgical Cases, to a third, fourth, fifth, or sixth year's student.

University of London.—Classes in the subjects required for the Preliminary Scientific Examination of the University of London are held from October to July, and classes in the subjects of the First M.B. Examination are held from January to July.

The Medical and Physical Society meets on alternate Thursdays at 7.30 P.M. Three prizes are annually awarded to the authors of the best papers written by first, second, and third year's students respectively.

Further information may be obtained from Dr. Gillespie, the Medical Secretary, at the Hospital.

UNIVERSITY COLLEGE AND HOSPITAL.—The General and Medical Libraries, the Museums of Anatomy and Pathology, of Comparative Anatomy, of Materia Medica and Chemistry, of Geology, and of Natural Philosophy, and the Parkes Museum of Hygiene, are open daily. There are also a Chemical and a Physiological Laboratory, where instruction is given under the superintendence of the Professors.

Clinical Instruction.—Dr. Wilson Fox, Holme Professor of Clinical Medicine, delivers Clinical Lectures every Tuesday and Thursday, and trains the pupils in the practical study of disease. Dr. Gowers, Assistant Professor of Clinical Medicine, gives special instruction in Physical Examinations, and on the Modes of Investigation of Diseases of the Nervous System; and Dr. Poore, Assistant Professor of Clinical Medicine, instructs in the Examination of the Heart and Blood-vessels, the Urine, and the Throat and Windpipe. Lectures are given every Monday by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Marshall and Mr. Berkeley Hill. Mr. Erichsen and Sir Henry Thompson, Emeritus Professors of Clinical Surgery, will deliver short courses during the session. The Holme Professor will hold a Clinical Examination every Friday. Mr. Marcus Beck and Mr. Barker, the Assistant-Professors of Clinical Surgery, will hold examinations, and instruct students in the observation and examination of patients.

Offices.—Six Physicians' Assistants, six House-Surgeons, four Obstetric Assistants, Physicians' Clerks, Surgeons' Dressers, Surgical Ward Clerks, and Ophthalmic Surgeons' Assistants, are selected from among the pupils. The Physician's Assistants, the Obstetric Assistants, and the House Surgeons, reside in the hospital, paying for their board.

Scholarships, etc.—Three Entrance Exhibitions, value £30, £20, and £10 *per annum*, tenable for two years, to gentlemen who are about to commence their first winter's attendance.*—The Atkinson-Morley Surgical Scholarship, £45, tenable for three years, for proficiency in Surgery.—The Sharpey Physiological Scholarship, annual value about £70.—The Filliter Exhibition of £30, annually in July, for proficiency in Pathological Anatomy.—Dr. Fellowes's Clinical Medals, one Gold and one Silver, with Certificates of Honour at the end of each winter and each summer session.—The Liston Gold Medal, with certificates of Honour, at the end of the winter session, for reports and observations on the surgical cases in the hospital.—The Alexander Bruce Gold Medal, for proficiency in Pathology and Surgery.—The Cluff Memorial Prize, every second year, to the most proficient in Anatomy, Physiology, and Chemistry: next award in 1881.—An Atchison Scholarship, value about £55, tenable for two years, annually after the winter session, for general proficiency.—Morris Bursary of £25 a year, in 1880; notice of application to be given on or before June 1st.—Gold and Silver Medals or other Prizes, as well as Certificates of Honour, after competitive examinations in the classes.—Prizes to the value of £10 in the class of Hygiene.

Private Instruction.—Gentleman may obtain assistance in their studies within the College, on application to the respective Professors.

The Medical Society meets to read and discuss papers on alternate Wednesdays throughout the session, at 7 P.M.

Residence of Students.—Several gentlemen connected with the College receive students to reside with them; and, in the office of the College, there is kept a register of persons who receive boarders.

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* The Examination will take place on September 27th and following days. The following are the subjects for Examination. *Latin:* Passages for translation into English, short passages for translation from English into Latin, and questions in Grammar and Ancient Geography. *Greek:* Easy passages for translation into English; questions in Grammar and Ancient Geography. *French or German:* Passages for translation into English, short passages for translation from English into French or German, and questions in Grammar. *Mathematics:* Arithmetic, Algebra up to and including Quadratic Equations, and Euclid, books I, II, III. *Natural Philosophy.—Chemistry.—Botany.—Zoology.*—Huxley's *Classification of the Animal Kingdom;* Rudiments of Animal Physiology. Candidates will be examined in any three, and not more, of the above subjects which they may select; but only one Modern Language, and two out of the last three subjects, are permitted.

* The subjects of Examination are the following. Latin and Greek: Translation into English of passages from Cæsar and Xenophon; Translation of short English sentences into Latin. French or German: Translation into English of passages from Bossuet's *Discours sur l'Histoire Universelle*, or of passages from Schiller's *Geschichte des dreissigjährigen Krieges*. Mathematics and Natural Philosophy: the subjects required for the Matriculation Examination of the University of London, with the addition of Acoustics (Nature of Sound), and omitting Heat. The next Examination will take place at the College, on September 25th and 26th, 1879. In September 1880 and following years, the value of the Entrance Exhibitions will be raised to £100, £60, and £40 respectively, and they will be awarded for proficiency in Science, the subjects of examination being those of the Preliminary Scientific Examination of the University of London.

Information respecting the College may be obtained from the Dean, Mr. Christopher Heath; the Vice-Dean, Mr. Thane; or the Secretary, Mr. Talfourd Ely.

WESTMINSTER HOSPITAL.—*The Hospital* contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, and for Diseases of Women.

Museums, etc.—The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum. The Library is open daily from 9 to 5.

Special Subjects.—In addition to the practice of the Hospital, pupils who enter for the whole period of medical education may attend, without further fee, the practice of the Royal Westminster Ophthalmic Hospital and of the Royal Hospital for Paralysis. Instruction in the physical examination of the Chest is given by Dr. Donkin, and in the use of the Laryngoscope by Dr. De Havilland Hall. Mr. R. Davy gives demonstrations in Orthopædic subjects.

Appointments.—A Curator of the Museum, a Pathologist, and a Medical and a Surgical Registrar are appointed annually, each with a salary of £40.—A House-Physician, a House-Surgeon, and a Resident Obstetric Assistant are appointed for six months after examination, and are provided with rooms and commons. They each pay a deposit of £20 on appointment; but receive £25 at the expiration of the term if their duties have been performed satisfactorily.—An Assistant House-Surgeon is appointed from among the senior students; he is provided with commons at the hospital table.—Clinical Assistants to the Physicians and Surgeons, and to the officers in charge of special departments, are appointed from students of the fourth year. Every student must perform the duties of Clinical Clerk and Dresser.

Scholarships and Prizes.—The Fence and Houldsworth Entrance Scholarship, each £50 a year for two years; and two Entrance Scholarships, value £10, tenable for two years.*—Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men.—A Prize of £2 2s. by Mr. A. P. Gould, to the first year's student who is most regular and diligent in the Dissecting Room.—Scholarship in Anatomy and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator).—At the end of the third summer, Prizes of £5 each (books or instruments), in Clinical Medicine and Clinical Surgery.—Frederic Bird Medal and Prize, value £15, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology.—Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth.—In most of the Classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each Class.

Two *Tutors* assist and guide the students in their work, and hold Senior and Junior Classes. Each student must attend at least three hours' tutorial instruction each week. Classes are held for the Preliminary Scientific Examination of the University of London.

Communications respecting the Medical School should be addressed to Dr. Allchin, the Dean of the School, from whom all particulars may be obtained. Information may also be obtained from any of the Lecturers, or from the Secretary at the Hospital.

SCHOOL OF ANATOMY, PHYSIOLOGY, AND OPERATIVE SURGERY.—The School meets the requirements of two distinct classes of students: *i.e.*, 1. Advanced students and qualified practitioners, who may wish either to extend their knowledge of the foregoing subjects, or to recall to mind what they once knew and have since forgotten; 2. Beginners entering upon their medical studies by a short term of apprenticeship with a general practitioner. For the former, rapid advanced classes, complete in three months, but still thoroughly practical, will be provided; and for the latter, more elementary classes of six months' duration, also thoroughly practical.

The Operations of Surgery are all performed on the dead body by the students.

The dissecting-room is open daily from 10 A.M. to 6 P.M. The Demonstrators attend four hours daily. No entrance fee is charged for dissections only; but it is understood that the dissected parts may be used by the Lecturer for the purpose of demonstration.

Fees.—Anatomy and Physiology, Lectures: For Primary Membership Examination of Royal College of Surgeons, 3 months, £3 3s.; 6 months, £4 4s. For Primary Fellowship Examination (with Comparative Anatomy), 6 months, £5 5s.; perpetual for either examination (4 years), £10 10s. Operative Surgery (one course), £5 5s. Anatomy and Physiology for Primary Fellowship, and Operative Surgery, £8 8s.

LONDON SCHOOL OF MEDICINE FOR WOMEN.—The following courses of lectures are delivered at this School: Anatomy and Practical Anatomy, by Mr. Reeves and Mr. Ottley; Physiology, by Mr. Schäfer; Chemistry, by Mr. Heaton; Botany, by Dr. P. H. Stokoe; Materia Medica, by ————; Practice of Medicine, by Mrs. Garrett-Anderson, M.D., and Dr. H. Donkin; Clinical Medicine, by Dr. O'Connor and Dr. Cockle, at the Royal Free Hospital; Midwifery, by Dr. Ford Anderson; Diseases of Women, by Dr. Louisa Atkins; Forensic Medicine, by Dr. Dupré and Mr. T. Bond; Surgery, by Mr. Cowell; Clinical Surgery, by Mr. Gant and Mr. Rose, at the Royal Free Hospital; Ophthalmic Surgery, by Mr. Critchett and Mr. James Adams; Pathology, by Dr. W. A. Sturge; Hygiene, by Dr. Sophia Jex-Blake and Dr. Edith Pechey; Mental Pathology, by Dr. Sankey; Comparative Anatomy or Zoology, by Dr. Murie; Minor Surgery, by Mr. W. H. Cripps.

The Winter Session will commence on October 1st. Intending students are requested to apply to the Dean for a form of application for admission to the School. No student will be admitted to the study of Medicine who has not completed her eighteenth year.

Fees.—The fee for the ordinary curriculum of non-clinical Lectures is £80 in one sum, or in instalments, £40 for the first year, £30 for the second, and £15 for the third. The courses of Lectures included in this fee are two each of Anatomy, Practical Anatomy, Physiology, and Practice of Medicine; and one each of Botany, Chemistry, Practical Chemistry, Materia Medica, Surgery, Pathology, Midwifery, Diseases of Women, and Forensic Medicine. The fee of £90 in one sum (or annual fees of £45, £35, and £15, in instalments) entitles a student to attend, in addition to the classes mentioned above, one course each of Practical Physiology, Comparative Anatomy or Zoology, Ophthalmic Surgery, Mental Pathology, and Hygiene. Any student having paid either of the compounding fees is, on a further payment of £6 6s., entitled to attend additional courses of the classes mentioned above. Materials for the practical classes are charged extra when additional courses are taken. The fee for separate courses is £8 8s. for each subject in winter, and £5 5s. in summer; for each course of lectures on Mental Pathology, Ophthalmic Surgery, and Hygiene, £2 2s.; for twelve demonstrations on Minor Surgery and use of surgical appliances, and for the same number of demonstrations on Auscultation, £1 1s. The fee for hospital instruction, including Clinical Lectures, is £20 for the first year, and £15 for each subsequent year. No student is admitted to the Hospital for less than one year.

Examinations are held in each Class; and attendance upon these is required from all students. A record of the attendance of all students is kept. Every student is required to attend not less than two-thirds of the lectures.

Clinical Clerks, Surgical Dressers, a Pathological Registrar, and a Prosector for the class of Anatomy, are chosen from among the senior students without further fee.

Besides the above, students and practitioners are admitted to visit several of the general and special hospitals and infirmaries; among which are the following. Information may be obtained on application to the secretaries of the respective institutions.

Great Northern Hospital, Caledonian Road.
Seamen's Hospital, Greenwich.
West London Hospital, Hammersmith Road.
City of London Hospital for Diseases of the Chest, Victoria Park.
Hospital for Consumption and Diseases of the Chest, Brompton.
Hospital for Sick Children, Great Ormond Street.
Belgrave Hospital for Children, Cumberland Street.
Evelina Hospital for Sick Children, Southwark Bridge Road.
Victoria Hospital for Children, Queen's Road, Chelsea.
East London Children's Hospital, Shadwell.
Royal Infirmary for Children and Women, Waterloo Bridge Road.
Samaritan Hospital for Women and Children, Lower Seymour Street.
Chelsea Hospital for Women, King's Road.
Hospital for Women, Soho Square.
British Lying-in Hospital, Endell Street.

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† The next Examination will be held at the Hospital on September 26th and 27th. The following are the subjects. Latin—Cicero, *De Senectute*, and the first *Speech against Catiline*. The paper will contain passages for translation, questions in Grammar, and easy English sentences for translation into Latin. French and German—The papers will contain passages for translation into English, and questions in Grammar. Mathematics: Arithmetic—including Vulgar and Decimal Fractions, and extraction of Square Root. Algebra—Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion, Arithmetical and Geometrical Progression, Simple Equations. Geometry—First Four Books of Euclid, or the subjects thereof. Natural Philosophy and Chemistry—The questions in these will be elementary, and in the latter will be confined to Inorganic Chemistry. The examination is by written papers. Notice of intention to compete, with a statement of the languages in which the candidate wishes to be examined, and a certificate of moral character, must be sent to the Dean not later than September 25th.

Queen Charlotte's Lying-in Hospital, Marylebone Road.
City of London Lying-in Hospital, City Road.
London Fever Hospital, Liverpool Road.
Royal London Ophthalmic Hospital, Moorfields.
Royal Westminster Orthopædic Hospital, King William Street.
National Hospital for the Paralysed and Epileptic, Queen Square.

NOTES CONCERNING THE PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

UNIVERSITY OF OXFORD.—The instruction in Natural Science is carried on at the Museum, where there is practical instruction in Physics, Chemistry, and Anatomy and Physiology. The Professors are: Regius Professor of Medicine—H. W. Acland, M.D., D.C.L., F.R.S.; Geometry—H. J. S. Smith, M.A., F.R.S.; Natural Philosophy—Rev. B. Price, M.A., F.R.S.; Experimental Philosophy—R. B. Clifton, M.A., F.R.S.; Geology—J. Prestwich, F.R.S.; Chemistry—W. Odling, M.B., F.R.S.; Physiology—G. Rolleston, M.D., F.R.S..; Zoology—J. O. Westwood, M.A., F.L.S.; Botany—M. A. Lawson, M.A.; Mineralogy—M. H. N. Story-Maskelyne, M.A., F.R.S.; Lee's Reader in Anatomy—J. B. Thompson, M.A.

Large collections illustrate the several subjects; there is a pathological series, including the collection of Schroeder van der Kolk, in the medical department, and a medical laboratory. The Radcliffe Library (in the University Museum), containing nearly 20,000 scientific volumes, is open to all students daily from ten to four, and on certain evenings during term. There are also lectures and practical instruction in Botany at the Botanic Gardens; and Clinical instruction at the Infirmary.

UNIVERSITY OF CAMBRIDGE.—The following Courses of Lectures on Medicine and subjects connected with it will be delivered during the ensuing academical year.

Michaelmas Term, 1879.—Chemistry and Physics: Heat, by the Professor of Experimental Physics; Electro-Magnetism and Electrical Measurements, by the Demonstrator of Physics, M. W. F., 1; Experimental Mechanics, by the Demonstrator of Physics (times to be announced hereafter); General Principles of Chemistry, by Professor Liveing, M. W. F., 12; Physical Chemistry, by Professor Dewar, T. Th. S., 12; Principles of Inorganic Analysis, by Mr. Main (St. John's), T. Th. S., 10; Chemical Analysis (University Chemical Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily; ditto (Caius College Laboratory), daily, 11 to 4; ditto (Sidney College Laboratory), daily; The Metallic Elements, by Mr. Pattison Muir (Caius), M. W. F., 10; Systematic Chemistry, advanced course, by Mr. Pattison Muir (Caius), (times to be fixed); Spectroscopic Analysis, by Professor Liveing, M. W. F., 1.30 and following hours; Volumetric Analysis, by one of the Demonstrators of Chemistry, T. Th. S., 10; Chemistry, Catechetical Lectures, by Mr. Lewis (Downing), M. W. F., 9.—Botany: Elementary, chiefly Morphology, by Mr. Hicks (Sidney), T. Th. S., 11; Physiology of Plants, by Mr. Vines (Christ's), M.W.F., 12; Practical, including Histology, by Mr. Bettany (Caius). Anatomy and Physiology: Zoology and Comparative Anatomy, *Invertebrata*, by Professor Newton, M. W. F., 1; Course, by the Demonstrator of Comparative Anatomy, to be hereafter notified; Practical Morphology, by Mr. Balfour (New Museums), Elementary Course *(Vertebrata)*, M.W., 9; advanced course *(Invertebrata)*, T. Th., 11; Human Anatomy; Demonstrations and Catechetical Lectures, by Professor Humphry and Demonstrator, daily, 11; Practical Anatomy in Dissecting Room, daily, 9 to 4; Anatomy and Physiology; The Nervous System and the Joints, by Professor Humphry, T. Th. S., 1; Anatomy and Physiology of the Organs of Digestion, Absorption, and Circulation, by Dr. Bradbury (Gonville and Caius College), T. Th., 12; Physiology, by the Trinity Prælector (Dr. Michael Foster), (New Museums), Elementary Course, T. Th. S., 9; Advanced Course, M. W. F., 11; Physiology, by Mr. Saunders (at Downing College), T. Th. S., 9.—Medicine: General Therapeutics, by Professor Latham, M. W. F., 9; Clinical Medicine, by Professor Paget, M. W. F., 10; Clinical Surgery, by Mr. Lestourgeon, T. Th., 10.

Lent Term, 1880.—Chemistry and Physics: Electricity, by Professor Maxwell (Cavendish Laboratory), T. Th. S., 12; Heat, by the Demonstrator of Physics, M.W. F., 1; Experimental Hydrostatics; Sound and Light, by Mr. Trotter (Trinity College), M. W. F., 10; General Course of Chemistry continued, by Professor Liveing, M. W. F., 12; Chemistry, General Course begun, by Mr. Main (St. John's), T. Th. S., 11; Non-metallic Elements, by Mr. Pattison Muir (Gonville and Caius), M. W. F., 10; Organic Chemistry, by Professor Dewar, T. Th. S., 12; by Mr. Walker (Sidney), M. W. F., 12; Chemical Analysis (University Chemical Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily, 11 to 4; ditto (Caius College Laboratory), daily; ditto (Sidney College Laboratory), daily; Chemistry, Catechetical Lectures, by Mr. Lewis, M. W. F., 9.—Botany: Histology and Physiology, by Mr. Hicks (Sidney), T. Th. S., 11; Elementary, chiefly Morphology, by Mr. Hicks (Sidney), T. Th. S., 12; Anatomy of Plants, with Practical Work, by Mr. Vines (Christ's), M. W. F., 12.—Anatomy and Physiology: Zoology and Comparative Anatomy, *Vertebrata*, by Professor Newton, M. W. F., 1; Course, by the Demonstrator of Comparative Anatomy (to be hereafter notified); Practical Morphology, by Mr. Balfour (New Museums), Elementary Class continued *(Invertebrata)*, M. W., 9; Advanced Class *(Invertebrata)*, T. Th., 11; Human Anatomy: Demonstrations and Catechetical Lectures, by Professor Humphry and Demonstrator, daily, 11; Practical Anatomy in Dissecting Room, daily, 9 to 4; Anatomy and Physiology: The Muscular and Circulatory Systems, by Professor Humphry, T. Th. S., 1; Anatomy and Physiology, by Dr. Bradbury (Gonville and Caius College), course continued, T. Th. S., 12; Physiological Optics and Acoustics, by Mr. Trotter (Trinity College), T. Th., 10; Physiology, by the Trinity Prælector (Dr. Michael Foster), (New Museums), Elementary Course continued, T. Th. S., 9; Advanced Course, M.W. F., 11; Physiology, by Mr. Saunders (Downing College), T. Th. S., 9.—Medicine: Principles and Practice of Medicine, by Professor Paget, M. F., 9; Clinical Medicine, by Professor Latham, M. W. F., 10; Clinical Surgery, by Mr. Carver, T. Th. S., 10.

Easter Term, 1880.—Chemistry and Physics: Electro-Magnetism, by Professor Maxwell (Cavendish Laboratory), T. Th. S., 12; Electricity, by the Demonstrator of Physics, M. W. F., 12; Sound and Light continued, by Mr. Trotter, M. W. F., 10; Chemistry, Elementary Course, by a Demonstrator of Chemistry, T. Th. S., 12; General Course continued, by Mr. Main, T. Th. S., 12; Elementary Organic Chemistry, by Mr. Pattison Muir (Caius), M. W. F., 10; Some Special Department of Chemistry, by Professor Liveing, M. F., 12; Chemical Analysis (University Chemical Laboratory), daily, 10 to 6; ditto (St. John's College Laboratory), daily; ditto (Caius College Laboratory), daily, 11 to 4; ditto (Sidney College Laboratory), daily; Chemistry, Catechetical Lectures, by Mr. Lewis, M. W. F., 9; Inorganic Chemistry, Catechetical Lectures, by Mr. Walker, M. W. F., 12.—Botany: Taxonomy, Glossology, and Phytography, by Professor Babington, M. W. F., 1; Morphology (chiefly Cryptogamic), with Practical Work, by Mr. Vines (Christ's College), T. Th. S., 12; Histology, by Mr. Saunders (Downing), M. W. F., 12.—Anatomy and Physiology: Course, by the Demonstrator of Comparative Anatomy (to be hereafter notified); Vertebrate Embryology, with Practical Work, by Mr. Balfour (New Museums), T. Th. S., 9; Human Anatomy, Catechetical Lectures, by Professor Humphry and Demonstrator; Practical Anatomy, in the Dissecting Room; Physiological Optics and Acoustics, by Mr. Trotter (Trinity College), continued, T. Th., 10; Elementary Biology, by the Trinity Prælector (Dr. Michael Foster), (New Museums), M.T.W.Th.F., 9; Physiology, advanced course, by Dr. M. Foster (times will be published at end of Lent Term); Physiology, by Mr. Saunders (Downing College), M. W. F., 9.—Medicine: Principles and Practice of Medicine, by Professor Paget, M. W. F., 9; Pharmacy and Pharmaceutical Chemistry, by Professor Latham, T. Th. S., 9; Pathological Anatomy, by the Linacre Lecturer (Dr. Bradbury), T. Th., 9; Clinical Medicine, by Dr. Bradbury, M. W. F., 10; Clinical Surgery, by Dr. Humphry, T. Th. S., 10.

Students desirous of attending Lectures on Thermo-dynamics, Crystallography, or Mineralogy, are referred to the Scheme of Lectures on the Natural Sciences.

Long Vacation (July and August), 1880.—Practical Physics, in the Cavendish Laboratory; Practical Chemistry, in the University Laboratory; Lectures on Organic Chemistry, by Mr. Fenton (provided sufficient names be entered), T. F.; Practical Anatomy; Human Osteology; Practical Histology; Clinical Instruction at the Hospital.

Medical Students requiring Certificates of attendance on lectures on Chemistry will be expected to attend one of the following: either the General Course of the Professor of Chemistry or the two courses of the Jacksonian Professor in Michaelmas and Lent Terms; or Mr. Main's course or Mr. Pattison Muir's in Lent and Easter terms; or the course of the Demonstrator of Chemistry in Easter term, together with Mr. Main's course on Organic Chemistry in Michaelmas term. Manipulations have to be practised besides, which may be done in any term.—The Chemical Laboratory of the University is open daily for the use of the students. The Demonstrator attends daily to give instruction. The Dissecting Rooms and Museums of Anatomy are open daily during the vacations as well as in the terms. Opportunities for clinical instruction in mental diseases are afforded at the County Asylum, Fulbourn, by Dr. Bacon. Notice will be given of the days and hours. Commencing Students of Medicine must be registered according to the Regulations of

the General Council of Medical Education and Registration. Forms for registration, abstracts of regulations, schedules, and other papers, may be obtained from the attendant at the Anatomical Schools, Pembroke Street.

BIRMINGHAM.—QUEEN'S COLLEGE.—Mr. Berry and Dr. R. C. R. Jordan lecture on Diseases of Children in the summer. Dental Surgery is taught by Mr. Howkins. Clinical Lectures are given in the General Hospital and the Queen's Hospital, which have upwards of 400 beds. Special instruction is given in the use of the microscope, laryngoscope, and ophthalmoscope, and surgical appliances, also in case-taking and bandaging, with minor surgery and prescribing. Students are allotted to each hospital by the Clinical Board, so that every student shall divide his time equally between the two institutions.

Appointments.—General Hospital: Resident Medical and Resident Surgical Assistant, two Resident Dressers, tenable for six months. *Queen's Hospital:* Resident Obstetric Assistant, tenable for six months; Resident Dresser, tenable for three months.

Prizes.—The Sands Cox Prize, value £20 annually, to students who have completed their curriculum, after examination in Medicine, Surgery, and Midwifery.—Two Ingleby Scholarships, after examination in Obstetric Medicine and Surgery and the Diseases of Women and Children; open to students who have completed the second year.—Medals and Certificates of Honour, annually, in each class after examination.

Clinical Prizes.—Two Senior Medical and two Senior Surgical Prizes (third and fourth years), value in each department £5 5s. and £3 3s.; two Junior Medical and two Junior Surgical Prizes (second year), value, £3 3s. and £2 2s.; Midwifery Prize, £4 4s.

The Medical Tutor holds classes for junior students.

Further particulars may be obtained by application to the Rev. the Warden, at the College, or 54, Islington Row, Edgbaston; to Dr. Rickards, 100, Newhall Street; to Dr. Carter, 18, Newhall Street; or to Dr. Hinds, 10, Easy Row.

BRISTOL MEDICAL SCHOOL.—This School is affiliated to University College, Bristol. Clinical instruction is given at the Royal Infirmary and the General Hospital. The Royal Infirmary contains 264 beds: it has a large children's ward, wards for eye cases and other special cases, and two wards apart from the main building for cases requiring isolation. The General Hospital contains 154 beds: it has a children's ward, and private and isolated wards. The Infirmary and the Hospital each contain a Library and a Museum.

Appointments.—Royal Infirmary: Students are appointed to Dresserships after the first year of study. Resident Dressers are appointed in weekly rotation. Clinical Clerks are appointed in the third and fourth years of study. A Pathological Clerk is appointed every four months. *General Hospital:* Clinical Clerks, Dressers, and Obstetric Clerks are appointed. The Dressers reside in the hospital in rotation, free of expense.—Resident pupils are received at both institutions.

Prizes.—Prizes and Certificates of Honour are awarded after examination in the subjects of each year. In awarding the prize for Practical and Operative Surgery, the marks obtained in the two courses are added together. Certificates alone are given for Practical Chemistry, Practical Surgery and Operative Surgery (separately), Comparative Anatomy, and Hygiene.—Prize and Certificates of Honour for Practical Anatomy. *Royal Infirmary:* Suple's Medical Prize, and Suple's Surgical Prize, each a gold medal value £5 5s. and about £7 7s. in money, awarded after examinations in Medicine and in Surgery respectively. Clark's Prize (interest of £500) to the prizeman of the third year in the Medical School, if he have attended the Royal Infirmary. Tibbits Memorial Prize, annually, after examination. A prize of £3 3s. to the Pathological Clerk, if he have performed his duties satisfactorily.—*General Hospital:* Martyn Memorial Scholarship, £20, at beginning of winter session, after examination in subjects of general education. Lady Haberfield's Prize (interest of £1,000) for general proficiency. Clarke Surgical Scholarship, £15, annually. Sanders Scholarship (interest of £500); and Lady Haberfield's Prize (interest of £1,000) annually; each after examination in Medicine, Surgery, and Diseases of Women. The Martyn Memorial Scholarship and Lady Haberfield's Prize, when not awarded, are available for the remuneration of a Museum Curator, appointed from among the students after competitive examination.

Further particulars respecting the Infirmary may be known on application to W. H. Harsant, Esq.; respecting the Hospital, on application to Dr. Siddall. Information regarding the Medical School will be afforded by the Honorary Secretary, Dr. E. Markham Skerritt.

LEEDS SCHOOL OF MEDICINE.—There are Anatomical, Pathological, Chemical, Botanical, and Materia Medica Museums. The Library is open to students.

Clinical Instruction, etc.—Clinical Lectures are delivered by the Physicians and Surgeons of the Infirmary, and classes meet in the wards for practical instruction. Courses of Practical Physiology and Practical Surgery are held.—Demonstrations of Eye and Ear Diseases, and instruction in the use of the Ophthalmoscope, are given. The West Riding Lunatic Asylum at Wakefield is open for the study of Mental Diseases, and a course of lectures is given by Dr. Major during the summer.—Students can also attend the practice of the Leeds Public Dispensary and the Fever Hospital. There are several resident appointments at these institutions.—The lectures on Chemistry and Botany are delivered at the Yorkshire College of Science, and those on Comparative Anatomy and Zoology at the Philosophical Hall.

Hospital Appointments.—Every student must hold the offices of Clinical Clerk and Dresser. A House-Physician and a House-Surgeon are elected from time to time. There are also four Resident Assistants in the Infirmary; two are selected from the senior students every six months, and hold office for one year.

Prizes.—At the close of each session, Silver and Bronze Medals, Books, and Certificates of Honour, are awarded according to merit.—The Hardwick Clinical Prize, value £10, is given annually for the best reports of medical cases, and the Surgeons' Clinical Prizes of £8, £5, and £3, for the best reports of surgical cases, during the winter session.—The Thorp Scholarship in Forensic Medicine (£10) at the close of each summer session.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—There are a Museum containing specimens of Morbid and Comparative Anatomy, a collection of Wax Models, and a collection of Materia Medica, a Library, and a Reading Room.

Instruction.—Clinical lectures are given weekly at the Royal Infirmary, which contains nearly 300 beds; the Lock Hospital adjoining contains 80 beds. Dr. Glynn gives practical instruction in Clinical Medicine and the Methods of Physical Diagnosis. Besides a winter course of Practical Surgery, a course of Operative Surgery is given in the summer for candidates for the Fellowship of the Royal College of Surgeons, and the degree of Bachelor of Surgery of the University of London. For the study of Mental Diseases, a class will be formed to attend the practice of the Rainhill Asylum, where instruction will be given by Dr. Rogers once a week during the summer. Dr. Gee lectures on Diseases of Children. Mr. Snape lectures on Dental Surgery, and Mr. R. E. Stewart on Dental Mechanics.

Appointments.—Royal Infirmary: Two House-Physicians and three House-Surgeons are appointed for six months after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three Clinical Clerks for each Physician, three or more Dressers for each Surgeon, and two Clerks to the Thornton Ward for Diseases of Women, are appointed for three months in October, January, and May. *Post Mortem* Clerks are appointed for six weeks. All students must perform this duty before the final certificate is signed.

Exhibitions and Prizes.—The Roger Lyon Jones Scholarship: one half (£21 for two years) to the candidate who has taken the highest position in the Honours Division at a Matriculation Examination of the University of London in the same year, or (failing such candidate) at the Preliminary Scientific M.B. Examination, on condition that he becomes a composition ticket holder of the School; the other half (£21 for two years) to a student who has completed two years, after examination in Anatomy, Physiology, Chemistry, Botany, Materia Medica, and Practical Chemistry.—Gold Medal for Anatomy and Physiology, presented by Mr. Torr, M.P., for second year's students; and one also for Anatomy and Physiology, presented by Dr. J. Bligh, for students of the first year.—Medals and Certificates of Honour for groups of subjects in each year.—Three prizes, and certificates, for Midwifery, by the lecturer on that subject.—Two prizes for the best sets of Microscopical Preparations made in the Physiological Laboratory during the winter.

The *Debating Society* meets eight or ten times during the winter session on Saturday evenings, for the reading and discussion of papers.

Communications should be addressed to the Registrar, Mr. W. Mitchell Banks.

LIVERPOOL NORTHERN HOSPITAL.—*Physicians:* Dr. Dickinson, Dr. Caton. *Surgeons:* Mr. Manifold, Mr. Puzey, Dr. Campbell. The hospital contains 146 beds.

Fees.—Perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. Students can enter to the medical or the surgical practice separately on payment of half the above fees. The hospital receives one resident pupil, fee £63 *per annum*. Attendance on the practice of this hospital qualifies for all the examining boards.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—*Physicians:* Dr. Cameron, Dr. Carter, Dr. Williams. *Surgeons:* Mr. Hamilton, Dr. Little,

GUIDE TO HOSPITALS AND MEDICAL SCHOOLS IN THE PROVINCES: 1879-80.

For further particulars regarding each Hospital and Medical School, see pp. 424, 425, and 427.

Lectures, etc.	Birmingham Queen's College.	Bristol Medical School.	Leeds School of Medicine.	Liverpool Royal Infirmary School of Medicine.	Owens College (Manchester Royal) School of Medicine.	Sheffield Medical School.	University of Durham College of Medicine, Newcastle.
WINTER SESSION.							
Anatomy & Physiology.	Dr. Norris and Mr. Bartleet..M. Th., 4	Dr. R. S. Smith..M. W. F., 10	Mr. Wright&Mr.Horsfall ..M. W. Th., 12	Dr. Caton .. Tu. Th. S.. 9.15	Dr. A. Gamgee....daily, exc. S., 11.30	Dr. Dyson & Mr. James ..M. W., 12.30	Dr. Drummond .. M. Th. F., 3
Anatomy, Descriptive & Surgical.	Mr. Thomas & Dr. Jolly ..M. Tu. Th. F., 11.30	Mr. F. R. Cross..M.Tu. Th. S., 10	Mr. Nunneley and Mr. Robinson..Tu.Th.F.S., 10	Mr. W. M. Banks....M. Tu. W. Th. F., 11	Dr. M. Watson....daily, exc. S., 1	Mr. E. Skinner and Mr. Snell..M.W.F., 6; Tu. Th., 5 (before Xmas.)	Mr. Russell.. M.W.F.S., 9
Demonstrations & Dissections.	Mr. B. May and Mr. Eales..daily	Mr. Harsant	Mr. McGill & Mr. Robson..daily	Mr. Briggs..daily, 9 to 5; exc. S., 9 to 2	Mr. Fraser and Mr. Branfoot..daily, 9.30 to 4.30; S., 9.30 to 12	Mr. R. J. Pye-Smith and Dr. Davison	Mr. Mears
Chemistry	Dr. A. B. Hill....M. W. F., 1	Mr. Coomber..M. W. F., 9 A.M.	Dr. Thorpe..M.T.W.Th., 4	Dr. J. C. Brown..M.Tu. Th. F., 3	Dr. Roscoe..daily, 9.30; and Mr. Schorlemmer	Mr. Allen..M.W.F., 11.30	Mr. Freire-Marreco .. M. W. F., 12
Medicine	Dr. Foster..Tu. W. F., 3	Dr. Spencer & Dr. Skerritt..M. W. F., 9	Drs. Allbutt and Eddison ..M. Tu. W., 1	Dr. Waters .. M. W. F., 9.15	Dr. Morgan..M., 4; Tu. Th., 3	Drs. De Bartolomé, Banham,&Thomas,M.W.F.,5	Dr. Philipson..M.W.F., 5
Surgery	Mr. Pemberton and Mr. F. Jordan..Tu. W. F., 4	Mr. Dobson..Tu. Th. S., 9	Mr. Jessop & Mr. Atkinson..M. Th. S., 9	Mr. Rushton Parker..M. W. Th., 3	Mr. Lund..M. W. F., 3	Mr. Favell and Mr. A. Jackson..M.W.F.,8 A.M.	Dr. Heath & Dr. Arnison M. W. F., 6
Hospital Practice	General Hospital (*a*). Queen's Hospital (*b*).	Royal Infirmary (*c*). General Hospital (*d*).	Leeds General Infirmary (*e*).	Liverpool Royal Infirmary (*f*).	Manchester Royal Infirmary (*g*).	Sheffield Infirmary (*h*) Sheffield Hospital (*i*)	Newcastle Infirmary (*k*).
Clinical Medicine.....	Physicians of Hospitals (*b*), 10 A.M.; (*c*) daily	Royal Infirmary..S., 12 General Hospital .. three days weekly	Physicians of Infirmary.. M. Th. F. S., 11; Th. S., 11	Physicians, Royal Infirmary..weekly	Dr. Roberts(Wm.)..Tu., 9.30; and clin. lec. every W. at 11	Physicians of Infirmary.. Tu., 8; Hospital, F., 7 P.M.	Physicians of Infirmary.. M. F., 12
Clinical Surgery	Surgeons of Hospitals (*b*), 10 A.M.; (*c*) daily	Royal Infirmary..F., 12 General Hospital..W., 12	Surgeons of Infirmary.. Tu. F., 9	Surgeons, Royal Infirmary..weekly	Surgeons Royal Infirmary..M., 11	Surgeons of Infirmary.. Th., 5.30; Hospital, Tu. 7 P.M.	Surgeons of Infirmary.. Th., 10
SUMMER SESSION.							
Materia Medica.....	Dr. Sawyer..Tu.W. Th., 12	Dr. Shaw..Tu. Th. S., 9	Dr. Churton.. M.W.Th., 9 A.M.	Dr. Carter .. Tu. Th. S., 9 A.M.	Mr. Somers & Dr. Leech ..M.W., 1; Tu. Th., 12	Dr. Young .. M. W. F., 8 A.M.	Mr. McBean.. M. W. F., 4.45; Dr. Baum, Tu. Th., 5
Midwifery, etc.	Mr. Clay and Dr. Bassett ..M. Tu. Th. F., 1	Dr. Swayne & Dr. Lawrence..daily, exc. S., 8 A.M.	Mr. Price and Dr. J. Braithwaite.... M. Tu. Th. F., 4	Dr. Wallace.. M. W. F., 10	Dr. Thorburn....M., 12; Tu. Th. F., 1; clin., W. S., 10	Dr. Hime.... M. W. F., 8 P.M.	Dr. Gibson & Dr. Nesham ..daily, 9 A.M.
Botany	Dr. W. Hinds..M.W.F., 3	Mr. Leipner ..M. W. F., 8 A.M.	Mr. Miall..Tu W. F., 3	Dr. Shearer .. M. W. F., 3	Mr. W. C. Williamson .. M. Tu. W. Th. F., 2.30	Mr. Birks .... Tu. Th., 8 A.M.	Dr. J. Murphy....M. W. Th. F., 3.45
Forensic Medicine.....	Mr. Wilders..M. Tu. F., 12 and 3	Dr. Eager & Mr. Stoddart ..M. Th. S., 10	Mr. Scattergood..M. Tu. Th. F., 5	Dr. E. Whittle..M.W.F., 3	Dr.Cullingworth..Tu.W. Th. F., 2	Mr. Harrison and Mr. Bell..Tu. Th., 5	Dr. F. Page..Tu.Th.F., 3
Practical Chemistry...	Dr. A. B. Hill..Tu.Th, 2	Mr. Coomber.. M.W.F., 9 A.M.	Dr.Thorpe..M.W.,10to12	Dr. J. C. Brown..M.Tu. Th., 10	Dr. Roscoe & Mr. Schorlemmer..M. W., 10.30	Mr. Allen..M. W. F., 11	Mr.Freire-Marreco..daily, 10 to 1 and 2 to 5
Comparative Anatomy..	Dr. Saundby..Th., 3	Mr. Sollas.. Tu.W.S., 10	Mr. Miall..M. Th., 3	Dr. Dickinson .... twice weekly	Dr. A. M. Marshall..M. Tu. W. Th. F., 2.30	——	——
Practical Physiology..	——	Dr, Smith .. Tu. Th. S., 8 A.M.	Mr. Walker..Tu. Th. F. S., 10 to 12	Dr. Caton..W.S., 2; Mr. Paul (dem.), S., 11	Dr. A. Gamgee (Sum.).. five days weekly	Dr. Gwynne..W. Th., 4	Dr. Drummond
Pathology	Dr. Rickards .... Th., 3 (Win.)	Dr. Spencer & Dr.Skerritt (Sum.) M. W. F., 9	Mr. Mc.Gill..Tu.,3; F., 2	Dr. Davidson (Win.).... Tu., 4.	Dr.Simpson&Dr.Dreschfeld(Win.).M.3; Tu.Th.4	House-Surgeon at Infirmary (Sum.)	Dr. Gibb (Sum.)..W., 10
Practical Surgery	Mr. Pemberton and Mr. Jordan	Mr. Keall and Mr. A. W. Prichard..M.W.F., 8.30	Mr. Jessop and Mr. Atkinson	Mr. Parker(Win.)..M.Th. 4; oper. course in sum.	Mr. Bradley..Tu. Th., 12	House-Surg. (Win.; Mr. Favell (Sum.)	Dr. L. Armstrong (Sum.)
Ophthalmic Surgery....	Mr. Solomon (Summer)	——	Mr. Nunneley, Dr. Land, and Mr. Oglesby	Mr. T. S. Walker..W., 4	Dr. Little (Sum.)..W.F., 4; clin., M. Th., 10	Mr. Snell (Sum.)....W., 12.30	——
Vaccination	——	——	Mr. Holmes	Mr. Roger Parker	Mr. E. Guest	Mr. Skinner	Mr. Hawthorn

(*a*) *Physicians:* Dr. Russell, Dr. Wade, Dr. Foster, Dr. Rickards. *Assistant-Physicians:* Dr. Saundby, Dr. Gibson. *Surgeons:* Mr. A. Baker, Mr. O. Pemberton, Mr. T. H. Bartleet, Mr. Goodall, Mr. R. Jolly. *Assistant-Surgeons:* Mr. Archer, Mr. T. F. Chavasse. *Obstetric Officer:* Dr. E. Malins.

(*b*) *Physicians:* Dr. Heslop, Dr. Sawyer, Dr. Carter, Dr. Hunt. *Surgeons:* Mr. West, Mr. Gamgee, Mr. F. Jordan, Mr. J. St. S. Wilders. *Obstetric Surgeon:* Mr. J. Clay. *Ophthalmic Surgeon:* Mr. P. Smith. *Dental Surgeon:* Mr. C. Sims.

(*c*) *Physicians:* Dr. Spencer, Dr. R. S. Smith, Dr. Waldo. Dr. Shaw. *Surgeons:* Mr. Board, Mr. Dowson, Mr. A. W. Prichard, Mr. Cross, Mr. J. G. Smith. *Assistant-Surgeon:* Mr. Harsant. *Operations:* Tu. F., 1.30.

(*d*) *Physicians:* Dr. Burder, Dr. Skerritt, Dr. Siddall. *Surgeons:* Mr. F. P. Lansdown, Mr. Atchley, Mr. Dobson, Mr. Keall. *Physician-Accoucheur:* Dr. Lawrence. *Diseases of Skin:* Dr. Siddell, Dr. Skerritt. *Dental Surgeon:* Mr. Parson. *Operations:* Th., 1.30.

(*e*) *Physicians:* Dr. Heaton, Dr. Clifford Allbutt, Dr. Eddison. *Surgeons:* Mr. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jessop, Mr. E. Atkinson. *Surgeons to the Eye and Ear Department:* Mr. J. A. Nunneley, Dr. R. T. Land, Mr. Oglesby. *Operations:* Th., 1; Eye, Tu., 12.

(*f*) *Physicians:* Dr. Waters, Dr. Glynn, Dr. Davidson. *Surgeons:* Mr. Bickersteth, Mr. Harrison, Mr. Banks. *Assistant-Surgeon:* Mr. R. Parker. *Obstetric Physician:* Dr. Wallace. *Dental Surgeon:* Mr. Snape. *Pathologist:* Mr. Paul. *Surgeons to Lock Hospital:* Mr. McCheane, Mr. F. W. Lowndes. *Operations:* Tu. W., 1.

(*g*) *Physicians:* Dr. W. Roberts, Dr. H. Simson, Dr. J. E. Morgan, Dr. D. J. Leech. *Surgeons:* Mr. F. A. Heath, Mr. Lund, Mr. Bowring, Mr. Bradley. *Assistant-Physicians:* Dr. Dreschfeld, Dr. Ross. *Assistant-Surgeons:* Mr. W. Whitehead, Mr. Hardie. *Obstetric Physician:* Dr. Thorburn. *Ophthalmic Surgeon:* Dr. D. Little. *Dental Surgeon:* Mr. Smith. *Operations:* F., 11.

(*h*) *Physicians:* Dr. De Bartolomé, Dr. Law, Dr. Banham. *Surgeons:* Mr. Barber, Mr. W. F. Favell, Mr. A. Jackson. *Ophthalmic Surgeon:* Mr. Snell. *Operations:* Th., 12.30.

(*i*) *Physicians:* Dr. H. J. Branson, Dr. Dyson, Dr. Thomas. *Surgeons:* Dr. Keeling, Mr. Thorpe, Mr. Pye-Smith. *Operations:* F., 12.30.

(*k*) *Physicians:* Dr. Philipson, Dr. Gibson, Dr. Drummond, Dr. Oliver. *Surgeons:* Dr. Heath, Dr. Arnison, Dr. L. Armstrong, Dr. Hume. *Assistant-Surgeons:* Dr. Page, Mr. Dodd.

Mr. Ransford. The hospital contains 200 beds. Clinical Lectures are given by the Physicians and Surgeons during the winter and summer sessions. Clinical Clerkships and Dresserships are open to all students. There are special wards for accidents and diseases of children. Fees for Hospital Practice and Clinical Lectures, perpetual, £26 5s.; one year, £10 10s.; six months, £7 7s.; three months, £4 4s. The practice of the hospital is recognised by all the examining bodies.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.—Museums of Human and Comparative Anatomy and of Materia Medica, and Psychological and Chemical Laboratories, are connected with the College.

The *Royal Infirmary* contains 105 medical and 190 surgical beds. In addition to the Practice of the Infirmary, the Monsall Fever Hospital (130 beds), and the Barnes Convalescent Home (124 beds), and the Royal Lunatic Asylum at Cheadle, which accommodates 150 patients, are open for purposes of instruction.

Clinical Instruction is given by the Physicians and Surgeons of the Infirmary. Medical Demonstrations are given by Dr. Dreschfeld and Dr. Ross; Surgical Demonstrations by Mr. Whitehead and Mr. Hardie; Pathological Demonstrations by Dr. Ross. Dr. Simpson gives instruction in the use of the Laryngoscope; Dr. Dreschfeld in Electro-Therapeutics; Mr. Whitehead in Aural Surgery; Mr. Hardie in Orthopædic Surgery; Dr. Little in Ophthalmic Surgery; and Mr. G. W. Smith in Dental Surgery. Clinical Classes are held in the Fever Hospital from time to time.

Appointments.—The following appointments are made: Non-resident, a Registrar and a Pathological Registrar, annually, at £100 *per annum;* two Assistant Medical Officers, for six months, receiving each £40; Resident Medical Officer, two years, £250 *per annum;* ditto, at Cheadle, one year, £150 *per annum;* ditto, at Monsall, one year, £200 *per annum;* Resident Surgical Officer, annually, £150 *per annum;* eight House-Surgeons (qualified) and four House-Physicians, a Resident Assistant at Monsall, and one at Cheadle, each for six months. Dressers and Clerks in the Royal Infirmary are appointed for periods of three months. Two or more Clinical Clerks are appointed for each Physician and Assistant-Physician, and two or more Dressers for each Surgeon and Assistant-Surgeon. A *Post Mortem* Clerk is appointed. Accident-room Dressers are appointed monthly, for two months.

Prizes.—Third Year: Turner Scholarship of £25 to students who have completed a third year's course in all the third year's subjects, including Ophthalmology; and three prizes, value £5 5s., £3 3s., and £2 2s., in the Classes of Medicine, Midwifery, Pathology and Morbid Anatomy, Medical Jurisprudence, Hygiene, Practical Surgery, and Ophthalmology. *Second Year:* Prizes of same value in classes of Anatomy, Physiology and Histology, Surgery, and Materia Medica. *First Year:* Prizes of same value in Anatomy, Physiology, Practical Chemistry, and Botany. The prizes for each year consist of books or instruments. Two Platt Physiological Scholarships, value £50 each, tenable for two years, to students who have attended Physiology in the College Laboratory during one session, for best original investigation and the result of a written examination; and two Platt Exhibitions to students of the Class of Physiology. Dumville Surgical Prize, value £20 (in books or instruments), at end of winter session, to students of two years, who have attended four courses, including one at least in Surgery. Dauntesey Medical Scholarship, value about £100, tenable for one year. Candidates must have attended lectures in a medical school. Subjects of Examination: General and Comparative Anatomy, with Dissections and Description of Preparations illustrating Typical Forms of Animals; Outlines of Physiology; Botany; Chemistry; and either Mathematics or Latin. A Gilchrist Scholarship of £50 *per annum*, tenable for three years in the College, to the candidate standing highest in the Matriculation Examination of the University of London in June, if in the Honours Division; or two of £25 each to the first two candidates in the First Division. The successful candidate must prepare for graduation in the University of London. Grammar School Scholarship, value £17, tenable for three years, open to scholars of the Manchester Grammar School. The successful candidate must enter to one of the departments of Owens College. Medical and Surgical Clinical Prizes (books or instruments to the value of £6 6s. in each department) are given for reports of cases at the Infirmary.

Prospectuses may may be obtained from the Registrar, Mr. J. H. Nicholson.

SHEFFIELD SCHOOL OF MEDICINE.—The General Infirmary contains 180 Beds. The Public Hospital and Dispensary contains 110 beds. Clinical lectures are given at both.

Besides the lectures mentioned at page 426, a course on Public Medicine is given by Dr. Drew. Dr. Merryweather teaches Dental Surgery.

The Infirmary contains a Pathological Museum, a Library, and a *Post Mortem* Theatre, with microscopes and all the appliances for clinical research. The Library of the Medical School is open to students on the nomination of a Lecturer.

Prizes and certificates of honour are given at the end of each session.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—The Laboratories, Libraries, and Museums of Anatomy, Pathology, and Materia Medica, are open daily.

Appointments.—An Assistant-Curator of the Museum is annually appointed from among the senior students, and receives £12 as an honorarium. Two Assistant-Demonstrators of Anatomy, two Assistant-Physiologists, and two Pathological Assistants, are also elected. Four Resident Dressers are chosen every six months, on payment of a fee of £10 10s. for board and residence.

The Infirmary contains 230 beds. There are special wards for the treatment of children, and for ophthalmic and syphilitic diseases. Clinical Lectures are delivered by the Physicians and Surgeons in rotation three times a week. Pathological Demonstrations are given as opportunity offers by the Pathologist. Practical Midwifery can be studied at the Newcastle Lying-in Hospital. Lectures are given on Psychological Medicine at the Coxlodge Lunatic Asylum, by Mr. R. H. B. Wickham, Medical Superintendent. Mr. H. E. Armstrong gives a course of lectures on Public Health.

Scholarships, etc.—An University of Durham Scholarship, value £25 a year, for four years, annually, for proficiency in Arts, awarded to perpetual students in their first year only. The Dickinson Scholarship, value £15 annually, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value £20 annually, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value £35 annually, for Medicine. The Gibb Scholarship, value £25 annually, for Pathology. At the end of each session, a Silver Medal and Certificate of Honour are awarded in each of the regular classes.

Further information may be obtained from the Registrar, Dr. Luke Armstrong, Newcastle-on-Tyne.

The following hospitals are also recognised by the Royal College of Surgeons for the purpose of professional education:—Bath Royal United Hospital; Bedford General Infirmary; Berkshire Royal Hospital, Reading; Bradford Infirmary; Derbyshire General Infirmary; Devon and Exeter Hospital; Gloucester General Infirmary; Hants County Hospital; Hull Infirmary; Kent and Canterbury Hospital; Leicester Infirmary; Norfolk and Norwich Hospital; Northampton General Infirmary; Nottingham General Hospital; Salisbury General Infirmary; Salop Infirmary; Staffordshire General Infirmary; North Staffordshire Infirmary; Wolverhampton and Staffordshire General Hospital; Worcester Infirmary.

NOTES ON THE MEDICAL SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF ABERDEEN.—Practical Midwifery and Gynæcology, and Clinical Diseases of Children, Dr. Stephenson, 11 (summer); Practical Toxicology, Dr. F. Ogston, jun. (sum.). Fee to each class, £3 3s., except Anatomical Demonstrations, £2 2s.; Practical Midwifery and Practical Pharmacy, and Pathological Anatomy, with Demonstrations, each £2 2s.; Practical Ophthalmology and Practical Toxicology, each £1 1s. Matriculation fee, both sessions, £1; summer session alone, 10s.

ROYAL INFIRMARY, ABERDEEN.—Perpetual fee, £6; or first year, £3 10s.; second year, £3. Clinical Medicine and Clinical Surgery, each £3 3s. The General Dispensary and the Lying-in and Vaccine Institutions are open daily, and the Eye Institution three days in the week. Clinical instruction is given in the Royal Lunatic Asylum for three months in the year.

UNIVERSITY OF EDINBURGH.—Minimum expenses for Lectures and Hospital Practice (including also £21 for Degrees of M.B. and C.M.), £104 18s.; Annual Fee for Materia Medica, Chemistry, Surgery, Institutes of Medicine, Midwifery, Clinical Surgery, Clinical Medicine, Anatomy, Practice of Physic, Pathology, Botany, Natural History, Medical Jurisprudence, each £4 4s.; Practical Anatomy, Practical Physiology, Practical Chemistry, Practical Pathology, Mental Diseases, Practical Materia Medica and Pharmacy, £3 3s.; Anatomical Demonstrations, Operative Surgery, Obstetric and Gynæcological Operations, Organic Chemistry (advanced), Practical Natural History, each £2 2s.; Practical Midwifery, £1 4s.; Vaccination, £1 1s.—Every student, before entering with any Professor, must produce a matriculation-ticket for the ensuing session, for which a fee of £1 is paid at the beginning of

TABLE OF THE MEDICAL OFFICERS, PROFESSORS, AND LECTURERS IN MEDICAL SCHOOLS OF SCOTLAND.

For further particulars regarding each Hospital and Medical School, see pp. 427 and 429. The letters (W.) and (S.) in this Table denote respectively Winter and Summer Courses.

Lectures, etc.	Aberdeen University.	Edinburgh University.	School of Medicine, Edinburgh.	Glasgow University.	Glasgow, Anderson's College.	Glasgow Royal Infirmary School.
Anatomy (Lectures	Dr. Struthers, 11 (W.)	Mr. Turner, 1 (W.)	Dr. Handyside & Mr. Symington, 1 (W.)	Dr. Cleland, 2 (W.); 11 (S.)	Dr. A. M. Buchanan (jun.), 1 (W.)	Mr. H. E. Clark, 10 (W.); 12, three days in week (S.)
Anatomical Demonstrations.	Dr. Struthers, 9 (W. and S.)	Mr. Turner, 4 (W.); 11 (S.)	Dr. Handyside & Mr. Symington, 4 (W.); 11 (S.)	Dr. Cleland, 11 (W.)	Dr. A. M. Buchanan, 4 (W. and S.)	Mr. Clark, 12 (W.)
Dissections	9 to 4 (W. and S.)	Daily (W. and S.)	9 to 4 (W. and S.)	9 to 4 (W.); 8 to 2 (S.)	9 to 5 (W.); 6 A.M. to 5 P.M. (S.)	10 to 5 (W.); 7 A.M. to 1 P.M. (S.)
Physiology	Dr. Stirling, 2 (W.)	Dr. Rutherford, 11 (W.)	Dr. James, 11 (W.)	Dr. McKendrick, 12 (W.)	Dr. McVail, 5 (W.)	Mr. W. J. Fleming, 1 (W.)
Practical Physiology	Dr. Stirling, 2 (S.)	Dr. Rutherford (W. and S.)	Dr. James (S.)	Dr. McKendrick and Dr. Muirhead, 12 (S.)	Dr. McVail (W.)	Mr. W. J. Fleming, Tu. Wed. Th., 1 (S.)
Chemistry	Mr. Brazier, 3 (W.)	Dr. Crum-Brown, 10 (W.)	Dr. S. Macadam, Mr. King, Mr. I. Macadam, Dr. Drinkwater, Mr. J. Y. Buchanan, 10 (W.)	Mr. Ferguson, 10 (W.)	Mr. Dittmar, 10 (W.)	Dr. J. Clark, 4 (W.)
Practical Chemistry	Mr. Brazier, 10 (S.)	Dr. Crum-Brown.	Dr. S. Macadam, etc. (as above), 9 to 5 (W. and S.)	Mr. Ferguson, Tu. W. Th., 9 (S.)	Mr. Dittmar, Tu. Wed. Th., 11 (S.)	Dr. J. Clark, Tu. Wed. Th., 3 (S.)
Materia Medica..	Dr. Davidson, 4 (W.)	Dr. Fraser, 2 (W.)	Dr. Moinet, 9 (W. and S.); Dr. Craig, 2 (W.); 9 (S.)	Dr. Cowan, 12 (W.)	Dr. Morton, 4 (W.)	Dr. Dougall, 4 (W.)
Pharmacy.....	Dr. Davidson, 4 (S.)	Dr. Fraser, 11 (W.); 10 (S.)	Dr. Craig, 3 (W.); 10 (S.)	Dr. Cowan and Dr. Tennent, 12 (S.)	—	—
Botany	Dr. Trail, 8 (S.)	Dr. Dickson, 8 (S.)	—	Dr. I. B. Balfour, 12 (S.)	Mr. A. S. Wilson for Dr. Paterson, 3 (S.)	—
Zoology & Comparative Anatomy.	Dr. J. C. Ewart, 2 (W.)	Sir C. W. Thompson, Mon. Wed. Frid., 2 (W. and S.)	Dr. A. Wilson, 3 (W.); 2 (S.)	Dr. Young, 9 (W.)	—	—
Medicine	Dr. Smith-Shand, 3 (W.)	Dr. Grainger Stewart, 3 (W.)	Dr. C. Muirhead and Dr. J. Wyllie, 3 (W.)	Dr. Gairdner, 11 (W.); Tu. Th., 1 (S.)	Dr. Charteris, 10.45 (W.)	Dr. Wood Smith, 10.30 (W.
Surgery	Dr. Pirrie, 10 (W.)	Mr. Spence, 10 (W.)	Dr. P. H. Watson, Mr. Chiene, Dr. J. Duncan, and Dr. A. G. Miller, 10 (W.)	Dr. Macleod, 1 (W.)	Dr. Dunlop, 3 (W.)	Dr. H. C. Cameron; 3 (W.)
Practical & Operative Surgery..	—	Mr. Spence & Dr. Taylor, 4 (S.)	Mr. J. Bell (W.); Dr. Watson, etc. (as above) 4 (S.)	Dr. Macleod, Mon. Wed. Fr., 1 (S.)	Dr. Dunlop, Mon. W. Fr., 11 (S.)	Dr. Cameron, 4 (S.)
Ophthalmic Surgery.	Dr. A. D. Davidson.	At Royal Infirmary	Dr. A. Robertson, 9 (S.)	Dr. T. Reid, Tu. Th., 2 (S.)	Dr. Wolfe, Sat., 1 (W.); Wed., 12 (S.)	Mr. H. E. Clark, Tu. Fr., 12 (S.)
Midwifery & Diseases of Women, etc.	Dr. Stephenson, 4 (W.)	Dr. Simpson, 11 (W.)	Dr. Keiller, Dr. A. Macdonald, Dr. C. Bell, 11 (W.); 10 (S.); Dr. H. Croom, 10 (S.)	Dr. Leishman, 4 (W.)	Dr. J. G. Wilson, 3 (S.)	Dr. Stirton, 3 (S.)
Pathology.....	Dr. Rodger (W.)	Dr. Sanders, 9 (W.); 11 (S.)	Dr. Waller, 9 (W.); also S.	—	At Royal Infirmary	Dr. Foulis, 10 (S.)
Medical Jurisprudence.	Dr. Ogston, 9 (W.), (with Medical Logic).	Dr. Maclagan (S.)	Dr. Littlejohn and Mr. H. A. Husband, 2 (W.); 11 (S.)	Dr. P. A. Simpson, 11 (S.)	Dr. A. Lindsay, 4 (S.)	Dr. Macewen, 11 (S.)
Hospital	Royal Infirmary (*a*), daily, 10	Royal Infirmary (*b*)	Royal Infirmary (*b*).	Western Infirm. (*c*), 9; Royal Infirmary (*d*)	Royal Infirmary (*d*), 9	Royal Infirmary (*d*), 9.
Clinical Medicine	Dr. Smith-Shand, Dr. Beveridge, & Dr. A. Fraser.	Drs. Maclagan, Sanders, Stewart, Fraser, and Simpson (Dis. of Women), Tu. F., 12	Drs. Balfour, Muirhead, Brakenridge, & A. Macdonald (Obst.) Tu. F., 12.	Dr. McCall Anderson, 9; and Physicians of Infirmaries.	Physicians of Royal Infirmary.	Physicians of Royal Infirmary.
Clinical Surgery.	Dr. Pirrie, Dr. Ogston, and Dr. Will.	Mr. Annandale, M. Th. 12 (W. and S.)	Mr. J. Bell, M. Th., 12 (W. and S.)	Dr. G. Buchanan, 9; & Surgeons of Infirmaries	Surgeons of Royal Infirmary.	Surgeons of Royal Infirmary.

a. Aberdeen Royal Infirmary.—*Physicians:* Dr. J. W. F. Smith-Shand, Dr. Beveridge, Dr. A. Fraser. *Surgeons:* Dr. Pirrie, Dr. A. Ogston, Dr. Will, Dr. Garden. *Ophthalmic Surgeon:* Dr. Davidson. *Dental Surgeon:* Mr. Williamson.

b. Edinburgh Royal Infirmary.—*Consulting Physicians:* Dr. D. R. Haldane and Dr. A. Keiller. *Physicians:* Dr. Maclagan, Dr. Sanders, Dr. A. R. Simpson, Dr. T. Grainger Stewart, Dr. T. Fraser (the preceding are Professors of Clinical Medicine), Dr. G. W. Balfour, Dr. C. Muirhead, Dr. Brakenridge, and Dr. A. Macdonald (lecturers on Clinical Medicine). *Assistant-Physicians:* Dr. J. Wyllie and Dr. Affleck. *Consulting-Surgeons:* Dr. J. Dunsmure and Dr. J. D. Gillespie. *Surgeons:* Mr. J. Spence, Mr. Annandale (Professor of Clinical Surgery), Dr. J. Bell, Dr. Duncan, and Mr. Chiene. *Extra Acting Surgeon:* Dr. P. H. Watson. *Ophthalmic Surgeons:* Mr. Walker and Dr. D. A. Robertson. *Surgeon for Ovarian Diseases:* Dr. T. Keith. *Assistant-Surgeons:* Dr. A. G. Miller, Dr. P. H. Maclaren, and Dr. J. Bishop. *Dental Surgeon:* Dr. J. Smith. *Pathologist:* Mr. D. J. Hamilton.

c. Glasgow Western Infirmary.—*Physicians:* Dr. Gairdner, Dr. McCall Anderson, Dr. Finlayson. *Physician for Diseases of Women:* Dr. Leishman. *Surgeons:* Dr. Macleod, Dr. G. Buchanan, Dr. A. Patterson. *Dispensary Physicians:* Dr. Tennant, Dr. Coats, and Dr. McVail. *Extra Dispensary Physician:* Dr. S. Gemmell. *Dispensary Surgeons:* Dr. J. G. Lyon, Dr. Knox, and Dr. Christie. *Extra Dispensary Surgeon:* Mr. J. C. Renton. *Pathologist:* Dr. Coats.

d. Glasgow Royal Infirmary.—*Physicians:* Dr. Maclaren, Dr. Scott Orr, Dr. Wood Smith, Dr. Perry, and Dr. Charteris. *Physician for Diseases of Women:* Dr. Stirton. *Surgeons:* Dr. Morton, Dr. E. Watson, Dr. Macewen, Dr. Dunlop, and Dr. Cameron. *Aural Surgeon:* Dr. J. P. Cassells. *Dental Surgeon:* Dr. J. C. Woodburn. *Dispensary Physicians:* Dr. Mather, Dr. Lawrie. *Extra Dispensary Physicians:* Dr. J. W. Anderson, Dr. Weir, Dr. Dougall. *Dispensary Surgeons:* Mr. Clerk, Dr. Lothian. *Extra Dispensary Surgeons:* Mr. Whitson, Mr. Fleming, Dr. Foulis.

each winter session. Students first entering in the summer session pay a fee of 10s. for that session.—The Library is open every lawful day during the winter session, from 10 A.M. till 4 P.M.; on Saturdays, till 1 P.M.

The following means are afforded for practical instruction, in addition to those mentioned in the table at page 428; in summer: Morbid Anatomy and Practical Pathology, by Mr. D. J. Hamilton, under the superintendence of Dr. Sanders; Tutorial Class of Clinical Medicine, in the Royal Infirmary, by the Clinical Tutor; Tutorial Class of Clinical Surgery, by the Clinical Professor; Obstetric and Gynæcological Operations, by Dr. Simpson; Chemistry (advanced class), by Dr. Crum Brown; Practical Instruction in Mental Diseases at Morningside Asylum, by Dr. Clouston, on Mondays, Wednesdays, and Fridays; and Practical Natural History, by Sir C. Wyville Thomson, on Mondays, Wednesdays, and Fridays, at 2. The Anatomical Museum, under the superintendence of Mr. Turner; Chemical Laboratories, under Dr. Crum Brown and Assistants; Physiological Laboratory, under Dr. Rutherford; Physical Laboratory, under Mr. Tait; Natural History Museum, under the superintendence of Sir C. W. Thomson; Medical Jurisprudence Laboratory, under the superintendence of Dr. Maclagan; Royal Botanic Garden Herbarium and Museum, under the superintendence of Dr. Dickson; Materia Medica Museum and Laboratory, under the superintendence of Dr. Fraser, are open to students.

Fellowships, etc.—Falconer Memorial Fellowship, for the encouragement of the study of Palæontology and Geology, value £100, tenable for two years, open to Graduates in Science or Medicine of the University of not more than three years' standing. Syme Surgical Fellowship, value about £100, tenable for two years, open to Bachelors of Medicine of not more than three years' standing, who shall present the best Thesis on a Surgical subject, giving evidence of original research. Sibbald Scholarship, about £40, tenable for four years. Hope Scholarship, about £30. Abercromby Bursary of £20, for four years, to students who have been brought up in Heriot's Hospital. Two Sibbald Bursaries, value £30 each. Thomson Bursaries, value £25 each, in March and October, at Preliminary Examination in the subjects of General Education. Four Grierson Bursaries, each £20 *per annum:* in the absence of certain preferential candidates, open to competition: one to the student who shall pass the best examination in the subjects of Preliminary Education; one open to students commencing the second winter session, after examination in Chemistry, Botany, and Natural History; one to students commencing the third winter session, after examination in Anatomy and Physiology; one to students commencing the fourth winter session, after examination in Materia and Pathology. Tyndall Bruce Bursary, £25, to students at end of third winter session; subjects of examination: Materia Medica and Pathology. Two Dr. John Aitken Carlyle's Medical Bursaries, £25 each, for one year, for proficiency in ordinary class-examinations; one to a first year's student, in Anatomy and Chemistry; one to a second year's student, in Anatomy and Physiology. Two Mackenzie Bursaries, proceeds of £1,000, annually to students in junior and senior classes of Practical Anatomy, for industry and skill. Competitors for the Bursaries must have studied the subjects of examination at the University of Edinburgh. Ettles Medical Prize, value about £40, to the most distinguished Graduate in Medicine of the year. Beaney Prize to the candidate for degrees of M.B. and C.M., who shall obtain most marks in Anatomy, Surgery, and Clinical Surgery. Hope Chemistry Prize, value £100, open to all students of the University not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the chemical laboratory. Neil Arnott Prize, about £40, to the candidate who, having been a medical student of the University during either a summer or a winter session, shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. The successful candidate must continue a medical student of this University during the winter session. Ellis Prize: accumulated proceeds of about £500, every three years, for an Essay or Treatise in some subject of Animal or Vegetable Physiology. Goodsir Memorial Prize, £60, awarded triennially. Wightman Prize, to student of class of Clinical Medicine for best report and commentary on cases treated in the wards. Cameron Prize, income of £2,000, yearly, to the member of the medical profession who shall have made the most valuable addition to Practical Therapeutics during the preceding year. Gold medals are given on graduation to Doctors of Medicine whose theses are deemed worthy.

EDINBURGH ROYAL INFIRMARY.—Fees: six months, £3 3s.; one £5 5s.; perpetual, £10. Separate payments of two years entitle to a perpetual ticket. Clinical Medicine and Clinical Surgery, each £4 4s. for the course in winter, and £3 3s. in summer. Four Resident Physicians and four Resident Surgeons are appointed; they live in the house for six months free of charge. Candidates must be registered as legally qualified practitioners. Non-resident Clinical Clerks are appointed. Each Surgeon appoints from four to nine Dressers for six months. Assistants in the Pathological Department are appointed by the Pathologist.—Instruction is given in special departments.

SCHOOL OF MEDICINE, EDINBURGH.—The following courses of instruction are given in addition to those mentioned at p. 428; Tutorial Classes of Physical Diagnosis and of Practical Surgery at the Royal Infirmary; Diseases of the Ear, Dr. Kirk Duncanson, twice a week, with clinical instruction at 4 (win.) and 11 (sum.); Vaccination, six weeks' courses in winter and summer, Dr. Husband; Diseases of Children, Dr. J. Andrew, Dr. J. Dunsmure, and Dr. J. Carmichael; clinical instruction daily through year at the Children's Hospital, lectures in summer by Dr. Andrew at 10 on Mondays and Thursdays, by Dr. Dunsmure at 10 on Tuesdays, and by Dr. Carmichael on Mondays and Thursdays at 2—all in summer; Practical Gynæcology, Dr. Halliday Croom, at 5 (winter); Practical Midwifery, Dr. C. Bell, throughout year; Diseases of the Skin, Dr. A. Jamieson, Tuesday and Friday, 3 (winter); Insanity, with practical instruction, Dr. Batty Tuke, Mondays and Thursdays, at 3 (summer). Dr. Littlejohn lectures on Public Health in conjunction with Medical Jurisprudence; Mr. H. A. Husband lectures on Public Health at 10 A.M. in winter.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh, the perpetual fee is £2 4s. Practical Anatomy (six months), £3 3s.; Anatomical Demonstrations, £2 2s.; perpetual, £4 4s.; Practical Anatomy with Demonstrations, £4 4s.; Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months; Practical Materia Medica, including Practical Pharmacy, Diseases of the Ear, and Diseases of Children, each £2 2s.; Vaccination and Diseases of the Skin, each £1 1s. Summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Demonstrations, Operative Surgery, and Insanity, each £2 2s. The minimum cost of education in this school for the double qualification of the Royal Colleges of Physicians and Surgeons of Edinburgh, including the examination fee, is £95, payable by yearly instalments; for the single diploma of either Physician or Surgeon, including the examination fee, £80.

Practical instruction in various subjects may also be obtained on payment of moderate fees at the Sick Children's Hospital, Royal Public Dispensary and New Town Dispensary, Royal Maternity Hospital, and the Edinburgh Eye Infirmary.

UNIVERSITY OF GLASGOW.—Fees, each course, £3 3s., except Lectures on the Eye, £1 1s.

The Chemical Laboratory is open from 10 A.M. to 4 P.M., and the Physiological Laboratory from 9 A.M. to 4 P.M., winter and summer; the Zoological Laboratory from 12 noon to 4 P.M. in summer. Demonstrations in the Botanical Garden are given at 6.30 P.M. in summer.

GLASGOW ROYAL INFIRMARY.—The number of beds is 570; 220 for medical and 330 for surgical cases. There are wards for the treatment of Venereal Diseases and the Diseases of Women; whilst Diseases of the Ear and Throat are specially treated at the out-door department. Courses of Clinical Medicine and Surgery are given by the Physicians and Surgeons, and *post mortem* examinations are conducted by the Pathologist, who also gives practical instruction in Pathological Anatomy and Histology.

Appointments.—There are five Physicians' and five Surgeons' Assistants. These appointments can be held for twelve months, and are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical clerks and dressers are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures: first year, £10 10s.; second year, £10 10s.; afterwards free: for six months, £6 6s.; three months, £4 4s. To perpetual students of other hospitals where the perpetual fee is equal to that at the Infirmary, £2 2s. for six months, £3 3s. for one year. Dispensary practice alone, six months, £1 1s.; one year, £2 2s. For Vaccination certificate, £1 1s.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—In addition to the subjects mentioned in the table at page 428, lectures are given in the summer on Aural Surgery, by Dr. J. P. Cassells at 4 on Thursdays, and on Mental Diseases by Dr. A. Robertson. The City Parochial Asylum under his charge is free to students of this school.

Fees.—For each course, first session, £2 2s.; second session and perpetual, £1 1s. Students who have attended a first course elsewhere can enter on the second course on payment of £1 1s. Anatomy: first

winter session, £4 4s.; summer session, £1 1s.; second winter session, £4 4s.; afterwards, for Lectures and Practical Anatomy, £1 1s. per session. Lectures on Diseases of the Ear, £1 1s.; with Clinique to those who are not students of the hospital, £2 2s. Clinique on Dental Surgery free to students of the hospital; to others, £1 1s. Lectures on Diseases of the Eye, £1 1s.

GLASGOW WESTERN INFIRMARY.—Fees, first and second years, each £10 10s., giving privilege of admission and three courses of Clinical Instruction. The second year's payment, or the payment of fees to the amount of £21, confers a life privilege of admission to the Infirmary and clinical instruction. Hospital attendance and clinical instruction for six months, £7 7s.; three months, £4 4s.

There is an out-door Obstetrical Department in connection with the Infirmary; fee £1 1s.

GLASGOW EYE INFIRMARY.—Fee, six months, £2 2s., three months, £1 1s.; to students who are attending or have attended the Lectures on the Eye in the University, six months, £1 1s.

Instruction may also be obtained at the Glasgow Lying-in Hospital; and at the Dispensaries for Diseases of the Skin and Ear; and the Royal Lunatic Asylum, Gartnavel, is open to students on payment of a small fee.

GLASGOW.—ANDERSON'S COLLEGE.—The following courses are given in addition to those at p. 428. In winter, Senior Anatomy, Dr. Buchanan, 4 P.M.; in summer, Osteology, Dr. Buchanan, 4 P.M.; Public Health, Dr. Christie, 1 P.M.; Practical Medical Chemistry, Mr. Dittmar, Tuesday, Wednesday, and Thursday, 11. The Chemical Laboratory is open daily from 10 to 5.

Fees.—Each course of lectures (except Anatomy), first session, £2 2s.; second session, £1 1s.; afterwards free. Anatomy (including Dissecting-room), first session, £4 4s.; second session, £4 4s.; third session and perpetual, £1 1s.; summer (including Practical Anatomy), £1 1s.; Osteology, £1 1s. Students who have attended classes at other schools will be admitted to such classes as they may have attended elsewhere at reduced fees. Fees for all the Lectures and Hospital Practice required of candidates for the diplomas of Physician and Surgeon, £48.

Scholarships, etc.—Kerr Bursary, value £12, for three years, open to students entering on second year; subjects of examination, Anatomy of bones, joints, muscles, and alimentary canal. Medical Scholarship of £20, for students entering on their third winter; subjects, Anatomy (joints, pelvic viscera, brain and spinal cord, recent dissections); Physiology (development of ovum); and Surgery (syphilis and syphilodermata, fractures of skull and long bones, and hernia). Prizes of £5, to Junior Anatomy, Chemistry, and Institutes of Medicine Classes.

A Dispensary is connected with Anderson's College. Students have the privilege of visiting and treating patients at their own homes, being assisted (when necessary) by the dispensary staff of physicians and surgeons.

MEDICAL SCHOOLS AND HOSPITALS IN IRELAND.

SCHOOL OF PHYSIC IN IRELAND.—This school is formed by an amalgamation of the medical schools of Trinity College and of the King and Queen's College of Physicians; the King's Professors of Institutes of Medicine, Practice of Medicine, Materia Medica, and Midwifery, and the Professor of Medical Jurisprudence, being appointed by the latter. The staff is as follows: Regius Professor of Physic, Dr. Alfred Hudson; Regius Professor of Surgery, Dr. W. Colles; University Professor of Anatomy and Surgery, Dr. B. G. M'Dowel, Tu., Th., S., 1; University Professor of Chemistry, Dr. J. E. Reynolds, Tu., Th., S., 2; University Professor of Botany, Dr. E. P. Wright, M., Tu., W., S., 1 (summer); Professor of Surgery in Trinity College, Dr. E. H. Bennett, M., W., F., 1; University Anatomist, Dr. T. Little, Tu., Th., S., 12; Professor of Comparative Anatomy, Dr. A. Macalister, W., Th., F., S., 4 (summer); Erasmus Smith's Professor of Natural Philosophy, Rev. John Leslie, M.A., M., W., F., 2; University Lecturer in Operative Surgery, Dr. R. G. Butcher; King's Professor of Institutes of Medicine, Dr. J. M. Purser, Tu., Th., S., 3; and Practical Histology two days a week in summer; King's Professor of Practice of Medicine, Dr. W. Moore, M., W., F., 3; King's Professor of Materia Medica and Pharmacy, Dr. Aquilla Smith, W., Th., F., S., 12 (summer); King's Professor of Midwifery, Dr. E. B. Sinclair, M., W., F., 4; Professor of Medical Jurisprudence, Dr. R. Travers, M., W., Th., F., 3 (summer).

The Winter Session commences on October 1st by the opening of the Dissecting Room. Lectures commence a month later. The Winter Courses consist of fifty-six Lectures each. Attendance on at least forty-two Lectures in each Course is required. The Summer Session commences April 1st. The Courses (Botany, Institutes of Medicine, Comparative Anatomy, Materia Medica, and Medical Jurisprudence) consist of forty Lectures each, attendance on at least thirty of which is required. The courses of Practical Histology and Practical Chemistry consist of twenty-six and thirty-six demonstrations respectively.

The Museums of Anatomy and Zoology; of Pathology, Materia Medica, and of Midwifery; and of Botany, are open to the students of the School of Physic.

Two Medical Scholars are elected annually by the Board of Trinity College, at an examination held at the end of June. Each scholarship is worth £20 *per annum*, and is tenable for two years. A Medical Travelling Prize and a Surgical Travelling Prize, value of each £100, open to students who have passed the M.B. examination after Trinity Term, 1877, will be competed for in June 1880.

Fees.—For Anatomy, Medicine, Practice of Medicine, Materia Medica, Midwifery, Medical Jurisprudence, Institutes of Medicine, Obstetric Medicine and Surgery (at Sir P. Dun's Hospital), Ophthalmic Surgery (at St. Mark's Hospital), each £3 3s.; Demonstrations and Dissections, each year, £8 8s.; Surgery, £2 2s.; Chemistry, £1 11s. 6d.; Practical Chemistry, £2 12s. 6d. Students dissecting during the fourth year pay £2 2s.

SCHOOL OF SURGERY: ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Introductory Lecture will be delivered on Monday, Oct. 28th, at one o'clock, by Mr. Thornley Stoker.—*Winter Session:* Anatomy and Physiology, Dr. Mapother, M., W., F., S., 3; Descriptive Anatomy, Dr. Bevan and Mr. Thornley Stoker, daily, except Saturday, 12; Surgery, Mr. J. Stannus Hughes and Mr. Stokes, Tu., Th., S., 1; Practice of Medicine, Dr. James Little, M., W., F., 1; Chemistry, Dr. Cameron, Tu., Th., S., 2; Midwifery and Gynæcology, Dr. Roe, Tu., Th., S., 3. Lectures on Comparative Anatomy will be delivered during the winter. Practical instruction in Operative Surgery will be given as part of the surgical course. The professor of chemistry receives operating pupils into the chemical laboratory. The dissecting-rooms open from October 1st, and are available from 8 A.M. to 10 P.M. during the Session. The dissections are under the direction of the professors of anatomy, assisted by five demonstrators.—*Summer Session*, commencing April 1st, 1880: Materia Medica, Mr. Macnamara; Medical Jurisprudence, Dr. Davy; Botany, Dr. Minchin; Practical Chemistry, Dr. Cameron; Midwifery and Gynæcology, Dr. Roe; Hygiene, Dr. Cameron; Ophthalmic and Aural Surgery, Mr. Swanzy.

The fee for each course of lectures is £3 3s., excepting Descriptive Anatomy, which is £8 8s.; Practical Chemistry, which is £5 5s.; and Ophthalmic and Aural Surgery and Hygiene, which are free. Composition fee for all lectures and dissections for the Diploma in Surgery, £56 17s. 6d. All fees for lectures are to be paid to Mr. John Brennen, at the College.

ADELAIDE MEDICAL AND SURGICAL HOSPITAL.—Consulting Physician, Dr. J. F. Duncan. Consulting Surgeon, Dr. Albert Walsh. Consulting Obstetric Surgeon, Dr. Lombe Atthill. Physicians, Dr. Henry H. Head, Dr. James Little. Surgeons, Dr. John K. Barton, Mr. B. Wills Richardson, Dr. Kendal Franks. Obstetric Surgeon, Dr. R. D. Purefoy. Ophthalmic and Aural Surgeon, Mr. R. Rainsford. Assistant-Physician, Dr. Walter G. Smith. Dental Surgeon, Dr. R. T. Stack.

Fee for nine months' hospital attendance, £12 12s.; six months', £8 8s.; summer three months', £5 5s.

There are wards for infants and children, and there is a large detached fever hospital. Special hours are devoted to Clinical Instruction in the Diseases peculiar to Women, and in the Diseases of the Eye, Ear, Throat, and Skin; and students are individually instructed in the use of the Stethoscope, Ophthalmoscope, and Microscope. Two resident pupils are selected half-yearly. At the termination of the session, prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery, will be awarded.

Further particulars may be obtained from Mr. Richardson, 22, Ely Place; or any of the other members of the medical staff.

CARMICHAEL COLLEGE OF MEDICINE.—The Dissecting Rooms will be open on October 1st. Lectures will commence on November 4th. The following are the Courses.—*Winter Session:* Medicine, Dr. Samuel Gordon and Dr. J. W. Moore, M., W., and F., 12; Surgery, Dr. J. K. Barton and Dr. A. H. Corley, T., Th., and S., 12; Anatomy, Dr. J. L. Stoney, daily, except Sat., 1; Physiology, Dr. Reuben J. Harvey, daily, except Sat., 2: Midwifery, Dr. W. B. Jennings and Dr. A. V. Macan, M., W., and F., 3; Chemistry, Dr. C. R. C. Tichborne, T., Th., and S., 3; Ophthalmic Surgery, Dr. Fitzgerald, W., 1.—*Summer Session*, 1880: Botany, Dr. McNab, M., W., F., 11; Institutes of Me-

dicine and Pathology, Dr. S. Woodhouse, T., Th., S., 11: Materia Medica, Dr. Duffey, M., W., F., 12; Practical Chemistry, Dr. Tichborne, T., Th., and S., 1.30; Forensic Medicine, Mr. Auchinleck, M., W., and F., 1; Practical Physiology, Dr. Harvey, T., Th., S., 12. The Physiological Department comprises a Histology Room, a room for Physiological Chemistry and one for Physiological apparatus. The Museum comprises a valuable collection of Anatomical and Pathological preparations. There is also an extensive Museum of Materia Medica.—Fees, for each course of lectures, £3 3s.; for each course of Practical Instruction (except Practical Physiology, £3 3s.), £5 5s. A second practical course can be attended for £2 2s., if no certificate be required. The fee for Ophthalmic Surgery is £2 2s. if a certificate be required. Perpetual Pupils, paying £58s. 5s. 6d. in two instalments, can attend all the lectures required by the Royal College of Surgeons of Ireland. The Carmichael and Mayne Scholarships, each £15 in value, and class and special Prizes to the value of more than £60, are awarded annually. For further information, apply to Dr. Harvey, 7, Upper Merrion Street.

Catholic University School of Medicine.—*Winter Session:* The dissecting-rooms will be opened on October 1st. The lectures will commence on Wednesday, October 30th, at 3 o'clock P.M., when the inaugural address will be delivered by Dr. Nixon. Anatomy and Physiology (Human and Comparative), by Dr. T. Hayden and Dr. Cryan, M., Tu., W., Th., and F., 12; Anatomical Demonstrations, by the Professors of Anatomy and Physiology, same days, 1; Chemistry, by Dr. J. Campbell, M., W., and F., 2; Surgery, by Mr. P. J. Hayes, M., W., and F., 3; Medicine, by Dr. R. D. Lyons, T., Th., and S., 3; Midwifery, by Dr. J. A. Byrne, T., Th., and S., 2; Demonstrations in Dissecting-Rooms, by Mr. Coppinger, Mr. W. J. Carroll, Mr. J. M. Redmond, and Mr. M. J. Kehoe. *Summer Session*, 1879: Practical Chemistry, by Dr. John Campbell, M., T., W., and F., 12 to 4 P.M.; Materia Medica and Therapeutics, by Dr. F. J. B. Quinlan, M., T., W., and Th., 1; Medical Jurisprudence, by Dr. S. M. Macswiney, M., T., W., and Th., 12; Botany, by Dr. G. Sigerson, M., T., Th., and S., 2; Pathology and Pathological Anatomy, by Dr. R. D. Lyons; Ophthalmology, T. and Th., 3; Natural Philosophy (Meteorology), by the Rev. Gerald Molloy, D.D., T., Th., and S., 11.

The school is within a few minutes' walk of the principal hospitals of the city. It includes an extensive and complete chemical laboratory, and a well supplied students' library.

Tutorial classes in the several departments of the medical curriculum are held daily.

Fees.—The fee for each course is £3 3s., except Dissections and Practical Chemistry, for each of which the fee is £5 5s.; and Pathology, Ophthalmology, and Natural Philosophy, which are free. A reduction of one-sixth is made to perpetual pupils paying the entire of their fees in advance, or in two instalments at the commencement of the first and of the second years of study. The cost of all the lectures and classes required for the diploma of the Royal College of Surgeons in Ireland is £68 5s., or to perpetual pupils, £56 17s. 6d.; for the Royal College of Surgeons of England, £50 8s.; of Edinburgh, £47 5s.

Prizes.—At the termination of the winter and of the summer sessions respectively, public examinations will be held in each class, and a prize of £3 3s. will be offered for competition amongst students who shall have diligently attended at least three-fourths of the lectures in the class of the current session. The Gold Medal will be awarded at the end of the winter session, in the following combined subjects, viz., Practice of Medicine, Surgery, and Midwifery, including the Diseases of Women and Children. At the termination of the summer session, the University Exhibition, value £20, will be awarded for the best answering in Practical Chemistry, Materia Medica, and Medical Jurisprudence combined. The examination in both is by printed questions.

Further particulars may be learned from the Registrar, Professor Campbell, 36, Leinster Road, Rathmines; or at the School of Medicine, Cecilia Street.

Coombe Lying-in Hospital.—Master, Dr. G. H. Kidd. Deputy-Master, Dr. W. Roe. Assistants, Dr. S. R. Mason, Dr. W. C. Neville. The hospital contains sixty-five beds, in two divisions, one devoted to Midwifery, and the other to Diseases of Women. Students can enter for six months at any period of the year. Clinical Instruction is given daily, and Lectures are delivered on the more important cases. Two paid Pupil Midwifery Assistants, and one Clinical Clerk, are selected half-yearly from among the pupils. Certificates of attendance are accepted by the Examining Boards; and the diploma of the Hospital is recognised by the Irish Local Government Board as a qualification in Midwifery. *Fees:* extern pupils, £8 8s.; intern pupils, £18 18s. Particulars may be learned on application to the Registrar at the Hospital.

Jervis Street Hospital.—Physicians, Dr. S. M. MacSwiney, Dr. W. Martin. Surgeons, Mr. M. H. Stapleton, Dr. J. Stannus Hughes, Dr. J. K. Forrest, Dr. Austin Meldon, Mr. J. E. Kelly, Dr. E. W. Collins, Mr. W. Stoker. Clinical instruction will commence on October 1st. This hospital is in the immediate vicinity of the Catholic University and Carmichael Medical Schools. Instruction is given by the physicians and surgeons on duty, on alternate days, from 9 to 11 o'clock. Two clinical lectures are delivered in each week. Operations are performed on Saturday mornings at 10. Practical Pharmacy is taught under the superintendence of the apothecary to the hospital. Resident pupils and dressers are selected from among the most attentive of the advanced students, without payment of any additional fee. Two interns are appointed each half year, and are provided with apartments, fuel, etc., free of expense. Special certificates are given to the resident pupils and dressers who have performed their respective duties to the satisfaction of the physicians and surgeons.

Ledwich School of Anatomy and Surgery.—The lectures will be delivered by the following teachers. Anatomy, Surgical and Descriptive: Mr. T. P. Mason, Mr. A. R. Glanville, Mr. M. A. Ward, Mr. C. H. Robinson, and Mr. F. A. Nixon, five days weekly, at 1 P.M. Anatomy, Physiological and Pathological: Dr. T. P. Mason, Mr. M. A. Ward, and Mr. T. Mason, five days weekly, at 12 o'clock. A brief course of Comparative Anatomy will be delivered during the winter session. Surgery: Mr. J. H. Wharton and Mr. J. E. Kelly, M., W., and F., at 11. Medicine: Dr. Arthur W. Foot, T., Th., and S., 11. Midwifery: Dr. S. R. Mason, T., Th., and S., 2. Chemistry and Natural Philosophy: Dr. E. Lapper, M., W., and F., 2. Practical Chemistry: Dr. Lapper. Ophthalmic and Aural Surgery, Mr. R. Rainsford, S., 1. Institutes of Medicine: Mr. F. A. Nixon and Mr. E. Ledwich. Materia Medica: Mr. Purefoy, M., W., F., 11. Forensic Medicine and Hygiene; Dr. Robert Travers, M., T., Th., and S., 11. Anatomical Demonstrations, daily. A course of operations to be performed by the students, under the superintendence of the lecturer (subjects, etc., included), £5 5s.

The dissecting rooms will open on October 1st. During the summer session, there will be lectures on Midwifery, Chemistry, Materia Medica, Botany, and Forensic Medicine.

There are endowments in favour of students, subject to the conditions prescribed by the founder, in the following departments: two in Anatomy and Physiology, two in Minute Anatomy, two in Practical Anatomy, and one in Surgery. The usual prizes in the other departments will be awarded at the termination of the session.

The school is connected by its teachers with six hospitals, five of which are medical and surgical, and one for midwifery and diseases of women and children.

Meath Hospital and County Dublin Infirmary.—Physicians: Dr. A. W. Foot, Dr. J. W. Moore. Surgeons: Dr. G. H. Porter, Mr. J. H. Wharton, Mr. P. C. Smyly, Mr. R. Macnamara, Mr. L. H. Ormsby, Mr. W. J. Hepburn. The winter session will commence on October 1st, and the Clinical Lectures on the first Monday in November. Four clinical lectures are given weekly, on alternate days. The physicians and surgeons visit the hospital at 9 A.M. The hospital contains 120 beds; it has a dispensary, lending library, and physiological laboratory attached, and is within a few minutes' walk of the University, the College of Surgeons, and the Ledwich School of Medicine. It contains a ward for diseases of children. Prizes are given at the end of the winter course. The office of resident pupil is open to pupils as well as to apprentices. Further information may be obtained of Mr. L. H. Ormsby, 12, Lower Fitzwilliam Street, or at the Hospital.

Mercer's Hospital, Dublin.—Physicians, Dr. T. P. Mason, Dr. G. F. Duffey. Surgeons, Mr. E. S. O'Grady, Mr. F. A. Nixon, Mr. M. A. Ward. The hospital is visited every day at 9 A.M. Dispensaries are held daily. Special instruction is given in cutaneous and infantile diseases. Bedside instruction is given daily, and clinical lectures are delivered weekly. Resident pupils are appointed each half year, and dressers and clinical clerks are selected each quarter from the pupils of the hospital. The hospital is connected by its staff with two of the principal medical schools in the city. Fees: winter six months, £8 8s.; summer three months, £5 5s.; nine months, £12 12s.; Further information can be obtained from any of the medical officers of the hospital, or from the Medical Registrar, Mr. James Shaw.

QUEEN'S COLLEGE, BELFAST.—The following courses are delivered. Anatomy and Physiology, Dr. P. Redfern, M., T., W., Th., F., 2; Medicine, Dr. James Cuming, M., T., W., Th., 4; Surgery, Dr. A. Gordon, M., T., W., Th., 1; Materia Medica, Dr. J. Seaton Reid, M., T., W., Th., 4; Midwifery, Dr. R. F. Dill, M., T., W., Th., 3 (summer); Chemistry, Dr. T. Andrews, M., T., W., Th., F., 3; Medical Jurisprudence, Dr. J. F. Hodges, M., T., W., Th., 2 (summer); Zoology, Dr. R. O. Cunningham, M., T., W., Th., 1; Botany, Dr. Cunningham, M., T., W., Th., F., 11 (summer).

The Clinical Laboratory is open from 9 till 3; on Saturdays, 9 till noon. Anatomical Demonstrations are given on the first five days of the week; and Dissections are carried on daily.

Fees.—Medical Jurisprudence, Chemistry, Materia Medica, Medicine, Surgery, Midwifery, and Botany, each £2; reattendance on same course, half fee; Practical Chemistry and Practical Anatomy, each course, £3; Anatomy and Physiology, first course, £3; each subsequent course, £2. Eight Junior Scholarships, of the value of £24 each, are awarded annually, after examinations, to students of the Faculty of Medicine; two being awarded for each of the four years of study. Clinical instruction is given at the Belfast General Hospital.

QUEEN'S COLLEGE, CORK.—The following courses of lectures are given. Anatomy and Physiology, Dr. J. J. Charles, daily, 1; Medicine, Dr. D. C. O'Connor, M., W., S., 12; Surgery, Dr. W. K. Tanner; Materia Medica, Dr. M. O'Keeffe, T., Th., 3; S., 12; Midwifery, Dr. H. Macnaughton Jones, T., Th., S., 4; Medical Jurisprudence, Dr. O'Keeffe, M., F., 3; and Mr. M. S. O'Shaughnessy; Natural Philosophy, Mr. J. England; Chemistry and Practical Chemistry, Dr. M. Simpson, M., W., F.; Zoology and Botany, Mr. A. L. Adams, M. W. F.; Logic, Mr. G. S. Read.

The building in which the Medical School is located is provided with a large, well lighted, and well ventilated dissecting room, with Physiological and Toxicological Laboratories, Materia Medica, Anatomical and Pathological Museums, as well as a room for surgical and obstetrical instruments and appliances. There are well appointed Physical and Chemical Laboratories, and a large Natural History Museum in the adjoining building; and part of the College ground is laid out as a Botanic Garden. The College Library is open daily to students of the school.

Fees: for Practical Anatomy and Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 for first course, and £2 for subsequent course. Other Medical Classes, £2 each course. Eight scholarships (value £25 each) as well as several exhibitions and class prizes, are awarded every year to the most deserving students.

Clinical Instruction is given at the North and South Infirmaries and Lying-in Hospitals; students can also attend the Mercy Hospital, the Maternity, the Children's Hospital, and the Ophthalmic and Aural Hospital. Fee for Clinical Lectures and attendance at either the North or South Infirmary, £8 8s. for twelve months; £5 5s. for six months; at the Lying-in Hospital and the Maternity, each £3 3s. The attendance at the Ophthalmic and Aural Hospital is free to students of the College.

A course of Clinical Lectures will be delivered during the first three months of each winter session in the Cork District Lunatic Asylum, by Dr. Eames, Resident Medical Superintendent. The fee is £3 3s.

QUEEN'S COLLEGE, GALWAY.—*Professors:* Anatomy and Physiology, Dr. L. P. Pye; Medicine, ——; Surgery, Dr. J. V. Browne; Materia Medica, Dr. N. W. Colahan; Medical Jurisprudence, Dr. R. J. Kinkead; Midwifery and Gynæcology, Dr. R. J. Kinkead; Chemistry and Practical Chemistry, Dr. T. H. Rowney; Experimental Physics, Dr. A. H. Curtis; Botany and Zoology, Dr. A. G. Melville; Modern Languages, Dr. Geisler. The College Library is open daily to students; also the Museums of Human and Comparative Anatomy, of Physiological Instruments, of Pathology, of Materia Medica, of Natural History, of Chemistry, and of Natural Philosophy; and the Montgomery Obstetric Collection.

Prizes.—Attached are eight scholarships of the value of £25 each; four exhibitions of the value of £12 each; two exhibitions of the value of £16 each; and sessional prizes in each of the subjects of the curriculum are awarded annually. The Clinical Board will award two silver medals to the students who pass the best examinations on cases treated in Hospital, and the subject of Clinical Lectures.

Clinical Lectures are delivered on Tuesdays and Fridays, and practical teaching at the bedside on other days of the week, at the Galway County Infirmary and the Galway Town Hospital. Arrangement has also been made by which students are entered for a summer course at the Richmond, Whitworth, and Hardwicke Hospitals in Dublin; and four resident clerkships in these hospitals are reserved for Galway students.

Fees.—Anatomy and Physiology, first course, £3; each subsequent course, £2; Practical Anatomy, Practical Chemistry, and Operative Surgery, each course, £3; other courses, £1 for each course extending over one term only; £2 for each course extending over more than one; and £1 for each subsequent attendance on the same. Clinical Instruction, 6 months, £4 4s.; summer course at Richmond, Whitworth, and Hardwicke Hospitals, £5 5s.; Resident Clerkship, 6 months, £15 15s.; Composition Fee for Clinical Instruction at Galway and Dublin for nine months, £8 8s.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.—Consulting Physician, Sir D. Corrigan, Bart., M.D.; Physicians, Dr. J. T. Banks, Dr. B. G. M'Dowel, Dr. S. Gordon, Dr. R. D. Lyons; Assistant-Physician and Pathologist, Dr. Reuben J. Harvey; Consulting Obstetric Surgeon, Dr. G. H. Kidd; Surgeons, Dr. William Stokes, Dr. William Thomson, Dr. W. Thornley Stoker, Dr. Anthony H. Corley; Ophthalmic Surgeon, Dr. Charles E. Fitzgerald; Dental Surgeon, Mr. W. B. Pearsall.

These hospitals contain 312 beds; 110 for surgical cases, 82 for medical cases; and 120 for fever and other epidemic diseases.

There will be a distinct Course of Lectures and Clinical Instruction in Fevers. Operations are performed on Wednesday mornings only, except in cases of emergency. A course of Practical Instruction in Ophthalmic Surgery will be given; fee, £3 3s. Practical Pharmacy is taught under the superintendence of the apothecary of the hospitals. There are an extensive Pathological Museum, containing above 4,000 drawings, casts, and preparations, and a well selected Medical and Surgical Lending Library. A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half year, and provided with furnished apartments, fuel, etc. These appointments are open not only to advanced students, but also to those who are qualified in Medicine or Surgery. The dressers are selected from among the best qualified of the pupils, without the payment of any additional fee.

The Richmond Institution for the Insane, containing over 1,000 patients, adjoins these hospitals, affording every facility for the study of mental diseases. The hospitals are visited at 9 o'clock by the physicians and surgeons on alternate days. Two Clinical Lectures are delivered in each week, in addition to the usual bedside Clinical Instruction, which is given daily by the physicians and surgeons.

Fees: For the winter and summer session, £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident Clinical Clerks, 20 guineas for the winter session; 15 guineas for the summer term (from May to October), including certificate of attendance, furnished apartments, fuel, light, attendance, etc.

ROTUNDA HOSPITALS.—Consulting Physician, Dr. Hudson; Consulting Surgeon, Dr. Colles; Master, Dr. Lombe Atthill; Assistant Physicians, Dr. W. J. Smyly, and Dr. A. Duke; Pathologist, Dr. G. F. Duffey.

This Institution consists of two distinct Hospitals, namely, the Lying-in Hospital, for labour cases, and the Auxiliary Hospital, for patients suffering from uterine and ovarian disease. There is also a large extern maternity in connection with the Hospital, and a Dispensary for Diseases of Women.

An Obstetrical Museum, containing upwards of 500 preparations, is attached to the Hospital.

Clinical Instruction in Midwifery and the Diseases of Women is given daily; and Lectures are delivered regularly during the Session on these subjects.

The Diploma from this Hospital is granted to pupils after six months' attendance, and on their passing an examination. It is recognised by the Local Government Board in Ireland as a qualification in Midwifery.

Accommodation is provided for a limited number of Intern Pupils.

Fees.—Intern Pupils: six months, £21; three months, £12 12s.; two months, £9 9s.; one month, £6 6s. Extern Pupils: six months, £10 10s.; three months, £6 6s.

ST. VINCENT'S HOSPITAL AND DISPENSARY.—This hospital is visited daily at 9 A.M. It is connected, by its medical officers, with three leading medical schools in its vicinity. Medical and surgical clinical lectures will be given three times weekly; operations on Fridays at 10.30 A.M. At the beginning of each winter and summer session, two resident pupils are selected by competitive examination. At the end of the winter session, an examination will be held in Clinical Medicine and Surgery, at which a senior and junior prize will be awarded.

A portion of all these examinations will be conducted at the bedside. Physicians, Dr. F. J. B. Quinlan, Dr. R. Cryan; Surgeons, Dr. E. D. Mapother, Dr. W. H. O'Leary, M.P.; Gynæcologist, Dr. J. A. Byrne; Surgeon Dentist, Mr. W. J. Doherty. Terms of attendance: Winter and summer sessions, £12 12s.; winter session, £8 8s.; summer session, £5 5s.

SIR PATRICK DUN'S HOSPITAL.—Consulting-Physician, Dr. A. Hudson; Consulting-Surgeon, Dr. W. Colles; Clinical Physicians, Dr. J. M. Purser, Dr. W. Moore, Dr. Aquilla Smith; Midwifery Physician, Dr. E. B. Sinclair; Clinical Surgeons, Dr. B. G. M'Dowel, Dr. E. H. Bennett, Dr. T. E. Little; University Lecturer in Operative Surgery, Dr. R. G. Butcher.

The hospital is visited daily before 12 by each of the physicians and surgeons on duty. The physician on duty visits the wards, with his class, at 9 A.M. on Mondays, Wednesdays, and Fridays; and the surgeon on duty, with his class, at 9 A.M. on Tuesdays, Thursdays, and Saturdays.

The payment of £3 3s. to the hospital entitles the student to attend the clinic of the hospital for twelve months, and the lectures delivered by Dr. Butcher at 10 on Thursdays. Students who have taken the degrees of Bachelor in Medicine or Master in Surgery, in Trinity College, are entitled to attend the hospital as perpetual free pupils. Clinical lectures are delivered on alternate mornings by the clinical physician and the clinical surgeon on duty. In addition to the hospital fee, the payment of a fee of £9 9s. is required for these lectures. Total fee for hospital and lectures for twelve months, £12 12s. For six months' instruction in Practical Midwifery, students of Trinity College, £3 3s.; other students, £6 6s. The Governors of the hospital award silver clinical medals in Medicine and in Surgery to the student who shall pass the best examinations on the Medical and Surgical cases treated in the hospital during the year. Ophthalmic lectures are delivered at St. Mark's Hospital; fee for three months, £3.

Candidates for the office of Resident Pupil are requested to forward their applications before 1st May and 1st November.

DR. STEEVENS' HOSPITAL AND MEDICAL COLLEGE.—The hospital contains 250 beds, and is provided with special wards for the treatment of fever, syphilis, and diseases of females. Visiting Physician, Dr. H. Freke; Visiting Surgeons, Mr. S. G. Wilmot and Mr. C. Fleming; Physicians, Dr. T. W. Grimshaw and Dr. R. Bookey; Physician-Accoucheur, Dr. J. Isdell; Surgeons, Mr. W. Colles, Dr. E. Hamilton, Dr. R. M'Donnell; Surgeon-Oculist, Mr. Swanzy; Surgeon-Dentist, Mr. Baker. The hospital is visited daily at 8.30 P.M., and clinical instruction is given as follows: The physicians and surgeons, Saturdays at 10; and Dr. Grimshaw, Monday; Mr. M'Donnell, Tuesday; Mr. Hamilton, Wednesday; Mr. Colles, Thursday; Dr. Bookey, Friday; Dr. Isdell, Saturday—each at 9 A.M. Mr. Swanzy gives clinical instruction on Tuesday at 10, and on Saturday at 9. Operations are performed on Saturdays at 10. Pathological Demonstrations are given by the lecturers as opportunity offers. The following lectures are given in the Medical School. Physiology, Mr. Hamilton, M., W., F., 10; Medicine, Dr. Grimshaw, M., W., F., 11; Surgery, Mr. Colles, T., Th., S., 11; Midwifery and Diseases of Women and Children, Dr. Isdell, M., W., F., 12; Chemistry, Mr. McHugh, T., Th., S., 12; Descriptive Anatomy, Dr. Bookey, Dr. Warren, daily, except Sat., 1; Materia Medica, Mr. Fox; Botany, Mr. Pentland; Medical Jurisprudence, Dr. Tweedy. Dissections are superintended by the Lecturers on Anatomy and the Demonstrators. Practical Anatomy and Clinical Instruction commence on the first Monday in October. The Sessional Lectures commence on the first Monday in November. A Histological Laboratory has recently been completed. The summer session will include Clinical Medicine and Surgery, Ophthalmic Surgery, Materia Medica, Midwifery and Practical Midwifery, Botany, Chemistry, Medical Jurisprudence, Institutes of Medicine, and Practice in Surgical Operations. The Reading-Room and Museum are open daily. There is also a Lending Library.

A Maternity Department is conducted in connection with the hospital. There is accommodation in the hospital for two Medical and six Surgical Resident Pupils.

Fees.—Hospital Practice, nine months, £12 12s.; six months, £8 8s.; three months, £5 5s.; resident dresserships, six months, winter, £21; summer, £15 15s. Practical Anatomy, £5 5s. Lectures, each course, £3 3s. Composition fee for lectures, payable in two instalments, £56 3s. 6d.

Prizes, etc.—An examination for two Midwifery Assistants (salary £30) will be held on the last Saturday in November. Candidates must be students in at least their second year; must have attended Practical Midwifery in the Maternity Department of Steevens's Hospital, and be entered on the books of the School for Hospital, Physiology, Anatomy, and Surgery, for the session in which they compete. Examinations will be held through the session on the subject of previous lectures. General examinations will be held at the close of the session, at which students are expected to answer, in order to entitle them to certificates of attendance. A gold medal will be awarded in each year's class, if the merit of the candidate justify its being conferred.

Further particulars may be learned from any of the Lecturers; from the Resident Surgeon, at the hospital; or from Dr. E. Hamilton, 120, Stephen's Green West.

REGULATIONS TO BE OBSERVED BY CANDIDATES FOR ADMISSION INTO THE INDIAN AND NAVAL MEDICAL SERVICES.

INDIAN MEDICAL SERVICE.

1. All natural-born subjects of Her Majesty between twenty-two and twenty-eight years of age at the date of the examination and of sound bodily health may be candidates. They may be married or unmarried. They must possess a diploma in surgery or a licence to practise it, as well as a degree in medicine or a licence to practise it, in Great Britain or Ireland. 2. They must subscribe and send in to the Military Secretary, India Office, Westminster, so as to reach that address at least a fortnight before the date fixed for the examination, a declaration according to the annexed form. 3. This declaration must be accompanied by the following documents: *a.* Proof of age, either by the candidate's own declaration, forms of which can be obtained at the India Office, pursuant to the Act 5 and 6 William IV, c. 62, or by extract from the register of the parish in which he was born (a certificate of baptism which does not afford proof of age will be useless); *b.* A certificate of moral character from a magistrate, or a minister of the religious denomination to which the candidate belongs, who has personally known him for at least the two years preceding the date of his application; *c.* A certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas, and licences possessed by the candidate. 4. The physical fitness of candidates will be determined previous to examination by a board of medical officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed. Every candidate must also be free from organic disease of other organs, and from constitutional weakness, or other disability likely to unfit him for military service in India. 5. On producing the foregoing qualifications, the candidate will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows: *a.* Anatomy and Physiology, 1,000 marks; *b.* Surgery, 1,000; *c.* Medicine, including Therapeutics, the Diseases of Women and Children, 1,000; *d.* Chemistry and Pharmacy, and a practical knowledge of drugs, 100. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. 6. The eligibility of each candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only. 7. Candidates who desire it will be examined in French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica. 8. The number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination of candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences. 9. The maximum number of marks allotted to the voluntary subjects will be as follows: French, German, and Hindustani (150 each), 450 marks; Natural Science, 300 marks. 10. The subjects for this part of the examination will be taken from the following books: *Animal Kingdom*, by W. S. Dallas, F.L.S. *Outlines of the Structure and Functions of the Animal Kingdom*, by Rymer Jones; or *Cours Elémentaire d'Histoire Naturelle*, by Milne-Edwards. Lindley's *School Botany*, Lindley's *Medical and Economic Botany*, Henfrey's *Elementary Course of Botany*. *Elements of Natural Philosophy*, by Golding Bird and C. Brooks. *Physical Geography*, by Mrs. Somerville. 11. The Examiners in London will prepare a list

in order of merit, with the marks affixed in the different subjects, to be transmitted to the Director-General and communicated to the Professors of the Army Medical School. If any candidate be found to be deficient in any particular subject, this shall be stated, in order that he may receive special instruction on the point at Netley. 12. After passing his preliminary examination, candidates will be required to attend one entire course of practical instruction at the Army Medical School before being admitted to examination for a commission, on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of diseases and injuries incident to military service. These courses are to be of not less than four months' duration; but candidates who have already gone through a course at Netley as candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the School a second time. 13. During the period of his residence at the Army Medical School, each candidate will receive an allowance of five shillings *per diem* with quarters, or seven shillings *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a surgeon of the British Service, but without the sword). 14. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact. 15. At the conclusion of the course, candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the Professors of the School. The Director-General, or any medical officer deputed by him, may be present and take part in the examination. If the candidate give satisfactory evidence of being qualified for the practical duties of an army medical officer, he will be eligible for a commission as surgeon. 16. The position of the candidates on the list of surgeons will be determined by the combined results of the preliminary and of the final examinations, and, so far as the requirements of the Service will permit, they will have the choice of Presidency in India, according to their position on that list. The examinations for admission to the Indian Medical Service will usually take place twice a year, viz., in February and in August.

NAVAL MEDICAL SERVICE.

1. Every candidate desirous of presenting himself for admission to the Naval Medical Service must be not under twenty-one nor over twenty-eight years of age. He must produce a certificate from the district registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character, signed by a clergyman or a magistrate, to whom he has been for some years personally known, or by the President or Senior Professor at the College at which he was educated. —2. He must be free from organic disease, and will be required to make a declaration that he labours under no mental or constitutional disease or weakness, nor any other imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate. His physical fitness will be determined by a board of medical officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test-types. He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.—3. He must be registered under the Medical Act in force at the time of his appointment, as licensed to practise Medicine and Surgery in Great Britain or Ireland.—4. Certificates of registration, character, and age, must accompany the Schedule when filled up and returned.—5. Candidates will be examined by the examining board in the following subjects: Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Naval Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany, with special reference to Materia Medica, also in French and German; and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.—6. After passing this examination, every candidate will be required to attend one entire Course of Practical Instruction in the Medical School at Netley, on—(1) Hygiene; (2) Clinical and Naval and Military Medicine; (3) Clinical and Naval and Military Surgery; (4) Pathology of Diseases and Injuries incident to Naval and Military Service.—7. At its conclusion, the candidate will be required to pass an examination on the subjects taught in the School. If he give satisfactory evidence of being qualified for the practical duties of a naval medical officer, he will be eligible for a commission as surgeon.—8. During the period of his residence at the Netley Medical School, each candidate will receive an allowance of 5s. *per diem* with quarters, or 7s. *per diem* without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the regulation undress uniform of a surgeon, but without the sword).—9. All candidates will be required while at Netley to conform to such rules of discipline as the Senate may from time to time enact.—10. After completing three years' full-pay service, surgeons will be allowed to be examined for the rank of staff-surgeon; but no surgeon can be promoted to the rank of staff-surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.

PUBLIC HEALTH OR STATE MEDICINE.

SUBJOINED are the regulations of the Examining Bodies which grant degrees or certificates in Public Health or State Medicine.

UNIVERSITY OF CAMBRIDGE.—Any person whose name is on the *Medical Register* of the United Kingdom may present himself for examination, provided he be in his twenty-fourth year at least when he presents himself for the first part of the examination, and have attained twenty-four years of age before he presents himself for the second part.

Part I comprises Physics and Chemistry; the principles of Chemistry, and methods of analysis, with especial reference to analyses of air and water; application of the microscope; the laws of heat, and the principles of pneumatics, hydrostatics, and hydraulics, with especial reference to ventilation, water-supply, drainage; construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general.

Part II will comprise—laws of the realm relating to public health; sanitary statistics; origin, propagation, pathology, and prevention of epidemic and infectious diseases; effects of overcrowding, vitiated air, impure water, and bad or insufficient food; unhealthy occupations and the diseases to which they give rise; water-supply and drainage in reference to health; nuisances injurious to health; distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

The examinations in both parts will be oral and practical as well as in writing. Candidates may present themselves for either part separately, or for both together.

Every candidate must pay a fee of £4 4s. before admission to *each part* of the examination.

Every candidate who has passed both parts of the examination to the satisfaction of the examiners, will receive a certificate testifying to his competent knowledge of what is required for the duties of a Medical Officer of Health.

All applications for admission to this examination, or for information respecting it, should be addressed to Professor Liveing, Cambridge.

UNIVERSITY OF LONDON.—A special examination is held once in every year in subjects relating to Public Health, and commences on the second Monday in December. No candidate is admitted to this examination unless he have passed the second examination for the degree of Bachelor of Medicine in this university at least one year previously, nor unless he have given notice of his intention to the registrar at least two calendar months before the commencement of the examination. The fee for the examination is £5, which must be previously paid to the registrar. If, after payment of his fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any *one* subsequent examination without the payment of any additional fee, provided that he give notice to the registrar at least one calendar month before the commencement of the examination. Candidates are examined in the following subjects: 1. *Chemistry and Microscopy*, as regards the examination of air, water, and food; 2. *Meteorology*, as regards general knowledge of meteorological conditions, and the reading and correction of instruments; 3. *Geology*, as regards general knowledge of rocks, their conformation and chemical composition, and their relation to underground water, and to drainage and sources of water-supply; 4. *Physics and Sanitary Apparatus;* the laws of heat, mechanics, pneumatics, hydrostatics, and hydraulics, in relation to the construction of dwellings, and to warming, ventilation, drainage, and water-supply, and to apparatus for these and other sanitary uses; the reading of plans, sections, scales, etc., in regard of sanitary constructions and appliances; 5. *Vital*

Statistics, as regards the methods employed for determining the health of a community; birth-rate; death-rate; disease-rate; life-tables; duration and expectancy of life; present amount of mortality at the various ages, and its causes, in different classes and communities; practical statistics of armies, navies, civil professions, asylums, hospitals, dispensaries, lying-in establishments, prisons, in-door and out-door paupers, friendly societies, sick-clubs, medical and surgical practice, towns; 6. *Hygiene*, including the causation and prevention of disease. Reference shall be had to such matters as the following: parentage; temperament; morbid diatheses; congenital diseases and malformations; effects of close interbreeding; special liabilities at particular periods of life; physical regimen of different ages; earth and climate, and changes of season; dampness of soil; malaria; conditions of healthy nourishment; conditions of healthy lodgment; conditions of healthy activity; hygiene of particular establishments and particular classes of population; disease as distributed in England; particular diseases, as regards their intimate nature, causation, and preventability; processes of contagion in different diseases; incubation; particular dangers of infection, etc.; disinfectants, and establishments for disinfection; quarantine; hospitals for infectious disease; conveyance of the sick; vaccination; prostitution; diseases of domestic animals in relation to the health of man; rabies; diseases of the vegetable kingdom, and failures of vegetable crops, in relation to the health of man; famine-diseases; poisons in manufacture, and commercial and domestic use; 7. *Sanitary Law*, as regards the Public Health Act, 1875; the Vaccination Acts; the Rivers Pollution Prevention Act; the Sale of Food and Drugs Act; the Artisans' and Labourers' Dwellings Improvement Act, 1875; the Acts regulating the Medical Profession and the Practice of Pharmacy; the Acts relating to Factories and Workplaces, and to the Detention and Care of Lunatics. The examination is written and practical, and extends over four days. Candidates are not approved by the examiners unless they have shown a competent knowledge in all the principal subjects. In the week following the examination, the examiners publish the names of the candidates who have passed, arranged in alphabetical order. If, in the opinion of the examiners, sufficient merit be evinced, the candidate who distinguishes himself the most receives a gold medal of the value of £5. A certificate under the seal of the University, and signed by the Chancellor, is delivered at the public presentation for degrees to each candidate who has passed.

UNIVERSITY OF DURHAM.—Certificates of proficiency in Sanitary Science are granted under the following regulations.

Candidates must give at least twenty-eight days' notice to the Registrar, and send the fee and the necessary certificates.

A. *Certificate of Proficiency in Sanitary Science.*—1. The candidate must be a registered medical practitioner. 2. He must have attended one course of Lectures on Public Health at the University of Durham College of Medicine, Newcastle-upon-Tyne, during one winter session. 3. He must pass an examination on the following subjects: *a. Physics*—Laws of light, heat, hydrodynamics, and pneumatics. *b. Chemistry*—As applied to the detection of noxious gases and atmospheric impurities, analysis of air and water. *c. Sanitary Legislation*—Knowledge of the Acts of Parliament in force for the preservation and protection of health. *d. Vital Statistics*—Rates of births, deaths, and marriages; the methods of calculation, classification, and tabulation of returns of sickness and mortality; data and conclusions deducible therefrom. *e. Meteorology, Climatology, and Geographical Distribution of Diseases in the United Kingdom. f. Sanitary Medicine*, more especially epidemic, endemic, epizootic, and communicable diseases; diseases attributable to heat, cold, or damp; insufficiency or impurity of air, food, or drink; habitation, occupation, overexertion, intemperance, heredity; preventive measures, vaccination, isolation, disinfection; the regulation of noxious and offensive manufactures and trades, the removal of nuisances. *g. Practical Hygiene*, in reference to site, materials, construction, lighting, ventilation, warmth, dryness, water-supply, and refuse-disposal of dwellings, schools, hospitals, and other buildings of public and private resort; action with respect to nuisances and outbreaks of disease; other duties of a medical officer of health.—The examination is by written papers, practical, and *viva voce*. In the practical examination, the candidate is required: 1. To report upon the condition of some actual locality; 2. To analyse liquids and gases; 3. To explain the construction and the uses of instruments employed in meteorology; 4. To make microscopic examinations. The fee is £5 5s. The next examination will commence on Monday, June 14th, 1880.

B. *Certificate of Proficiency in Sanitary Science for Medical Officers of Health.*—The candidate must be a registered medical practitioner before January 1st, 1878, and must have acted as a medical officer of health for five years. He must not be under thirty years of age. He must pass the same examination as particularised under the heading A, and must write an essay upon some practical sanitary subject, and be examined upon the essay and upon other sanitary questions. The fee is £10 10s.

UNIVERSITY OF EDINBURGH.—This University gives the degrees of Bachelor and Doctor of Science in Public Health, under the following conditions.

Bachelor of Science.—1. The candidate must be a Graduate in Medicine of a British University, or of such Colonial, Indian, or Foreign University as may be specially recognised by the University Court. 2. He must be matriculated for the year in which he appears for examination. 3. If the candidate have not passed an *annus medicus* in the University of Edinburgh, he must, before presenting himself for examination, have attended in the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations. 4. There are two examinations for the degree of Bachelor of Science in the department of Public Health. A candidate who has passed the first examination may proceed to the second at the next period fixed for this, or at any subsequent examination. 5. The candidate must produce evidence that, either during his medical studies or subsequently, he has attended a course of lectures in which instruction was given on Public Health; and that he has studied Analytical Chemistry practically for three months with a recognised teacher. 6. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court. 7. The subjects of the examination for the degree of Bachelor of Science in the department of Public Health are as follows.

First Examination.—1. *Chemistry*—Analysis of air, detection of gaseous emanations and other impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and amount of their mineral and organic constituents; detection, chemical and microscopical, of adulteration in articles of food and drink, and in drugs; practical examination, including at least two analytical researches. 2. *Physics*—Hydraulics and hydrostatics, in reference to water-supply, drainage, and sewerage; pneumatics, in relation to warming and ventilation; meteorology, and methods of making meteorological observations; mensuration, in reference to the plans and sections of public and private buildings, mines, waterworks, and sewers. The candidate must make figured sketches for models. 3. *Sanitary Law*—Knowledge of the leading Sanitary Acts of Parliament. 4. *Vital Statistics*—Knowledge of statistical methods and data in reference to population, births, marriages, and deaths. An oral examination, and an examination in practical chemistry in the laboratory, will take place a few days after the written examination.

Second Examination—1. *Medicine*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases, and the geographical distribution of disease; insalubrious trades; overcrowding; epizootics, including pathological changes. 2. *Practical Sanitation*—Duties of a health-officer in reference to water-supply; insalubrious dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries, nuisances from manufactories, etc.; bad or insufficient supplies of food; outbreaks of zymotic diseases; quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals.

The written examinations will take place on October 16th and 17th, 1879, and April 1st and 2nd, 1880. Candidates must give notice and pay the fee on or before October 1st and March 1st.

Doctor of Science.—A Bachelor of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department, on producing evidence that he has been engaged in practical sanitation since he received the degree of Bachelor of Science, and on producing a thesis on some subject embraced in the department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the Examiners. The candidate for the degree of D.Sc. must lodge his thesis with the Dean of the Medical Faculty on or before January 31st in the year in which he proposes to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted.

The fees for the degrees in Science in the Department of Public Health are: for each examination for B.Sc. in Public Health, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s. The degrees in Science are conferred at the graduation ceremonial in April. The following are recommended as books to be studied in preparation for the above examinations:—Parkes, E., *Practical Hygiene;* Wilson, George, *Handbook of Hygiene;* Smith, Edw., *Manual for Public Officers of*

Health, and *Handbook for Inspectors of Nuisances;* Michael, Corfield, and Wanklyn, *Manual of Public Health*, edited by E. Hart; Eassie, *Healthy Houses;* Latham, Baldwin, *Sanitary Engineering;* Law, Henry, *Rudiments of Civil Engineering;* Monro, Geo., *The Public Health (Scotland) Act;* Buchan, Alex., *Introductory Text-Book of Meteorology*.

UNIVERSITY OF GLASGOW.—A special examination will be held once in every year in subjects relating to Public Health, and will commence on the second Tuesday in April. This examination will consist of two divisions; and candidates may enter to one or both of these, provided that no candidate shall be admitted to examination in the second division who has not already passed the first. All candidates must be registered medical practitioners. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which special instruction was given on Public Health; and that they have attended a course of Analytical Chemistry specially bearing upon the subjects of examination, given by recognised teachers. Candidates who have not passed an *annus medicus* in the University of Glasgow must, before presenting themselves for examination, have attended as matriculated students in this University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations. The examinations are written, oral, and practical.

The fee for each division of this examination is £4 4s. The candidates must give notice to the Assistant-Clerk of Senate, and pay the required fee, at least one calendar month previous to the examination. If, after payment of the fee, a candidate withdraw his name, or fail to present himself at the examination, or fail to pass it, the fee is not returned to him; but he may enter for any *one* subsequent examination without the payment of an additional fee.

The examination embraces the following subjects:—*1st Division.*—*Physics*—Pneumatics, hydrostatics, hydraulics. *Chemistry*—Analysis of air, water, and food. *Meteorology*—Climate, topographical and seasonal: its influence in relation to health and disease. *Geographical Distribution of Diseases.*—*2nd Division—State Medicine*—Duties of health-officer; ventilation; food and its adulterations; water and water-supply; sewage and drainage; construction of hospitals, public buildings, and dwellings; overcrowding; manufactories; insalubrious trades; cemeteries; nuisances; quarantine; disinfectants and deodorisers; outbreaks of zymotic diseases. *Sanitary Law*—Knowledge of leading Sanitary Acts of Parliament. *Vital Statistics.*

The following are recommended as books for study:—E. Parkes, *Practical Hygiene;* George Wilson, *Handbook of Hygiene;* A. H. Hassall, *Food and its Adulterations;* Lardner and Loewy, *Hydrostatics and Pneumatics.*

A course of lectures on Public Health is delivered in the University during the winter session.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—The Royal College of Physicians of Edinburgh grants a certificate of qualification in Public Health under the following regulations.

Candidates must be already on the *Medical Register*, and possess a qualification in Medicine. They are not required to attend any special course of instruction; but their attention is directed particularly to courses of lectures on State Medicine, and to the practice of Analytical Chemistry. There are two examinations, which may be taken simultaneously or with an interval not exceeding twelve months. The examinations are written, oral, and practical. Rejected candidates are not admitted for re-examination till after the expiry of six months.

Examinations.—The first examination embraces—*a. Physics:* especially pneumatics, hydrostatics, hydraulics, and engineering in relation to sanitary operations, including a knowledge of architectural and other plans, sections, etc.; *b. Chemistry:* especially analysis of air, water, food, including the biology of putrefaction and allied processes; *c. Meteorology:* including climate, topographical and seasonal influences in relation to health and disease.

2. The second examination embraces—*a. Epidemiology and Endemiology:* including the corresponding departments in the diseases of animals and plants—contagious diseases—diseases of periods of life, professions, trades, seasons, and climates; *b. Practical Hygiene:* duties of a health-officer; food; water-supply; sewerage and drainage; construction of hospitals, public buildings, dwellings; manufactories; cemeteries; nuisances; *c. Sanitary Law and Vital Statistics.*

3. Meetings for both examinations are held annually in April and October. The first examination is held on the second Tuesday of the month; the second examination on the immediately succeeding Thursday. Each occupies two days. Candidates may enter for both examinations in the same week, or for one only. The examinations must be passed in their order, first and second. Candidates must appear for the second examination not later than twelve months after having passed the first. A candidate remitted at his second examination may come up again after a further period of six months; but, if he then fail to pass, he must undergo the first as well as the second examination before obtaining the certificate.

The fees must be paid at least a week before the day of examination. The fee for the first examination is £3 3s.; for the second examination, £3 3s.; and for receiving the certificate, £4 4s. Candidates forfeit the fee for the examination which they have been unsuccessful in passing. If a candidate who has presented himself for both examinations fail to pass the first, he is not allowed to present himself for the second, and his fee for the second is returned to him.

UNIVERSITY OF DUBLIN.—Doctors of Medicine of Dublin, Oxford, or Cambridge, who wish to obtain from this University a certificate of qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects: 1, Law; 2, Engineering; 3, Pathology; 4, Vital and Sanitary Statistics; 5. Chemistry; 6, Meteorology; 7, Medical Jurisprudence.

DENTAL SURGERY.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND grants a diploma in Dental Surgery under the following regulations.

Candidates must produce Certificates: 1. Of being twenty-one years of age. 2. Of having been engaged during four years in the acquirement of professional knowledge. 3. Of having attended not less than one of each of the following Courses of Lectures: Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica. 4. Of having attended a second Winter Course of Lectures on Anatomy, or a course of not less than twenty Lectures on the Anatomy of the Head and Neck. 5. Of having performed Dissections during not less than nine months. 6. Of having completed a Course of Chemical Manipulation. 7. Of having attended, at a Hospital or Hospitals in the United Kingdom, Surgery and Clinical Lectures on Surgery during two Winter Sessions. 8. Of having attended two Courses of Lectures upon each of the following subjects: Dental Anatomy and Physiology (Human and Comparative), Dental Surgery, Dental Mechanics, and one Course on Metallurgy. 9. Of having been engaged, during not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent Practitioner. 10. Of having attended at a Dental Hospital, or in the dental department of a General Hospital, the Practice of Dental Surgery during two years. The courses of instruction and hospital practice must be by lecturers or in institutions recognised by the College.

All Candidates who commence their Professional Education on or after July 22nd, 1878, must, in addition to the Certificates enumerated above, produce a certificate of having, prior to such commencement, passed the Preliminary Examination in General Knowledge for the Diploma of Member of the College, or an equivalent examination.

Candidates who were in Practice as Dentists, or who had commenced their Education as Dentists prior to September 1859, and who are unable to produce the Certificates required by the foregoing regulations, must furnish the Board of Examiners with a Certificate of Moral and Professional Character, signed by two Members of the College, together with answers to certain inquiries.

The Examination is partly written and partly oral. The written examination comprises General Anatomy and Physiology, and General Pathology and Surgery, with especial reference to Dental Practice. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, have to answer only those questions set by the Section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination are examined only by that Section. A rejected candidate is not admitted to re-examination within six months, unless the Board otherwise determine. Examinations are held in January and June. The fee for the Diploma is £10 10s., over and above any stamp duty.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The Examinations are written and oral. The Examinations consist of two separate sittings, and are held subsequent to each period of the ordinary examinations, on such days as the College may appoint. Candidates must apply to the Secretary of the College on or before the Saturday preceding the ordinary examinations, and must produce all the required certi-

ficates. Examinations for the Dental Diploma will be held as follows: first examinations, October 21st, 1879; January 26th, March 29th, April 20th, July 20th, 1880; and the second immediately after the conclusion of the first examination.

Candidates must produce evidence of having attained the age of twenty-one years, and of having passed the Preliminary Examination in General Education required for the ordinary Licence in Surgery, or an equivalent examination. They must also produce certificates of having been engaged during four years in the acquirement of professional knowledge, and of having been during that period, or at some time previous to their examination, engaged for not less than three years in the acquirement of a practical knowledge of Mechanical Dentistry with a registered dental practitioner.

The following Lectures and other courses of instruction must have been attended at a recognised medical school or schools: Anatomy, one winter course; Dissection and Demonstrations, nine months; or Dissection, nine months, and Anatomy of Head and Neck, one course of twenty lectures; Physiology, one course of not less than fifty lectures; Chemistry, Surgery, Medicine, each one winter course; Materia Medica and Practical Chemistry and Metallurgy, each one course of three months; Clinical Instruction in Surgery at a recognised Hospital, one course of six months, or two courses of three months; also the following special courses by recognised teachers: Dental Anatomy and Physiology, Dental Surgery and Pathology, Dental Mechanics, one course of each (not fewer than twelve lectures); two years' attendance at a Dental Hospital, or the dental department of a General Hospital.

Licentiates of the College, or registered medical practitioners, must produce certificates of attendance on the special subjects only, and are examined in these only.

Anatomy, Chemistry (with Metallurgy), and Physiology, will form the subjects of the first Examination; Surgery, Medicine, Materia Medica, and Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, those of the second.

The fee is £10 10s. Each candidate, for the first Examination, must pay to the Secretary of the College £4 4s. not later than 9 A.M. of the Saturday preceding the Examinations; and if the candidate be unsuccessful, £2 2s. are returned to him. Each candidate for the second Examination must pay £6 6s. not later than 9 A.M. of the Tuesday preceding the Examination; and if he be unsuccessful, £3 3s, will be returned to him. No unsuccessful candidate will be remitted for less than three months.

Examinations sine Curriculo.—Candidates who were in practice before the first day of August 1878, or those not in practice but who had commenced their apprenticeship as Dentists before the first day of August 1875, and who are unable to furnish the Board of Examiners with the certificates of lectures and hospital attendance required by the foregoing regulations, must produce: 1. A certificate of moral and professional character, signed by two registered medical practitioners, together with the full name, age, and address of the candidate. 2. The date of commencing practice or apprenticeship as a Dentist, and whether, if in practice, such practice has been carried on in conjunction with any other business, and if so, with what business. 3. Whether he has any degree or diploma in Medicine or Surgery, and if so, from what College or University, or other body, and at what time it was obtained. 4. The particulars of professional education. The President's Council shall determine whether the candidate is entitled to be admitted to Examination; and such Examination shall, with the exception of the Preliminary Examination, and the exemptions in favour of registered medical practitioners, as before explained, be passed on the same subjects and in the same manner as is required for other candidates, and will confer the same privileges.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The regulations as to certificates, curriculum, number of examinations, fees, and examinations *sine curriculo*, are in effect similar to those of the Royal College of Surgeons of Edinburgh.

Metallurgy is added to Dental Mechanics as well as to Chemistry.

Every candidate, before being admitted as a Licentiate, must subscribe a declaration engaging not to advertise or pursue any other unprofessional mode of attracting practice.

The dates of Examination for 1879-80 are: October 21st, April 20th, and July 13th; candidates must enter at least four days previously.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The Dental Board of Examiners consists of three Fellows of the College, three Registered Dentists, and the President, Vice-President, or other Member of the Council of the College (summoned in rotation).

Examinations shall be held at such times as the Council shall direct. The Examinations, up to the first day of August 1881, shall be practical, embracing the Anatomy, Physiology, Surgery, and Pathology of the Teeth, Jaws, and surrounding parts, and Mechanical Dentistry; and shall be partly written and partly oral.

All candidales shall lodge with the Registrar of the College, at least one fortnight previous to each Examination, the following certificates: 1. Of having attained the age of twenty-one years; 2. From two Fellows or Licentiates of any College of Surgeons in the United Kingdom, and from two Dentists of repute, testifying that the candidate is of good character, has been engaged in the practice of Dentistry for at least five years, and has refrained from advertising or other unbecoming modes of attracting business for at least two years previously; 3. Of having lodged in the Bank of Ireland, to the credit of the College, the fee of £10 10s., half of which shall be returned to any candidate who fails to satisfy the Examiners.

After August 1st, 1881, every candidate must lodge with the Registrar of the College, at least a fortnight previous to Examination, the following certificates: 1. Of having attained the age of twenty-one years; 2. Of having been engaged during four years in the acquirement of professional knowledge; 3. From two Fellows or Licentiates of any College of Surgeons in the United Kingdom, and from two Dentists of repute, testifying that the candidate is of good character; 4. Of having passed the Examination in Preliminary Education of one of the Examining Bodies recognised by the General Medical Council; 5. Of having lodged in the Bank of Ireland, to the credit of the College, the fee of £10 10s., half of which shall be returned to any candidate, if rejected; and no candidate can present himself for re-examination for six months; 6. Of having attended in a recognised school one course each of lectures on Anatomy and Physiology, Surgery, Chemistry, Practical Chemistry and Metallurgy, and Materia Medica; and two courses each of Dissections with Demonstrations, and of Dental Surgery, including Dental Mechanics; 7. Of having attended General Hospital Practice for two winter sessions, and the dental department of a General Hospital, or a Special Dental Hospital, for a further period of nine months; 8. Of having been engaged during, at least, three years in acquiring a practical knowledge of Dentistry, under the instruction of a Registered Licentiate in Dentistry.

The Examinations are partly written and partly oral; preparations, microscopes, and other appliances being used.

Licentiates in Surgery, or Fellows of any College in the United Kingdom, and Graduates in Surgery of any University recognised by this College, are examined only in subjects special to Dentistry.

Every successful candidate, previous to receiving the Licence, shall declare that he will not advertise, or pursue any other unbecoming mode of attracting business, so long as he holds the Licence in Dentistry of the College.

The following provision is made for instruction in Dental Surgery.

NATIONAL DENTAL HOSPITAL AND COLLEGE.—*Consulting Physicians:* Dr. B. W. Richardson and Dr. W. H. Broadbent. *Consulting Surgeons:* Mr. Erichsen, Mr. Spencer Wells, and Mr. Christopher Heath. *Consulting Dental Surgeon:* Mr. J. Merryweather. *Dental Surgeons:* Mr. Oakley Coles, Mr. G. J. Williams, Mr. A. F. Canton, Mr. H. T. K. Kempton, Mr. H. Rose. *Assistant Dental Surgeons:* Mr. F. H. Weiss, Mr. C. J. Noble, Mr. G. A. Williams, Mr. T. Gaddes. *Lecturers:* Dental Anatomy and Physiology: Mr. T. Gaddes; Dental Surgery and Pathology: Mr. Oakley Coles; Dental Mechanics: Mr. G. J. Williams; Dental Metallurgy: Mr. A. Tribe; Operative Dental Surgery: Dr. W. F. Thompson; Elements of Histology: Mr. T. Gaddes; Demonstrator of Dental Mechanics: Mr. H. Rose; Deformities of the Mouth: Mr. Oakley Coles; Arts and Literature: Rev. H. R. Belcher, M.A.

Clinical Demonstrations are given from time to time.

Dressersships in the extraction-room are held for three months by six senior and six junior students of the hospital.

Prizes.—Four Prizes in Books or Instruments are open for competition at the end of each course of lectures required. Certificates of Honour are given in each class.—The Rymer Medal for General Proficiency, value £5, with books or instruments, is awarded annually to the most meritorious student.—Mr. Oakley Coles gives a prize for the best prepared notes of his Lectures on Dental Surgery. Dr. Thompson will also give a prize.

Fees.—General fee for Special Lectures required by the curriculum of the Royal College of Surgeons of England: Two Courses each on Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, with one course on Dental Metullurgy, £12 12s. Single Courses: Dental Anatomy and Physiology, Dental Surgery and Pathology, and Dental Mechanics, each, one course, £2 12s. 6d.; two courses, £4 4s.; Dental Metallurgy, one course, £3 3s.; two courses, £5 5s. For lectures on subjects not required by the curriculum (these Lectures, with the exception of the Arts and Literature Class, are free to students who have entered for the Special Lectures), Elements of Histology and

Demonstrations on Dental Mechanics, each £1 1s.; Operative Dental Surgery, Deformities of the Mouth, each £2 2s.; Arts and Literature Class (three months), £3 3s. For the Two Years' Hospital Practice required, £12 12s. Total fee for the Special Lectures and Hospital Practice required, £25 4s.

Information respecting the Hospital Practice and the College may be obtained from the Dean, Mr. Oakley Coles, at the Hospital, Great Portland Street.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Lectures are given at this School on Mechanical Dentistry, by Mr. J. S. Turner; on Metallurgy in its Application to Dental Purposes, by Mr. G. H. Makins; on Dental Surgery and Pathology, by Mr. A. Coleman; on Dental Anatomy and Physiology (Human and Comparative), by Mr. C. S. Tomes.

The staff of the Dental Hospital of London consists of—*Consulting Physician:* Sir Thomas Watson, Bart., M.D. *Consulting Surgeon:* Mr. Christopher Heath. *Consulting Dental Surgeons:* Mr. S. Cartwright; Mr. John Tomes. *Dental Surgeons:* Mr. Fox; Dr. Medwin; Mr. Gregson; Mr. Coleman; Mr. Moon; Mr. A. Hill. *Assistant Dental Surgeons:* Mr. A. Gibbings; Mr. D. Hepburn; Mr. R. Woodhouse; Mr. Bartlett; Mr. S. J. Hutchinson; Mr. V. Canton.

The Saunders Scholarship of £20 *per annum*, and Prizes, are open for competition.

Fee for two years' hospital practice or lectures, each £15 15s. Fees for lectures and practice, £31 10s. Additional fees for a General Hospital for the two years to fulfil the requirements of the curriculum vary from £40 to £50.

Further particulars may be obtained on application to the Dean, Mr. T. F. K. Underwood, at his residence, 11, Bedford Square, W.C.; or at the Hospital.

Instruction in Dentistry is also given at the Medical Schools. For particulars and fees, see the tables and notes in previous pages.

PUBLIC HEALTH.—During last week, the annual death-rate per 1,000 persons living in London and twenty-two other large towns of the United Kingdom was 19; in Portsmouth it was 11, Sheffield and Bristol 14, Glasgow and Bradford 15, Brighton, Birmingham, and Hull 16, Wolverhampton, Oldham, Leeds, and Newcastle-upon-Tyne 17, Edinburgh and Salford 18, Nottingham and Manchester 19, London 20, Plymouth 22, Leicester and Sunderland 23, Liverpool 24, and Dublin and Norwich 26. Smallpox caused 9 deaths in Dublin, and 7 in London, but not one in either of the large English provincial towns. The zymotic death-rate in the English towns averaged 4.0 per 1,000, and ranged from 1.1 and 1.2 in Bradford and Bristol to 5.5 in Liverpool and Norwich, and 5.8 in Leicester. The deaths from diarrhœa in the twenty towns declined to 293. In London, there were 1,393 deaths, or 24 below the average, which included 7 from smallpox, 37 from measles, 50 from scarlet fever, 4 from diphtheria, 36 from whooping-cough, 25 from different forms of fever, and 146 from diarrhœa. In all, there were 305 deaths from these diseases, or 37 below the average, and equal to a zymotic death-rate of 4.4 per 1,000. The deaths from diseases of the lungs were 143, which corresponded with the average. There were 11 deaths from drowning; 10 of infants under one year of age from suffocation; and 9 cases of suicide. At Greenwich, the mean temperature of the air was 56.8°, and three degrees below the average; rainfall on two days of the week to the aggregate amount of 0.02 of an inch. The duration of registered bright sunshine was equal to 48.6 per cent. of its possible duration.

BEQUESTS.—The following bequests have been paid to the undermentioned institutions, among others, by the executors to the will of the late Mr. James Graham, of Cornwall Terrace, Regent's Park:—The London Hospital, £2,500; St. Thomas's Hospital, £2,000; National Hospital for Diseases of the Heart and the Royal Hospital for Incurables, each £1,000; British Home for Incurables, Charing Cross Hospital, Central London Throat Hospital, Hospital for Sick Children, Hospital for Hip-Diseases, Hospital for Women and Children, Brompton Consumption Hospital, King's College Hospital, Western General Dispensary, Royal Medical Benevolent College, Royal Free Hospital, St. Luke's Hospital, St. George's Hospital, Asylum for Idiots, and Victoria Hospital for Children—each £500; Cheyne Hospital for Sick Children, City of London Lying-in Hospital, City Orthopædic Hospital, Seamen's Hospital, Deaf and Dumb Asylum, East London Hospital for Children, London and Dover Convalescent Home, Middlesex Hospital, National Hospital for Consumption, Westminster Hospital, Samaritan Free Hospital, Ealing Cottage Hospital, Metropolitan Free Hospital, Westbourne Provident Dispensary, and University College Hospital—each £250.—Mr. John E. Ralli, late of Gloucester Square, Hyde Park, and Finsbury Circus, has bequeathed £500 to St. Mary's Hospital, Paddington.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 13TH, 1879.

MEDICAL EDUCATION AND GRADUATION.

THE recurrence of our educational number finds many questions of medical education, and especially of examination and graduation, still unsettled; and among them are questions which, it was hoped, might have been definitely settled during the recent session of Parliament. The means of determining an adequate minimum standard of education, below which no one should be admitted to practise, remains still undecided. The conjoint scheme, by which the medical corporate bodies and universities of England had proposed voluntarily to settle a complete curriculum and minimum examination in all the subjects, has been suspended, pending the inquiries of a Select Committee of the House of Commons, which has found itself unable to conclude its labours and to report this year.

Meantime, the students of this date, and the students who will enter at the schools in October next, will join the ranks under the old *régime*. Nevertheless, they will have the benefit of some recent and important changes in the system of medical education and examination, already wrought under the influence of professional opinion; and they will have the advantage of being able to estimate, from much that has been said and written during the last few years, how strongly the current of opinion is setting in favour of certain modifications and improvements of which it is already easy for the student to avail himself.

We had hoped to be able to announce in this number that the opportunities for university graduation open to British medical students were enlarged, by the grant to the new Northern University of the power of conferring medical degrees after an adequate examination. We lament that this legitimate anticipation has not been fulfilled. The English student, whether at provincial or at metropolitan schools, labours still under great disadvantages in respect to his opportunities of graduation, when comparison is made of the advantages and facilities offered by the programmes (abstracts of which we print) of the Universities of Edinburgh, Glasgow, Aberdeen, and Dublin, and of the Queen's University in Ireland, with its Colleges in Belfast, Cork, and Galway. The effect of these disadvantages and difficulties on the graduation of metropolitan and provincial medical students in England will be seen, when we glance at the figures represented on the registration-lists for 1878. Thus, of 893 persons passing their examinations in 1877 and registering in that year, 89 took the diploma or the licence of the Royal College of Physicians of London, 497 the diploma of the Royal College of Surgeons of England, 262 the licence of the Apothecaries' Society of London; and only 45 out of 893 took the degree of the University of London. Again, an analysis of the official pass-lists of the Universities of Scotland shows that a very large proportion of the graduates are Englishmen, of whom—due allowance being made for the high reputation of the Northern Universities—many would no doubt have taken degrees in England had a fair field been open to them. At the recent graduation in Edinburgh, of 97 candidates who received the degree of Bachelor of Medicine, 37 are noted as belonging to England, 35 to Scotland, 1 to Ireland, and 24 to various colonies and foreign countries. The Aberdeen M.B. list of this year gives—England, 25; Scotland, 25; Ireland,

1; foreign countries, etc., 6. At Glasgow, out of 53 graduates, 6 were English and 43 Scotch.

The deplorable deficiency of university graduation among English students is making itself felt more and more. Oxford continues to neglect in a regrettable manner its duty of providing a medical teaching faculty. Happily, however, Cambridge is rapidly rising to a very high position as one of the greatest medical schools; and the instruction in the medical sciences at Cambridge, under the auspices of Paget, Humphry, Foster, Latham, and Bradbury, is of the first order; while its magnificent resources as an university, and the facilities afforded for medical graduation, are such as to attract a large and annually increasing class to it as a school and as a seat of instruction and graduation. It will be observed also that the universities of Scotland and Ireland offer facilities for graduation to students, who are at the same time enabled to pass a large part of their curriculum in the schools and hospitals of England.

We trust that the day is rapidly passing away, when any student will voluntarily submit to enter the profession with the lowest attainable qualification. We are free to confess, that the degrees of the University of London are not within the reach of more than a limited number. The governing body of that university has chosen to pitch its pass-standard above the heads of ordinary students and above moderate requirements. It is a degree which presupposes more than average industry, more than average capacity for cramming, and more than average persistence. Its matriculation is already a difficult test. We would encourage everyone to attempt this; and would say to all who pass it, that they may feel satisfied that with steady and continuous study they will be able to graduate. But even to those who do not feel sufficiently furnished with preliminary education to pass the matriculation examination of the *dura mater* at Burlington House, we would give earnest counsel to resolve on graduation at one or other of the British universities. The day is rapidly coming—if it be not come—when the social, intellectual, and professional position which belongs to university graduation will be considered as an essential appanage of the medical practitioner. Already, since the principle of reciprocity established by the Medical Act is bringing Doctors of Medicine from all parts of the United Kingdom to settle in English towns and villages, the social disadvantages of an inferior status is felt by many a highly educated and competent general practitioner, unprovided with an university degree. It is rare to find a clergyman, however poor, however obscure, who cannot boast his university culture and connection, and who does not take the position to which an university title confers a claim. The medical man should have the same status, as his conventional name "doctor" itself implies. We cannot find in France or in Germany a medical man who is not a student and graduate of an university; and the present state of things in England, as compared with that in any other European country, or even in Scotland or in Ireland, is too anomalous to be endured.

We would therefore strongly advise the student now commencing, to read aright the signs of the times; to measure himself, so to speak, against the curricula; to consider his prior education, his intellectual means, his resources of time and finance; and to determine to enter Medicine, if possible, with no less diploma than that of an university. If he can spend eight years in study, and is well provided with funds, he may go to Oxford, and spend four years in taking an arts degree, and all his spare energies in shaming the authorities into a reversion of the splendid endowments and resources now diverted from medicine; and, after studying during four subsequent years in London or elsewhere, he may return to be examined in Oxford by examiners from London for an Oxford degree. If, being an Englishman, he has only four years to spend, and is conscious of an aspiration for a high class of education, university associations, and unlimited opportunities for culture in every direction and excellent facilities for graduation, he can fulfil those aspirations, without any other than moderate expenditure, at the University of Cambridge, completing his clinical experience by course of six to twelve months in the hospitals of a great city—London, Manchester, Liverpool, or elsewhere. Otherwise, he has the opportunities which Durham can afford him in England; or he has the admirable opportunities which the University of Edinburgh and the other Scotch universities offer to students educated in many great provincial as well as in many London schools.

As to the choice of a school, apart from its university qualities by affiliation or connection (which the ambitious student will do well to study critically and comparatively, and not superficially), it is unnecessary to say more than that most of the schools provide much excellent instruction; and we shall not undertake to compare them. As a rule, we consider that those schools in which the teachers devote themselves to teaching as their profession and the main business of their lives (and not merely as an incident in their professional career and a step to promotion in the hospital), and those schools which are well provided with well-found laboratories and a tutorial as well as a professional staff, are preferable to those which are not so supplied. But to this, also, individual experience will no doubt suggest exceptions. A rule on which we would lay great stress is, that, as far as possible, the student should thoroughly dispose of his scientific subjects—Chemistry, Botany, Anatomy, and Physiology—in his first two years, and think during that time of little else; and that he should give, during the rest of his time, his whole energy to the practical and clinical study of Medicine, Surgery, and Obstetrics. The student who desires to be really well informed ought to devote not less than five years, instead of four, to his studies. Five is the minimum of years of study in other countries; it is none too much, but rather too little, for the vast field of work over which medical students are now compelled to range; and of these, the *first three* should be given to the rough mastering of the medical and biological sciences, and the last two to clinical and practical study.

CHANGES IN THE MEDICAL SCHOOLS.

THE following changes have taken place in the medical schools since the publication of the educational number in 1878.

At St. Bartholomew's Hospital, Dr. P. Black has retired from the office of Senior Physician. Dr. Gee, late Assistant-Physician, has consequently become full Physician; and the vacant office of Assistant-Physician has been filled by the appointment of Dr. Wickham Legg, who also succeeds Dr. Gee as Lecturer on Pathological Anatomy. Mr. Thomas Smith has retired from the Lectureship on Anatomy, and is succeeded, as Mr. Langton's colleague, by Mr. Howard Marsh, whose place as teacher of Practical Surgery is taken by Mr. Butlin. Dr. Thorne Thorne has been appointed Lecturer on Public Health in place of Dr. Southey. Dr. V. D. Harris is Demonstrator, and Mr. D'Arcy Power Assistant-Demonstrator, of Practical Physiology.

At the Charing Cross Hospital, Dr. D. B. Lees has been appointed an Assistant-Physician. Mr. Amphlett teaches Surgical Pathology in place of Mr. Cantlie, who instructs in Minor Surgery in place of Mr. Bloxam; while Mr. Bloxam takes Mr. Bellamy's place in the summer course of Practical Surgery.

At St. George's Hospital, Mr. Warrington Haward is associated with Mr. Stirling as Teacher of Practical Surgery; and the Demonstrations on Skin-Diseases are given by Dr. Cavafy in place of Dr. Whipham. Mr. G. R. Turner is Demonstrator of Anatomy, and Messrs. Giles, Willis, and Cotes, Assistant-Demonstrators.

At Guy's Hospital, Dr. Goodhart has retired from the Lectureship on Pathology, leaving Dr. Hilton Fagge in sole charge. Mr. Jacobson gives a course of Demonstrations of Morbid Histology. Dr. Horrocks succeeds Mr. Symonds as one of the Demonstrators of Anatomy.

At King's College, Mr. F. J. Bell has succeeded Mr. A. H. Garrod as Professor of Comparative Anatomy; and Dr. Charles Kelly has been appointed Professor of Public Health.

At the London Hospital, the staff of Surgeons has been reduced by the death of Mr. Maunder. Mr. Baker has retired from the Lectureship on Botany.

At St. Mary's Hospital, Mr. Malcolm Morris has become Dr. Cheadle's

colleague in the department of Diseases of the Skin. Mr. H. E. Juler has been appointed Demonstrator of Anatomy, and Mr. R. P. Griffin Assistant-Demonstrator.

At the Middlesex Hospital, Dr. Henry Thompson has retired from the office of Physician, and Mr. T. W. Nunn from that of Surgeon; both have been placed on the Consulting Staff. Dr. Robert King has been promoted from the post of Assistant-Physician to that of Physician, and Mr. Henry Morris from Assistant-Surgeon to Surgeon. The vacancies thus created have been filled by the appointment of Dr. D. W. Finlay as Assistant-Physician, and of Mr. Robert Lyell as Assistant-Surgeon. Mr. Sutton has been appointed Demonstrator of Anatomy in place of Mr. Williams.

At St. Thomas's Hospital, the vacancy in the office of Physician caused by the lamented death of Dr. Murchison has been filled by the promotion of Dr. John Harley from the office of Senior Assistant-Physician. Mr. H. H. Clutton has been appointed an Assistant-Surgeon. Mr. Wagstaffe takes the place of Mr. Mason as Demonstrator of Anatomy; and Mr. Taylor and Mr. Haslam have been appointed Demonstrators in place of Mr. Pitts.

At University College, Mr. Miller succeeds Mr. Ottley as one of the Demonstrators of Anatomy. In the Hospital, Sir William Jenner has retired from the office of Physician, and has been appointed Consulting Physician; the vacancy being filled by the promotion of Dr. F. T. Roberts, the Senior Assistant-Physician. Dr. H. Radcliffe Crocker has been chosen to fill the vacancy in the office of Physician to the Skin-Department, caused by the regretted death of Dr. Tilbury Fox.

At the Westminster Hospital, Mr. Black succeeds Mr. Miller as Demonstrator of Anatomy.

In Queen's College, Birmingham, Dr. A. H. Carter has been associated with Dr. Norris and Mr. Bartleet in the Professorship of Physiology. Dr. A. B. Hill has been appointed Professor of Chemistry and Practical Chemistry in place of Mr. Bruce. Mr. Wilders lectures alone on Forensic Medicine. Dr. Robert Saundby has been appointed Professor of Comparative Anatomy.

The Bristol Medical School has become affiliated to the University College of that city, and has removed to new buildings in the college grounds. A number of changes have been made in the staff of teachers. Dr. Shingleton Smith lectures alone on Physiology, Mr. Atchley having retired. Mr. F. R. Cross is lecturer on Anatomy, *vice* Mr. Dobson and Dr. Waldo. Mr. Dobson lectures on Surgery, in place of Mr. Coe and the late Mr. R. W. Tibbits. Mr. W. H. Harsant is Demonstrator of Anatomy in place of Mr. Cant. Dr. Aust Lawrence is associated with Dr. Swayne in the Lectureship on Midwifery. Dr. Reginald Eager and Mr. W. W. Stoddart teach Medical Jurisprudence in place of Mr. Keall. Dr. Shaw has succeeded Dr. Burder as Lecturer on Materia Medica. Mr. W. J. Sollas has been appointed Lecturer on Comparative Anatomy *vice* Mr. Atchley, who teaches Practical Physiology and Histology. Mr. W. P. Keall teaches Operative Surgery and Surgical Pathology, and Mr. A. W. Prichard Practical Surgery, in place of Mr. Coe and Mr. Tibbits. At the Bristol Royal Infirmary, Mr. A. W. Prichard, Mr. F. R. Cross, and Mr. J. G. Smith, have been appointed Surgeons in place of Mr. Crosby Leonard (who has been appointed Consulting Surgeon), Mr. C. Steele, and the late Mr. Tibbits; and Mr. W. H. Harsant has been appointed Assistant-Surgeon.

In the Leeds School of Medicine, Mr. Land has retired from the Lectureship on Descriptive Anatomy.

In the Liverpool Royal Infirmary School of Medicine, Dr. John Wallace has been appointed Lecturer on Midwifery, and also Obstetric Physician to the Royal Infirmary, in place of the late Dr. A. B. Steele. Practical Physiology is taught by Dr. Caton, with Dr. F. T. Paul as Demonstrator, in place of Dr. Ashby.

At Owens College, Manchester, Dr. A. Milnes Marshall has been appointed Professor of Comparative Anatomy in place of Mr. W. C. Williamson; and Dr. C. J. Cullingworth Lecturer on Medical Jurisprudence in place of Dr. Ransome. Mr. Priestley and Mr. A. H. Young have retired from the Assistant-Lectureships in Physiology and in Anatomy. Dr. Ross has been appointed an Assistant-Physician to the Manchester Royal Infirmary, and gives Medical Demonstrations in conjunction with Dr. Dreschfeld.

In the Sheffield Medical School, Mr. W. D. James succeeds Dr. O'Keefe as Mr. Dyson's colleague in the Lectureship on Physiology.

In the University of Durham College of Medicine at Newcastle-on-Tyne, Mr. Mears has retired from the chair of Anatomy, leaving Mr. J. Russell sole lecturer; but continues to hold the office of Demonstrator. Dr. C. J. Gibb lectures alone on Pathological Anatomy, Dr. Byrom Bramwell having left. In the Newcastle Infirmary, the vacancies in the staff of Physicians caused by the retirement of Dr. Embleton and Dr. Bramwell have been filled by the appointment of Dr. Drummond and Dr. Oliver. Mr. J. Russell has retired from the office of Surgeon, and Dr. Hume has been promoted to the office of Surgeon. Mr. T. A. Dodd has been appointed an Assistant-Surgeon.

In the University of Aberdeen, Dr. Davidson has succeeded Dr. A. Harvey as Professor of Materia Medica; and Dr. J. Cossar Ewart has been appointed Professor of Zoology and Comparative Anatomy in the room of the late Dr. James Nicol.

In the University of Edinburgh, Dr. Dickson (lately Professor at the University of Glasgow) has been appointed Professor of Botany in place of Dr. J. H. Balfour, who has retired.

In the Edinburgh Royal Infirmary School of Medicine, the following additions to the staff of Lecturers has been made; Mr. Symington, Anatomical Lectures and Demonstrations; Dr. Drinkwater and Mr. J. Y. Buchanan, Chemistry and Practical Chemistry; Dr. Waller, Pathology; and Mr. H. A. Husband, Medical Jurisprudence and Public Health.

In the University of Glasgow, Dr. I. Bayley Balfour has been appointed Professor of Botany.

In the Carmichael College of Medicine in Dublin, Dr. McNab lectures on Botany in place of Mr. E. B. Blakely.

In the Catholic University School of Medicine, Dublin, Mr. P. J. Hayes lectures on Surgery in place of the late Mr. Tyrrell.

In the Ledwich School of Anatomy and Surgery, the vacancies in the joint Lectureship on Surgical and Descriptive Anatomy, caused by the death of Mr. E. Ledwich and the removal of Mr. J. E. Kelly to another post, have been filled by the appointment of Mr. F. A. Nixon; and Mr. Montgomery A. Ward and Mr. T. Mason have been appointed Lecturers on Physiological and Pathological Anatomy in place of Mr. Ledwich and Mr. Kelly. Mr. J. E. Kelly is associated with Mr. Wharton in the Lectureship on Surgery. Mr. Purefoy lectures on Materia Medica in the room of the late Dr. B. F. Macdowell.

At the Meath Hospital, Mr. W. J. Hepburn has been appointed Surgeon in the place of the late Mr. R. P. White.

At Mercer's Hospital, the vacancies in the Surgical Staff caused by the deaths of Mr. Ledwich and Dr. McDowell have been filled by the appointment of Mr. F. A. Nixon and Mr. M. A. Ward.

In Queen's College, Cork, Dr. Macnaughton Jones has been appointed Professor of Midwifery in place of Dr. J. R. Harvey, who has retired.

At Dr. Steevens's Hospital and Medical College, Mr. Fox lectures on Materia Medica in place of Mr. Johnston; and Mr. Pentland takes Mr. Fox's place as Lecturer on Botany.

OPENING OF THE MEDICAL SCHOOLS.

THE subjoined is a list of the Medical Schools in England and Scotland, with the date of their opening, and the names of the gentlemen appointed to deliver introductory addresses. Where no name is inserted, there is no special introductory lecture.

St. Bartholomew's Hospital—October 1st.
Charing Cross Hospital—Mr. Hird—October 1st, 4 P.M.
St. George's Hospital—Mr. Dalby—October 1st, 4 P.M.
Guy's Hospital—October 1st.
King's College—Dr. Duffin—October 1st, 4 P.M.
London Hospital—October 1st.

St. Mary's Hospital—Mr. St. George Mivart—October 1st, 3 P.M.
Middlesex Hospital—Dr. Coupland—October 1st, 3 P.M.
St. Thomas's Hospital—Dr. Cory—October 1st, 4 P.M.
University College—Mr. Thane—October 1st, 8 P.M.
Westminster Hospital—Mr. Dupré—October 1st, 3 P.M.
Birmingham (Queen's College)—Dr. Sawyer—October 1st, 3.30 P.M.
Bristol Medical School—October 1st.
Leeds School of Medicine—Mr. E. Atkinson—October 2nd, 4 P.M.
Liverpool Royal Infirmary School of Medicine—Dr. Wallace—October 4th, 3 P.M.
Owens College (Manchester Royal) School of Medicine—October 1st.
Newcastle College of Medicine—Dr. Drummond—October 1st, 2 P.M.
Sheffield School of Medicine—Mr. Snell—October 1st, 4 P.M.
Aberdeen University—October 29th.
Edinburgh University—The Principal—October 28th.
Edinburgh School of Medicine—Dr. Batty Tuke—October 28th, 11 A.M.
Glasgow University—Dr. Cleland—October 28th.
Glasgow, Anderson's College—Dr. A. Buchanan, October 28th.
Glasgow Royal Infirmary School of Medicine—Mr. H. E. Clark—October 29th.

THE first university in Siberia will be opened in the course of this year in the city of Tomsk.

A PROFESSOR of Psychological Medicine will be added to the Medical Faculty of the University of Dorpat on January 1st, 1880.

THE centenary of the birth of the celebrated chemist Berzelius was celebrated in Stockholm on August 20th.

A PIKE caught lately near Ostend was found to contain trichinæ. Dr. Clendenin of Ostend recently made a microscopic examination of a fish, and found it to contain these parasites in abundance. It is supposed that the fish were infected by eating offal in the harbour.

WE notice with regret that the deaths of two infants, aged three and four months, in St. Bartholomew's Hospital, on August 30th and September 2nd, admitted from Clerkenwell, were referred to pyæmia and inflammation following vaccination.

DR. AMBROSE HAMILTON KELLY, who was in medical charge of the British Mission to Cabul, and who was last week massacred with the Envoy, Sir L. Cavagnari, and the other members of the Mission, held the post of Surgeon in the Bengal army. He was a Licentiate of the King and Queen's College of Physicians in Ireland, a Licentiate in Midwifery, and a Licentiate of the Royal College of Surgeons in Ireland, and obtained all his diplomas in 1869. He had studied at Steevens's Hospital Medical College in Dublin.

THE death-rate in London still remains below the average, though not so remarkably low as it was during July and August. The annual death-rate from all causes, which in the two preceding weeks had been equal to 19.1 and 20.0, was last week 20.1. During the past ten weeks of the current quarter, the death-rate has averaged only 18.5 per 1,000, against 22.9, 19.7, and 23.1 in the corresponding periods of the three years 1876-7-8.

THE NEW SCHOOL BUILDINGS AT ST. BARTHOLOMEW'S.

THE new buildings of the medical school are now nearly half completed. The entire structure, which will be finished by October 1880, will cost £50,000, exclusive of fittings. The necessary funds have been furnished by the governors of the hospital by the permission of the Charity Commissioners. At present, the new library, museum, practical physiology and zoology laboratories, together with two class-rooms, are all but finished, and will be opened on November 1st. There will then only remain to be built two new theatres, a new dissecting-room, a room for practical pharmacology, and four other class-rooms. The chemical laboratory is comparatively new, and will remain. The new buildings possess a handsome frontage in Giltspur Street, and are in every way worthy of the ancient reputation of the medical school of St. Bartholomew's.

FREE OMNIBUS TICKETS FOR STUDENTS.

WE read in the French medical papers that the Faculty of Medicine of Paris intends to make an arrangement with the omnibus and tramway companies, by which a certain number would be put at the disposal of advanced students. The free tickets would prove a great boon as a saving of time and money. In order, however, to prevent abuse, they would only be available from 10 A.M. to 12 A.M.

THE DEATH-RATE FROM DIARRHŒA.

THE deaths referred to diarrhœa in the twenty largest English towns, which had steadily increased from 47 to 343 in the seven preceding weeks, declined last week to 293. The annual death-rate from this disease, which averaged 2.1 per 1,000 in the twenty towns, was equal to 5.5 in Norwich and 5.8 in Leicester. In London, the deaths referred to diarrhœa, which had increased from 25 to 209 in the six preceding weeks, declined last week to 146, and were 19 below the corrected average; 106 were of infants under one year of age, and 30 of children aged between one and five years. The annual death-rate from diarrhœa, which averaged 2.1 per 1,000 in London, against 2.0 in the nineteen large provincial towns, ranged from 1.7 in the south to 3.0 in the central groups of metropolitan registration districts. The deaths of three infants and of one adult were referred to simple cholera, or choleraic diarrhœa.

SCOTLAND.

AT the last quarterly meeting of the managers of the Glasgow Royal Infirmary, Dr. James Morton was reappointed one of the surgeons, and Dr. James Maclaren one of the physicians of the hospital.

EDINBURGH INFIRMARY FURNISHING FUND.

AMONG the many notable instances of generosity towards the fund, one deserving attention is the Business Women's Fund. This fund has been collected among women engaged in business. The sum already raised amounts to £333 2s. 4d,, of which £294 was contributed in Edinburgh, and the remainder in the contiguous towns and villages. At a meeting of the contributors last week, Mr. Weir, Convener of the House Committee of the Infirmary, thanked them for their successful efforts, and mentioned that £500 had been received from the trustees of the late Mr. James Whitelaw, watchmaker, and £100 from the Earl of Moray. The chairman of the meeting suggested the possibility of the "Business Women" providing an annual subscription towards maintaining the ward they have furnished.

THE HEALTH OF GLASGOW.

THE death-rate in the city last week reached the very lowest point on record, 14.5 per 1,000 *per annum*. During the summer months, the rate has been as low as 16, which was thought a very satisfactory circumstance; and when, in the week ending August 16th, it fell to 15, the fact was generally remarked on as being something unprecedented. This, however, has been outdone, the rate last week being the lowest figure in the records of the Sanitary Office. The rate in the preceding week was 17, and in the corresponding period of 1878, was 19.

DEATH FROM HYDROPHOBIA AT CROSSFORD.

A GIRL, aged 8 years, was bitten at Crossford by a collie dog, about seven weeks ago. The usual precautionary methods were adopted in the treatment of the wound, and no evil effect was evident till six weeks after the occurrence, when distinct symptoms of hydrophobia set in. Dr. Stewart and Dr. Lindsay were in attendance, and pronounced it a case of hydrophobia. Every effort was made in the way of treatment, but all was of no avail, and the child died in great suffering on Tuesday, the 2nd instant.

IRELAND.

THE President of the Queen's College, Belfast, retires on the 10th proximo, and will be succeeded by the Rev. Dr. Porter.

THE Professorship of the Practice of Medicine in the Queen's College, Galway, is now vacant, and the candidate selected will have to enter upon his duties on November 1st.

IT is reported that an outbreak of scarlet fever has taken place in the Labasheeda district of the Killadysart Union, County Clare. The type is most malignant, and the mortality excessive; in several households, two or three members of a family have died after a few days' illness.

QUEEN'S COLLEGE, GALWAY.

THE President, in his recent report of this institution, expresses his satisfaction at the progress of the Medical School, the numbers of the students having increased with a steadiness that gives evidence of a vitality and progress which must strike as remarkable everyone who is acquainted with the neighbourhood of Galway, and considers how unpropitious a locality it must be for founding and maintaining a medical school. The report also draws attention to the inadequacy of the incomes of the Professors of the Queen's College, and remarks that it would be an act of wise liberality to extend the benefits of the Superannuation Act, so as to place the Professors on the same footing in this respect as those in the Scottish Universities.

MEDICAL EDUCATION IN BRAZIL.

THE imperfect condition of medical education in Brazil since its organisation in 1854 having attracted much attention, the Government about a year ago appointed a Commission of the professors of the University of Rio de Janeiro, and afterwards one of the professors at Bahia, to inquire into the subject and point out the reforms that were necessary. The result of their labours has been the publication, in April last, of an official decree, the principal articles of which are given in the *Gazeta Medica da Bahia* for May. An outline of its chief provisions will be interesting at the present time, when medical education is such a prominent subject of discussion.

Candidates desirous of being examined in any series of subjects of the curriculum must produce—1, certificates of having passed the preliminary examination in subjects of general education, or the examinations preceding in the official programme that for which they offer themselves; 2, a written attestation of personal identity signed by some of their teachers or by two persons of repute. An inscription made or an examination passed under false certificates shall be void; and the candidate, besides forfeiting the fees and being subject to the criminal code, shall not be allowed to present himself again for examination within two years.

The examinations shall be oral and written, and their duration shall be such as may be determined in the regulations of the respective faculties or schools. The subjects of examination shall be divided into series; and no one shall be admitted to examination in one series until he has passed an examination in all the subjects of the next lower series.

Any number of persons may associate together for the formation of a medical school, in the organisation of which the Government will not interfere. When an institution of this kind has been in existence seven years, and at least forty of its pupils have obtained academical degrees, the Government may grant to it the title of "Free Faculty", with all the privileges of an official faculty or school, including that of conferring degrees. The examinations in these faculties shall be conducted under the same regulations as in the official faculties; and commissioners appointed by the Government shall be present. Each faculty shall teach at least all the subjects required in the official schools or faculties. If misconduct or infraction of the laws be proved, after due inquiry, any Free Faculty may be deprived of its privileges, which can only be recovered by giving guarantee for the necessary reform.

Private teachers will be allowed, under certain conditions, to hold classes in the buildings of the State schools or faculties.

To every Faculty of Medicine there shall be attached a school of Pharmacy, a course of Obstetrics and Gynæcology, and one of Dental Surgery.

The ordinary courses shall consist of the following subjects, arranged in four series. 1. *Physico-Chemical Sciences:* Medical Physics; Organic and Biological Chemistry; Mineral Chemistry and Mineralogy; Toxicology and Forensic Medicine; Pharmacology and the Art of Prescribing. 2. *Natural Sciences:* Botany; Comparative Anatomy and Zoology; Theoretical and Practical Histology; Descriptive and Mechanical Anatomy; Theoretical and Experimental Physiology. 3. *Medical Sciences:* General Pathology; Materia Medica and Therapeutics; Medical and Experimental Pathology; Hygiene and History of Medicine; Clinical Psychiatry; Syphilitic and Cutaneous Diseases. 4. *Surgical Sciences:* Descriptive and Mechanical Anatomy; Pathological Anatomy and Physiology; Topographical Anatomy and Operative Surgery; Clinical Ophthalmology; Dental Surgery; Obstetrics; Clinical Midwifery and Gynæcology.

The School of Pharmacy shall comprehend chairs of Pharmacy, Inorganic Chemistry, Mineralogy, Organic Chemistry, Botany, Zoology, Materia Medica and Therapeutics, Toxicology and Pharmacology, and Practical Pharmacy.

The Obstetric course shall consist of Descriptive Anatomy, General Physics, General Chemistry, Physiology, Obstetrics, Pharmacology, and Clinical Obstetrics and Gynæcology.

The course of Odontology shall comprehend Elementary Physics, the Elements of Inorganic Chemistry, the Anatomy of the Head, Dental Histology, Dental Pathology, Dental Therapeutics, Operative Surgery, and Dental Surgery.

In every faculty, provision for practical instruction shall be made by the establishment of—1. An Institute of Physico-chemical Science, comprising Laboratories of (*a*) Physics, (*b*) Inorganic Chemistry and Mineralogy, (*c*) Organic and Biological Chemistry, (*d*) Pharmacy: 2. A Biological Institute, comprising the following laboratories: (*a*) Anatomy, with dissecting-rooms; (*b*) Physiology and Operations; (*c*) Botany and Zoology, with a Botanical Garden; (*d*) Forensic Medicine and Toxicology: 3. A Pathological Institute, consisting of laboratories for (*a*) Normal and Pathological Histology, (*b*) Dental Operations. Each institute shall be provided with a museum. Prizes are offered for the best preparations made in the laboratories.

Every second year, a gold and a silver medal will be awarded, after competition among the *internes*, for the best essay on some subject of importance in medicine or surgery having special reference to Brazil.

Every candidate for matriculation as a general student in medicine must produce evidence—1, of being at least sixteen years of age; 2, of having been vaccinated within the previous four years; 3, of having passed an examination in Portuguese, Latin, French, English, German, History, Geography, Philosophy, Arithmetic, Geometry, Algebra as far as equations of the first degree, and the elements of Physics, Chemistry, Mineralogy, Botany, and Zoology.

Candidates for admission to the School of Pharmacy must produce the certificates 1 and 2, and of examination in Portuguese, Latin, French, English, Philosophy, Arithmetic, Algebra as far as equations of the first degree, and Geometry.

For admission to the obstetric course, or the course of Dental Surgery, the candidate must not be less than eighteen years of age (and, in the case of Obstetrics, between the ages of eighteen and thirty if a female); must have been vaccinated not more than four years previously; and must have passed an examination in Portuguese, French, Arithmetic, Algebra, and Geometry.

After all the examinations in the general medical curriculum have been passed, the degree of Bachelor in Medicine will be conferred. Candidates who have passed through the School of Pharmacy will receive the degree of Bachelor in Pharmacy and in Physical and Natural Science. Those who have passed through the course of Dental Surgery will receive the title of Dental Surgeon; and those who have been approved at the examinations of the Obstetric Course will receive the title of Midwife or of Master in Obstetrics.

No graduate of any foreign university shall be allowed to assume the title of graduate of any of the faculties in the empire, unless he shall have passed all the examinations required in the case of graduates of the faculty. Actual or retired teachers in foreign medical institutions, recognised by the respective governments, may practise their profession without further examination or the payment of any fee, on the production of certificates from the diplomatic agents or from the Brazilian consuls in their respective countries.

The most meritorious candidates in each year, who shall have proceeded to the degree of Doctor, shall have the privilege of going to Europe to pursue the practical studies for which he may have a predilection or which may be specified by the faculty, the government allowing him a sufficient sum of money for his maintenance.

Every fifth year, each faculty shall nominate to the government a professor or substitute, to be charged with the duty of making scientific investigations and observations on the medical topography of Brazil, or of studying in foreign countries the best methods of teaching and investigating certain diseases, and of examining the medical establishments and institutions of the most advanced nations of Europe and America.

The course of medical study extends over six years.

ASSOCIATION INTELLIGENCE.

WEST KENT DISTRICT.

THE first evening meeting of this district will be held at the residence of J. C. Armstrong, Esq., 197, Parrock Street, Gravesend, on Tuesday, September 23rd, at 6.45 P.M.: J. ARMSTRONG, M.D., in the Chair.

Mr. Jessett of Erith has kindly consented to introduce the subject of "Fractures".

A. H. B. HALLOWES, M.R.C.S., *Honorary Secretary.*

Maidstone, September 2nd, 1879.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held in Bishop Cosin's Library, Durham, on Tuesday, September 23rd, at 2 P.M.; G. H. PHILIPSON, M.A., M.D., President, in the Chair.

Members desirous of reading papers, or making other communications, are requested to give notice to the Secretary at their earliest convenience.

Service in Durham Cathedral at 4 P.M. Dinner in the Castle Hall, Durham, at 5 P.M. Dinner tickets may be obtained from the Secretary, six shillings; inclusive of wine, nine shillings. Gentlemen who intend to be present are particularly requested to intimate their intention before Monday, September 22nd, in order that proper arrangements may be made for the dinner.

T. W. BARRON, M.B., *Honorary Secretary.*

10, Old Elvet, Durham, Sept. 10th, 1879.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next ordinary meeting of this Branch will be held at the Assembly Rooms, Tenby, on Wednesday, September 24th, at 1 P.M.

Dinner at the Gate House Hotel. Further particulars by circular.

Members wishing of read papers, etc., are requested to communicate the titles to either of the Honorary Secretaries, without delay.

ALFRED SHEEN, M.D.
J. HANCOCKE WATHEN. } *Honorary Secretaries.*

September 10th, 1879.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this district will be held at Ramsgate, on September 25th, at 3 o'clock; President, Mr. S. WOODMAN, F.R.C.S.

Members desirous of reading papers are requested to communicate with the Secretary.

WM. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, August 31st, 1879.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE first meeting of the above district for the present season will be held at the Castle Hotel, Hastings, on Friday, September 26th, at 3.30 P.M.: Dr. ALLEN in the Chair.

All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.

Papers, etc., are expected from the Chairman, "On the Medical Aspects of Provident Dispensaries"; from Mr. Gabb, "On a Case of Skin-Disease"; Mr. Campbell, "Case of Perineal Section"; and from Dr. John Williams, of University College Hospital, on "Antiseptic Midwifery".

Notice of intended communications is requested by the Secretary not later than Wednesday, the 17th instant, in order that they may be inserted in the usual circular.

Dinner will be provided at the hotel at the ordinary charge.

THOMAS TROLLOPE, M.D., *Hon. District Secretary.*

9, Maze Hill, St. Leonard's-on-Sea, Sept. 9th, 1879.

MEDICAL NEWS.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDEE UNION—Medical Officer for Collon Dispensary District, at a Salary of £100 per annum, with £15 per annum as Sanitary Officer, Registration and Vaccination Fees. Election on the 18th instant.

*BETHLEHEM HOSPITAL—Two Resident Medical Students. Applications on or before October 11th, 1879.

*BIRMINGHAM GENERAL HOSPITAL—Assistant Physician. Salary, £100 per annum. Applications on or before September 29th.

*BRIGHTON AND HOVE LYING-IN INSTITUTION—House-Surgeon. Salary, £120 per annum, with furnished apartments, coals, gas, and attendance. Applications on or before October 2nd.

*CUMBERLAND INFIRMARY—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, not later than September 23rd.

*GLOUCESTER COUNTY ASYLUM, West Gloucester—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications on or before September 22nd.

*GUEST HOSPITAL, Dudley—Matron. Salary, £60 per annum, with board, washing, and apartments.

*KENT AND CANTERBURY HOSPITAL—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on or before September 26th.

*MANCHESTER ROYAL INFIRMARY, DISPENSARY, and LUNATIC ASYLUM—Honorary Assistant Surgeon.

*NEWCASTLE-UPON-TYNE INFIRMARY—Junior House-Surgeon. Salary, £50 per annum, board, lodging, and washing. Applications on or before September 24th.

*NORTH SHIELDS AND TYNEMOUTH DISPENSARY—House-Surgeon and Dispenser. Salary, £120 per annum, furnished house, gas, coals, etc. Applications must be forwarded by October 1st.

PORTUMNA UNION—Medical Officer for No. 1 Dispensary District. Salary, £100 per annum, and £12:10 as Medical Officer of Health, together with Registration and Vaccination Fees. Election on the 20th instant.

*RADCLIFFE INFIRMARY, Oxford—House-Surgeon. Applications on or before October 4th.

*ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester Square—Assistant Physician and Honorary Assistant Surgeon. Applications on or before the 17th instant.

*ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Election on October 1st.

SHILLELAGH UNION—Medical Officer for Hackelstown and Coolkenno Dispensary District. Salary, £100 per annum, and £15 a year as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 23rd instant.

SHILLELAGH UNION—Medical Officer for Coolattin and Clonegall Dispensary District. Salary, £100 per annum, with £15 yearly as Sanitary Officer, together with Registration and Vaccination Fees. Election on the 19th instant.

*TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, coals, gas, and attendance.

TULLAMORE UNION—Medical Officer for Clara Dispensary District. Salary, £100 per annum, and £15 as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 24th instant.

*VICTORIA HOSPITAL FOR CHILDREN—Medical and Surgical Registrar. Applications on or before September 20th.

WESTMINSTER HOSPITAL—Pathologist and Curator of the Museum. Remuneration, £52:10 per annum. Applications on or before September 13th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum.

*WILLITON UNION, Somerset—Medical Officer for the Porlock District. Salary, £50 per annum. Applications on or before September 22nd.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

GAIRDNER.—At 9, College, Glasgow, on September 7th, the wife of *W. T. Gairdner, M.D., of a daughter.

ROBERTSON.—On September 5th, at Bradford, the wife of Fred. F. L. Robertson, M.B., M.R.C.S., of a son.

ROTH.—On September 9th, at Grand Parade, Brighton, the wife of Bernard Roth, F.R.C.S., of a son.

MARRIAGE.

MOON—BEGG.—At 12, King Street, Dundee, on September 3rd, by the Rev. H. G. Watt, B.D., of St. Enoch's, David Steele Moon, L.R.C.P. & S., Dundee, to Margaret Elder, only daughter of the late Dr. Begg, Dundee.

DEATH.

BROAD, James, M.D., at Cromwell House, Lamel Grove, Anerley, aged 42, on August 30th.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

PLASTER-OF-PARIS AND FELT APPARATUS.

SIR,—Some remarks of mine at the Cork meeting are incorrectly reported in the JOURNAL of this date. I did not say that I found it difficult to apply the plaster-of-Paris jacket, or that it was affected by heat. I did say that I had tried the new plastic jacket introduced by Mr. Cocking, and that I found this latter unsatisfactory, because it was affected by the heat of the body. I tried it, however, in one case only, and the experience of others may be different. It seems to me that, where "setting" depends on alteration of temperature, the above ought to be the result. Kindly insert this.—Yours, etc., THOMAS LAFFAN.
Cashel, August 31st, 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

THE INCUBATION OF MUMPS.

SIR,—In the recent articles on "Mumps", it is stated that the "period of incubation varies from nine to fourteen days". In one case that I remember, the period of incubation was twenty-three days. A boy aged 12 was staying with a friend, who showed symptoms of mumps the day after the first-named one had left. He returned after two days to school, and became affected exactly twenty-three days from the time he had last seen his friend. He was immediately isolated, but several other cases occurred, and, in many of them, the period of incubation extended to nearly twenty days. A lady patient of mine last year had "mumps" for the second time, a previous attack having occurred in 1859. In the first attack, she was attended by a well known and most skilful practitioner.—I am, sir, yours faithfully, THOMAS FAIRBANK, M.D.
Windsor.

SIR,—Can you, or any member of the Association, tell me of an institution where a strong healthy boy of weak intellect, but by no means idiotic, about 17 years of age, can be taught some occupation, useful or otherwise, or even to read? Or do you know of any private person who could do anything for him in the way of education in some form?—I am, yours truly, MONDAY.
September 8th, 1879.

DR. ROBINSON (Runcorn).—*Primâ facie*, the very strong remarks of the coroner went much beyond what was required. But to what extent they were justified, it is scarcely possible to say without having some knowledge of the witness and of his general conduct and manner of bearing himself.

A CASE FOR INQUIRY.

SIR,—I think the following case ought hardly to be allowed to pass unnoticed. About three weeks ago, at noon on Sunday, I was called to see a labouring man, who was lying on some straw in a barn. He was apparently suffering from trismus. He was sensible, and kept pointing to his mouth, which was tightly shut, with frothy mucus oozing from between the teeth. When I asked him if he could open his mouth, he shook his head, but could not speak. His pulse was good; and, as he did not appear to be in any immediate danger, I ordered him to be removed to the union, five miles off, and sent for a fly to take him. One hour later, when the conveyance arrived, the man was found dead.

The Police Superintendent was called, who said he must communicate with the Coroner. He informed the Coroner that the cause of death was unknown, and asked whether he should instruct me to make a *post mortem* examination. The Coroner's reply was, that he did not consider either an inquest or *post mortem* examination necessary. The next day, the Registrar applied to me for a certificate of death, which I declined to give; and the next day but one, the man was buried by the parish authorities.

I may mention that the man was a complete stranger, travelling in search of work, and had got a week's job from a local farmer. Although his wages had been paid on the Friday night previous, his pockets were quite empty; but no inquiry was made as to how or where he had spent it.—I am, sir, yours obediently,
September 5th, 1879. M.R.C.S.

G. L. R., A TUTOR, AND OTHERS.—The result of the recent Arts Examinations at Burlington House for the Diplomas of Fellowship and Membership of the College of Surgeons, will, we are informed, be communicated to the five hundred candidates, if possible, the next or succeeding week.

H. J.—If successful, you can commence your hospital studies in October next.—We never recommend hospitals.—Write to the Secretaries of the institutions named for their regulations.

M.D. (Clapham).—The man was struck off the list of members on his conviction at the Old Bailey.

ERRATUM.—In the JOURNAL of September 6th, page 376, column 1, line 10 from bottom, for "Mr. Reeves's", read "Mr. Keene's".

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—
Dr. H. Macnaughton Jones, Cork; Dr. Waters, Liverpool; Dr. Barnes, London; Dr. Sutherland, London; Mr. G. Pound, Odiham; M.R.C.S.; Dr. Mac Cormac, Belfast; M.B.; Dr. U. Pritchard, London; Dr. William Roberts, Manchester; Dr. Rabagliati, Bradford; A. J. U.; Dr. Borchardt, Manchester; Mr. Lowndes, Liverpool; Dr. A. Sheen, Cardiff; A Physician; One in the Square; Mr. Henry Pitts, Tue Brook; The Rev. W. Stainer, London; Mr. Davies Colley, London; The Secretary of Apothecaries' Hall; M.D.Ed.; Messrs. Mayer and Meltzer, London; Probitas; Dr. R. Sinclair, Dundee; Dr. Hinds, Birmingham; Mr. F. M. Wright, London; Mr. Royds, Reading; Monday; Mr. R. Roberts, Four Crosses; The Registrar-General of England; Mr. W. Carr, Glasgow; Our Paris Correspondent; Mr. G. Eastes, London; The Registrar-General of Ireland; Dr. F. Barnes, London; Dr. Gairdner, Glasgow; Surgeon-General Crawford, Dublin; Mr. G. Birt, Stourbridge; Mr. H. B. Hodges, Watton, Herts; Dr. Dyce Duckworth, London; Our Glasgow Correspondent; Dr. Drummond, Newcastle-upon-Tyne; Country Surgeon; Dr. Baird, Perth; Our Edinburgh Correspondent; Mr. J. J. S. Johnstone, Gloucester; Our Dublin Correspondent; Dr. Hirschberg, Berlin; M.; Mr. R. E. Power, Portsmouth; Mr. Spence, Edinburgh; Dr. J. J. Charles, Cork; M.B.London; Mr. Bush, Nottingham; Mr. C. H. Roberts, London; L.R.C.P.London; Dr. Wade, Birmingham; etc.

REMARKS
ON
THE USE OF THE COLD BATH IN ENTERIC FEVER.

By ALEXANDER COLLIE, M.D.,
Medical Officer to the Homerton Fever Hospital.

A study of the papers of Professor Liebermeister and others, on the use of the cold bath in the treatment of enteric fever, led me to try it on the cases which came under my care in the Homerton Fever Hospital. I have given, personally, one hundred baths, some in severe, others in moderately severe, cases, taking as my guide not the temperature, but that *plus* the patient; for in this relation, as in others, patients vary much; the temperature with which one man may be highly delirious, another bears with comparative equanimity. In the administration of our baths, then, we had regard less to the temperature than to the age, the state of heart, restlessness, and sleeplessness, and chiefly to the last. If the patient had not slept for two or three days, even if the temperature fell short of 103°, he was wrapped in a flannel dressing-gown, and placed in a bath of 70° Fahr., gradually reduced to 60° in from ten to fifteen minutes, at the end of which time he was removed to bed, wrapped in a blanket. In nearly all the cases, we thought it prudent to give some stimulant to the patient in the bath, from noting that its effect was to weaken the pulse, which fell but a few beats in frequency, and became thready, compressible, wavered, and sometimes almost disappeared. It required resolution to proceed with the bath in such circumstances—circumstances pointing to impending collapse, a result which occurred in two cases. The general effect of the bath was to lower the temperature, taken *per rectum*, two to three degrees at once, and for about three-quarters of an hour after the bath it continued to fall, about which time the maximum fall had been reached. It then began to rise, reaching its former height in periods varying from one to several hours. In a large number of cases, sleep followed, varying from half an hour to two or three. The general conclusion formed of the value of the bath was that, in the milder cases and in some of the severe cases in the early period of the disease, the bath given once or twice daily was an useful way of relieving the discomfort produced by the heat, of allaying restlessness and producing sleep; that, beyond temporary relief of symptoms, it had no effect on the course of the disease or on the general mortality; and lastly, that in severe cases the remedy was inadmissible, owing to its depressing effect on the body generally, to the exhaustion which its administration entailed; but above all, for its definite and marked effect upon the circulation, which it invariably greatly weakened. In other words, that the bath was useful in relieving symptoms in those cases whose natural termination is recovery; inapplicable, by reason chiefly of cardiac weakness, in those cases whose natural termination is death; that is, in the cases in which specific treatment is needed. The depressing effect of the bath has been noticed by Professor Liebermeister, who considers a very high degree of cardiac weakness an important contraindication. What, exactly, may constitute such a condition, will be differently estimated by different persons; but it may be inferred reasonably that, one who has been the subject of a fever whose definite and specific effect is to produce, and that rapidly, some kind of muscular degeneration and death by asthenia; one who has, let us say, passed ten days without sleep and with little or no food, is a person whose condition generally is one of weakness, and whose heart in particular is weak in a very high degree. What might be inferred, a look at the patient shows at once. He lies prostrate, unable to turn on his side or help himself to a drink, the impulse of his heart gone, the first sound inaudible, and the pulse quick and feeble; in short, in a condition of exhaustion. Such a person, I submit, is one in whom there is a very high degree of cardiac weakness. To put the case briefly, those severe cases in which there is every probability of a fatal result from bodily weakness and severity of disease are not cases in which the "antipyretic treatment" is admissible.

It is true that cases such as I have described form but a small proportion of the whole number of cases of enteric fever; but it is also true that they are the only cases in which specific treatment of any sort is required. The great majority of cases recover of themselves, and, as regards their treatment, probably the less of it the better. These cases are cases whose temperatures fluctuate daily between 103° and 104°, rarely remaining any long time at the latter point; and to give them any specific treatment whatever is perfectly useless, for they recover of themselves, and are, in my opinion, best left alone. The remainder which die are cases in which the prominent feature is cardiac weakness, and whose temperatures fluctuate between 104°, 105°, and upwards. These are the cases for which treatment is needed; but I imagine it would occur to no one to give such cases—cases which cannot even be "changed" without suffering from exhaustion—a cold bath every two hours. Liebermeister expressly says that "a very high degree of heart weakness is an important contraindication", and further, that many patients do not bear a very frequent use of the bath. Hence, taking together the cases in which the "antipyretic treatment" is inadmissible from cardiac weakness, and the cases which do not bear it, we exclude from its operation all the cases in which it is desirable that active treatment should be used; and to employ remedies where they are not wanted is, to say the least, a work of supererogation. The "antipyretic treatment", on the showing of its own supporters, then falls to the ground. The treatment which we have been considering, attracted attention by reason of the very favourable results which were said to be obtained by it. In some cases, the mortality was said to have been reduced to 3 or 4 per cent. Admitting that relapsing fever, the normal mortality of which is about 3 or 4 per cent.; that the "typhus" of young people whose normal mortality is very low; that all febriculæ, in which the mortality is nothing, were excluded; and finally, that the enteric was enteric as we know it in London—points on which, by reason of the loose way in which the term "typhus" in Germany is applied to diseases perfectly distinct, I entertain grave doubts —I should still prefer, judging from my experience, to believe that nature of cases, not treatment, determined the favourable results referred to.

The virulence of epidemics and endemics of enteric varies greatly; at one time nearly all the cases recover, at another time they nearly all die, irrespective of treatment. It will be the experience of every large fever hospital that, not infrequently, a succession of mild cases follow each other for weeks, and one might think that some particular plan of treatment was the cause, but that a succession of bad cases follow and the usual mortality is reached. When this does not occur, some are ready to attribute to treatment what is the result of nature. This error, arising from the varying virulence of epidemics, is not eliminated in the comparison which Professor Liebermeister makes between his "indifferent", his "complete", and his "incomplete" antipyretic treatment. It does not follow that the cases of 1843 and of 1874 were like cases, and, until it be shown that they were, the comparison is inconclusive.

The antipyretic treatment of Professor Liebermeister, however, is less successful, tested by statistics, than Dr. Russell's at Glasgow, or my own at Homerton, the comparison of the mortality at Basle, Glasgow, and Homerton for the years 1873 and 1874—the only years in which I have the means of comparing the three places—appears to show this. Thus, of 163 cases in the year 1873 at Basle, the mortality was 10.4 per cent.; whilst in the same year, of 275 cases at Glasgow, the mortality was 9.4 per cent.; and of 305 cases at Homerton, it was 9.5 per cent. So also at Basle, in 1874, there were 200 cases, with a mortality of 10.5 per cent.; at Homerton, 372 cases, with a mortality of 9.6 per cent.; and at Glasgow, 343 cases, with a mortality of 7 per cent. It is unlikely that the cases of a small country town like Basle, with forty to fifty thousand inhabitants, were more severe than those occurring among the pauper population of Glasgow, with its five hundred thousand inhabitants, and the pauper population of the East End of London, with upwards of one million. And, in this point of view, it is important to observe that it is in the small country towns of Germany that the "antipyretic treatment" has been said to be successful, such as Halle, Jena, Heidelberg, Prague, Zürich, etc. "It does not succeed in Vienna." To this we may add that it does not succeed in London and Glasgow. In this there is nothing peculiar. The mortality from acute disease in the hospitals of the large towns is nearly always greater than that of the hospitals of the small country towns; and it will not surprise any one that Jena, Halle, and Basle are no exception to the rule.

"If fever depend upon a poison in the blood, it is not to be dislodged by the act of vomiting, nor washed out by the forcible descent of cold water upon the skin" (Sir T. Watson). I believe the expectant treatment to be the best. There are cases which recover and cases which die; and, in order that we may not prevent the one nor hasten the other, I think the safest course in the present state of our knowledge is to abstain from interference. "Opportunum medicamentum est opportune cibus datus" (Celsus); to which let us add general hygienic measures and good nursing, and I believe the treatment of

acute disease to be almost complete. An occasional opiate to relieve pain, a little wine to help a failing heart, a laxative to relieve constipation, will be useful adjuvants, if judiciously employed; but I do not think they will be anything more.

THE PREVENTION OF BLOOD-POISONING.

By S. MESSENGER BRADLEY, F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

MR. SAVORY'S eloquent address shows that admirable results are attainable by the simplest forms of dressing, when directed by judgment and care, and is an argument that other methods than that of Lister merit the term of antisepticity. It is also valuable in impressing upon us the importance of the patient's general condition, as well as the state of his wound; and therein, to some extent, points the moral of the parable of the sower, in which the soil determines the character of crops: in some cases the seed, falling upon stony ground, it withers away; in others, falling by the way side, the birds of the air devour it; in others, falling upon a suitable soil, it brings forth (septicæmic) fruit a hundred fold. Doubtless the soil is a factor as important as the seed, and in much that Mr. Savory says there is unquestionable force and truth; but, is he wise in resting contented with such a weak barrier between soil and seed as that afforded by the granulation membrane? I cannot think so.

A chain which holds a mad dog may prevent him from biting; but chains are apt to snap, and his room is preferable to his company. While agreeing with Mr. Savory that antisepticity in surgery is obtainable without recourse to Listerism—as indeed I have long maintained—and while congratulating Mr. Savory and his colleagues on the admirable statistics which he quotes, I cannot agree that the employment of germicides is nought; that drainage-tubes are an abomination; and that the perfection of security, as well as simplicity, are to be sought in water-dressings and bread-poultices.

I will refer to one or two points in the nature of first principles in antisepticity.

First, as to the theory. Antiseptic surgery was inspired by a belief in the germ-theory, which maintains that putrefaction is caused by the presence of organisms (bacteria); their action probably being to pull down the higher and more unstable quaternary compounds, and reduce them to the simpler and more stable binary products. In this process, oxygen is absorbed and free ammonia evolved, and the nature of the change is further evidenced by a characteristic odour: hence it comes to pass that we have a triple test of the existence of putrefaction; firstly, the smell, and the nose is a very subtle chemist in this matter; secondly, the existence of organisms, revealed by the microscope; and, thirdly, the presence of free ammonia, demonstrated by Nessler's test.

The truth of the whole theory essentially depends upon the continued non-putrefaction of highly putrescible fluids, when once the germs present have been destroyed and access of fresh germs prevented. It does not at all signify whether or not the air is excluded; so long as it is filtered free from germs the fluids thus protected never putrefy.

In the second place, let us see what antisepticity in surgery aims at. Naturally, as Lister urges, not merely at preventing the access of these mischief-making organisms, but at destroying the germs of those already present. Consider the phenomenon of a putrid egg; how has putrefaction taken place in this instance? Manifestly by the development of the pre-existent germs, and not by the admission of germs from without; for, while "stony limits cannot hold *air* out" any more than *love*, it is not the air which works these changes, as proved over and over again; and even if germ-laden gases could penetrate the egg-shell, it is certain that bacteria would not pass through the membrana putaminis. In this instance as elsewhere death may take place, but without putrefaction. Boil the egg, and so destroy existing germs; and then, although it necessarily dies, it does not putrefy. It is true that chemical changes are involved in death, of a nature not unlike those taking place in putrefaction, but they are not identical, and therefore this is not to the point. Professor Lister seeks to secure the double object by the employment of the antiseptic spray and his well-known dressings, and certainly has conferred the greatest boon upon the surgical profession in all his work in this direction. Amongst other facts elicited during the progress of this work, it has been abundantly proved that there are no more prolific sources of infection than water and such articles as poultices; yet these are the very agents on which Mr. Savory so much relies. How, then, can we reconcile Mr. Savory's treatment with scientific surgery? True his statistics show admirable results; but are there not still better results forthcoming from the master Lister and his followers? I pause for a reply.

My belief is, and long has been, that Lister's principles are invulnerable, and his practice excellent; but that the latter is unnecessarily complicated. I have argued that, scientifically the same results—by which I mean equally certain results—are to be obtained without the spray and without the employment of patent dressings; but I certainly should not look for these results if I used water-dressings and bread-poultices. To satisfactorily solve the question, some other things than even such statistics as Savory advanced are necessary; and among them are the presence or absence of putrefaction, as proved by the triple test I have mentioned, and the temperature of the patient given from day to day after the operation. I hope these points will be answered by Mr. Lister. In the meantime, I should like to be allowed to allude to three cases where I have employed with success similar dressings to those described in my paper, on Antiseptic Surgery, in the BRITISH MEDICAL JOURNAL for February 23rd, 1878.

The first is that of the organisation of a large blood-clot, which formed sequentially to removal of a loose cartilage from the knee-joint, and a report of which appeared in the JOURNAL, November 30th, 1878. The second is the case of a lad in whom I excised the entire spine of the scapula and head of the humerus, removing, at the same time, much granulation tissue. In this case, repair took place without rise of temperature and without putrefaction—the absence of the latter being rigorously tested by the means referred to above. The third is the case of a youth in whom I removed the os calcis, with similar results to those in the second case.

I mention these instances because they are pre-eminently the class of cases in which putrefaction is prone to occur; and, therefore, as tending to show that any treatment which averts such a catastrophe merits the term antiseptic.

Mr. Savory makes a bold, straightforward attempt to prove the same of his method. It remains to be seen whether he has established his position.

BLOOD-POISONING AND ANTISEPTICS.

By WILLIAM THOMSON, F.R.C.S.,
Surgeon to the Richmond Hospital, Dublin.

I WAS one of the many who listened with deep attention and delight to the oration of Mr. Savory at Cork. The subject was skilfully chosen; and, although the orator's words were, as I thought then and think now, only the declaration of a section which clings to old habits and methods that are gradually being swept away, I could not but admire his address as eloquent and brilliant. But when I have said that Mr. Savory left unused no aid of the advocate's art to assail the position held by so many British surgeons, and to defend his own, I have said all that I can say in favour of it; for the result, I fear, will be to establish many in their hostility to antiseptics in the ordinary sense, and to turn back the timid who are on the threshold of conversion to more modern surgical ideas.

I am not about to enter into an elaborate criticism of that remarkable address; but there are some points in it which deserve observation. Mr. Savory is a believer in the germ-theory. He admits that there are such things as "agents of putrefaction" commonly called germs, which abound in the air, and notably in animal decomposing fluids. It is against the noxious influence of these that antiseptic surgery is directed. It is quite beside the question whether fluids potent for the gravest mischief may be produced within the body, "far away from any direct communication with the air". An abscess slowly forming in some remote region of the body is an entirely different thing from an amputation wound suddenly inflicted, or an incision into a knee-joint, or into the peritoneum. Lister's method is intended to prevent the access of these germs to freshly exposed wounded surfaces. It would be an excellent thing if we could also influence those distant collections of pestilent fluid; but, not being able to do so, is there any logical ground upon which we ought not, therefore, to limit the chances of blood-poisoning as much as possible by using an antiseptic spray? It is quite true that under the crudest system of dressing wounds we may see good results, and that a poisonous fluid may be in contact with a raw surface without producing bad effects. But now and then we see a case in which the "terrible transmission" to the blood takes place, and the patient is probably lost. Under what condition does this occur? Mr. Savory answers: "First of all, this mischief is least likely to happen in healthy wounds during the process of repair; and when it does occur, it is either in a wound unhealthy in character or flagging in action, or in one so recent, or in which the process of repair has been so delayed, that little or no new and healthy tissue has been produced on the surface. In other words, when the newly formed tissue is healthy and entire, it is tolerably impregnable, and whatever interferes with its integrity gives the opportunity for mischief. I say the mischief is less

likely to happen in proportion as the wound is healthy and repair is rapid; but exceptions to this we know occur; and it is reasonable to suppose, in some cases at least it has been almost demonstrated, if in some obscure corner reparative action have not failed, that from violence or accidental disturbance or other cause, the continuity of the new structure has been broken or its integrity somehow impaired, and so the poison has passed in."

What, then, is the hope of escape which Mr. Savory puts before us, when he scornfully casts aside the details of the antiseptic method? An utterly unreliable hope—that the wound will remain healthy, or that the delicate layer interposed between the blood and the poisonous pus shall remain intact! Who can foresee the moment when the wound shall become unhealthy, or by what unlucky movement a rent shall be made in the granulation film, and the way made clear for immediate poisoning? Is it not the case, that we only recognise the damage when it is done by the occurrence of a rigor, or the presence of some other marked symptom? On the other hand, the antiseptic plan aims at securing healthy discharges by preventing the septic organisms from touching the part until they are impotent, and thus providing against the risks which Mr. Savory so forcibly points out.

Well, having had such an admission of danger from him, one naturally turns anxiously to see what is his hope of security, and finds it in the declaration that he has achieved "the best results by the simplest means". In the early part of his address, we have him pronouncing "free ablution with clean water adequately used to be amongst the simplest, safest, best of antiseptics". There could be no higher character; and, when the elaborate table of results from operations and the percentages of pyæmic cases follow, one expects to hear that all this has been attained by so simple and safe an agent as cold water. But it is not so; for in St. Bartholomew's Hospital the surgeons "use very freely antiseptics of various kinds. And with cleanliness we attach, for the most part, the highest importance to rest." Mr. Savory gives his own method of dressing a wound. He uses carbolised catgut ligatures, wire sutures, dresses the wound with olive or almond oil, containing one part in about fifty of carbolic acid; adapts cotton-wool or lint to exercise equable pressure; drains the wound by position; dresses it "probably from the first with tepid water, perhaps containing some permanganate of potash in the form of Condy's fluid or other potent antiseptic of the least irritating kind, and, if there is tension, uses a bread-and-water poultice". Now, is this method fittingly "characterised by its simplicity and the entire absence of all novelty", when we get at one bound from cold water to carbolised ligatures, carbolised oil, drainage, and permanganate of potash washings? What is the need of this hybrid antiseptic method, if there be no more virtue in carbolic acid than in cold water? I assume that Mr. Savory is above paying court to carbolic acid simply because it is popular; and I must, therefore, believe that he admits its virtue as a protection against pyæmia.

When I began to study surgery, I made acquaintance with watery and greasy dressings. They were an advance upon much more uncouth applications, and with their use the greatest cleanliness was enjoined. The cases were carefully watched, dressed daily, and all care taken, but I know that blood-poisoning was not uncommon, and that the chances of it were increased by the long and profuse suppuration. Sometimes cases stood out from the others as remarkable in the facility of cure. Amputations of the breast often did well, as they do now, and healed without suppuration. It is one of the points most strongly urged against the Listerian treatment, that these cases do occur. But those who use that argument seem to forget that here, in most instances, the conditions of success are peculiarly favourable. The parts can be kept at almost absolute rest; and it is a recognised principle that when this is secured healing may go on uninterruptedly. Mr. Lister himself observes, in an address given in this hospital last June (*Dublin Journal of Medicine*, August 1879): "Before I saw Pasteur's papers, I used to wonder how the layer of blood or lymph in the wound made in operating for hare-lip did not putrefy. After a plastic operation on the face, I remember observing that, if the lymph was beyond a certain thickness, there was suppuration, but there might be a fair thickness and yet no suppuration. Now, that healing without the formation of pus implied that the lymph did not putrefy; for, if it had done so, the putrefaction would assuredly have involved suppuration. But, if the lymph had been put between two bits of glass or gutta-percha tissue at the same temperature, it would have putrefied. What was the reason of the difference? Somehow there is a peculiarity in living tissue as distinguished from ordinary matter that acts antiseptically, as we may say—prevents the development of septic organism. And it appears from various facts, to which I must not now refer, that such really is the fact—that healthy living tissue has the power of counteracting the development of these minute organisms, on the same sort of principle, probably, as the healthy plant can resist parasitic fungi. If a plant becomes enfeebled by cold, you see fungi developed upon it, but, if it becomes vigorous again, the fungi leave it. The healthy tissue of the plant resists the growth of the fungi. Well, then, the healthy living tissues of a wound—that is to say, if the tissues are perfectly free from irritation and disturbance, and have recovered from the damage done by the wound—these tissues resist the development of the organisms. And not only the healthy tissues, as we ordinarily call them, but the blood-clot seems to have this power. The blood-clot may be regarded as a form of tissue. You may say 'That seems strange; the fibrine is merely a chemical substance that can be formed outside the body by the mixture of two solutions. The red corpuscles soon lose their vitality, and constitute a large mass of the clot. The serum is a mere chemical solution.' But, then, there are the white corpuscles. These we know retain their vitality outside the vessels; and it appears that these white corpuscles in the clot confer upon it the properties of tissue, and that by virtue of them the blood-clot in the healthy condition may remain unputrefied, although the causes of putrefaction are mixed with it. If you do not understand these things, you will not be able to understand various apparently contradictory circumstances in the behaviour of wounds."

These breast-amputations and hare-lip cases, then, prove nothing in opposition. But, take an excision of the knee or an ovariotomy. In the earlier knee cases here, the suppuration went on for months, and everywhere it was one of the most forcible arguments against the operation. It is certainly not so now. On the day before I went to Cork, I saw my colleague Mr. Stokes excise a knee-joint. It was dressed antiseptically. A week afterwards, I saw it dressed, but there was absolutely not a drop of pus. A drainage-tube—which Mr. Savory regards as a seton simply, and mischievous—was removed, but it was not followed by a gush of any fluid, purulent or otherwise. I write this on the seventeenth day after the operation, but there has not been a sign of pus, and the wound is practically healed. After Mr. Lister gave his address at the Richmond Hospital, I was asked by my friend Mr. H. G. Croly to assist him in dressing a case in which he was about to excise the elbow. I did so; and there the wound healed, he assures me, without any suppuration, and the girl left in a few weeks quite well, with a narrow cicatricial line. The same has happened in ovariotomy in my own practice and in that of my colleagues. Now, this is the experience of every surgeon who has adopted the Listerian method strictly. I say strictly, because I have seen a great deal of so-called antiseptic surgery that was, in reality, worthless. A hand-spray used intermittently, or the spray playing on the surgeon's back instead of on the wound, was surely not Listerism, and yet I have heard an operation so performed honestly described as being done under the strictest antiseptic precautions. It is no wonder that results disappointing and deterrent should be obtained from such methods; but they are not antiseptic methods, and I very much fear that many who think they have tried Lister's plan and found it wanting have, in reality, not tried it at all.

I cannot say why Mr. Lister has not published statistics; but is it to be believed that there is a conspiracy among surgeons generally to exaggerate the benefits of his system as they have employed it? I have myself tried the usual plans. I began with plain cold water—pure Vartry—and then drifted into carbolised lotion and oil, using them without gauze or protective or mackintosh, but with simple lint; and even applied Mr. Savory's bread poultice when necessary. But I have given all up for the pure antiseptic treatment. Of the results, I can say that I have lost no case by blood-poisoning under the latter method; that I have lost several under the "simple method"; that the wounds heal more rapidly, and that there can be no comparison at all on the score of suppuration. That is the view which all my colleagues, I believe, hold too, and it is one that we have come to not because we have caught at a fashionable novelty—for we were amongst those who held out long—but because we have been compelled by our experience. Has experience taught nothing in St. Bartholomew's Hospital? I am assured that it has. I have heard to-day that the operation of ovariotomy was disastrous there, until Listerism was adopted, and that since then the results have been as uniformly favourable. I should like to see the records of that operation, although Mr. Savory has excluded them from his table.

When Mr. Savory speaks upon this question of statistics, I must take exception to the mode of comparison which he seeks to establish. He says, "Lister's plan must be tested (it would be an insult to its author to propose less) not by contrast of former with present statistics, but by comparison of its results with the best results which now are obtained otherwise". Now, Mr. Savory's results are of the "obtained otherwise" class, and they are put forward as a challenge. But, surely, this is not comparing present with former modes of dressing. It is comparing Lister's plan with a modification of it, but a modification which is, in certain respects, antiseptic—using that word in the popular sense, and not as Mr. Savory, as a purist in language, uses it. The truth is that

all dressing is now tinged more or less with the Listerian mode; whether it be in increased carefulness, or cleanliness, or washings with antiseptic fluids—they are all based on getting rid of a danger ever lurking about the patient. Even Mr. Savory is the practiser of a method, not Listerian in its details, it is true, but Listerian in its principles. If he would have a true comparison, let him dress his wounds with one of the "best antiseptics", clean water, side by side by those done under the antiseptic dressings, and a twelve months' observation will show on which side success will stand.

Mr. Savory is liberal in his admission, when he regards a carbolised spray as "better than a pestilential atmosphere". I should like to know how he determines when the atmosphere is not pestilential, as regards an open wound. He admits that there are germs in the air so small as to be beyond the powers of the microscope. By what means is it made clear that the atmosphere coming in from London or other streets is pure, though all the sides of a ward be windows or the walls be burrowed with chimneys. Is it quite certain that this special ventilation will sweep away all the exhalations from other patients, and that the eddies caused by opposing currents of air will not carry troops of vigorous poison germs upon the wound at the very time we deem the ward to be purest? May not the very "pestilential atmosphere" of which Mr. Savory speaks, however small in extent, be actually present at the wound surface, with great potency for mischief? If, then, it be impossible to determine this point, if we cannot know at what moment a tear may occur in the granulation tissue and expose the patient to risk, is it not reasonable, even on Mr. Savory's own showing—nay, are we not bound on every ground—to use a spray which he admits to be "preferable" to such a condition?

Read in this light, Mr. Savory's address will not do so much harm as might at first appear. It is a testimony to principles which he has adopted, but which he has hesitated to follow in their logical leading. That he must do so, I do not doubt. His address has only strengthened my own convictions. Like hundreds of others, the trammels of my old teaching held me back from trying a method over which I heard much scepticism talked; but I cannot refuse the evidence of my senses, and I have adopted it because it has relieved surgery of much of its terror, and given a sense of safety which, so far as I am aware, no other system affords.

A BRIEF RECORD OF TWO THOUSAND TWO HUNDRED CONSECUTIVE CASES OF MIDWIFERY.

By W. WHALLEY, M.D., etc., Bradford.

In reviewing 2,200 consecutive cases of midwifery taken from my obstetric register, I find that out of that number there were thirty-nine breech-presentations, of which seventeen infants were still-born. Footling cases occurred seventeen times; ten of these infants were still-born. The arm presented twelve times; five of these infants were still-born. The face presented five times; one infant was still-born. The funis associated with either head or breech presentation occurred seven times; one infant being still-born. The funis and arm presented in one case; the infant was still-born. The funis and shoulder presented once; the funis, feet, and head once; the funis and foot once; the shoulder once; the foot and head twice; the hand and face once. There were two complete and three partial placental presentations. The placenta was retained or adherent in twenty-seven cases, requiring the introduction of the hand for its removal. Accidental hæmorrhage occurred in twelve cases. In three instances, the funis was coiled three times round the neck of the child. The long and the short forceps were applied in fifty-one instances; in which seven infants were still-born. Craniotomy was resorted to in eleven cases. Podalic version was performed in about twenty-one cases; and the Cæsarean section in one case.

There were twenty-eight cases of twins, of which eleven infants were still-born. In thirteen cases, the head presented in both children; in seven cases, in the first child the head presented, and in the second the breech; in four cases, the head of the first child and the foot of the second; in one case, the arm of the first child and the head of the second; in another, the breech of the first and the head of the second; in one case, the head of the first child and the hand of the second; and in another, the hand of the first child and the head of the second. In half the number of cases, the second child followed the first at intervals varying from twenty minutes to two hours; in the remainder, the intervals varied from two to six hours. In twelve cases, the children were both males; in seven cases, they were both females; in five cases, male and female; and in four cases, the sexes were not registered.

Rupture of the perinæum requiring surgical interference happened in six cases. All were successfully treated with the quilled and interrupted sutures. Spontaneous evolution occurred in three premature cases. Five cases were complicated with convulsions. Deformity of the pelvis was met with in seven cases. Premature labour happened spontaneously twenty-eight times, and was artificially induced five times.

In one patient, seven years had elapsed since her last confinement; in another, eight; in two others, nine; in another, ten; in another, eleven; in another, twelve; in another, fourteen; and in two others, fifteen years.

Among the primiparæ, six patients were aged respectively 32, 34, 36, 37, 39, and 45 years.

Of the total number delivered, seven mothers died.

The abnormalities met with in children were the following. Three possessed supernumerary thumbs; in two of these cases I amputated the redundant thumb, and in the third applied the ligature; all did well. One child had webbed fingers, another hare-lip with cleft palate; the latter I operated upon successfully at the eighth week. One child was born with talipes calcaneus, and was successfully treated by the aid of a boot without division of tendons. There was one case of spina bifida, the tumour being situated in the lumbar region; and, notwithstanding every care was taken to protect it from injury by a properly arranged apparatus, the child only survived a few months, ultimately dying from convulsions. There were twelve or fourteen cases of nævi. Two were cured by vaccination, one with nitric acid; but the ligature was found most successful. One child had malformation of both ears; each pinna or external ear consisted merely of a small flap of loose skin, and there was complete absence of the meatus auditorius externus; the child did not survive many days. In another child, there was an absence of a portion of the abdominal parietes in the umbilical region, the deficiency being supplied by a purple-coloured membranous structure; the child died before the funis separated. Lastly, there was one acephalous child.

The foregoing cases—viz., 2,200—have been attended in private practice, and comprise the whole of my midwifery practice from August 28th, 1860, to January 21st, 1878. It will be observed from the above figures that, of the abnormal presentations, the breech was the most frequent. The management in the greater number of these cases has been to let the breech pass doubled, and not to allow the legs to escape until after the knees were born. In the twelve cases of arm-presentation, podalic version was successfully performed in all, so far as the mother was concerned. Out of the five cases of face-presentation, one infant was still-born, and another died in a few hours after birth, from injury to the larynx during labour. In the cases complicated with prolapsus of the funis, the "postural method" and turning the child and delivering by the feet were found to be the most successful plans of treatment.

The first case of complete placental presentation was met with in a multipara, about six months advanced in pregnancy. She stated that during two months she had lost blood eight or ten times; it had appeared in gushes without any apparent cause, and subsided as unaccountably. In this case, plugging succeeded well for about thirty-six hours, after which the discharge became excessive, and the uterine action strong; the os uteri was found dilating, the placenta was detached from the inner surface of the uterus, and removed; the breech was then readily brought down, and delivery speedily accomplished. The patient made a good and rapid recovery. The second case of complete placental presentation occurred also in a multipara, aged 35, the mother of ten children, pregnancy being advanced almost to the full term. When called to this case, at 3 A.M., I was informed that the patient had been flooding excessively at intervals since the afternoon of the previous day. I found her fainting, cold, gasping for breath, and the uterine action very feeble. The os uteri was dilated to the size of a crown-piece, and possessed that degree of unresisting flabbiness indicative of the most urgent danger. Brandy was administered by the mouth and in the form of enemata combined with infusion of ergot. In an hour and a half, the patient had fairly rallied. Podalic version was decided upon, and was performed without much loss from hæmorrhage, after which the uterus contracted firmly. The child was still-born. Although the patient appeared to bear the operation remarkably well, she sank four hours after delivery. The death of this patient was unquestionably attributable to hæmorrhage carelessly allowed to take place before sending for assistance, the patient having unfortunately being placed under the care of an old, ignorant, and very deaf nurse.

Only one of the cases of partial placental presentation caused trouble or anxiety. This occurred in a primipara at the full term of gestation. I found flooding was and had been going on profusely for some time, the membranes were ruptured, and a portion of the fleshy fibrous placenta was readily recognised. I proceeded at once to plug the

vagina, but it proved ineffectual; the hæmorrhage continued to be poured forth copiously, so that the patient's life remained in imminent danger. Version was performed with difficulty. She made a good recovery, but the child died. The remaining cases of partial placental presentation, as well as the majority of the twelve cases of accidental hæmorrhage were treated, *i. e.*, after labour had commenced, by puncturing the membranes early and administering ergot, which invariably increased the uterine action, the head being quickly forced down upon the open orifices, almost completely plugging them, putting a stop to the hæmorrhage, labour progressing rapidly and satisfactorily to the end. In short, this treatment proved eminently successful.

The forceps has been much more frequently employed in my practice of late years than formerly, from the fact that patients have learnt to appreciate its utility. It was formerly the custom here as elsewhere for medical practitioners to remain with their parturient patients for several consecutive days and nights, rather than employ instruments. I have invariably used the long forceps with the pelvic curve, and have found it to answer every purpose, whether the head has been engaged at the brim of the pelvis, or in the cavity, or at the outlet. In a paper like the present, it would be impossible to particularise the conditions which indicated in every case the necessity for the employment of the forceps or for having recourse to craniotomy.

Of the five cases of convulsions, three only presented any features of interest. They all occurred in primiparæ, either during labour or immediately after delivery. In one case, I delivered with the forceps, after which the convulsions ceased. In two other cases, the convulsions continued after delivery for twelve or sixteen hours, threatening congestive apoplexy. The administration of chloroform and other treatment having failed, I performed venesection in both cases; in one about twenty, and in the other about thirty ounces of blood were drawn, after which the convulsions subsided. Both the patients made rapid and good recoveries.

The first case of pelvic deformity occurred in a primipara. On examination, both the child's hands were found presenting; the insertion of the funis was recognised; the head was felt resting on the promontory of the sacrum. The latter projected so far forward as to considerably narrow the inlet of the pelvis. The legs of the child were directed up towards the fundus of the uterus. The membranes were ruptured, and the uterus was contracting strongly upon the body of the child. Chloroform was administered, and several unsuccessful attempts to turn were made; it was then resolved to eviscerate, but this was found impracticable. It was finally determined to decapitate the child *in utero*. This was done with considerable difficulty by piercing the neck with a pair of long sharp forceps, and then dividing the spinal column. The trunk was then removed, and the head afterwards extracted with the long forceps. This patient has since had five children; four were delivered with the forceps, one of which was still-born, and one a female child, being unusually diminutive, was born naturally.

The subject of the second case was a multipara, who had always experienced tedious lingering labours. All her children, with one exception, were either still-born or soon died. When summoned to attend, I learnt she had been in labour since the previous evening. On examination, I found she possessed that rare deformity, which has been termed by M. Naegele "the obliquely distorted pelvis". I applied the forceps, but found the space insufficient to admit of extraction with safety to the mother. I then determined to turn; this was effected with great difficulty. After bringing down the breech and shoulders, profuse hæmorrhage ensued; and, finding it impossible to bring the head through the brim, I perforated behind the ear. The patient lost about a quart of blood, from the effects of which she died the following day.

The third case was met with in a multipara. It consisted of a diminution of the conjugate diameter of the pelvis, complicated with extreme obesity of the patient. She had borne several children, and, rather than allow premature labour to be produced artificially, had exposed herself to all the dangers of craniotomy three times. Her consent to have premature labour induced by means of the uterine douche having at last been obtained, it was brought on at the seventh month. Unfortunately for the fœtus, the funis and foot presented, and it was born dead. The patient has been confined twice since; once she was delivered by craniotomy, and the last, a very diminutive female child, was born alive without instrumental aid.

The fourth case occurred in a primipara, and in most respects resembled the one just described, except that the tubera ischiorum were more closely approximated. The patient presented many of the characters indicative of deformed pelvis, the result of rickets in early life. On inquiry, it was found that, when a child, it was a long time before she could walk unsupported. She was with considerable difficulty delivered by craniotomy. She was urged to have her second labour artificially induced at the seventh month, but obstinately refused, and was again delivered by craniotomy, but with much greater difficulty than on the first occasion. She died from exhaustion on the third day.

The fifth case was met with in a multipara, and resembled the third case. This patient has been delivered four times with the forceps; only one child survived.

To the sixth case, I was called at 2 A.M., and found she had been in labour two days, under the care of an ignorant midwife, who pronounced "all right". The membranes were ruptured; the funis, neck, chin, and foot of the fœtus were recognised with great difficulty, owing to the extreme contraction of the brim of the pelvis. The patient having been brought under the influence of chloroform, version was several times attempted by myself and three other medical gentlemen, but all signally failed. As it was found impossible to pass the hand through the brim of the pelvis, after repeated but ineffectual attempts to eviscerate the child, all agreed that the only means remaining was to perform the Cæsarean section. This I did without the aid of chloroform. The patient bore the operation remarkably well, but gradually sank the following day from exhaustion.

The seventh case occurred in a primipara aged 25. She, like the fourth case, presented many of the characters frequently associated with distortion of the pelvis, the result of rickets in childhood. She was of diminutive stature, had a shambling gait, a very prominent chin, the joints of the hands and feet were thick, and there was curvature of the lower extremities. She was nearly three years old before she could walk alone. At her first confinement, I found that the promontory of the sacrum projected considerably forward; the symphysis pubis was flattened and pushed towards the former, the lateral diameter being increased; the bulk of the head of the fœtus remained above the brim. The forceps were applied, but it was found impossible to effect extraction with impunity. The case was terminated by craniotomy. Her second labour was induced at the seventh month by means of the uterine douche. It lasted ten hours. The child was born without operative interference, but only lived ten hours. In her third pregnancy, the patient was persuaded by her friends to go to the full term of gestation. I had again to perform craniotomy; and on this occasion I found the cephalotribe of signal service. In her fourth pregnancy, I again induced premature labour at the seventh month by the gradual dilatation of the os uteri, separation of the membranes, and the introduction of a long elastic male catheter (without stilet) between the membranes and the uterus. This soon brought on uterine action; the child was still-born. The fifth labour was prematurely induced by the introduction of Dr. Barnes's bags. It continued eighteen hours; the child was delivered alive by the forceps, but only lived two days. The mother suffered from a sharp attack of peritonitis, from which she soon recovered. Her sixth and last labour was brought on at the seventh month in the same way as the fifth, and in every respect resembled it; the child lived three hours and a half.

The first of the seven mothers who died was a primipara, and resided in a very insalubrious locality. She was delivered by craniotomy, and died at the expiration of a week from septicæmia. The second patient began in labour when convalescing from an attack of small-pox. She was very depressed in spirits, her brother having just died from small-pox, and her husband had been removed to the hospital suffering from the same complaint. She died from septicæmia. The third was the subject of pelvic distortion, and died, as has already been stated, from accidental hæmorrhage. The fourth died from exhaustion, the result of a prolonged instrumental labour with deformed pelvis. The fifth died after the Cæsarean section. The sixth, aged 39, a primipara, was extremely delicate, was delivered by craniotomy of a putrid fœtus, and died on the fourth day from septicæmia. The seventh was a primipara, extremely feeble and anæmic; her labour was natural, diarrhœa supervened, and carried her off on the seventh day.

The foregoing brief reports are in many respects very imperfect; however, I have endeavoured to detail the most essential and interesting features of the cases met with in my obstetrical practice.

WHITECHAPEL.—During the first quarter of this year, 753 births, and 647 deaths, were registered in this district. The death-rate is about the same as that for the corresponding quarter of last year, and is equal to an annual rate of 28 per 1,000. The deaths from infectious diseases were reduced from 73 to 38; but the diseases of the respiratory organs were, chiefly on account of the low temperature that prevailed during the whole three months, increased from 225 to 280. The chief infectious disease of the quarter was whooping-cough, which caused 23 deaths. As usual, the report contains some interesting remarks on questions of a general kind, such as the comparative mortality in the different infectious hospitals of the Metropolitan Asylums Board; the relative proportion of deaths occasioned by the more or less constant epidemic diseases; and the advantages of preserving open spaces.

OBSTETRIC MEMORANDA.

CASE OF EXTRA-UTERINE FŒTATION.

A.B., aged 24, married, with two children, was in her usual health, and moving quietly about the house, when she was suddenly seized with severe abdominal pain and vomiting, followed speedily by diarrhœa. She is said to have become black in the face on the first onset of symptoms, and very cold. I saw her about an hour afterwards, and found her pale and blanched, with very feeble pulse, and in a state of partial collapse. She was cold, and complained of pain in the lower part of the abdomen. She died eight hours after the commencement of the attack.

A *post mortem* examination was made, and a large quantity of fluid and clotted blood was found in the abdominal cavity. The amnion with its contained fœtus was found fully distended with fluid, and about one inch in diameter, and the placenta was completely separated from its attachment. Both were free in the abdominal cavity. The uterus appeared to be of normal dimensions. There were no signs of inflammation of the peritoneum.

Although the collapse was sufficiently marked to indicate some great loss of blood, the diagnosis was difficult from the absence of any history of injury or strain. The possibility of extra-uterine fœtation was suggested before death, from two menstrual periods having been missed. I have recorded this case as being interesting from the fact that the extra-uterine cyst was in its entirety, and that death clearly took place from internal hæmorrhage.

R. L. BATTERBURY, M.B.Lond., Berkhampstead.

THE USE OF ERGOT IN LABOUR.

MUCH was said in the recent discussion upon the use of the forceps, about the uncertainty of the action of ergot of rye. I have not the slightest doubt that this uncertainty is almost wholly due to the mode in which the drug is usually administered. In almost all labours, and especially in protracted ones, the patient's stomach is distended by large doses of tea and other fluids, and into this distended stomach a few drops of ergot (in some form) are put by the medical attendant. Under the special circumstances absorption is slower even than usual; and therefore the ergot, diluted with a quart or more of the fluid contents of the stomach, does not produce its characteristic effects, and the accoucheur is disappointed.

I do not believe in spurring a jaded horse; and, therefore, very seldom give ergot, except in cases where I have reason to expect *post partum* hæmorrhage. Then, just before delivery is complete, a dose of ergot injected deep into the gluteal region very rarely fails to secure perfect uterine contraction.

JAMES HICKINBOTHAM, M.D., M.R.C.P., F.R.C.S.Ed.,
Physician to the Birm. and Mid. Hos. for Women.

METRORRHAGIA AND ITS TREATMENT BY PLUGGING THE CERVICAL CANAL.

I SHOULD like to say a few words on this subject, referred to by the Paris correspondent, and also by Dr. Henry Bennet in recent numbers of the BRITISH MEDICAL JOURNAL.

At the Samaritan Hospital during the last ten years, I have attended over 10,000 women, among whom have been about 3 or 4 per cent. of cases of severe uterine hæmorrhage. When either impending abortion or "unrecognised polypus or uterine tumour" is suspected to be the cause of hæmorrhage, I infinitely prefer plugging the uterine canal with either a conical sponge-tent, or one of sea-tangle wrapped round with a strip of lint dipped in tincture of iodine, to using cotton, as recommended by Dr. Henry Bennet. While cotton is difficult to apply successfully, and is as a rule quickly dislodged, it is quite the reverse with the conical tents, which can be pushed home, are self-retaining owing to their expansion, and, by dilating the uterus, enable the subsequent recognition of intra-uterine tumours, or the escape of any foreign body, such as a dead ovum, that may be keeping up flooding.

At the present time, I have such a case under my care in the Samaritan Hospital. The poor girl, up to the time of her admission, had been losing excessively and almost continuously for over five years, and presented all the usual symptoms due to such heavy loss. I dilated the cervix by plugging with a conical tent, and after its removal was able to explore the uterine cavity, and found bulging from fibrous deposit in both the anterior and posterior walls, but no distinct tumour. I produced an eschar in each by means of the thermo-cautery, so as to set up interstitial absorption, and have given ten or fifteen drops of Bell's ergotine hypodermically every second day. All flowing has ceased, and the patient is doing well so far.

I quote the case because it is just such an one as Dr. Henry Bennet would have plugged with cotton-wool, which for the time might, under his skilful manipulation, have stopped the bleeding, but would have not enabled any of the further procedure necessary for the cure of such a case to be carried out.

Probably I have injected the unimpregnated uterus with solutions of perchloride of iron as frequently as any other practitioner. Since I have used water at about 120°, and a solution not stronger than one drachm to the ounce, as stated in a paper read before the Medical Society of London last winter, I have seen nothing but good accrue. It is, however, necessary that the os shall be several times larger than the instrument through which the solution is injected, or contraction may take place so as to prevent the escape of the fluid, which would consequently be driven up the Fallopian tubes and might set up mischief. It is shock, however, that has killed in some cases; and the hot solution prevents this in my experience. PERCY BOULTON, M.D., M.R.C.P.Lond.,
Physician to the Samaritan Hospital for Women.

TREATMENT OF SICKNESS DURING PREGNANCY.

THERE are, no doubt, cases of sickness occurring during the course of some pregnancies which tax the utmost resources of the attendant, and prove extremely distressing both for patient and physician. Some of these may require the dilatation of the neck of the uterus, so much recommended in recent publications; but for every day-practice, and to relieve the ordinary distressing nausea and vomiting, let me recommend a fair trial of pepsine wine.

To try this remedy fairly, the preparation should be of good quality, well made with light sherry or marsala, and prepared either from Morson's pepsine, or, better still, from fresh calves' stomachs, removing and rejecting the cardiac and pyloric portions; and when the wine is weak, fortifying it with a small amount of French brandy of the best quality, to prevent the putrefaction and decay of the animal matter. If, in cases of nausea and irritability of the stomach from any cause, especially early pregnancy, a fair trial be given to this preparation in drachm doses, repeated if required every hour, or two hours if necessary, it will prove a valuable agent in practice. I find it best to give with it cold chicken jelly in small quantities, to the exclusion of all other kinds of food. This jelly is best prepared by removing all the skin, fat, and bones of the chicken, and boiling the flesh alone to a fine jelly, a plan that yields a much better and more agreeable result than using the entire chicken. In severe cases of vomiting, this jelly ought to constitute the entire nourishment for the patient; and it is of great service, given with the pepsine wine, in the bowel and gastric attacks of infants, and the gastric fevers met with in young children. In pregnancy, I would recommend a dose of the pepsine wine immediately on waking in the morning, and after this some chicken jelly, cold or melted, the patient to rest in the recumbent position for at least an hour, and chicken soup to be repeated at intervals for a few days with the pepsine wine, and afterwards more solid food given, as it may be tolerated. In conclusion, I may add that I have found pepsine wine a most valuable agent in treating the nausea and vomiting met with in phthisical patients. WILLIAM FRAZER, M.D., Bournemouth.

BLEEDING IN PUERPERAL CONVULSIONS.

READING the case by Mr. Pollard, published in the JOURNAL for July 12th, and the remarks on the same subject in the JOURNAL of July 17th, by J. G. Swayne, M.D., induces me to record a few notes of two cases in which I have practised venesection for puerperal convulsions. Those gentlemen bled their cases to thirty ounces, whereas I did not take more than six ounces of blood in mine; and while I am convinced of the extreme value of venesection in suitable cases of puerperal convulsions, I think that small bleedings should be tried first, especially where any previous illness may have rendered the patient anæmic and reduced her strength.

Both of my cases were married primiparæ, aged respectively 19 and 22 years. Both, about a month previous to parturition, had been troubled with constipation, dysuria, scanty urine, puffiness of lower eyelids, and œdema of both legs. The first had frequently fallen asleep on a chair during the day, felt constantly drowsy and lethargic, and sometimes lay in bed for twelve hours at a time, during the same period.

The first case occurred November 26th, 1877. The convulsions commenced violently and suddenly about 5 A.M., each lasting from

twenty to thirty minutes, and five such occurred within four hours. The nearest doctor was present when I arrived. We found the child's head presenting, and the os uteri soft and dilatable. The convulsions were so severe and prolonged as greatly to endanger life; we therefore chloroformed the patient without delay, and delivered with straight forceps a mature living healthy female child. After removal of the placenta, the convulsions continued, and came on every twenty minutes or so; and as the patient seemed becoming exhausted, we prescribed cold to the head, quiet, and chloral hydras gr. xv and potas. brom. gr. xx every two hours for the first four doses, and every four hours afterwards till consciousness was regained.

On calling three hours after the delivery, I found the patient in a severe convulsion, the face flushed and bedewed with perspiration, and the pulse 130 to 140 per minute, small, feeble, and very compressible. As a *dernier ressort*, I bled at the arm to six ounces. The convulsions immediately ceased, the face grew pale, and the patient never had another convulsion.

Her head was shaved and kept cool, the bowels were attended to, and she had frequent moderate supplies of good nourishment, but no stimulants. She became conscious the second day after delivery (November 28th), and gradually regained her vigour and normal complexion. I ceased to attend her sixteen days after the confinement.

The second case, which occurred June 9th, 1878, was similar to the first in many respects; in both cases the convulsions came on before delivery, and continued after the uterus had been emptied of its contents. In this case, a midwife alone was present at the delivery (which seemed normal in every respect). The presence of the convulsions, their recurrence every forty minutes, and their violence, caused a doctor to be sent for, who prescribed in the emergency. After the case was handed over to me, I gave the chloral hydras and potas. brom. mixture as in the former case, and without any abatement of the convulsions.

On calling again, fifty hours after the delivery, I found the patient still unconscious and convulsed: her face was very much flushed, and both arms were in constant jactitation.

I took six ounces of blood from the left arm, and the patient at once grew pale and calm. She had no more convulsions. Three days thereafter, her intelligence and memory had returned, and she recovered gradually without a bad symptom.

J. Eaton, M.D., Cleator Moor.

REVIEWS AND NOTICES.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. xvii. General Anomalies of Nutrition, and Poisons. Translation. Edited by Albert H. Buck, M.D., New York. London: Sampson Low and Co. 1878.

FIRST NOTICE.

In the first part of this volume, the subjects of Hæmophilia, Scurvy, and Morbus Maculosus are treated by Immermann. They involve much valuable information respecting hæmorrhagic forms of disease, including their etiology, pathology, diagnosis, and treatment. We pass over these subjects to the larger and more important part of the volume; namely, Poisons. About six hundred and sixty pages are devoted to this encyclopædic article; in other words, we have here a treatise on Toxicology on a large scale.

The subject is divided into three parts. The first part, by Professor Boehm of Dorpat, includes poisoning by the metalloids, acids, alkalies, earths, and their salts, and poisoning by anæsthetics; a considerable space being assigned to alcohol, chloroform, and chloral-hydrate. Then follow some gaseous compounds, such as carbonic oxide; charcoal-vapour and coal-gas; certain carbon-compounds, including bisulphide of carbon, benzin, prussic acid, and allied substances; nitro-benzin, aniline and aniline-dyes, carbolic acid, and nitro-glycerine. Among the gases, sulphuretted hydrogen is introduced; and Dr. Boehm concludes his portion of the work by a chapter on tainted articles of diet. Here we meet with a full account of sausage-poisoning and of poisoning by fish and cheese. It will be seen from this description that no order is observed, and we nowhere find any attempts at classification or arrangement.

The second division of the work, including the heavy metals and their salts, as well as arsenic and phosphorus, has been assigned to Dr. Naunyn of Königsberg. The whole of this section is comprised in about one hundred pages.

The third and larger division is devoted entirely to the large class of vegetable poisons, and has been undertaken by Professor von Boeck of Munich. This is the most elaborate portion of the article on poisons, comprising about three hundred pages; and it includes a large amount of recent information on this class of substances.

Although the subject is differently treated by the three writers, they agree in the fact that they bring before the reader a very full and complete modern history of poisons in a medical point of view. Each writer devotes his space chiefly to the physiology, pathology, and treatment of poisoning, with a general disregard of chemistry and medical jurisprudence. The only exception to this remark is that von Boeck enters into a description of the processes for the separation of vegetable poisons from organic substances, and the tests required for their recognition.

We shall, in the first place, examine Dr. Boehm's contribution to the *Encyclopædia*. Considering how seldom we have to deal with cases of poisoning by chlorine, bromine, and iodine, we think that Dr. Boehm has allotted an undue space to these metalloids, to the exclusion of more important details of other poisons which form a more frequent subject of inquiry. The extensive use of Bromide of Potassium as a medicine has in some instances, by the largeness of the dose or its too frequent repetition, led to the morbid state to which the term *bromism* is here applied. This state is indicated by disorders of the central nervous system, as well as of digestion and nutrition, and by affections of the skin. Among the symptoms noticed are general tremors of the muscles, irritation of the skin, restlessness, and nervous agitation. Single large doses have caused a saline taste in the mouth, increased secretion of saliva, and nausea, with nervous disturbance lasting for eighteen hours. Among these symptoms, Laborde, who experimented on himself, observed depression of spirits, dizziness, disturbance of vision, somnolency, and sleep with bad dreams. There was a diminution of the power of voluntary movement, and an unsteadiness of gait, with a blunting of sensibility. The power to resist the action of the drug varies very much in different individuals. (P. 316.) As to treatment, when the symptoms of bromism are thus fully brought out, Boehm tells us it is sufficient to intermit the use of the drug. The toxic symptoms then cease of themselves. At the same time, the treatment may be supplemented by a strengthening diet, warm baths, and diaphoretics. There is no specific antidote. (P. 321.)

In the section on Anæsthetics, alcohol and alcoholism occupy a conspicuous place. Acute and chronic alcoholic poisoning are fully considered, and numerous authorities are quoted in support of the writers' views. He strongly dissents from the opinion that alcohol in any form improves digestion. Claude Bernard has proved by experiment that, so far from increasing the secretion of gastric juice, alcohol has exactly the contrary effect. In fact, it brings about a diminution of all secretions. Bernard found that he could check digestion in the stomach of a dog, when the process had commenced, by simply introducing alcohol. It is a novelty to hear of mild forms of intoxication resulting from the common application of alcohol or spirits of camphor to wounds under surgical treatment. (P. 390.)

It is well known that the consumption of the liqueur call *Absinthe* has reached enormous proportions in the large towns of France. Besides alcohol, it contains several ethereal oils (anise, fennel, etc), of which the most important is the oil of wormwood; and to the presence of these, no doubt, the great difference from the customary effects of alcoholism is really owing—namely, the frequent occurrence of well-marked epileptic convulsions.

In reference to the danger arising from Chloroform-narcosis, special prominence is given to anomalous conditions of the heart. Dr. Boehm agrees with Sansom that simple valvular incompetency, in the absence of fatty degeneration of the cardiac muscles, does not render chloroform more dangerous or contraindicate its use. "Unfortunately, however, the one pathological condition of the heart which seems to be really a predisposing cause of the bad effects of the narcosis—fatty degeneration of the cardiac muscles—is, as a rule, diagnosed first on the *post mortem* table." (P. 429.)

In reference to Nitrous Oxide, the author observes that "some few fatal cases, which have occurred either during or after the narcosis, show that it is not absolutely devoid of danger. These, however, appear to be solely and simply due to suffocation; and the gas itself appears innocent." (P. 455.) He properly calls attention to the fact that, when the pure unmixed nitrous oxide is used, the narcotic effects of the gas are always combined with the first stage of suffocation. Hence deep narcosis speedily occurs, during which operations only lasting a few seconds (as in tooth-drawing) can be performed quite painlessly and safely. It follows as a matter of course that, if the operation be prolonged to a period of a few minutes, death by suffocation must necessarily result. As loss of consciousness and anæsthesia also occur in the first stages of suffocation, without breathing any narcotic gas, it is somewhat doubtful how far the gas participates in the effects when used in dental practice

in the manner described. (P. 455.) It is, therefore, a serious question, whether dentists are not really operating in these cases on patients whom they half-suffocate by entirely withdrawing the supply of air. Experiment has shown that a dog may be deprived of air during a period of three minutes and fifty seconds, and then recover without any artificial means; but a difference of only twenty seconds may be the difference between life and death. Thus, if the animal be deprived of air for four minutes and ten seconds, he will probably die suffocated.

In reference to Carbonic Oxide, the author notices that it displaces oxygen from the blood and enters into combination with the colouring matter of the blood, in such a way as to render this incapable of absorbing more oxygen. The outward sign of this change is manifested by a peculiar bright cherry-red coloration of the arterial as well as venous blood; whilst in the spectrum of blood containing carbonic oxide the two usual bands of oxyhæmoglobin are replaced by two others, which appear nearer to the violet end of the spectrum; and these carbonic oxide bands exhibit the special character of *not* vanishing on the addition of reducing agents like those of oxyhæmoglobin. (P. 457.) We are further informed that the compound of hæmoglobin with carbonic oxide is crystallisable, just like oxyhæmoglobin. We agree with the author that this relation of carbonic oxide to the blood, which equally occurs in the living body, helps to explain the poisonous properties of the gas, as it makes the further reception of oxygen, and therefore life itself, impossible. The whole mass of the blood is, by its diffusion, speedily robbed of its vital properties.

In the chapter on Prussic Acid, we are informed that the blood-pigment forms a crystalline compound with this poison analogous to that of carbonic oxide. But there is this important difference in the two cases: in poisoning by carbonic oxide, the combination has been demonstrated in the blood of the living animal; but not in poisoning by prussic acid. Schönbein has shown that this poison changes the vital properties of the red blood-discs, and robs them of their power of liberating oxygen from the peroxide of hydrogen. (P. 502.)

In treating of Carbolic Acid poisoning, Boehm observes that it usually runs a very rapid course, and is rarely protracted. All the hitherto noticed fatal cases have proved so within the first twelve hours; some, indeed, after only a few minutes. Even when recovery takes place, this is usually sudden, and does not leave behind it any noteworthy complications. (P. 531.) In its operation on animals, this poison produces symptoms of irritation on the medulla oblongata; but this has not been witnessed in human beings.

The vapour of Bisulphide of Carbon, which strongly impregnates the atmosphere of India-rubber factories, so as to penetrate the skin and hair, has been observed to produce highly prejudicial effects. Digestion is impaired, and the workpeople suffer from severe colic. In the early stages, diarrhœa and constipation alternate with each other. There is troublesome flatulence, the intestinal gases being strongly impregnated with the unpleasant smell of bisulphide of carbon. The urine, which is passed with a painful sensation of scalding, has a similar smell, but contains neither albumen nor sugar. The vapour appears to produce some remarkable effects on the sexual organs. Thus the sexual passion, which is increased at first, rapidly declines at a later stage, and finally there is a complete moral and physical impotency, with a decrease in the size of the testicles. Among women, it is observed that "menstruation always takes place prematurely, and is more profuse than it should be. They never have a child, and their sexual appetite becomes entirely lost." (P. 482.) It would seem that persons who have been long exposed to breathe the vapour of the bisulphide seldom or never completely recover from the effects.

In the chapter on poisoning by Sulphuretted Hydrogen, the author enters into the curious question of self-poisoning by this gas. Thus it is supposed that, under some peculiar conditions, the living body may be self-infected by the generation within itself of sulphuretted hydrogen from albumen or other matters. The number of recorded cases of this kind is very small, and the necessary conditions for their occurrence are as yet little known. (P. 491.)

We must refer the reader to the work itself for a full and satisfactory account of Sausage-poisoning (*Botulismus*). This is essentially a German question. Dr. Boehm is able to supply from the medical journals of his own country, a long array of cases showing the injury to health and the mortality arising from this cause. The only treatment found successful has been the free use of energetic evacuants. We look in vain for any explanation to account for this form of poisoning. Nothing positive can be said as to the nature of the poison, except that it is very probably the result of slow putrefaction of animal substances. Chemistry, however, has not been able to separate any independent poisonous ingredient. The author states that the pathology of sausage-poisoning "is highly obscure; that it differs widely from all other kinds, and cannot well be compared with any of them". It differs also from the effects produced by trichinous, diseased, or putrefied flesh. It has a tedious course, extending over many days and sometimes weeks. These facts "point to processes of change going on in the blood which do not occur in other kinds of poisoning, where we simply have to deal with the absorption and elimination of a foreign body from the system". (P. 537.) It will be seen from these observations that the author leaves this difficult question just where he found it. We gather from his remarks—1. That the meat used for sausages is insufficiently cooked; 2. That it is mixed with a variety of incongruous substances, such as milk, flour, brains, onions, herbs of various kinds, including *Geum urbanum* (bennet-root), and large masses of fat. "The putrefied sausages, when recently cut across, have a dirty greyish-green colour and a soft cheesy-like creamy consistence. They diffuse a very disagreeable smell of putrid cheese. The taste is disgusting, and sometimes causes smarting or soreness of the throat." (P. 541.) We should have thought that in these repulsive characters there would be sufficient warning to prevent the noxious substance from being consumed as food. This form of poisoning, although common in Germany, is rarely seen in England.

The same obscurity seems to rest on the nature of Fish-poison and Cheese-poison, to which subjects Dr. Boehm devotes two chapters. Poisoning by cheese has been occasionally observed in England. "All that is known is that it is usually very old and decomposing or decayed cheese, the use of which by human beings has caused the symptoms of poisoning, whilst animals have partaken freely of it without any harm. The author knows of a case in which a dog ate a whole plateful at once of a poisonous cream-cheese which had been reserved for analysis, and not the slightest symptoms of poisoning were shown by the dog, although he was watched for many days." (P. 552.) There are no external marks by which poisonous cheese can be certainly identified. The taste has been described as bitter and pungent; and the effects consist in general of well-marked gastro-intestinal symptoms, with colicky pains, vomiting, diarrhœa, and disgust at all sorts of food. Then, again, in severe cases, nervous symptoms have shown themselves in the form of vertigo, diplopia, headache, great weariness, and muscular weakness. Cases of cheese-poisoning, like those of sausage-poisoning, are seldom restricted to solitary cases. In general, a number of persons partaking of the food are attacked at once with similar symptoms. Dr. Boehm adopts the theory that the cheese undergoes, not ordinary decay or putrefaction, but "a species of putrefactive decomposition, the products of which are poisonous to human beings". If ordinary decay or putrefaction were the cause, it is obvious that the eaters of Stilton cheese would be frequent sufferers, as this is seldom eaten until putrefaction is far advanced. This theory, however, is not consistent with the following remarkable fact stated by the author. "Husemann relates a case in which a mother and an infant at the breast both suffered from symptoms of cheese-poisoning, so that it would appear that the poison had passed into the woman's milk." (P. 553.) We gather from this that the author admits the existence in cheese of an independent poison not yet isolated by chemistry. It is not suggested that the infant at the breast ate any of the cheese; and we must, therefore, draw the conclusion that some specific poison was in this case absorbed into the blood of the woman, eliminated in her milk, and thus conveyed into the body of the infant, producing the usual symptoms of poisoning.

With this Dr. Boehm concludes his share of the encyclopædic article on Poisons. As about two hundred and seventy pages are devoted to this section, we may look upon it as a treatise on a certain class of poisons in their medical, physiological, and pathological aspects. We consider that the author has executed his task with great skill and judgment. He has collected and condensed from every available and authentic source a large amount of useful information of the most recent kind. By excluding all chemical details, he has been able to give full scope to modern views on the physiology and pathology of poisons. His portion of the work, therefore, will serve as an useful supplement to treatises of a practical kind.

NOTES ON BOOKS.

Short Notes on Foreign Books.

Die Bewusstlosigkeitszustände als Strafausschliessungsgründe, im Sinn der neuesten deutschen, österreichischen, und ungarischen Strafgesetzgebung. Von Dr. Otto Schwartzer. (Tübingen, 1878.) The author is the director of a private asylum for mental sufferers, and has, as such, had a great deal of experience on the subject. His main object in writing this pamphlet was to throw a light on some peculiar mental affections, which, being differently judged by doctors and lawyers, often cause great difficulty in cases where a judgment has to be passed.

INTERNATIONAL CONGRESS OF MEDICAL SCIENCE, AMSTERDAM.

THE International Congress of Medical Science was held in Amsterdam during the week from September 7th to September 13th.

Amsterdam, September 13th, 1879.

The sixth International Congress of Medical Science was opened here on September 7th, under the presidency of Professor DONDERS, before a large and brilliant audience of upwards of five hundred medical men assembled from all parts of Europe. The general meetings were held in the great hall of the Parc, an extensive building situated in a large garden and opposite to the Zoological Gardens—only surpassed in Europe by those of London—and furnished with museums, lecture-rooms, and reception-rooms, in which most of the Sections were accommodated. Among those present were MM. Virchow, Lister, Verneuil, Palasciano (Naples), Warlomont (Brussels), Sayre (America), Ernest Hart (London), elected Honorary Presidents of the Congress; Tilanus and Gaye, Organising Secretaries; Amadeo (Lisbon); Clementi (Catania); Eulenberg and Hüter (Greifswald); Finkelburg, President of the Council of Health, Berlin; Holmgren (Upsala); Madame Jacobs, M.D. (Amsterdam), the first lady graduate of that University; Kraus (Vienna); Lubansky (Cronstadt); Letieraut, Lucas-Championnière, Professor Bouchard, Professor Hayem, M. Dechambre, M. Lutaud (Paris); Mazzoni (Rome); Mouat, Hardwicke, Chadwick (London); Stokvis; Semmola; Sanders; Dr. Berkart; Dr. Ogston (Aberdeen); Professor Marey; Dr. Landowsky; Professor Halle (Prague); Professor Bouchut (Paris); Professors Crocq, Jansenns, Delstanche (Brussels); Turnbull (Philadelphia); Cassells (Glasgow); Gayet (Lyons); Le Dentu, Damaschino, Gariel, Landolt (Paris); Snellen (Utrecht): Kuster, Schmitzler (Vienna); Stilling (Cassel); Saemisch, Rosenstein (Berlin); Voltolini, Menière, Zehender (Rostock); Coni (Argentine Republic); Marcovitch (Roumania); Revelliod and Reverdin (Geneva); Farioli (Naples); Gallard and Leblond (Paris); and a host of other well-known names in medicine throughout the world, those which we have noted being selected haphazard from among those with whom we happen to be personally acquainted among European notabilities, and not as representing by any means the full intellectual strength of this very remarkable assemblage.

The President, Professor Donders, who was received with great warmth, delivered an eloquent and profoundly thoughtful address, inaugurating the Congress, of which we print the greater portion below, at page 455. The address was delivered in French, in which language the greater part of the proceedings was conducted. The two languages officially admitted for public use in the Congress were French and German; most of the documents being printed in both languages, and the addresses or papers being communicated in one or the other, according to the nationality of the speaker. Most of the German members of the Congress used their mother tongue. In the previous Congresses, French was the only language officially recognised; but in Amsterdam, where there was, as might be expected, a considerable number of Germans, and of Dutch physicians to whom German is more familiar than any other foreign tongue, the facilities accorded for the use of that language were useful, and did much to facilitate the proceedings of the Congress and to complete its international character. The greatest cordiality prevailed throughout among the members of the different nationalities present; and as a large number of the Dutch professors and doctors speak English, there was little difficulty for any Englishmen who might not find themselves at ease in talking other than their own tongue in making themselves understood, and finding pleasant and learned companions, among the Amsterdam, Leyden, and Utrecht professors, who exerted themselves in every possible way to make the Congress successful. Among rhose who took a very prominent part in the proceedings, besides Professors Tillanus, Stokvis, and Gaye, who were the pivots around which all the business turned, were Drs. Geuns, Fabius, Oberbeck de Meyer, Egeling, Israéls, De Perrot, Zeeman, and Heynsius. The following were nominated Presidents of Sections: Professor Rosenstein (Medicine); Tillanus (Surgery); Halbertsma (Obstetrics); Heynsius (Biology); Oberbeck de Meyer (Public Medicine); Ramaer (Psychiatry); Snellen (Ophthalmology); Van Hoek (Otology); Stokvis (Pharmacology).

In the evening, the municipality of Amsterdam hospitably received the whole of the members of the Congress at the Hotel de Ville. The Burgomaster, in his official robe, surrounded by the Municipal Councillors, delivered an address of welcome, to which a response was made by delegates of Germany, France, and America. M. Verneuil spoke with much humour and tact, but the honours of the evening were for America, whose representative, Dr. Sayre of New York, hailed Amsterdam as the mother-city of New York (once New Amsterdam), and as the mother of much of the solid industry, prudence, and endurance which the old Knickerbrocken had shown in founding New York, and had transmitted to their successors. The rooms of the Hotel de Ville, finely decorated with masterpieces of Vander Holst, Bol, and others of the Dutch masters, were filled with a large company of both sexes, who were received with great hospitality.

Next morning, the Sections entered upon their work at 9 A.M., and on every subsequent day the Sections opened their work at nine and went on till noon, when the members adjourned to mid-day breakfast (or luncheon), and reassembled at half-past one o'clock in the Great Hall of the Parc. The main business of the Sections will be found analysed below. The arrangements for reporting discussions were the more difficult that there is but one stenographer in Amsterdam who understands any other language than Dutch sufficiently well to report in it. Under the circumstances, the report of the discussions and speeches must be very much with the members themselves; and it would be very desirable, at all future Congresses, to accept beforehand that view of this highly important subject, and to make it part of the arrangements of each Section, that every person, after speaking in debate, shall there and then write out briefly the substance of his remarks, and hand it in to the Secretary of the Section before quitting the room. Convenient tablets and forms should be prepared for this purpose, and immediately after a speaker has addressed the meeting, a blank form, with printed instructions, should be handed to him by the Secretary or an assistant.

Further, it is very desirable that every person reading a paper should be called upon, before his communication is allowed to be made, to forward a copy of the text, and also a short abstract of it. The former can be reserved for the *Transactions*, the latter printed, and copies placed at the disposal of the Section and of the press. This was done from the conclusions of certain questions of the programme. It would be very desirable that it should be done for all. At such a Congress as this, which aims at being represented by all the medical papers of Europe, and has no organ of its own, it is especially desirable that such facilities for report should be furnished and carefully organised, and in this respect there is much room for improvement; otherwise, it is only fair to say that the arrangements, multifarious as the wants to be met, were admirably planned and carried out, not only with polyglott intelligence, but with the utmost method, courtesy, and accuracy, entirely by volunteers among the medical and non-medical friends of the city.

The general meeting of the second day was occupied by Professor A. Becker, who read, in German, a very able paper on localisation of cerebral disorders in relation to ophthalmic studies, which elicited a further communication on the same subject next day from Dr. Bouchut of Paris, whose continuous and artistic "cerebroscopic" studies have been carried on with ardour for many years. Professor Becker was followed by Dr. Chevrin, who enumerated his views of the cure of stammering with the contagious ardour which stands a propagandist in such good stead.

At eight o'clock in the evening, the members of the Congress were present at a musical *fête* offered to them by the Hereenigung Club, where the ladies of Amsterdam were assembled in great force to take part in the graceful and hospitable welcome which the city accorded to the Congress.

The public meeting of Tuesday was principally devoted to an address by Prof. Lister, in reply to various objections which have been made to the antiseptic system. Professor Lister was received by the whole Congress with an enthusiasm which knew no bounds. When he stepped forward to the desk to open his address (which was delivered, with but few notes, in improvised French), the whole assembly rose to their feet; and, with deafening and repeated rounds of cheers, waving of hats and handkerchiefs, hailed the distinguished Professor of King's College with acclamations renewed minute after minute, and time after time, as his name was again and again shouted forth by some grateful and enthusiasticacolyte. This remarkable scene—unprecedented, we imagine, in the history of medical science—continued for some minutes, until Professor Donders, the President, advancing with the distinctive grace and dignity for which he is remarkable, and taking Professor Lister by the hand, as he stood overwhelmed with this magnificent ovation, obtained a moment's silence, and, addressing him, said: "Professor Lister, it is not only our admiration which we offer to you; it is our gratitude, and that of the nations to which we belong." After much further cheering, Mr. Lister delivered an address, of which I hope to be able to furnish you later with the text; in which he answered with great vigour some

of the objections which have been urged theoretically and practically to the antiseptic method. He briefly set forth the scientific basis on which the theory rests, describing the simple means by which urine freshly passed and protected from the admission of septic germs may be indefinitely preserved without undergoing change; he referred to his experiments on the specificity of the bacterium concerned in lactic fermentation, by way of part answer to those who object that certain bacteria not known to be specific may be found beneath antiseptic dressings; and, on this subject, more particularly to Mr. Watson Cheyne's recent researches on the bacteria of wounds; to those who allege favourable results without antiseptic precautions as a reason for putting them aside, he replied by giving reasons for believing that living animal tissues in sound states do oppose the pullulation of specific or septic bacteria—as may be seen most commonly in hare-lip operations and other cases where a layer of animal fluid effused between two walls of healthy animal tissue does not undergo putrefactive change, as it would if placed between two walls of glass or gutta-percha or any other dead substance. Mr. Lister further claimed that those who allege their successes under ordinary modes of dressing, and consider them comparable with the successes of antiseptic surgery, can hardly know what the successes of the antiseptic surgeon really are. Let them say what would be their results in opening a series of psoas abscesses, or a series of knee-joints. It is difficult to imagine that anyone who is aware of the immunity from suppuration and putrefaction with which these operations can be performed antiseptically can seriously claim an equal power for another mode of treatment. Finally, referring to the complaint that, in the inculcation of antiseptic methods and the creation of the antiseptic system, there was a tendency to set aside the philosophic investigation of "constitutional conditions" as a basis of treatment, Mr. Lister said that it was one of the glories of antiseptic surgery that it set the patient so free from what were formerly known as the "surgical risks" of operation, prolonged suppuration, traumatic and septic fever, constitutional irritation, pyæmia and the like, that it was only in quite exceptional cases and conditions that the operator had to ask himself any question of the kind. The questions of diathesis were not so much neglected by the antiseptic surgeon; they were rather removed out of the way by the antiseptic method, and taken into another category. Mr. Lister's address over, the Congress adjourned.

The Committee of Reception gave a banquet in the evening to fifty of the leading members of the Congress—*chez* Sommerdyk-Bussfink, a culinary artist of high order, if not to rank among the best *chefs* of Europe. Afterwards there was a fête, in which all Amsterdam took part, at the Palais de l'Industrie.

On Wednesday, according to precedent, the labours of the Congress were suspended: the day was devoted to amusements. Upwards of three hundred members of the Congress, with many ladies accompanying them, made an excursion in steamboats provided for the purpose to Ymmuden, to inspect the new canal which connects Amsterdam with the North Sea. This canal, which is as large as the Suez Canal, brings Amsterdam within two hours' distance of the North Sea, and is not only a work of great interest and singular magnitude, but is understood to be a monument of rare engineering skill even in Holland, where the secret of rescuing whole provinces from the sea, and of maintaining, by pumps, windmills, dykes, and canals, a dry land far below the level of the surrounding water has been a national tradition for centuries.

In the evening, M. Marey gave an eloquent discourse, illustrated by experiments, on the Circulation. On Thursday, M. Verneuil occupied the general meeting with a very interesting academic address on the subject to which Mr. Lister had already referred, Diathesis in Disease. M. Verneuil has a favourite text, that "le traumatisme bat le rappel des diathèses". It is a classic subject: he did honour to the manes of the great surgeons of the past, French, German, and English, who found in it a fruitful theme. Mr. Lister had demolished unconsciously, by anticipation, much of the ground on which M. Verneuil's predecessors thought they had a firm hold and had left him but a narrow territory on which to skirmish. He was able to avail himself of it skilfully, and with the trained power of exposition which many Paris professors possess, and none in a higher degree than M. Verneuil. On the whole, however, the subject seems at the present moment rather to lack individuality. Other communications of a minor interest were followed next day by an elaborate address on Education by M. Virchow, which must be read in the text before an English critic can pronounce upon it. Professor Virchow's reception by the meeting was very enthusiastic, both on this and subsequent occasions. In the evening, he delivered a learned address to a large audience on the Troad, where he has recently been supplementing the researches of Dr. Schliemann by anthropological and geological studies, of which the results will appear in a forthcoming chapter in Schliemann's expected volume to be published in London.

Later in the evening, there was again a musical *fête* in the Gardens of the Parc, with fireworks and set-pieces showing figures of Hippocrates and Hygeia. On Friday evening, Dr. Sayre of New York gave a splendid banquet as American delegate from the American Medical Association, at which forty or fifty leading members of the Congress were present, as well as the American Consul and the principal "échevin" of the city. This was followed by a special representation at the Summer Theatre of scenes from plays of different countries, to which all the members of the Congress were invited; and where the fashion and beauty of Amsterdam were also present by invitation. In the course of the evening, two artistically dressed *tableaux vivants* were presented on the stage, arranged by a well known artist. The one was taken from the well known print of Ambroise Paré dressing a wounded man on the field of battle, surrounded by a numerous assistance; but in lieu of Paré a similitude of Lister was presented, and in the foreground an immense *foyer* of carbolic acid. The idea was immediately seized, and from the whole theatre there rose such an universal acclamation, with continuous ovation to the name of Lister, that it was only after Mr. Lister had, under compulsion, bowed his acknowledgments from his place, and after the curtain had risen and fallen three times, that the enthusiasm subsided. Another *tableau* presented was that of Rembrandt's famous Anatomy Lesson at the Hague; but in allusion to the recent graduation at Amsterdam University, for the first time in Holland, of a lady as Doctor of Medicine, the figures were those of ladies attired in black, the principal figure presenting a noticeable likeness to Miss Jacobs, the newly fledged M.D., who attended throughout, together with Mrs. Hoggan, M.D., the meetings of the Congress. The *tableau* was received with polite applause.

The sections, which, as will be seen from our subjoined summary, continued to work throughout the week (except on Wednesday), closed their proceedings on Saturday at 11 o'clock. At the final general meeting, Professor Donders asked the general assembly to say where it wished to hold its next meeting. M. Warlomont of Brussels rose, after a short pause, and proposed that the next (seventh) Biennial International Congress should be held in Great Britain. The previous Congresses had been held in Paris, Brussels, Florence, Vienna, and Geneva; and he believed that the members ought now to express a desire to hold their meetings on British soil. Professor Donders asked the meeting for an expression of its wish on the subject, when it was decided that the Congress expresses its desire to hold its next meeting in Great Britain, and authorises the officers of the present Congress to take such steps as may seem most desirable to carry out that object.

Professor Lister said, after the unanimous vote at which the Congress had just arrived, he desired to say only that he should be happy to assist in welcoming the Congress to the city which they might desire to visit. Mr. Ernest Hart added, that if the time selected for the International Congress should be such as to enable the members of that Congress also to visit the meeting of the British Medical Association of 1880, he felt sure that he might promise to all such foreign visitors to the meeting of the Association a most cordial welcome.

A deputation of the Medical Society of the Netherlands then ascended the dais to offer to Professor Donders the hearty, respectful, and admiring vote of thanks to which eloquence, dignity, learning, and admirable tact in a most difficult post more than entitled him. Professor Donders, with much justice, pointed out how many of these difficulties had been smoothed by the unwearying energy, intelligence, coolness, and courtesy of Dr. Guye, whose qualifications as General Secretary were of the highest order. The formal proceedings terminated amid much effusive and cordial exchange of salutations.

In the evening, the members united once more at a *Banquet d'Adieu* where one hundred and thirty sat down to dinner, under the presidency of Professor Donders. There was much eloquent speech-making in all languages. By request, Mr. Hart proposed a toast, "To our next happy meeting." He said it was not the custom for sovereign personages to accept invitations, but to intimate their intentions, which every one endeavoured to realise within the limit of their means. That Congress, representing the sovereign principle of unity, liberty, and fraternity in medical science, had designated Great Britain as the country in which it desired next to assemble, after having visited so many other countries of Europe. It would be for the medical profession to receive that communication; and there were in England traditions of fraternity and hospitality which made him hope that the task of those to whom the Congress had entrusted its wishes might be satisfactorily accomplished.

The banquet, which began at six and terminated at nine—a most wholesome example adopted at all the banquets, and much to be commended—was followed by a very picturesque scene, which brought the festivities to a fitting termination. The company had adjourned to a fine *salle* over the banquetting-room, when a *fanfare* of trumpets with-

out in the street below drew all present to the balconies. Amsterdam is the Venice of the North; and below, on the narrow way bordering the canal, stood corps of trumpeters and the civic band, with a body of students—military, medical, and in arts—the whole scene lighted by an army of torch-bearers. The students had assembled to do honour to the Congress; and, after some cheering and playing of national airs, a deputation ascended to the hall, and delivered an address to the Congress, to which Professor Donders made a brief but admirable reply, and MM. Virchow and Gariel each in turn said a few earnest and enthusiastic words to the students of Amsterdam. Renewed cries, however, were raised for Lister, and once more Mr. Lister was the subject of an ovation which was as picturesque as it was enthusiastic. The effects of the trumpeters, the uniformed students, the surrounding crowds beyond them, backed by the gleaming canal, and the fine rows of buildings, were worthy of the home of Rembrandt's greatest works, and the whole scene was one of rare animation and fairylike beauty. Finally, as Professor Virchow was leaving the building, he stepped out among the crowd of students still waiting to cheer their departing guests; and, in response to their reiterated cheers, began to address them in a strain of brilliant and heartfelt eloquence, which flowed on until it grew into an address of such brilliant, noble, and earnest words as few men can command even in their happiest moments of inspiration. It was of sparks of fire, and fell upon the ears of his delighted young audience, inflaming them to noble aspirations, to the courage of warfare, to the love of truth, to the onward march of science, to the rending asunder of superstitions and hatreds; full of hope, full of promise, full of solemn warning—it was such an address as makes an epoch in many a young life, and was a noble termination of a congress which typified much that is excellent in science, hopeful in progress, and worthy of commemoration in history.

INTRODUCTORY ADDRESS BY PROFESSOR DONDERS.

Allow me, gentlemen, to say a few words on the nature, the diversity, and importance of our labours. I shall have attained my object if I succeed in putting before you science and medical art as they appear *in statu nascendi* in our programme, and as they will gradually develop in your communications and discussions. We shall treat of the questions of the day—of doubtful points that require a more thorough investigation—and wait for a solution, not by the shock of opinion, but by well authenticated facts that have been carefully weighed in your minds, and which you all will contribute. In speaking of the history of the various problems which are now before you, I shall not go any further than merely to give you a short sketch of their origin. In speaking of science and art, I meant medical science and the art of healing in the strictest sense of the word. There is an art of a superior order, which is neither the offspring of science nor of technical art, but which manifests itself in both, and gives them that stamp which we admire in purely æsthetic masterpieces. In our sphere, this art seems to enter into regions that are inaccessible to our senses; it manifests its power not merely by material means, but also by words which find an echo, by a look which inspires confidence, by an expression of sympathy which becomes a benefit. I mean the intuitive identification with the patient. But it is not my intention to speak of this art. How could I? It is of a superior nature; it is a divine gift that cannot be communicated to others, or rendered more perfect by discussing it. But the art I mean is simply the art of healing in the strictest sense of the word. And in this sense, I ask, first of all, what are the relations between art and science? I have been trained in the eclectic school of rational medicine. Our learned and respected professors were proud of belonging to it, and looked upon the name of rationalistic physician as upon one of their proudest titles. He who would have dared to treat diseases, the nature of which was unknown to him, with drugs with whose effect he was unacquainted, would have been looked upon as a crude empiric. The precepts of therapeutics were represented to us as forming the basis of the practice of medicine. And the rules of the latter were classified as so many methods of treatment by which we were to battle successfully against as many classes of diseases. We were told to follow nature humbly, perhaps to guide it, but never to force it. These words contained the clue to the mystery. You observe in what a *naïve* way we had succeeded in lulling our ignorance to sleep with illusory knowledge. We had given ourselves up to the charms of a foolish security, which had sprung from a true veneration for vital force and the *vis medicatrix* of nature. This condition, however, could not last. Henle arose; and, in the words of Moleschott, the scales fell from our eyes. We cannot help admiring his style of writing, and the clever irony or the vigorous sarcasms with which he tore asunder our sweet illusions, and drove the last of the teleologic ideas from its place of refuge. We understood him the better as the vital force had already succumbed under the picturesque mode of expression of Mulder and Du Bois-Reymond's powerful language. And when the law of the conservation of forces had been formulated by Robert Mayer, and the nature of force and labour had been clearly understood, those who still clung to the beloved image saw that they had been pressing a phantom in their arms. It only remained to prove that the relations which existed between the outer world and the organs and organisms could be traced back to a harmonious unity, and that the latter could be explained by the laws of custom, exercise, and heredity. This took place in 1848; that is to say, at a time when Lamarck was still forgotten; and Darwin had not yet spoken. And in this manner the doctrines of teleology everywhere lost their power.

As far as our art was concerned (with the exception of the mechanical methods), the reaction was so strong in certain schools that the people were inclined to do away with everything. Therapeutics were abandoned, and pathological anatomy was raised up in their stead. For it had been forgotten that both the latter and semeiotics only consider the morphological part of the process, and not the disease itself, and that they entirely overlooked their causes. But this was only transitory; and the right road was at last found. The types of disease were not taken from the dissecting-room, but at the bedside of the patient, by studying the active causes. After the types had once been thus established, the revelations given by necropsies were often merely the morphological complement. With the aid of these types, the art of healing was built upon a purely empirical basis, and the true link between theory and practice had been discovered. From the natural sciences to which he still remained attached, the physician borrowed the exact method which is peculiar to them, and the various methods of investigation; and, guided by physiology, he endeavoured to penetrate on one side to the causes, on the other side to the meaning and the relation, of the symptoms. At the same time, the cellular theory was throwing a new light on the processes.

This spirit still reigns in our clinics; and, if I am not mistaken, the communications which our masters are going to reveal to us will bear witness to it. But, say you, is not this sketch perhaps of rather too local a colouring? Has not, perhaps, your attention been drawn exclusively to the German school, of which the Dutch school is a great ally? I must confess that both medical art and science followed a different way in France. A hundred years ago, there were born in France some men who laid the foundations on which the French school has been since built up, and to whom it has remained true. While in other countries the minds had gone deep into philosophical speculations, the French school sought and found its salvation in anatomo-pathological researches, and in corresponding semeiotics; and, at the same time, it went back to the true principles of general anatomy. Laennec and Corvisart were inspired by the spirit of Bichat, which had already begun to manifest itself in Pinel. I well remember, gentlemen, the impression which the researches of Lallemand made on us when we were students, and the model clinics of Andral, who was quoted in Germany by those who desired to free themselves from the bondage of the schools. Another remarkable man was Ricord, that great observer in his special department. However, so far as regards principles, this generation did not rise much above the level which had been attained by its predecessors. The positive spirit which had broken off from ontological conceptions had not yet vindicated all its rights in France. At the same time, the discipline of pathological histology had not yet found anyone who was capable of advancing it. We must therefore not be surprised when we see that Claude Bernard is considered in France as the founder of general physiology. In Germany, the strong reaction which had been caused by long wanderings had swallowed up vitalistic theories. Not so in France. We all respect Claude Bernard. For few individuals possessed greater technical abilities, a greater power of observation, a more strict method; few people had fewer prejudices, and were more untiring critics of themselves. All this was applied to questions most of which had been well put and were answered by brilliant discoveries. And so many rare qualities were combined in one of the most amiable individuals that ever lived! When we remember all this, it is easy to understand why his country rendered to the remains of the great naturalist those marks of respect which hitherto had only been granted to statesmen and warriors. But it would be a mistake to attribute to this venerated teacher the foundation of general physiology. He understood its true principles, and cultivated them, and contributed much towards spreading them in his own country. But this would have been much less important if foreign science had been received more freely in France.

While thus the French movement was communicated to the Southern countries and the German movement to the Northern countries, who in their turn did not lack spontaneity, England progressed slowly, with grave and measured steps, its eye fixed more on practice than on science. It paid but little heed to theories, and continued to educate its

"practitioners" in the hospitals. And the physicians who had thus been educated were at once consummate practitioners and worthy disciples of its great philosophers. Their names are closely connected with immortal discoveries in the domain of physiology. You see yourselves, gentlemen, that a large proportion of the questions that appear on our programme tend to show forth this relation between science and practice. You find it in the endeavour to test the auditory acuteness, in the explanation of the sounds and murmurs of the circulatory system, and in the experimental and mathematical analysis of the sphygmographic curve. Both these papers have sprung from the laboratory at Leyden. You find it also in the analysis of Menière's vertigo, which traces this interesting disease back to the physiology of the semicircular canals of the ear. And principally you will find it in the paper on the relations between the lesions of the brain and their reflection in the eye, considered from the point of view of cerebral localisations. On this highly important subject, our friend and colleague from Heidelberg is going to lecture before you.

Let us cast another glance on the discipline of therapeutics. It asserts its capability of making a strict diagnosis, and pretends to be able to develop in a purely empirical way. This has always been its object. It maintains a sceptic position, to which it has a right in the presence of a plurality of causes. It prefers to employ means of which it knows not the effect. Speak of a given medicine as of a rational one, or say that a certain explanation seems very plausible: this is sufficient to rouse its suspicions. Now results such as attend the investigations on phospaturia, which will soon be placed before you, are capable of nourishing this incredulity. This does not prevent the discipline of watching carefully the researches on the physiological action of its agents, as you will see. It is highly interested in studying their constitution, and the relations between their constitution and the toxic effect which have of late begun to reveal themselves; for, though it clings steadily to the teachings of experience, it fully expects to find in these substances some clue as to their real mode of action. Do not look upon these aspirations as being rash; for do we not see gradually our ideas respecting some modes of action assume a definite form? We understand the effects of carbonic oxide on hæmoglobin. Complicated molecules are introduced into the organism, penetrate into the tissues, cause there a certain effect, and are eliminated like the carbonic oxide, without having undergone any change. In what way can we picture to ourselves their mode of action, unless we assume that they enter into certain relations with the living molecules, and take an active part in the process of dissociation, which constitutes the life of the tissues?

Our endeavours to learn the last results of the pioneers who explore those unknown regions have failed. I must, therefore, beg of you, gentlemen, to content yourselves in pharmacodynamics with discussing the question, if there are any drugs which have a direct effect on nutrition, and to lend your attention to researches concerning the influence of certain alkaloids on the eye, that organ which is so easily affected, and on the contractions of the uterus. By comparing these researches with the results obtained by therapeutic experience, we shall perhaps be able to throw some light on the movement of the molecules, of which I have spoken above.

Gentlemen, if, in general, science only serves our art indirectly, it succeeds sometimes in opening to it new horizons, or in dictating to it truths which are ratified by art. You will remember how physiology taught us to distinguish the anomalies of refraction and accommodation, and how it suggested to us the methods by means of which we are enabled to study these anomalies and the disturbances to which they give rise. Here practice simply followed out the indications of theory, and created a system which seems established for ever. We shall hear, in a learned dissertation, in what way the study of the physiological evolution of the skeleton has contributed to our obtaining a more thorough knowledge of its deviations and of their treatment. But first of all, allow me to give you here, in this part of my speech, a short sketch of the origin of the antiseptic method, which is doubtless one of the greatest triumphs of modern surgery. It is now three years since the Netherlands celebrated the memory of Antoni v. Leuwenhoek. Two centuries have elapsed since the time when his scrutinising eye, armed with the instruments which his hand had created, beheld for the first time microscopic organisms. In a speech made at Delft by the illustrious Professor Harking, our colleague of yore, he gave a powerful description of the influence this discovery has exercised in more than one respect. Leuwenhoek also saw the microscopic organisms that take an active part in the process of fermentation; but he did not understand their true nature. It is only forty years ago now that, owing to the researches of Schwann and Cagniard-Latour, they were recognised as microscopic organisms. Had they been created spontaneously in the fermenting liquor? Schwann excluded fermentation by heating the air which penetrated into his apparatus. Dusch and Schroeder filtered it through cotton-wool. Pasteur proved that this cotton contained germs of a nature different from those found in the fermenting liquid, and, aided by his wonderful talent for experimenting, he followed their traces all through the atmosphere. They were thus recognised as a necessary agent for fermentation; and the part they take can no longer be doubted, as Helmholtz has succeeded in uniting all the conditions, and simultaneously all the products, of fermentation in one liquid, from which he excluded, by means of a simple membrane, our small organisms, that is to say, fermentation itself.

What had been established about fermentation could also be applied to putrefaction. With the aid of our improved instruments, it was discovered that it was closely connected with the smallest microscopic organisms, and that, after substances that were liable to putrefy had once been boiled, putrefaction could be prevented simply by not allowing the substance in question to come into contact with those organisms. This was directly proved by Tyndall's ingenious proceeding, which consists in keeping away, by means of a mechanical process, the innumerable particles which dance in the rays of the sun. The air was thus rendered optically pure, and no longer infected the liquid in which the germs had been destroyed by boiling.

Now why should there not be the germs of numerous diseases among those particles? Putrefaction and infection are very closely related to each other. The old theory of contagion, that of fermentation, our knowledge about parasites, the analogy that exists between certain morbid processes and the process of dissolution, the progress of infection and the stage of incubation, the increase of virus in the affected organism, in short, all these different items, seemed to point towards this hypothesis, and the supposition was soon verified. For one moment even, it was thought that the parasite of every specific disease could be found. Was there ever a more fertile field opened to imagination? But the virtue of abstention, "to whom alone it is given to behold the entire truth", interposed victoriously. What we know and what we suppose to be true, have been expressed very clearly by my learned friend from Lyons, who, by his remarkable experiments, showed us the struggle and the vicissitudes of the battle which is fought between the molecular processes of the living organism and the invading army of parasites. If Lister has recognised the cause of the suppuration of wounds, his principal merit rests in his energy of conviction and in the strict logic, which have both led him to the desired end. To him, the surgeon owes the greatest of satisfactions, viz., the possibility of being almost invariably sure of success in any operation that has been well conducted. We have much pleasure in being allowed to offer here, to this benefactor of humanity, the expression of our admiration and eternal gratitude.

A noble organ, the eye, was still waiting to be benefited by this method; for its intervention was sorely needed in all operations on the cornea, as its tissue is incapable of resisting the invasions of bacteriæ, from its deficiency in vessels. But the organ is so exquisitely sensitive that it was well-nigh impossible to apply the antiseptic method to its full extent. Our aim is to overcome this obstacle; and in the ophthalmologic section, where this question will be brought before us by my fellow-worker, we shall see what has been done towards achieving it, and what results have been obtained.

Parasites cling to life with great tenacity; means or drugs that would destroy bacteriæ would be equally dangerous to our nature. The use of carbolic acid, which was known to be very efficacious against them, had frequently been followed by symptoms of poisoning, and in some cases the issue had been fatal. The question arose as to whether the fault lay with the carbolic acid or with foreign germs that had penetrated into it. We shall see, from the researches which are to be laid before us, that carbolic acid, even while it protects life, threatens it. Numerous experiments have been made to find another remedy that might be used instead, and the subject will no doubt be taken up in our meeting.

You see thus how many practical questions cluster round a subject that is of purely scientific origin. But this is not all. Science has taken up the same subject in its relations to public health. It has explained the facts according to its views, and has not hesitated to impose its authority where it is necessary to decree practical measures. No doubt most of you are acquainted with the fact that the celebrated C. von Naegeli, in availing himself of the results of his classical researches on the micrococci, classified by him under the name of schizomycetes, has founded thereon principles and doctrines that are in flagrant contradiction with the traditional teaching of hygeists. Nowhere, perhaps, have his views caused a greater impression than in Holland, especially in this capital where we now meet, and where highly important practical questions that were connected with these problems had remained suspended through them. I do not presume to decide in this matter, which, according to the opinion of our Academy

of Sciences, cannot yet be solved. But I cannot refrain from asserting that many of the teachings of the celebrated botanist ought to be heard in spite of the old doctrine; and if the latter, instead of discussing them or opposing them by facts, simply brands them as heresies, and complains of their being received favourably, one cannot help asking whether really it has nothing better to oppose to them than the orthodoxy of its own belief? Anyhow, von Naegeli's audacious deductions, setting aside the positive results of his investigations, can but prove helpful to hygiene, if they lead us to re-examine conscientiously the reasons of many a current belief, and if they teach us to beware of preconceived opinions, and to distinguish carefully between what has already been proved or what is only a gratuitous supposition.

As we go on gathering facts which will contribute to solve the much vexed problem, we follow with much interest the purely scientific facts that are connected with the history of bacteria and other micrococci. Little is still known about them. How mysterious is even the comparatively simple process of fermentation has been sufficiently shown by the recent discussions between such eminent men as Pasteur and Berthelot. If, on one side, Helmholtz's experiments, which we have quoted above, seem fully to prove that the act of fermentation cannot take place without the presence of living organisms, on the other side, the explanation that the supposed "anaërobes" owe their life to the oxygen which is derived from the combinations of carbon can hardly be deemed satisfactory. You know, gentlemen, that our eminent colleague and friend Paul Bert applied his discovery respecting the effects of condensed oxygen to the investigation of the amorphous and organised ferments, and studied from that point of view the *rôle* of the micrococci in malignant pustule. We have succeeded in discovering a method which enables us to follow without interruption, even under the microscope, the effects of gases at various degrees of condensation; and one of my colleagues intends to demonstrate this method to you, and to say a few words on the results which he has obtained.

It has been my endeavour to bring before you in these few words a sketch of the progress of our art, compared with that of science; and at the same time to show that, within certain limits, it advances freely and independently. Now, science pushes these limits far back, or rather it does not suffer them. It recognises no outward motive, and tends ceaselessly to perfection, pleading its rights, duties, and wants. He who only searches for what is useful will never succeed in discovering the secrets of Nature; for our sublime goddess of wisdom is very jealous, and only grants her favours to those who serve and love her for her own sake. It is true that she likes to see, on her fields, fruit ripen whose seed, if sown in other parts, promises a rich harvest to satisfy material wants; and she blesses the hand that gathers them. But the husbandman must only have in view the beauty and perfume of the flowers, if he wish to offer thanks to her. I should like to sketch the advance of science, as it is reflected in the questions of our programme, in as exhaustive a manner as I showed you the relations between science and art; but the time allotted to me is nearly expired. Allow me, however, to pass rapidly over this part of my discourse.

Our science is concentrated in physiology, which embraces the physical and psychical life of man, his origin and nature, and consequently the highest problems of humanity. Without ever leaving her eldest sister, morphology, who guided and directed her feeble steps, physiology soon absorbed the principles of physics and chemistry, and aspires now, under their shield, to be classified among the exact sciences. Physiology naturally forms the basis of medical sciences, and must be an example to them by her methods. And the medical man has been called to be her advocate in society on the subject of the high problems of which I have spoken. Morphology also assumes a physiological character whenever it treats of the history of development. Its elementary form, the cell, is at the same time its element of life. Forty years lie between us and the time when the cellular theory was made the basis of biological science by Schwann. Schwann's cell has undergone many transformations in the course of time; the membrane which surrounds it has lost its meaning; the contents have been shown to be protoplasm; and simpler forms have been defined by Brücke as the protogens of living matter. (These forms do not appear to be much more than homogeneous particles of mucus, yet in reality they are and signify much more.) The autogenesis of the cell has given way before the "omnis cellula ex cellulâ", which is the motto of cellular pathology; and the division of cells, which was at first looked upon as a simple process, was recognised to be a most complicated one when traced back to the individual cell. And, in spite of these great and manifold advances, the first conclusion to the question on the development of cells—viz., "all the recent researches tend to establish numerous points of relation between the division of the animal and vegetable cells"—expresses the spirit and even the title of Schwann's memorable book. The wall which had been erected by dogmatism between the vegetable and animal kingdoms has also been torn down long ago. Morphology, combined with microscopic chemistry, has given birth to wonderful discoveries, especially concerning the secretory organs. We hope that we shall be allowed to hear them exposed here by the physiologist whose name is intimately connected with these researches. The latter, in their turn, are closely related to Ludwig's immortal discovery of the influence of nerves on secretion, which extends to all periodical secretions without exception. On these phenomena Bernard's theory of the dilatatory nerve-fibres is based, and through them the action of divers toxic substances is manifested in a very characteristic way.

What a wonderful time we live in. Many surprising facts are discovered, and new points of view are opened that invite and excite us to make new researches. Is it a wonder that laboratories are flourishing where, owing to technical perfection, the most delicate questions are solved with the greatest precision, and where sometimes well conducted experiments throw an unexpected light upon great problems?

It was our intention to have in our programme a few questions relating to psychical processes. This class of phenomena will merely be touched by a communication on the systems of colour. But we deplore the absence of the experimentator on whom we had reckoned, and of the learned professor whom we had hoped to see. It was, however, not our intention to call up again the psychical forces of "plastidules" and atoms which have created great sensation in the scientific world. I do not think, for my part, that this question can as yet be worked out satisfactorily; neither does it seem to promise a fruitful discussion. Still we must confess that it cannot be ignored by physiology; and I am far from wishing to curb the powers of imagination. I love its offsprings, and find much pleasure in contemplating those delicate and aërial creatures. All I wish is to see them remain in their own sphere, and not to have them intruding on the domain of exact sciences.

You know, gentlemen, that this question is far from being a novel one. Not only students of natural history, but philosophers in their study, and even reverend fathers in their cells, who thought to conciliate these ideas with the doctrines of the Catholic Church—of whom I have known several—have endeavoured to penetrate into the psychical element of the atoms. I will not deny it; there was a time when my imagination was so harassed by doubts which had been raised on the subject of vivisection, that I could not help wondering whether we really had a right to disturb violently the happy union of its volatile atoms in a molecule of water, and whether we ought not rather to afford them every opportunity of enjoying themselves in the unstable equilibrium of dissociation, where the individuality of each could freely be displayed.

At other times, perhaps excited by Norman Lockyer's audacious conclusions, my imagination would become more and more excited, and see our atoms in the midst of a rising temperature, and yet, still within the limits of a mechanical theory, divided, subdivided into other atoms—nay, into molecules—and then divided again; till at last they dwindled down to homogeneous atoms, which, in spite of their smallness, occupied a certain space, and existed, and must therefore be considered as being still capable of division, and so on *ad infinitum*. And when my imagination was on the point of being lost in these fantastic visions, where each phase of temperature possessed its own atoms and corresponding vibrations, or perhaps even its thinking beings, I used to catch it in the act of going off into some transcendental lucubrations, and rewarded it with a smile for its luxuriant fecundity. But who can say that it followed a foolish way? If we look around us on this earth, we must admit that we do not know in what living substances the physical element begins to manifest itself. What we know—and to prove this would be like taking owls to Athens—is that its manifestation is connected with living matter, known under the name of psychical matter; and that all changes which take place in this substance, either directly or indirectly, modify the physical manifestations. Let us add that we are led to believe that the molecular movements of this substance and its physical manifestations are of the same order—in short, that between both intimate relations exist. But the nature of these relations is still to us the greatest of all riddles; we cannot comprehend it.

Setting aside the atoms, which we may represent to ourselves under any given form, we can only dispose of their actual and potential energy, which is the characteristic of the law of the conservation of forces, *i.e.*, of the motion and tension, or condition of motion. From both these forms springs a chain of transformations which, under certain conditions, may lead us back to the starting-point. But have we any clue as to the process by which both motion and tension, whatever may be the form under which they appear, create consciousness? Or else does consciousness merely form a link in the chain? As long as we looked upon light as a mysterious force, we were inclined, rather from a poetical sentiment than from reason, to see in it merely a transition to a more mys-

terious force. But since the undulation theory has given us an exact idea of the motion of light, we know that distance is immeasurable, and all prospects of being ever able to grasp the psychical phenomena have vanished. Though certain expressions of force are not yet quite clear to us, as they act at a distance, we are justified in assuming from their transformation that they are analogous to the motion of light.

Let us enter deeply into the question. Given a thorough knowledge of the atoms, their number, relation to each other, movements—and I do not think this at all inaccessible—the psychical phenomenon, viz., consciousness, appears, without the aid of any intermediate agency, as a phenomenon *sui generis*, which is not contained either in matter or in movement. In short, it is a phenomenon that can only reveal itself to itself; in short, an inexplicable and unexplained phenomenon. What have we gained by attributing a psychical element to the atoms? The psychical element of the atom remains to us just as little known as the psychical element of the complex matter. In order to explain or understand a phenomenon, we must be able either to connect it with other well known phenomena, or to trace it back to some motion which can be grasped by our intellect, such as the notion of matter and movement, which are contained in the idea of space. To embrace the theory of monism because we fail to grasp the relations of the psychical phenomena is merely an act of faith.

This is not the first time, gentlemen, that I have expressed my opinion on this point. In my work on the rapidity of psychical processes, I have developed the same ideas. Now, when I speak of the unexplained (that is, inexplicable), I mean the "ignoramus" (that is, "ignorabimus"); that, owing to the authority of him who uttered it, to the rare power of his language and to the illustrious assembly before whom it was uttered, it was re-echoed in all the camps, misunderstood by some, distorted by others, and only in very few cases received with full assent. Especially the apostles of the monistic theory have hurled their anathemas at it.

Surely we cannot expect those thinkers who prudently abstain from giving an opinion to shrink back into the shade before those who accept everything. Do not Du Bois-Reymond's open-hearted avowals and Fechner's expressive utterances show how much both are inclined to give way to the fascination of the monistic theory, which insinuates itself in a way as a postulate of thought? If they resisted the temptation, was it not because of the energy of an inflexible logic? What means a docile submission in the face of a struggle between two powerful forces? As long as the world will believe in the magnetic powers of the ecstatic needle, such characters will be respected. Is it true that the theory of evolution is closely allied to the monistic conception of the universe? Is the latter really a necessary consequence of the theory of evolution? I cannot believe it; for we know that many physiologists who adopt in the main the doctrine of evolution—nay, even some of those who have contributed to found it—do not belong to the disciples of monism.

It is evident that, in face of the dilemma between the creation of each individual species or the originating of individual organisms under given conditions, the physiologist could not hesitate. *A priori*, the nature of science itself exacts the adoption of the second hypothesis, because the first has put an end to all researches. Remember, also, that the laws which enable us to conceive from a causal point of view, and to follow in a certain way the development of the harmonious relations in nature—I mean the laws of custom, exercise, and heredity—belong to physiology. It was the duty of the latter to show that the harmonious relations which are created in the individual by the force of habit and exercise are propagated in the race by heredity. In the united action of these three agents, physiology found the key to the continuous perfectibility of creation. This is especially seen in the exercise of a faculty which, when combined with conscious volition, appears under the shape of a *vis creatrix* which influences the development or even generation of the tissues and organs. We must not be surprised, gentlemen, if Darwin's powerful agent—viz., natural selection—were much more readily received by physiology than by natural history; for this theory explained the limitation of species: a fact that physiology, from its point of view, had been unable to explain or to understand. And, with grateful admiration, physiology acknowledged the greatness of the author of this wonderful theory, so rich in facts, which opened a new horizon to it. But this did not hinder it from objecting to an apostolic zeal that had left the master far behind. Was not that his right and his duty?

We have here a grand edifice, which has been constructed of the most varied materials. Although they are of different origin, they fit into each other and support each other in a wonderful manner. But the building is far from being completed, and its foundations do not seem very safe. Is it not clear that the architect, who collected the precious materials, put them together, and adapted them to each other, perhaps almost without knowing it, is more persuaded of the solidity of the building than the impartial spectator, who will not believe in the safety of the structure till the edifice is finished? The architect says, in answer to the observations of our spectator: "You know nothing about morphology; you do not know our materials." The spectator is silenced; but his confidence is not increased, and he remembers seeing many a building fall down that the architect had warranted to be solid. As far as he is concerned, he would not look upon this accident as upon something very dreadful. It suffices to him that the materials may not be lost; for he knows that, after having been purified and carefully selected, they might even render better service in a new construction. Then, perhaps, the edifice would even turn out better if physiology, being obliged to add its tribute, would take more interest in it. If I am not mistaken, the latter ought to attach more importance to its own agents, that have been relegated to the background by the doctrine of natural selection, and in this way put further back the parentage which is shown by the genealogical trees of the morphologists. But let me tell you, that the principle of selection would not suffer by it. Physiology accepts it without restriction. Even if the spontaneous origin of organisms cannot be proved by the conditions of experience, we cannot contest the right of postulating it.

Shall we condemn the theory of evolution to silence till it has been established by direct proofs and based on exact knowledge? If we look at it from the classical ground of liberty of thought, this question appears almost absurd. We are far from wishing to impose any restrictions on the teachings of the monistic conception of the universe. The ardent wish for the free expression of thought, as it has been professed by one of our number, is far from implying, as has been believed, the wish of restriction. In liberty alone we recognise the way that leads to truth, our supreme ideal. Even if at times a doctrine that has not yet been fully demonstrated is proclaimed to be the ripe fruit of science, what does it matter? There is no reason to fear that the trees will touch the stars. Do we not see how, when the floods have risen very high, they fall with great force and carry away with them in their course objects that are not ponderous enough or have no solid roots? Let each one throw his ferment into this vast and boiling sea, where thousands of thoughts cross each other: the truth will appear on the surface. Do not ask any more, anxiously, What profit or what harm can such or such an idea which has just burst forth do to humanity? Do we not often see that what we have dreaded most has been followed by salutary results? and that what we have received with open arms has brought forth misery? Now this is quite natural; for what is the direct influence which we can comprehend compared with the indirect influence which is hidden within the ages? Let us have free and entire liberty, and under its shadow truth will grow, the source of all that is good.

But let us beware of one rock in advocating the freedom of thought. Do not let us impose our convictions on others. Here the proverb comes into play: *Hanc veniam damus petimusque vicissim.* Let us remember that truth triumphs only through the value of its arguments, and not by imperious affirmations. We feel elated by witnessing a noble enthusiasm, the genius of truth, as Charles Dickens calls it, and the author of great deeds. But let us take heed that it draw us not into passion which makes us forget the respect due to our adversaries, and inclines only too much to attribute to them wrong motives. We may follow the same road as brothers, obeying moral precepts that are founded on the exigencies of social life. Some may rush forward impetuously, while others measure scrupulously each step. "The same road", said I; for movement is but a relative conception. The clouds that float in the sky with unequal rapidity only appear to us to advance in an opposed sense. Both in science, as well as in politics, the conservatives of to-day are the liberals of yesterday. Still, they are all progressists.

Gentlemen, we have considered the two great problems that agitate science and keep humanity in suspense. The latter feels that its most serious interests are at stake. For on our knowledge of our origin and psychical nature depends, in each sphere of human life, the solution of important questions. These thoughts must and will present themselves to everyone, especially to the physician, who, in the fullest meaning of the word, must be anthropologist as to the psychological questions; the philosophers have handed them over to physiology, and the latter has not refused to accept them; for not only must the latter try to incorporate the special questions of psychology with the physiology of the brain, it must also examine carefully the general problems. And if the evolution theory rely on morphology for support, physiology alone is able to penetrate into the conditions of development, and to explain from the causal point of view those three great factors of harmonious evolution; viz., habit, exercise, and heredity, and the tendency to variation which seems to spring from them. Every organ and every function becomes the object of questions on origin and development,

and we are justified in expecting from physiology that it will realise more and more that it is its duty to elucidate them.

On this ground, the doctrine of evolution and of psychical processes meet. From the point of view of the former, the origin of our notions appears under a new aspect. The possibility has vanished that, at the time of creation, they were implanted into each species; and it is our duty to explain their origin. This explanation can only be found in experiments on the senses and the voluntary movements. Concerning the abstract ideas and the mathematical axioms, the greatest mathematical thinkers of our time have attributed to them an empiric origin. It remains now for us to determine how much can be attributed to individual experiences and to race of the origin of our notions. This is a serious question, which I have considered more than once in the course of thirty years, but of which I will not speak here. It suffices to recall that, in order to explain the origin of our thoughts, we are obliged to admit the combined action of our individual experience and of that of our ancestors, as it has been transmitted to us by heredity in the peculiar dispositions of our brain. Even in man, individual experience does not suffice to explain the development of ideas as we see it after the human being has been born.

I have led you, gentlemen, into the territories of pure science, and you did not think that practice had anything to do with it. However, you will have noticed that, in our conception of the psychical processes, the power of volition takes the lead as the modifying agent of normal and abnormal nutrition, and that the principal aim of hygiene is contained in the factors, which are of great importance in forming harmonious relations, viz., the desire to raise man to the full perfection of his physical and moral being; the principles of gymnastics, that are yet but little known; the doctrine of heredity, which is so interesting from many points of view; the influence of consanguinity of the offspring; and many other important questions.

I have finished, gentlemen and beloved colleagues. I must thank you for the kindly attention with which you have listened to me. Tomorrow, your work begins. Can there be any purer joy than that which awaits you? The search after truths which elevate the spirit, the pursuit of knowledge that aims at the wellbeing of humanity—that is the ideal the physician-philosopher has set up before him. The unconsciousness of this divine privilege opens hearts to generous sentiments—the fruitful source of the fraternity which is our motto!

THE following papers were read and discussed in the various Sections.

SECTION I.—MEDICINE.

The Theories of Infectious Diseases and on Vaccination. By Professor CHAUVEAU (Lyons).—The following were the conclusions. 1. It may be regarded as certain, that the action of the micrococcus of fermentation, which plays such a prominent part in the production of certain infective diseases, of which charbon may be taken as a type, is the same in all the diseases of the same order. 2. We are therefore justified in looking upon infective diseases as being closely allied to parasitic diseases. It is very difficult to draw a distinct line between them. It may, however, be said, that in the former the parasitic agent acts exclusively mechanically by causing irritation and local destruction. In the second class, this mode of action has only a secondary influence. The parasitic agent manifests its deleterious effect by disturbing the physiological life of the anatomical elements of the tissues. 3. The parasitic micrococci which cause infective diseases behave in the organism like ferments. They cause much disturbance both by the formation of new bodies that poison the organism, and by robbing the latter of necessary material. 4. To every specific infective disease there corresponds necessarily a specific cause. But it has not been proved that the organisms of infection constitute different species, or different forms belonging to a small number of species. The speaker merely assumed that in all cases of one and the same affection the characteristics and properties of the infective agent are the same. 5. There is, however, reason to believe that all the microcosms of infection belong to one and the same family—viz., to septic ferments. All true septic diseases—such as charbon, surgical septicæmia, pyæmia, traumatic gangrene, the different varieties of typhoid fever, etc.—are, in fact, septic or septicoid affections. 6. If the micrococci of infection are septic ferments, they must be capable of living and multiplying when not in the human body. This has repeatedly been proved by experiments, and it is well known that their germs are disseminated over the whole universe. 7. In certain infective diseases—*e.g.*, malaria—the infected individual invariably receives the germs of infection from his surroundings, never from other individuals who have already been infected. The latter do not seem capable of transmitting the contagion. 8. In other infectious diseases—*e. g.*, enteric fever—the patients are themselves foci of germs which, after having been transmitted to the outer world, infect the food (ingesta). The infected individuals become thus indirectly foci of contagion. 9. There are certain infectious diseases—*e. g.*, exanthematic typhus fever—where the germs infect not only the food (ingesta), but also the surroundings (circumfusa). The infected individuals become thus very active foci of direct contagion. 10. Do the so-called virulent diseases, among which vaccine may be regarded as a type, constitute a special class of infectious diseases? It seems so, for the present. It had been proved by experiments, before the same thing was demonstrated for infectious diseases, that the virulence is attached to solid particles of vaccine. But we do not know whether these particles are micrococci similar to the organisms of infectious diseases. Hitherto it has not been possible to breed the virus proper outside of the living organism, nor does the effect which certain poisons have upon them at all correspond to the qualities attributed to living beings. Anyhow, in our present state of knowledge, it is very difficult to draw the line between both diseases. Perhaps further experiments and observations will tend to prove that all contagious diseases are of the same nature, in which case they would all become parasitic diseases.

On Bright's Disease and Primary Cirrhosis of the Kidneys. By Professor L. ROSENSTEIN (Leyden).—1. The anatomical changes in the kidneys, which form the foundation of the disease that was first described by Bright, affect both the parenchyma and the connective tissue of the kidneys. 2. There cannot be properly said to exist strictly parenchymatous nephritis or strictly interstitial nephritis. It has been sufficiently demonstrated by experiments and clinical observation that in every case of diffuse inflammation of the kidneys, both histological elements are affected. 3. Diffuse inflammation always leads to certain pathological changes in this organ, known as white kidney and red granular kidney. Both may finally develop into the "atrophic kidney", the only difference being that in the former the parenchymatous tissue of the kidney is chiefly affected, and in the latter the interstitial tissue. Both varieties may be distinguished clinically by analysing the urine. The symptoms of atrophy are common to both forms. 4. Clinical observations tend to show that the red granular kidney, or, as it is now called, primary cirrhosis of the kidneys, is preceded by a period of tumefaction. This assertion is confirmed by anatomo-pathological observations. 5. The description given by Bright relates principally to the white granular kidney. Here, as well as in the other variety, the morbid process passes through two stages, as has been shown both clinically and anatomically.

On Phosphaturia in Pulmonary Phthisis. By Professor STOKVIS (Amsterdam).—The following were the conclusions. 1. The elimination of phosphoric acid through the urine in pulmonary phthisis is not characteristic of the affection, either from a diagnostic or a pathogenetic point of view. 2. This conclusion is justified by a series of analyses of the urine, which have given the following results. (*a*) The sum total of phosphoric acid which is eliminated in twenty-four hours is never increased in phthisis. In comparing phthisis with other pulmonary affections, it will be seen that the sum total of phosphoric acid is much lower in the former than in the latter. (*b*) In certain cases of pulmonary phthisis, where there is no diarrhœa or febrile rise of temperature, there is a marked preponderance of earthy phosphates over alkaline phosphates. However, the sum total of earthy phosphates excreted through the urine is considerably below the quantity that is generally excreted in a healthy individual or in other chronic diseases. (*c*) Compared with the excretion of urea in the urine, the elimination of phosphoric acid in pulmonary phthisis does not show any marked deviation from the normal type. This relative value of phosphoric acid is very rarely augmented; on the contrary, it is more frequently normal or diminished In some cases, it decreases as the affection progresses. (*d*) Compared with the elimination of chlorine by the urine, the elimination of phosphoric acid in phthisis is always somewhat higher, and in some cases considerably so, than normally. This rise in the relative production of phosphoric acid is due solely to the decrease of chlorine in the urine, and is especially marked in cases where the febrile movements and digestive troubles form a prominent feature. It is a well-known fact, that decrease in the elimination of chlorine always takes place in cases of fever and starvation. (*e*) There is no characteristic modification in the normal relations between the amount of phosphoric acid and sulphuric acid eliminated through the urine in cases of pulmonary phthisis. An increase in the relative quantity of phosphoric acid has never been noticed, though a decrease often takes place. The latter is due solely to an increase in the elimination of the sulphuric acid, and is often found in cases of protracted fever and starvation. 3. All the anomalies exhibited by the elimination of phosphoric acid through the urine in pulmonary phthisis may easily be traced back to a change in the physiological conditions which influence the elimination of phosphoric acid through the urine. It follows from this, that they are not caused by a specific morbid process, but simply by a considerable rise of tempera-

ture, digestive troubles, a peculiar diet, or starvation. 4. It has of late been asserted that pulmonary phthisis has been successfully treated with phosphates or hypophosphites. This good result cannot, however, be attributed to a restitution of the loss of phosphoric acid, from which the organism has suffered during this illness.

On Syphilitic Affections of the Larynx. By Professor ZAWERTHAL (Rome). *a. On the Syphilitic Affections of the Larynx.*—The following were the conclusions. The syphilitic affections of the larynx form about three-fifths of the laryngeal affections in general which come under the observation of specialists. The larynx may exhibit alterations which are due to secondary syphilis (erythema syphiliticum and "plaques muqueuses") and others which belong to tertiary syphilis; *e.g.*, erythema papulatum, erythema nodosum, the gummous infiltrations which appear frequently on the epiglottis, the aryepiglottic folds, etc.; chondritis and perichondritis; stenosis of the larynx, following the cicatrisation of ulcerations; the retraction of cicatrised portions of the larynx; laryngeal growths, or the ankylosis of articulations, which were formerly the seat of syphilitic alterations. The possibility of the existence of "plaques muqueuses" on the mucous membrane of the larynx is a fact which henceforth will be recognised among pathological truths. Secondary syphilitic alterations of the larynx are successfully treated locally by powdering them with bichlorate of mercury and the insufflation of protochlorate of mercury. Frequently, the local treatment is sufficient to effect a cure. Tertiary alterations must always be put under a general active treatment; so far as the local treatment is concerned, it must be the same, if we have to do with ulcerations; but if, instead, we find a chondritis or perichondritis, the affected parts must be painted with iodine preparations instead. The growths and ankylosis that result from the healing of the syphilitic processes of the larynx will hardly ever give way, even to the most energetic combined treatment. Growths may be successfully treated by the knife or galvano-cautery.

b. On Stenosis of the Larynx and Tracheotomy.—The following were the conclusions. Stenosis of the larynx may spring from various causes: *e.g.*, phthisis, syphilis, cancer, hypertrophy of the submucous tissue of the laryngeal cavity. In serious cases of stenosis, the least increase in the collateral œdema, or in the thickness of the parts which surround the opening of the glottis, may lead directly and rapidly to asphyxia. This is seldom the case in phthisis, as the process of ulceration which goes on without ceasing generally maintains, in the majority of these cases, a sufficiently wide opening of the rima glottidis. Asphyxia is a common occurrence in all other classes of laryngeal stenosis. The patient may be saved from death by introducing into the larynx one of Schrötter's tubes of vulcanised rubber, but the relief obtained thereby is only momentary, and has no effect on the further progress of the disease. In cases where the danger of suffocation is caused by an acute collateral œdema, catheterism of the larynx may, however, prove a more efficient remedy. In all other cases, tracheotomy must be performed. It should be done with a threefold object: 1. Tracheotomy saves from the imminent danger of suffocation, although it is by no means a safe operation in itself, especially if the surgeon and his assistants should be inexperienced. 2. By opening another way to the current of air by which respiration is kept up, and by allowing the larynx to rest completely, both as vocal and respiratory organ, tracheotomy has a very good effect on the pathological conditions of the larynx. 3. It is clear that the tracheal opening enables the surgeon to apply the most energetic treatment to the local lesions of the larynx. These conclusions are based on the statistics given by my laryngoscopic clinic and private practice. They agree also with the laws of pathology.

c. On bronchial asthma from a historical, etiological, and clinical point of view.—The following were the conclusions. In speaking of asthma, true bronchial asthma is often mistaken for one of the following affections: *a.* Angina pectoris; *b.* Incomplete obstruction of the larynx; *c.* Paralysis of the posterior crico-arytenoid muscles. *d.* Spasm of the diaphragm; *e.* Paralysis of the diaphragm. Bronchial asthma is caused by a spasmodic contraction of the bronchial muscles. This contraction may be produced by different causes, which, however, all tend towards the accumulation of carbonic acid in the alveoli. We seem justified in admitting from our present point of knowledge that bronchial asthma is an affection which springs from chemical troubles of the blood. Physiological experiments, the etiology of the attacks, their clinical progress, their analogy with the infectious diseases, and the effect of certain therapeutic agents are so many proofs in favour of the chemical theory which I propose to discuss.

Medical Education. By Professor VIRCHOW (Berlin).

On the Importance of Naegele's Doctrine for the Interpretation of Facts relating to the Propagation of Miasmatic Epidemic Diseases, and especially to the Cholera Epidemics of our Time (since 1830).—By Professor T. VAN GEUNS (Amsterdam).

On Beri-Beri. By Dr. F. J. VAN LEENT (Amsterdam).

On the Anatomical Cause and Rational Treatment of Various Diseases. By Dr. A. BASTINGS (Brussels).

On the Relation between Carcinoma and the Lymphatic System. By Mrs. F. E. HOGGAN, M.D. (London).

On the Influence of Tobacco on Scurvy. By M. E. DECROIX (Paris).

On the Relations between Syphilis of the Lungs and Phthisis Pulmonalis. By Professor J. SCHNITZLER (Vienna).

On Intermittent Fevers. By Dr. DÉCLAT (Paris).

On the Influence of Menstruation on the Progress of Pulmonary Phthisis. By Dr. G. DAREMBERG (Mentone).

a. On a New Treatment of Nervous Dyspepsia. b. On the Treatment of Interstitial Hepatitis. c. On Lead-Poisoning and its Treatment by the Constant Current. d. On the Use of Iodoform in the Treatment of Broncho-Alveolitis. e. Contributions to the History of Addison's Disease. f. On the Treatment of Echinococcus of the Liver. By Professor SEMMOLA (Naples).

On Renal or Primary Phosphaturia. By Dr. DEBOUT D'ESTRÉES (Contrexéville).

Treatment of Phthisis. By Dr. G. DELAUNAY (Paris).

SECTION II.—SURGERY.

On Malformations of the Skeleton and their Treatment, with regard to the Physiological Development of the Skeleton. By Professor HUETER (Griefswald).—The conclusions were as follows. 1. Acquired pes valgus and genu valgum, when they are not caused by inflammation or traumatic lesions, are due to diseases peculiar to the development of the skeleton. 2. These affections must in such cases be regarded as being due to the abnormal activity of those physiological changes which take place normally under the influence of the movements of the joints of the lower extremity, and especially through walking. 3. In such cases, the deformity is caused either by a normal pressure on abnormally soft parts of the skeleton (rachitic form), or by an abnormally great pressure on normal parts of the skeleton (static form). 4. Congenital pes varus may be regarded as a disease peculiar to the growth and development of the skeleton. In the majority of cases, the onset of the affection is not marked by any peculiar functional muscular troubles, and the conformation of the bones of the tarsus presents an abnormal development of the normal fœtal conformation of the bone. 5. The majority of cases of common scoliosis, especially when they are not caused by the shortening of an extremity or by a process of cicatrisation (pleuritic empyema), must be considered as the effects of an affection of the bones of the trunk. 6. Such cases of common scoliosis are caused by an asymmetric development of both halves of the pectoral vertebræ, and by asymmetric growth of the ribs, both to the right and the left and the diameter of the thorax. It follows that common scoliosis is a disease of growth, analogous to the asymmetric development of the pelvis and the skull. 7. It being once admitted that congenital pes varus and acquired pes valgus and genu valgum, as well as ordinary scoliosis, are caused by a vicious conformation and an abnormal growth of the bones, it is clear that the treatment would consist in these cases in checking, by a well-regulated pressure, the tendency of those portions of the bones that grow exuberantly, and in stimulating, by removing all pressure, the growth of those portions of the skeleton which are backward in their growth. In this way, it will be possible to obtain a normal conformation of the skeleton. 8. By applying this method of treatment to cases of incipient scoliosis, we may be sure of success.

On Suprapubic Lithotomy. By Professor L. E. VAN GODOEVER (Utrecht).—The following were the conclusions. 1. In children, suprapubic lithotomy is preferable to all other methods of operation. 2. In adults, suprapubic lithotomy will be found very useful in many cases. 3. A catheter must never be allowed to remain in the bladder after the operation. 4. The vesical suture, which has been recommended by Latzbeck and others after suprapubic lithotomy, ought to be applied if possible. In this case, dressing the wound must be treated strictly antiseptically. 5. Much importance must not be attached to statistics, which seem to prove that lithotrity is preferable to lithotomy.

The Radical Treatment of Hernia. By Professor W. P. TILANUS (Amsterdam).—The conclusions were as follow. 1. Very favourable results have been obtained by the radical treatment of hernia; viz., ligature of the neck of the sac, extirpation of the sac, suture of the opening, with antiseptic precautions. The treatment is not dangerous, and has in most cases given good results. 2. Operation for hernia is indicated only in cases where the hernia cannot by kept *in situ* by a truss.

On Aseptic Dressing. By Professor J. LISTER (London).

On Indications and Counterindications for Operations in Individuals

suffering from Constitutional Diseases. By Professor VERNEUIL (Paris).

The following papers were also read.

On the Operative Treatment of Aneurism of the Arch of the Aorta. By Dr. E. KÜSTER (Berlin).

On the Different Methods of Amputation with a view to the Prevention of Accidental Diseases. By Professor BOUQUÉ (Ghent).

On Maxillary Cysts. By Dr. MAGETOT (Paris).

On Movable Plaster-of-Paris Dressings and Listerism. By Dr. VAN DER LOO (Venlo).

On Blepharo-Plasty, Chilo-geno-Plasty, and on an Operation for a Vesico-Uterine Fistula. By Professor ANIELLO D'AMBROSIO (Naples).

On the Migration of Needles in the Human Body. By Dr. MILLIOT (Nice).

On the Pathological Histology and Rational Surgical Treatment of Purulent Pleuritis. By Dr. H. P. KAPTEYN (Abevuele).

On the Use of Camphor-Paste in the Treatment of Surgical Wounds. By Dr. A. M. DA CUNHA (Bellem, Lisbon).

On Diffuse Hypertrophy of the Lower Jaw. By Dr. A LE DENTU (Paris).

On the Operative Treatment of Micrognathy. By Professor ROSE (Zürich).

A Parallel between Open and Air-tight Dressing of Wounds. By Dr. BARTSCHE (Osnaburg).

On the Importance of Movable Barracks for the Wounded. By A. VON LUBANSKY VIAZMA (Smolensk).

SECTION III.—OBSTETRICS AND GYNÆCOLOGY.

On the Treatment of Uterine Fibromas. By Dr. J. DE LA FAILLE, (Leeuwarden). The following were the conclusions: 1. The treatment of uterine fibromata is principally determined by the hæmorrhage. 2. The treatment must be modified with respect to the size and seat of the tumour. 3. Internal medication is seldom successful, though it may be tried in cases of intraparietal fibromata. The same may be said of alkaline baths. 4. A very rational treatment of intraparietal fibromata consists in subcutaneous injections of ergot. 5. The usual method of dilating the uterus by means of sponge tents or laminaria tents is dangerous. It is important that the tents should be frequently renewed. 6. Fibrous polypes ought always to be removed with the *écraseur*. 7. Intra-uterine fibromata are best removed by enucleation. The same may be said of the subperitoneal fibromata. 8. In cases of gastro-hysterotomy, the intraperitoneal treatment of the pedicle is preferable to the extraperitoneal treatment. 9. The extirpation of the uterus *in toto* is preferable to a partial excision of the organ. 10. Ovariotomy is very seldom indicated in fibrous tumours of the womb.

Prophylactic Treatment of Puerperal Fever. By Professor HALBERTSMA (Utrecht). The conclusions were as follows: 1. The principal causes of puerperal fevers are—*a.* abnormal births; *b.* infection; *c.* atmospheric conditions. 2. The prophylactic treatment consists—*a.* in premature delivery before symptoms of endometritis set in; *b.* in not examining the woman *per vaginam* in cases of normal birth; *c.* in antiseptic treatment; *d.* in stimulating the contractions of the uterus after confinement by giving ergot. 3. The danger of contracting puerperal fever may be as great in private dwellings as in lying-in hospitals.

On the Effect of Pilocarpine, Eserine, etc., on the Contractions of the Uterus. By Dr. VAN DER MEY (Amsterdam). The conclusions were these: 1. The subcutaneous or intravenous injection of a solution of hydrochlorate of pilocarpine made during pregnancy excites the uterus to contract. If the injection be given in the first stages of labour, it stimulates the uterine contractions. 2. The action of sulphate of eserine on the pregnant womb is very similar to that of hydrochlorate of pilocarpine. 3. It has been proved by clinical experience and experiments on animals that the action of hydrochlorate of pilocarpine in inducing premature labour has been much exaggerated. 4. If combined with the mechanical means for the induction of premature labour, pilocarpine may be found useful. 5. In cases of normal labour, where the uterine contractions are not strong enough, pilocarpine may be administered successfully. 6. It must not be used for the purpose of stopping *post partum* hæmorrhage.

What must be the position of gynæcology in social questions on procreation?

The following papers were also read.

Demonstration of Gynæcological Instruments. By Mr. LAWSON TAIT (Birmingham).

On the Use of Artificial Food for Infants. By Dr. ALBRECHT (Berne).

Gynæcological Communications. By Dr. T. GALLARD (Paris).

A New Method of Perineorraphy. By Dr. A. LEBLOND (Paris).

An Intra-Uterine Lithopædion. By Dr. J. BAART DE LA FAILLE (Gröningen).

SECTION IV.—PHYSIOLOGY.

On the Systems of Colour-Perception. By Professor DONDERS (Utrecht).

On Muscular Contraction. By Professor ENGELMANN (Utrecht).—The following were the conclusions. 1. At the instant of contraction of striated muscular fibres, certain changes take place in the optic properties and the size of the isotropic and anisotropic layers. 2. The isotropic layers become more refracting and the anisotropic, especially the transverse discs, less so. It results from this, that, at a certain stage of contraction, the transverse striation becomes blurred (stage of transition). At a more advanced period of contraction, dark and light transverse bands reappear. The former correspond to the isotropic, and the latter to the anisotropic elements (stage of inversion). *b.* The isotropic and anisotropic layers can distinctly be shown by the polarisation apparatus to consist of alternating sharply defined layers. This is always the case, whether the fibres are contracting or not. *c.* The height of the isotropic layer decreases much more rapidly during contraction than the anisotropic layer. In fact, the size of the latter grows at the expense of the former, as is evident from the fact that the absolute size of both layers does not undergo any perceptible change. *d.* If exhausted muscular fibres be treated with agents that produce swelling of the fibres, the same changes in the form, size, and optic properties of the anisotropic discs will be caused as appear at the time of the physiological contraction. *e.* The same applies to positive birefractory histological elements, that only possess one axis, even if they should not be contractile and lifeless. 2*a.* When nerves are stimulated, the contraction begins exclusively on the surface of the muscles on the point where the nerve and striated substance join. The irritation is propagated by the intermediate agency of the muscles over the other parts of the fibre. 2*b.* The nervous fibres in the ganglia of insects are directly and intimately connected with the centre of the isotropic discs, and apparently particularly with the intermediate disc. The birefractory discs are not connected directly with the nerve. 2*c.* An isotropic disc which is in connection with a nerve-fibre can be stimulated from the nerve-trunk or ganglion.

On the Origin of the Sounds and Murmurs in the Vascular System. By Professor H. HEYNSIUS (Leyden).—The conclusions were as follow. The existence of sounds in the vascular system is due to the following five causes, one of which produces also the valvular *bruit*. 1. The sudden transition of the valves of the heart, the veins, and the venous walls from a state of relaxation to a state of tension. 2. The contraction of the cardiac muscle. 3. The blood is propelled into a dilated portion of the circulatory tract with a certain minimum rapidity, the value of which depends on the relations between the dimensions of the constricted and the dilated vascular tract. When the rapidity of the circulation sinks beneath this minimum, the sound degenerates into a *bruit*. The latter gradually grows weaker and vanishes entirely as the rapidity of the blood-current decreases. 4. The blood-waves of the arterial trunks. The first two sounds are caused by the primary vibrations of the wall; the latter two by the primary vibrations of the fluid, which produce secondary vibrations in the vascular wall. To these four may be added—5. The pulsation of the arteries, which depends on the elongation of the vessels during their diastole.

On Measuring the Blood-Pressure in Man. By Professor MAREY (Paris).

On the Pulse-Curve. By Dr. A. ISEBREE MOENS (Goes).—The conclusions are these. 1. In a healthy individual, the pulse-curve, as obtained in the arteries—*e.g.*, the carotids—is principally composed—(*a*) of a primary up-stroke *o*, which is caused by the contents of the left ventricle having been suddenly thrown into the aorta. It is followed by (*b*) a down-stroke, *p*, which corresponds to the post-systolic vacuum; then follows another short up-stroke, *s*; (*c*) of one or more up-strokes, *A* and *B*, both dicrotous, and placed at equal intervals, $oA = AB$. They originate at the root of the aorta. 2. These up-strokes are propagated towards the periphery with a rapidity, *V*, which in each artery is equal to one-ninth of the square root of a fraction. The numerator of this fraction consists of the product of the acceleration of the gravity, *g*, the coefficient of elasticity of the vessel, *E*, and the thickness of its wall, *a*. The denominator is the product of the specific gravity of the blood, Δ, and of the diameter of the vessel, *d*. 3. Owing to the variability of the coefficient of elasticity, the rapidity of propagation increases as the blood-pressure increases, and decreases as the latter decreases. 4. This same variability is the cause that the interval between the dicrotous up-stroke and the primary up-stroke increases steadily towards the periphery. The primary up-stroke being more elevated, the dicrotous, the coefficient of elasticity, must be higher, and the rapidity of propagation greater.

Microscopic Demonstration. By Professor L. RANVIER (Paris).

On the Development of Cells. By Dr. M. TRUEL (Voorschoten, near

Leyden).—The following were the conclusions. 1. All recent researches have tended to establish numerous points of affinity between the process of division which takes place both in animal and vegetable cells. 2. The difference which exists between spontaneous cell-generation and propagation by division is merely a relative one. 3. Spontaneous generation of cells may be considered as an intermediate stage between the division of cells and cells containing several nuclei.

Papers were also read on the following subjects.

The Physiology of Reading. By Dr. JAVAL (Paris).

Errors in the Theory of Inhibitory Nerves. By Dr. ONIMUS (Paris).

Differentiation in Biology. By Dr. GAETAN-DELAUNAY (Paris).

The Respiration of the Nerve-Tissue of the Nemertiæ. By Dr. HUBRECHT (Leyden).

The Effects of High Pressure on Circulation and on the Vaso-Motor Nerves. By Professor Dr. E. VON CYON (Paris).

On Embryoscopy. By Professor PREYER (Jena).

SECTION V.—PUBLIC MEDICINE.

The Protection of Children against too Early Labour. By Dr. I. VAN HOUTEN (Hague).—The conclusions were the following. 1. It must be the aim of legislation and custom to put a stop to excessive competition where it tends to lower the wages of labour, in cases where the low prices could only be obtained at the cost of the health and intellectual development of the labourers. 2. The lawgiver must confine himself merely to the tracing out of general rules for the organisation of labour from the point of view just stated. It remains with the associations of working men to carry them out more completely. 3. The principle in question will not be carried out to its full extent till the teachings of the neo-Malthusians have been universally adopted (restriction of the increase of population without renouncing the conjugal relations).

What are the most efficient Means to prevent the spreading of Contagious Diseases? By Professor G. VAN OVERBECK DE MEIJES (Utrecht).—The conclusions were these. 1. The most efficient way of preventing pandemics would consist in attacking them in the places where they originate. The governments of civilised countries must assist in combating the epidemic; and, if they should refuse to comply with this request, the refractory country must be surrounded by a double or triple cordon of sanitary posts of observation. 2. In order to render a soil less liable of developing, storing, and multiplying germs of disease, it must be drained and purified. 3. The individual disposition to contract an epidemic which prevails in the lower classes must be counteracted by bettering the general conditions of their existence. It is dangerous, both for an individual as well as for the public, to expose themselves deliberately to the infection during the prevalence of a benignant epidemic, with a view to immunity from future epidemics. Vaccination ought to be recommended only as long as energetic measures against the transmission of virulent diseases have not been taken up by governments. The rulers of a state have not the right to impose vaccination; it should even be restricted to the inoculation of animal vaccine, because it affects everybody. The same object may be obtained by isolating small-pox patients. Compulsory vaccination has failed to give the expected results, as transgressors are not severely punished, and revaccination is not imposed by the law. 4. The hygienic measures which are designated under the name of simple observation or quarantine must only be applied in countries that are either islands or else situated so favourably as to allow of all modes of ingression that may be threatened by the epidemic to be carefully watched. Quarantine of observation, as it has hitherto been carried out in Europe, can hardly be looked upon as sufficiently satisfactory. The rules of the old "quarantaine de rigeur" ought to be carried out without exception in all cases and on the frontiers of every country as far as regards the strictest isolation of individuals that have either been infected or are in the first stage of the disease. If the sanitary police of the country in question be well organised, such individuals who belong to an infected group, but do not present any symptoms of disease, may be allowed to pass, though they must remain for some time under the supervision of the police. Where, however, the sanitary police is badly organised, as is the case in almost all countries, including the Netherlands, it will be found better to keep the entire group back at the frontier, and at the same time to isolate the sick from the individuals that are suspected of having been infected, and the latter class from those that are in good health. An international convention ought to be founded for the purpose of prohibiting the transport of patients suffering from a contagious epidemic disease, except with a special authorisation or in extreme cases. The same rules ought to apply to the transport of contaminated objects, under penalty of a fine and imprisonment. 5. When a person has been taken ill with a contagious epidemic, both the physician and the head of the family are bound to declare it to the magistrate. The patient must immediately be either removed to a hospital that has been erected for the purpose, or else isolated in the house or ship where he happens to be. The persons who were in the same house with the patient are not bound to remain with him; they must, however, remain under the supervision of the police. In case they should wish to remain with the patient, they must share his seclusion. It is the duty of the magistrate to issue regulations respecting the isolation and treatment of the deceased, the disinfecting of his things, etc. If the dwelling of the patient happened to be a hotel, a school, or a place where public meetings are held, the magistrate may close it, according to his own judgment. 6. No trustworthy disinfectants have yet been discovered that would be efficient in disinfecting a room that a sick or healthy person had occupied. The safest way will be to observe the utmost cleanliness, and to ventilate it well. The best methods of disinfecting lifeless objects are, exposing them to dry heat (temperature over 210° Cent. = 410° Fahr.); boiling them for at least two hours at a temperature of more than 130° Cent. (266° Fahr.); exposing them for six to eight hours to the vapours of water that has been heated to a still higher temperature, or to the fumes of sulphuric acid. The fumigation must in every case be followed by washing the objects in question thoroughly in water, and ventilating them for a long time. Objects which might be damaged by this process of disinfection ought to be burned or buried in the soil of the graveyard; but this will hardly be carried out in practice. All measures for disinfection must be carried out according to a plan that has been carefully considered and is strictly uniform. 7. When an epidemic has once broken out and rages among a numerous population, the public authorities are seldom able to suppress it. It is in such cases their duty, with the aid of well-disposed persons, to succour the families that have been stricken by the epidemic, both materially and morally. The inhabitants of a country where an epidemic rages ought to be encouraged to emigrate temporarily; but the magistrates of places that have been spared must submit the immigrants to the strictest rules of the quarantine of observation.

How far does the duty of the Magistrates extend concerning the Superintending of Human Food? By Dr. F. SEELHEIM (Utrecht).—The conclusions were as follows: 1. The Government is bound to issue prohibitory laws against the mixing of human food with certain substances which are detrimental to health. However, as such cases do not occur often, it will be necessary to obtain the articles of food which it is desirable to analyse, either by buying them of the vendor or by seizing them in the shop, if information have been given about them. No shop ought to be searched unless it has been proved that the articles were sold with a view to fraud. 2. Butchers' shops must henceforth be more strictly superintended than has hitherto been the case; for it is well known that the flesh of animals who have been either ill or have died of disease is often sold as fresh meat. 3. If the food have been adulterated unintentionally, the adulteration ought not to be punished as an intentional fraud unless it has been declared such publicly by the sanitary council. 4. It must be the object of the sanitary council to become thoroughly acquainted with the quality of food. A special commission ought to be elected for that purpose. 5. It will be part of the duty of the local sanitary boards to provide for a fit locality where the analysis of food and other corresponding articles may be carried on. The public will be allowed to make use of this laboratory by paying a fixed sum. 6. It is the duty of the board of health to analyse food, with a view to detecting any inoffensive additions to food or detractions therefrom, as well as adulterations or an inferior quality of food. If necessary, the results of the analyses must be brought before the public, and the sellers should also be made acquainted with them. It will be hardly necessary to give a penal law on that subject. 7. Potable water must be regarded as forming part of food.

On the Choice of Drinking-Water with reference to Public Health. By Dr. VAN TIENHOVEN (Hague).—The following were the conclusions: 1. It is necessary for the public health that the drinking-water contain neither ammonia nor nitrous oxide. It may contain a certain amount of organic substances, nitric oxide, oxide of lime, chlorine, and sulphuric acid. 2. The calorimetric method is by far the best for making chemical analyses. 3. Our knowledge of the physical properties of clay and calcareous soil is of great use in helping us to find good drinking-water and to keep it pure.

What is the best method for Measuring Public Health? By Dr. F. ZEEMAN (Amsterdam).—The conclusions were these: 1. In measuring the public health, it would be preferable to take as a standard the social life of a family, and not that of a single individual. As far as regards given data, however, we must restrict ourselves to studying the life and health of the individual. This is the only way of obtaining data on which we may rely in our calculations. 2. In order to be able to compare the public health in different countries and at different times, it is important

that the standards by which it is measured be reliable, and that they may be universally applied. 3. The means that have hitherto been employed for the purpose of measuring public health are: *a.* Infant mortality during the first year of life. *b.* General death-rate in the following years, compared with the number of the living population of the corresponding age; statistics of death-rate; mean duration of life. *c.* Statistics of diseases that are the cause of death, both as regards the age of the individual, which renders him particularly liable to contract certain diseases, and as to epidemics. *d.* Statistics of the death-rate and sick-rate of the army. *e.* Statistics respecting the inmates of workhouses, asylums, prisons, etc. *f.* Statistics of the sick-rates of mutual help societies. *g.* The physical examination, measurement, etc., of soldiers. *h.* The physical development of infants and youths until they have reached the adult age. *i.* The produce of labour; the fertility of women. 4. The said means of measuring may be classified in three groups as follows: *a.* Official statistics; they are very useful, if only a general survey of the state of the public health is required, but they are found to be wanting in precision when medical statistics have been introduced. *b.* The knowledge of practical physicians; this is, however, a rapid, though irregular, current which is occasionally increased by epidemics. In order to be of use to the public, its course ought to be directed by the law, and the results obtained made public. *c.* The results which have partly been obtained, or will be obtained in future, by a series of careful investigations, which are classified under the name of anthropometry. These methods seem to respond best both to the requirements of universality and precision.

Papers were read on:

Milk Epidemics of Typhoid: their Etiology and Prevention. By Mr. ERNEST HART (London).

The Etiology and Prophylaxis of Phosphorus Necrosis. By Dr. MAGITOT (Paris).

The Death-rate among the Rich and the Poor. By Dr. DRYSDALE (London).

The Regulation of Prostitution and Public Health. By Dr. DRYSDALE (London).

A Psoriform Eruption in Workmen who manipulate Wheat. By Dr. MANOUVRIEZ (Valenciennes).

A new Edition of an Atlas of Mortality, which is being published by the Medical Association of the Netherlands. By Dr. H. VAN CAPPELLE (The Hague).

International Measures against Small-pox. By Dr. G. DELAUNAY (Paris).

Measures against the Plague. By Dr. L. VON GROS (Buda-Pesth).

The Organisation of the Sanitary Service on the Hungarian Railways. By Dr. L. VON GROS (Buda-Pesth).

SECTION VI.—PSYCHIATRY.

On the Use of Coercive Means in the Treatment of Mental Diseases. By Dr. VAN ANDEL (Zutphen).—The following were the conclusions. 1. The rational adaptation of the non-restraint system must be accepted as a general rule in the treatment of mental diseases. 2. Lunatic asylums must be built with a view to the adaptation of this system, and their medical and economical administration conducted accordingly. 3. The principal conditions for carrying out this system are the situation, size, and division of the asylum. The medical man must superintend all the domestic arrangements of the asylum. There must be a sufficient number of intelligent nurses. The asylum must not be overcrowded.

The Etiology and Treatment of Catatony. By Dr. DONKERSLOOT (Dordrecht). The conclusions were as follows. 1. It will be found useful to classify under the name of catatony a series of certain cases, the principal symptom of which is an inability to act. This must be attributed to some lesion of the motor centres of the brain. 2. As catatony frequently appears as a complication of divers nervous affections, such as catalepsy, hysteria, epilepsy, or melancholy with stupor, it is impossible to indicate a special etiology or treatment of the affection.

Is it necessary to classify Mental Diseases? If so, what should be the Basis of this Classification? By Dr. VAN DER LETH (Utrecht).—The following were the conclusions. 1. A classification of mental diseases is necessary, as it would be most useful, not only for the study, teaching, and treatment of mental diseases, but also for forensic medicine. 2. The doubts which have hitherto existed on this subject have been caused by the great difficulties which render the classification of diseases rather uncertain. In this case the difficulties are increased—*a.* by the complicated structure of the affected organ, of which little is known; *b.* by its various functions which govern our whole being; *c.* by differences in individual disposition and development; *d.* by the great number and variety of the causes of the disease. 3. A good classification must be clear and simple, and answer the purpose for which it has been designed. The classification may be different, according to the purposes to which it will be applied; *e.g.*, a special classification will be needed for teaching and studying mental diseases, another for their treatment, and a third will be found more useful for the needs of legal medicine, etc. 4. The bases of this classification need be no other than that used in classifying other diseases. It must rest, in the first place, on functionary troubles (symptomatic classification); in the second place, on the causes that have had a deleterious influence on the normal functions, and have it still; and thirdly, on the local anatomical lesions that have given rise to the said disturbances. 5. It will be found useful to divide mental diseases into several groups which are distinguished by peculiar characteristic symptoms. Only it must be always remembered that transitions and complications are apt to change the features of the disease.

On the Responsibility of the State in Mental Diseases. By Dr. RAMAER (Hague).—The conclusions were these. The responsibility of the Government in mental diseases is of a twofold aspect; it must protect the insane against the dangerous influences of social life, and it must defend society against the disturbances to which their affection is apt to give rise. The State is only bound to protect such insane as are not taken care of by their relatives or friends, unless the latter should ill-treat them. Crimes committed against insane persons ought to be punished more severely than if they had been committed against sane individuals. The State is bound to take care of a lunatic who has been put under the charge of strangers or distant relatives. There ought to exist special laws regulating the part which the Government is to take in the supervision of lunatics. The tenour of this law must be as follows. Anyone who receives into his house a lunatic without the permission of the special authority will be prosecuted. Certain regulations for those who express a wish to take charge of lunatics. The necessary formalities for admission into an asylum. Lunatics must be under the constant supervision of the Government. This may be done in different ways. The following appears to be one of the best methods. In small countries, the supervision may be confided to a general inspector, who is elected among the specialists of his country for mental diseases. He must be in direct communication with the minister to whose department the care of the lunatic asylums belongs. In larger countries, it will be found necessary to elect several inspectors, each of which must take charge of a special province. All these inspectors will be in direct communication with the minister as above. They must form a council, of which the minister must be the president, and meet as often as will be deemed necessary. The physicians belonging to the public asylums must be elected by the State and subordinated to the inspectors. In this way, the State will be able to exercise a greater control over the asylums. Every house or asylum where lunatics are received and taken care of outside of their own family must be visited at irregular intervals by the chief magistrate of the town, etc., in order to ascertain that no sane persons are unlawfully detained in it. It is the duty of the State to see that such lunatic patients who are not taken care of by their own families are placed in a public asylum where they may be properly treated. The supervision of the State must not confine itself to the lunatics alone; it must also extend to their property. For this purpose, every lunatic who is not incurable, and who has been placed under the supervision of the State, must, if he be in possession of some property, be provided with a legal adviser *pro tem.* If he be incurable, he must be placed under guardianship. The property of a lunatic must never be sold, not even to defray the cost of his maintenance. If the income of a lunatic be not sufficient to pay for the cost of his maintenance in a public asylum, he must be kept in an asylum at the expense of the State or the community to which he belongs. Finally, the State must protect the lunatic against its own laws, *i.e.*, the State must declare the impunity of the lunatic in all cases where a punishable deed has been committed by him under the influence of his malady. This, however, does not infer that every deed committed by a lunatic is not to be punished. The State must not merely confine itself to protecting the lunatics, it must also defend society against the dangerous acts which lunatics might commit under the influence of their affection. For this purpose, every lunatic who might endanger the public welfare must be placed in an asylum, and the police must have the power to remove such individuals to an asylum. Persons who are in charge of lunatics and who allow them to escape, either through negligence or illwill, must be punished.

On Mental Disease as a cause of Divorce. By Dr. VAN DER SWALME (Delft.)—*Conclusions.*—1. The reasons which, from a religious, moral, or practical point of view seem to plead in favour of mental alienation as a *motif* for divorce are not sufficient. 2. From a medico-legal point of view, for the words mental alienation, the words chronic incurable mental disease, with loss of memory, ought to be substituted. 3. Patients suffering from this disease are not often met with, as they gener-

ally die soon. 4. It seems dangerous to fix conditions for divorce for the few survivors, as such laws, however carefully exercised, might easily aggravate the sufferings of a larger number of unfortunates. 5. It results from these facts, that mental alienation does not seem to afford a more valid motive of divorce than many other infirmities and illnesses which destroy the happiness of married life.

Papers were read on :

1. *The Psycho-physiological Training of an Idiotic Hand.* By Dr. E. SEGUIN (New York).

2. *On the Influence of Alcohol on Mania.* By A. VON LUBANSKY VIAZMA (Smolensk, Russia).

SECTION VII.—OPHTHALMOLOGY.

On the Relations existing between Diseases of the Eyes and Cerebral Localisation. By Prof. O. BECKER (Heidelberg).

On Myotic and Mydriatic Agents. By Prof. DOYER (Leiden).—The following were the conclusions : 1. Notwithstanding the direct relation which exists between the size of the pupil and the power of accommodation, both functions are independent of each other. 2. It has been shown, by comparing the results obtained by different experiments, that the dilatatory effects of pilocarpine, eserine, gelsemine, atropine, elaturine, and duboisine, are in the proportion of $\frac{1}{200}$, $\frac{1}{6}$, $\frac{1}{16}$, 1, 2, 15. 3. The smallest dose of duboisine that has any effect upon the pupil is 0.000000005 *gramme*.

Plan of a Regulation for Testing the Visual Faculties of Railway Servants. By Prof. DONDERS (Utrecht).—The following were the conclusions :—I. *Remarks.* 1. It has been shown by experiments which have been made for the purpose on railway lines, that it is necessary to possess normal visual faculties in order to be able to distinguish the signals at the given distance. 2. It results from an examination of the railway servants. *a.* That in cases where an examination had been required, about three per cent. of the officers were not fit for the service. *b.* That the said persons had been received in spite of their faulty vision. *c.* That visual defects are seldom acquired during the service.—II. *General Regulations.* 3. It is necessary (*a*) to submit all the officials to a new examination ; (*b*) to be very careful in admitting new officials to the service ; (*c*) to re-examine the officials in the cases and circumstances given under 6 *a*. 4. The general revision takes place but once by experts who have been specially chosen for the purpose, according to given rules, under the direction of the ophthalmic surgeon of the railway company. The tables which show the results of each individual examination are submitted to him, and he is bound to re-examine all those individuals whose visual powers appear doubtful, and to give his opinion on the subject. 5. New officials can only be admitted on presenting a certificate signed by one of the official experts of the company. These experts are elected by the managers after having been recommended by the ophthalmic surgeon to the Company. 6. A special re-examination takes place : A. Once in two years, for the purpose of testing the acuteness of visual perception. It is conducted by an officer who has received the necessary instructions from the ophthalmic surgeon, or one of the official experts. B. For the purpose of testing the visual perception in general. *a.* From the age of forty-five and upwards, once in five years by an official expert. *b.* In special cases (1) after diseases of the eye ; (2) after traumatic lesions, especially such as are liable to cause a commotion of the brain, or after cerebral affections in general. *c.* If certain mistakes or actions have taken place, which may lead to doubt the integrity of the visual function. *d.* If the periodical re-examination A seem to infer an insufficient acuteness of sight.—III. *Examination.* 7. The examination relates principally to (*a*) the refraction; (*b*) visual range; (*c*) perception of colours; (*d*) the visual field. The examination must extend to the general condition of the eyes and eyelids. It must also be noted whether there exist any progressive diseases of the eye, such as cataract, etc. 8. The refraction and visual range are tested simultaneously in the general manner, for seeing at a distance by means of Snellen's letters, and with the aid of glasses. Each eye is tested separately at first, then both together. In cases where there is a slight dimness of the cornea, the examination takes place in the open air. 9. The qualitative test of colour-perception is conducted by means of Holmgren's method, Stilling's pseudo-isochromatic tables, and Donders' coloured samples. The quantitative test is conducted after Donders' method, both with transmitted and incident light. 10. The extension of the visual field is tested by asking the patient certain questions relating to the movements of the hand and to the number of fingers extended. The observer and the patient must keep their eyes steadfastly fixed on one another. 11. The bimanual test for the range of vision (Art. 6 A) takes place in the open air, and is conducted according to given instructions with the aid of Snellen's movable letters. If the visual range should be less than four-sixths, the individual must be re-examined by one of the special experts.—IV. *Conditions for Reception.* 12. Persons who apply for a situation as engine-driver or stoker must present the following certificates. *a.* A certificate that their eyes and eyelids are healthy, that there is no tendency to chronic congestion or inflammation. The visual field must be extensive, visual range and refraction normal. Colour-perception must be at least $\frac{4}{5}$. There must be no traces of cataract or any other progressive diseases of the eye. Persons who apply for situations as railway-servants must be possessed of the following certificates. *b.* A certificate of health of the eyes and eyelids, absence of habitual congestion or inflammation. The visual field must be unlimited for both eyes, the visual acuity and refraction must be normal. Colour-perception for one eye at least $\frac{3}{5}$; for the other eye the visual range and colour-perception must be at least $\frac{1}{2}$. There must be no traces of cataract or any other progressive affections of the eye. 13. At the re-examination of stokers and engine-drivers who have been employed in this capacity for more than one year, they must be shown to have a visual range of at least $\frac{3}{4}$ (without glasses), and a colour-perception of at least $\frac{1}{3}$ without glasses for one eye. For the other eye, the visual range must be at least $\frac{1}{3}$ (without glasses), and the power of distinguishing colours must be $\frac{1}{3}$. At the re-examination of station-masters, their assistants, the inspectors, guards, and others, who have served on the line for more than a year, they must fulfil the following conditions. The visual field must be unlimited at least for one eye. The visual range of both eyes must be at least $\frac{2}{3}$, and the colour-perception $\frac{2}{3}$. If this degree of visual range can only be attained by wearing glasses, the individual in question must be obliged to wear them. 14. Individuals whose visual range or perception of colour is less than $\frac{2}{3}$, but more than $\frac{1}{3}$, both for day and night signals, are considered comparatively fit for the service. They will be registered as such, and employed only when it suffices to distinguish the signals at a comparatively short distance. The same degree of qualification would not be sufficient for stokers and engine-drivers. 15. Individuals whose visual range or colour-perception with both eyes is $\frac{1}{3}$ or less, even with the aid of glasses, are unfit for service on the line.

Anatomo-Pathological Demonstrations. By Prof. SAEMISCH (Bonn).—Professor Saemisch exhibited preparations relating to—1. Conjunctivitis granulosa and follicularis ; 2. Choroiditis disseminata ; 3. Other pathological processes in the eye.

On Antiseptic Dressing in Operations of the Eye. By Professor H. SNELLEN (Utrecht).—The following were the conclusions. 1. Suppuration following operations on the eye is an analogous process to suppurations after cutaneous operations. For this reason, antiseptic measures, which are modified according to circumstances, would have the same prophylactic importance. 2. No operation on the cornea ought to be undertaken without having previously thoroughly cleansed with a 1 per cent. solution of carbolic acid the part which is to be operated upon, as well as everything that can possibly come into contact with it. The instruments must be cleansed with alcohol. 3. As it is almost impossible to use Lister's spray in operations on the cornea, a current of air purified with carbolic acid may be substituted in its stead. 4. Rags dipped in purified vaseline and purified cotton-wool will prove a sufficient dressing both for antiseptic purposes as well as to keep out the air. No irritating antiseptic means that might eventually increase the secretions of the conjunctiva and the glands of the eyelids must be employed.

On Sympathetic Irido-Choroiditis. By Professor MACGILLAVRY (Leyden).—The following were the conclusions. 1. In ascribing the origin of sympathetic irido-choroiditis to an irritation of the ciliary nerves in the eye which is the seat of the primary affection, the hypothesis is implicitly admitted that inflammation may be caused by a reflex action. 2. This assertion, however, is not based on any facts in pathology which might lead to it. 3. It has been shown by anatomical observations that in sympathetic irido-choroiditis the lymphatic space between the dura mater and the arachnoids is filled with conglomerations of lymphoid cells. 4. We have reason to believe that these conglomerations take a part in causing the inflammation of the second eye.

Papers were read on the following subjects :

Demonstration of a Tumour on the Retina. By Professor NOËL (Louvain).

On the Hygiene of Reading. By Dr. FAVAL (Paris).

Pathological Demonstrations. By Dr. W. A. BRAILEY (London).

On the Results of the Sclerotomies performed by Dr. von Wecker. By Dr. N. MANOLESCU (Paris).

On Retinal Hæmorrhages in Acute Cerebral Affections. By Dr. BOUCHUT (Paris).

On the Nystagmus of Miners. By Dr. DRANSART (Louvain).

Section VIII.—Otology.

On Adenoid Tumours in the Naso-pharyngeal Cavity. By Professor Dayer (Leyden).—The following were the conclusions. 1. Adenoid tumours in the naso-pharyngeal cavity give rise to a series of disturbances the cause of which has frequently been misunderstood in the functions of respiration, speech, and hearing. These troubles can only be cured in the majority of cases by removing the tumours; 2. Breathing through the mouth must not be considered merely as the effect of tumours or of a simple catarrhal swelling in the naso-pharyngeal cavity. When that habit has once been contracted, it becomes one of the principal causes of the further development or recurrence of the said tumours; 3. The best method of operating on adenoid tumours consists in crushing and removing them with the nails. This method is by far preferable to the use of instruments and can be applied even in very young children.

On Menière's Disease. By Dr. Guye (Amsterdam).—The following were the conclusions. 1. In a general sense of the word, the name of Menière's disease may be applied to all cases of vertigo which are caused by an abnormal irritation of the nerves of the semicircular canals. The irritation may be produced either by an exaggerated normal cause, *e.g.*, violent rotatory movements of the head, or of the whole body, or by an abnormal cause, *e.g.*, a sudden change of temperature (especially when passing from a higher to a lower temperature), variations in the intra-tympanitic pressure, disturbances in the circulation or inflammation; 2. In a more restricted sense the name of Menière's disease is applied to cases where the vertigo is caused by an inflammatory condition either of the semicircular ducts or of the middle ear. The vertigo may either be persistent or simply caused momentarily by normal movements of the head. In some cases, it appears periodically under the form of a fit, at intervals of weeks or even months; 3. Exposure to cold and catarrhs of the tympanitic cavity play a prominent part in the etiology of Menière's disease; 4. The majority, if not all cases, of Menière's disease are of secondary nature, *i.e.*, they are caused by catarrhs or inflammations of the tympanitic or mastoid cavity; 5. In typical cases the vertigo is preceded or accompanied by rotatory sensations which follow a certain order; the attack begins by a sensation of rotation around a vertical axis. The rotation invariably takes place on the affected side; sometimes it is combined with a sensation of swinging backwards and forwards. In more serious cases, the feeling is that of rotating round a horizontal axis, both backwards and forwards. Finally, the vertigo becomes general and the patient loses consciousness and falls down; he often vomits in such cases. Sometimes the attack is over in from ten to thirty minutes, in other cases it is called forth by a simple movement of the head during one or two days following the first attack, and the patient is obliged to lie perfectly still in order to avoid them; 6. In some cases, the rotatory sensations may be caused experimentally by certain therapeutic agents, *e.g.*, by the insufflation of air into the tympanitic cavity in cases of acute inflammation of the latter, or by the injection of fluids into the mastoid cavity when the mastoid process has been perforated. In these cases, the rotatory sensation always takes place round a vertical axis and in the direction of the affected organ; 7. In some cases the attacks are accompanied by loud noises in the ear; in other cases there is a constant slight buzzing noise which does not increase in strength during the attack; sometimes there is no sound at all; 8. In cases of long standing, a slight feeling of vertigo persists even during the free intervals, and seems to be caused by the first movements of the head after awaking from sleep. Sometimes the patient feels as if he were going to fall either backwards or forwards. Other patients are obliged to keep the head fixed in a certain position, because every movement that takes place in the plane of one of the semicircular ducts is accompanied by a sensation of a heavy body rolling in the same direction. (In a typical case which came under the speaker's observation, the patient held his head inclined forward and to the left, corresponding to the plane of the left sagittal duct. The left ear was affected in this case); 9. Menière's disease is frequently complicated with hysteria. It is also apt to produce in children a condition not unlike chorea and in adults clonic contractions of the muscles of the face and body. These often disappear entirely after a local treatment of the middle ear; 10. In some cases, patients after recovering from Menière's disease have lost the faculty of hearing; 11. Highly satisfactory results have often been obtained by local treatment, even in inveterate cases; 12. Professor Charcot has strongly recommended the use of quinine in the internal treatment of the affection, as it frequently wards off the attacks. In some cases where the inner ear is affected it has been observed that the use of quinine has been followed by increasing deafness, while the singing in the ear vanishes. This effect generally only lasts as long as the drug is used.

On the Different Methods of Determining Auditory Range. By Dr. A. Magnus (Königsberg).—The following were the conclusions. 1. In judging the usefulness of the methods by which auditory range can be tested, the object of the test must always be kept in view, not an ideal object. No apparatus has as yet been invented that could be used for all tests. 2. As far as the auditory perception of irregular sounds (noises) is concerned, each ear may be tested individually. This would hardly be feasible for the regular waves of sound (music). 3. In making a medical diagnosis, such methods must be applied by means of which we can compare the auditory range for sounds that are transmitted through the air with that for sounds that are transmitted through the bones of the skull. 4. In order to enable the physician to make a prognosis and to control the treatment, he must use instruments which produce sounds of the same intensity (Politzer's apparatus, a watch). 5. A watch with an inhibitory apparatus would be the best instrument for a medical examination. 6. All the methods by means of which auditory range can be tested possess only a relative importance, owing to subjective influences (the degree of attention, age, intelligence), or to objective influences (any noise or sound which may exist during the examination, the locality, etc.). 7. Every physician must fix upon a normal distance for hearing, according to the circumstances under which he operates. If he regard this normal distance as an unity, he may express the results of his experiments as fractions of this unity.

On Diseases of the Ear in Relation to Life-Policies. By Dr. J. Patterson Cassells (Glasgow).—The following were the conclusions. 1. It would be both arbitrary and unjust to look upon all cases of deafness and otorrhœa as being alike, and to refuse them. It has not at all been proved that diseases of the ear tend to shorten the medium duration of life in general. 2. All persons who wish to assure their lives must be questioned especially as to the past and present state of their ears. 3. Persons who have been suffering from some disease of the ears, or are still so, must be examined by a specialist. 4. This is done with a view to estimate the danger which their life may incur through this affection. Accordingly, they must be classified as good, doubtful, dangerous, very dangerous. This classification will depend—(*a*) on the nature and the gravity of the affection; (*b*) on the present and past condition of their general constitution. 5. Persons suffering from some affections of the ear may be accepted, if their general health be good and free from all constitutional affection; also when there is no complication. All those must be refused where the otorrhœa is caused by an exanthematic fever, or if the persons be scrofulous or syphilitic; also all cases of singing in the ears, with or without deafness, where the gait is unsteady; lastly, all cases where the singing in the ears, whether accompanied by deafness or not, is complicated by a syphilitic constitution.

Section IX.—Pharmacology.

On the Toxic Properties of Carbolic Acid. By Mr. J. Binnendijk, Army Surgeon (Amsterdam).—The following were the conclusions. 1. Pure carbolic acid is a toxic substance which acts directly on the cerebro-spinal nervous centres, especially on the respiratory centre, by stimulating them first and then paralysing them. It also appears to have a certain influence on the blood. This is evident from the fact that hæmoglobin has been often detected in the urine in the course of the first few hours following the intoxication. 2. Carbolic acid is both absorbed and eliminated in a very short time. The toxic effects appear very soon after the poison has been absorbed into the system, and disappears before it has been entirely eliminated. In favourable circumstances (subcutaneous injections, taking it on an empty stomach, etc.), it is generally eliminated in the course of twelve or sixteen hours. 3. Carbolic acid undergoes certain changes in the organism. Complicated chemical substances are formed (compound sulphuric ethers of carbolic acid, hydroquinona, pyro-catechin, *Baurmann*), which have a less toxic effect. Another portion is probably oxidised (*Salkowski*, *Taubes*). 4. If glycerine be mixed with an aqueous solution of carbolic acid, the toxic effects are generally diminished (on rabbits). It has not yet been decided whether this favourable effect is due to the resorption being less rapidly effected under such circumstances, or to another cause.

Have Drugs a Direct Influence on Nutrition? By Prof. Fokker (Gröningen).—The following were the conclusions: 1. The majority of the authors who have attributed to certain drugs a direct effect on nutrition have overlooked the modifications wrought in certain intermediate functions, and have mistaken an indirect effect for a direct one. 2. There is no positive reason to believe that drugs have any effect on nutrition. 3. The pharmacodynamic systems, which are based on the effects of drugs on nutrition, such as have been established by Köhler, Rabuteau, and others, are perfectly useless.

On Chemical Constitution and Toxic Properties. By Dr. T. FRASER (Edinburgh).

Universal Pharmacopœia: Communications.—1. As the International Committee, which had been commissioned by the Congress at Geneva to prepare a paper on an universal pharmacopœia and international uniformity in medicine, to be read at the sixth session, is constituted of members belonging to distant countries, America included, it was not possible for them to meet and to draw up a report. 2. The Committee were asked to meet in Amsterdam a few days before the opening of the meeting. 3. It then presented to the section of pharmacology its report. 4. As the principle of international uniformity in medicine was accepted by the meeting at its fifth session, the meeting at Amsterdam then agreed as to the necessary steps that must be taken to put this principle into practice. The Secretary, Prof. V. Gille (Brussels); the President of the Commission, Prof. Pacchiotti (Turin).

On the Culture of the different species of Quinine in Java. By Mr. K. W. VAN GOOKOM, chief superintendent of culture, ex-superintendent of the quinine plantations in Java.—The following were the conclusions: 1. The cinchona species have become rapidly acclimatised in the East Indies, so that there is no longer any reason to fear that the reckless way in which the bark has been gathered in the woods of South America will produce a stoppage in the quinine market. 2. The regular culture of cinchonas has contributed much to increase the value of the plant, both as a botanical species as well as for its medical properties. 3. The outward appearance of the cinchona plant does not allow us to form any idea as to its wealth in active principles. Neither does its anatomical structure throw any more light on the subject; so that its value can only be demonstrated by a chemical analysis. 4. The individual difference which exists in cinchonas has more reference to the quantity of active principle contained than to its quality. 5. The properties of the bark have remained the same, even although the plant has been cultivated in foreign lands. It seems, however, as if cinchonas were very sensitive to outer influences. In order, therefore, to prevent hybridisation, the planters will have to watch them, and to be very particular in selecting the seed. 6. The planters will have especially to bear in mind that their aim is to produce material for the manufacturing of quinine. For this purpose, the *C. Ledgeriana* and the *C. officinalis* will be best suited, while the *C. Succirubra* will always be found very useful as a constituent of pharmaceutic preparations. 7. The growth of cinchonas in the East Indies seems to depend more on the local condition of the earth and the soil than on a difference in the elevation of the land. Anyhow, it seems best not to attempt to grow them at a greater height than 4,500 to 5,000 feet.

Papers were read on:

The Antineuralgic Properties of the Gelseminum Sempervirens. By Dr. A. CORDÈS (Geneva).

On a New Method of using Petroleum in Medicine. By Dr. P. J. ENNES (Lisbon).

On the part assumed by Peptone in the Functions of Digestion and Nutrition. By Dr. H. SANDERS EFN (Amsterdam).

On the Best Method of Administering Quinine. By Dr. T. E. DE VRY (the Hague).

RUPTURE OF THE AORTA.—The following case is reported in the *Presse Méd. Belge.* A woman aged 37 was received at the Hôpital Saint-Jean in Brussels. She said that she was six months pregnant, and complained of headache and of violent pain in the epigastrium. She was very restless. Two hours after the examination, the restlessness increased; her skin was covered with perspiration; her face twitched convulsively. She vomited frequently large quanties of mucus mixed with bile. Her bowels were moved once or twice. Two hours later, the patient died. During the whole of this time, her cerebral and respiratory functions had remained perfectly normal. The necropsy showed that the pericardium was distended by a voluminous clot. The heart was not adherent to the pericardium. The connective tissue at the base of the heart was infiltrated with blood, especially in the neighbourhood of the aorta and pulmonary artery. The auricles and ventricles were normal. In the aorta, about half an inch beyond the sigmoid valves, was a transverse rupture which extended through the whole of the inner coat; and the blood oozing from this rupture into the neighbouring parts had partly torn off the membranes of the pulmonary artery. The same had taken place in the aorta down to the lumbar region, and the iliac veins were overflowing with blood. No satisfactory reason for this rupture of the aorta could be detected. It might, however, have been caused by some rapid movement made by the woman during the last moments of her life.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 20TH, 1879.

A CAMPAIGN AGAINST FIRST FALLACIES.

IT is probable that in these hard times and in the bad times yet to come during the winter of distress with which we are threatened, that the question of conveniently feeding our population will assume a growing importance. It is one on which medical men are able to speak with some authority as practical physiologists, physicians, and travelled men of the world. The extravagance of our people in their feeding is well known to us all; notably, their extravagant excess in flesh food, their ignorant neglect of nitrogenous vegetables, and their carelessness and unskilful waste in cooking. At this moment, Sir Henry Thompson's excellent articles on Food and Diet in the *Nineteenth Century* are very opportune, and medical men generally may usefully serve their country at what threatens to be a period of wide-spread distress and critical suffering by inculcating sound principles in respect to the economy of meat, the attention to all kinds of beans, lentils, green vegetables, common fish (now neglected), rice, cheese, maccaroni, and hominy. In a great number of houses of the middle, and all of the upper, classes, it is the practice to indulge the servants and the masters in meat meals twice and often thrice a-day. There can be no doubt that this is wasteful, and in all probability it is for the majority unwholesome.

To repeat the now well-known figures which represent the high food value of all kinds of peas, beans, and lentils is trite to persons who have any extended knowledge of life elsewhere than in England, or who have any elementary knowledge of dietetics and of the composition and value of food. Yet, the fallacy that meat alone can give strength for hard work, and beer alone give adequate stimulus to its digestion, are fallacies so deeply founded, and which underlie so many extravagances and follies of the poor and of the well-to-do, that a campaign against dietetic fallacies would be as patriotic as it is well founded. The example must be taken from near home; the doctrine must, as far as possible, be enforced by proofs which may be new, but which should not be "outlandish". It is of little use to talk to the uneducated poor about the powers of the rice-eating populations of India, the much enduring Hindoo, or the vigour and the strength of the toiling Mohammedan porters of Constantinople. They need something nearer home, and it is more to the purpose to point to the vast masses of Irish peasantry who for years endure continuous labour on the worst devised vegetable dietary which could be selected, a bulky and monotonous dietary of boiled potatoes, or to the experience of many a dock-labourer in himself and his own family, of many a thousand toiling widows with sturdy young families who have found in a meagre bread and butter diet washed down with weak tea the means of maintaining life and strength. These are extreme cases of ill-selected monotonous and insufficient dietaries dictated by strange necessities, unmodified by adequate intelligence. Withal waiting for the imperious dictates of pending poverty, and looking only to the wiser precepts of an intelligent economy which the march of national events is likely to impose upon all of us as a public duty, a survey of the field of reform in dietary may advantageously be at once taken.

The first step is a widening of our list of legumes. The first immediately available resources are peas, beans, and rice, haricot beans,

lentils, and the varied beans of India; the second is the introduction of the pipkin and the stew-pot. Until the English housewife learns how wasteful is the roasting-jack, how costly the gridiron, and how unnecessary the "clear fire" and the blazing mass of coals, without which she can at present usually neither cook a cutlet nor boil a cup of coffee, the first lessons of household economy are still unknown to her. But it cannot be very difficult, if anything like a general effort be made to popularise the art of making an appetising nourishing soup with a few bones, a crust of bread, and half a cabbage, a *croute au pôt* such as every peasant can make, and such as every epicure falls back upon from time to time; it cannot be difficult to naturalise in England the wholesome, delicious, and nutritive breakfast "hominy porridge", on which peasant and millionaire alike delight in America, and which may be seen as often at the breakfast-table in the Fifth Avenue at New York as in the cottage in New England; the art of stewing over a few embers in a pipkin which converts scraps of meat, onion, carrot, and bread-crusts into a savoury stew, cannot be unattainable. At any rate, the time is suitable for a renewed effort to impress upon rich and poor the costliness, the waste, and the national evil of our present disregard of the wealth of legumes which is at hand, but little used; of the desirability of inquiring into the alleged trade combinations by which the price of fish is kept up and the take limited in order to preserve a system of limited sales and large profits. The habitual excess of flesh-eating probably leads also to the excess of beer and wine drinking; the digestion is fatigued by excess of nitrogenous food, and then stimulated by alcohol to dispose of it. More and more the medical profession is happily assuming the duty of instructing the people in the means of health and the art of avoiding and preventing disease; dietetic regulation, in health as in disease, is one of the most useful of medical functions.

Our profession are the chief repositories of the physiological knowledge which enables those who possess it to apply certain criteria to popular beliefs, to note the general principles which explain popular habits, to trace the origin of the errors of national diet, and to point out not only as a matter of observation, but as a series of facts carrying their own explanation, when and how better practices obtain, and in what way we can profit by assimilating some of the dietary customs of our neighbours and of contemporary nations. The vegetarians have had their follies and their excesses; but they have also had their good experience, and they have much to teach us; let us not disdain to learn from them. To popularise and widely to diffuse a good penny vegetable cookery-book, free from absurdities, but well-tried and sensible, would be of itself a boon during the coming winter.

COMBINED SANITARY DISTRICTS.

A MATTER which must inevitably come before Parliament next session for immediate dealing with on some reasonable basis is the disruption of combined sanitary districts—threatened and accomplished—which is now going on. It would be an unprofitable task at the present moment to pass in review all the districts that have suffered from this process of disintegration. Their number is, unhappily, rapidly increasing, and the supineness of the Local Government Board bids fair to upset them altogether. Crippled and powerless to avert the catastrophe, combined medical officers of health have, up to the present, submitted to their inevitable fate, and have been perforce content to continue with a diminished district and diminished salary when authorities have backed out of combinations which they serve. It is very much to the credit of Dr. Cornelius Fox, that when it came to his turn to submit to the disruption of his district, he should have firmly refused to acquiesce in or submit to the contemplated injustice, and, much to his pecuniary disadvantage, should have retired from the service altogether. If, in the past, medical officers of health, when the Local Government Board showed that they were afraid to exercise their compulsory powers, had done as Dr. Fox has done, *i.e.*, boldly declined to go on with diminished districts and lessened salaries, we should probably never have arrived at this state of chaos. But now that local authorities see the Local Government Board allowing without a sigh one combination after another to go to pieces, it is small wonder if they seize every occasion to get rid of officers whose independence and outspokenness offend their every prejudice.

The history of Dr. Fox's retirement is so instructive as to merit somewhat lengthy treatment. Some time in 1874, a report on the sanitary condition of a village called Wickford was laid before the Billericay Rural Sanitary Authority by Dr. Fox. The report dealt in detail with the serious defects in the drainage and the privy accommodation in the village which were discovered; it referred to the floods to which the village was subjected; and it pointed out, amongst other things, that although in Wickford parish the general mortality from all causes had, during the decennial period 1861-70, been "below the average", that from "fever" and from diarrhœa had been greatly in excess of that obtaining for the whole of England and Wales, for London, and other specified districts. A further report, issued in April 1876, went to show that when the death-returns were examined for a more extended period, namely, for the twenty years 1851-70, the general mortality for Wickford parish was in excess of that obtaining in the standard group of districts quoted by the Registrar-General, and that the infantile mortality and that due to diarrhœal diseases was in excess of that obtaining both in the standard districts and in a number of the neighbouring registration districts; the excess from diarrhœal diseases being especially great. The recommendations made by Dr. Fox were appended to the earlier of these reports, and they dealt mainly with the provision of a means of drainage for slop-water, the provision of a dry or pail closet in place of the foul privies, and the removal of obstructions in the bed of the river. According to the minutes of the Rural Sanitary Authority these reports were, in November 1874 and in April 1876, communicated by the Sanitary Authority to one of their members with a view to their being laid before a vestry meeting at Wickford; and at both those dates there is a reference to such a meeting having been called, at which the state of affairs was clearly and fully explained by Dr. Fox. The suggested method of draining the village appears, however, not to have met with local approval, and beyond the removal of certain special nuisances, nothing was done. Matters went on thus till October 1878, when a serious outbreak of diphtheria at Wickford necessitated a fresh report on the village by Dr. Fox, in which the adoption in full of his recommendations of 1874 was again urged. Copies of the two former reports had, in accordance with official instructions, been forwarded to the Local Government Board, and a copy of the last was therefore sent also. The consequence was that the Whitehall authorities wrote a very severe letter to the Billericay board, censuring them for their inaction, which had the effect of incensing the latter against Dr. Fox for doing what it was his positive duty to do. The Authority suddenly became seized with a desire for economy and a wish to get rid of Dr. Fox by quitting the combination. They accordingly, in the calmest way, gave him notice that at the expiration of his triennial appointment they should withdraw, without assigning the smallest reason for so doing. Expostulation from Dr. Fox drew from the chairman the admission that he had performed his duties most creditably, but "the authority had been informed that the duties of a medical officer of health could be performed at a less cost". Economy, then, was the cloak under which the authority endeavoured to conceal its animosity against Dr. Fox for his action with regard to Wickford. The Local Government Board, on being informed of the contemplated withdrawal, wrote to request a reconsideration of the matter, the reason assigned (a question of a few pounds only) being wholly insufficient. Much vacillating correspondence followed, and eventually the Whitehall authorities, after much barking and threatening, left Dr. Fox ignominiously to his fate. The authority, left to do as they pleased, forthwith advertised for two officers, one at a salary of £50, and the other at a salary of £60 a year. These posts have now been filled up by the appointment of two local general practitioners, who doubtless do not pretend to any special acquaintance with sanitary science such as Dr. Fox possesses. The appointments are now before

the Local Government Board for confirmation, but we cannot think that such a scandal as the payment of half the salaries of these officers out of Imperial funds can possibly be perpetrated. If an authority chooses to be contumacious, and to have its own blind way, it is only fair that the district which sends such men to represent it should be called upon to bear the expense of their obduracy.

Assuming, then, that no repayment of salaries is allowed, let us see how far the authority's argument of economy avails them. The district contributed £219 a year to Dr. Fox's salary, of which the Local Government Board paid half; so that the actual money that came out of the district was £109 10s. *per annum*. The salaries of the new pair of medical officers of health amount to £110, all of which the district will have to pay! To this must be added the expense of water-analyses, many scores of which Dr. Fox performed gratuitously, but which cannot be expected of general practitioners. The plea of economy must therefore be considered a transparent subterfuge; and Dr. Fox's dismissal can only be ascribed to pique on the part of the authority at being lectured for their own neglect. It may be noted, as showing the estimation of sanitary matters amongst the members of the authority, that no committee has ever been selected by the board of guardians (between thirty and forty in number) to act as the sanitary authority; and no *ex-officio* guardian is ever seen at a sanitary meeting. The authority, if they have ever questioned the accuracy of Dr. Fox's report, have been afraid to say so; and now that it has been corroborated in every detail by Dr. Thorne Thorne, who was sent down specially from Whitehall to inspect the village, the authority simply have not a leg to stand upon. Of course it must be admitted that they were within their rights in taking the step they did; but this is only the more reason why the powers for mischief of local authorities in this direction should be controlled in the future. If honesty in reporting, and the independent discharge of duty, are to be rewarded by threats and insulting dismissal, how can it be hoped that medical officers of health, who have given up other prospects to enter the public service, and are dependent for their bread upon the favour of local authorities, will speak with that decision and frankness which ought to characterise them?

Few men would have had Dr. Fox's courage of self-denial in sacrificing himself to a principle. But, as he says: "If I went on as medical officer of health with the other authorities in the combination, I should be completely in their power; for directly I reported anything unpleasant to them, they would threaten me in a *sub rosâ* fashion with detaching themselves and diminishing my salary. And as they now see, in the case of the Billericay rural sanitary authority, that the Local Government Board does nothing more than remonstrate, and finally permits an injustice to be done, and abandoning a medical officer to his fate, I should be completely in their hands." After the treatment Dr. Fox has received, it is not surprising that he has come to the conclusion that fearless independence, which was supposed to be the great merit of combinations, is quite incompatible with permanence in a combined appointment. In this we cannot but agree with him; but it is impossible to suppose that this state of affairs can continue, unless Parliament is content to see the sanitary organisation that it constituted with so much labour crumble in the dust. The time has surely come when appointments such as that of Dr. Fox can be made permanent. No change of sanitary jurisdictions seems to be contemplated; and probably it will be long before anything is done, if ever, in this direction. Meanwhile, existing authorities see that they can browbeat their officers, set aside their reports, neglect their own duties, and generally throw dust in the eyes of the Local Government Board, without ever being brought to account for their iniquities. It is not only amateur sanitarians and superficial thinkers who, as the sneer goes, are clamouring for the appointment of a ministry of health. It has come to be the deliberate conviction of those who have made sanitary science the study of their lives, that, until such a department is created, and until medical officers of health are brought into some definite relation with the central office, no real improvement in our present organisation can be looked for.

THE total amount received up to Saturday last for the Hospital Saturday Fund amounted to £1,588 12s. as compared with £1,370 10s. last year.

WE understand that Surgeon-General Crawford, the head of the Army Medical Department in Ireland, is about to proceed to India, to relieve Surgeon-General Ker Innes in Bengal.

THE teaching staff of the University of Berlin consists of two hundred and nineteen members. Of these, nineteen belong to the theological faculty; nineteen to the juridical; seventy-six to the medical; and one hundred and seven to the philosophical. Of the seventy-six lecturers on medicine, thirteen are ordinary professors and forty-four private teachers. There are also two teachers of language, a riding-master, and a fencing-master.

SOUTH LONDON SCHOOL OF PHARMACY.

THE public opening of this School for the session 1879-80 took place on Tuesday, the 16th instant. There was a large muster of students present, and a greater number of visitors than usual. The Secretary, Mr. W. Baxter, after reading his annual report, and presenting the medals awarded last term to the following successful competitors—Senior Chemistry, Mr. Crook; Junior Chemistry, Mr. Roughton; Botany, Mr. Sager; Materia Medica, Mr. Harburn; Pharmacy and Dispensing, Mr. Parkin—the business of the session commenced.

THE TROAD.

PROFESSOR VIRCHOW is expected in town this week to complete, with Dr. Schliemann, the inspection of the collections of the latter from the Troad now lodged in the South Kensington Museum. Professor Virchow will furnish a chapter in the forthcoming work of Dr. Schliemann, giving the result of the ethnographic and geological investigations which he has recently made during his visit to the seat of Dr. Schliemann's excavations in the Troad.

PROFESSOR LISTER AT AMSTERDAM.

THE enthusiastic ovation with which Professor Lister has been honoured this week at the International Congress of Amsterdam by the body of surgeons and physicians of all nations who were assembled there, will cause great joy in King's College and Hospital, which have the advantage of possessing the surgeon whom Europe delights to honour. The honours which have been heaped upon Professor Lister by every country of the world are not perhaps without precedent in the history of medicine; but we know no precedent for the enthusiasm which his presence creates in every assembly of medical men in Europe, and the almost regal reception everywhere accorded to him. It is, as Professor Donders expressed it, not only a testimony of admiration to the learned surgeon who has known how to draw from the teachings of abstruse science the most precious, precise, and accurate safeguards for practical surgery, and who has enlarged the bounds of its achievements while he has disarmed it of its worst terrors and anxieties; but it is also an expression of gratitude for the multitude of lives already saved throughout Europe by the application of his methods, and the endless vista of benefits to humanity which opens before the universal adoption of the antiseptic principles. Whatever may be doubted, no one will deny that Professor Lister has created a revolution in surgery throughout Europe, by which every day lives are saved; and it cannot be said that the honours thus spontaneously showered upon him by the most critical of judges—his foreign contemporaries—are otherwise than well earned. Few men, if any, however, have lived to see themselves so quickly hailed by the masters of their own art in all countries as among the greatest benefactors of their kind; and English surgery may well feel proud of its illustrious professor, who has once more made the name of English science and humanitarian progress resound with applause in every country. To the names of Hunter, Astley Cooper, Brodie, Spencer Wells, he has added another which all Europe recognises as being already enrolled by their side in no less brilliant characters upon the scroll of fame; and of this his College and his country may well be proud.

BABY-FARMING.

FURTHER disclosures of the formal "rather startling character" have been made this week of systematic baby-farming at Birkenhead. The police statement is, that no fewer than ten children have come into the possession of the prisoners since January of last year, for only three of whom they have "accounted". One child, a cripple, five years and a half old, had died in their house, and no trace whatever could be had of what had become of the body. The prisoners had met, at the Shaftesbury Hotel, Liverpool, a woman who had come from a remote part of the county, and they received from her £10 and a male child, of whom no account had been given, the three children found on the prisoners' premises being all girls. It appears that the Infant Life Protection Act of 1872 has not been put in force by the Town Council, and there is "every reason to believe that in Tranmere and the neighbourhood baby-farming exists to a considerable extent". Interested as we are in watching the operation of that Act—which is largely due to the BRITISH MEDICAL JOURNAL and the Infant Life Protection Society, which based its operations upon our report on baby-farming—we have more than once expressed the conviction that the few convictions for offences against the Act are not exclusively due to its success in preventing the crime against which it is directed, but in many places to the neglect of the authorities to carry out the provisions of the Act and to establish any due inspection. The prisoners have been in the habit of advertising for children: sometimes they themselves took charge of the unfortunates; in other cases, they "sublet" them at a cheaper rate; and the extent to which this nefarious trade has been carried on may be judged from the fact that the police avow that twelve or fourteen different towns have to be communicated with before the inquiry can take a complete shape. The prisoners have been remanded; the magistrate remarking, with judicial calmness, that "he had no doubt that the corporation would now take steps to put the Act of 1872 into operation". It is time. Might it not be advisable to ascertain in how many other towns the Act is not put into operation? The subject is one in which medical officers of health may be expected to take some interest: it has a very direct relation with the bills of mortality.

M. CHASSAIGNAC.

To the unavoidably brief notice in the JOURNAL of last week of the death of M. Chassaignac, our Paris correspondent has supplied us with the following addition. Born at Nantes in 1805, M. Chassaignac prosecuted his medical studies there, and became an *interne* in the local hospital. In 1835, he received the diploma of the Faculty of Medicine of Paris, and in the same year was appointed *agrégé* of the Faculty. From this time forward, he used all his efforts to attain the higher position of Professor, and whenever the Chair of Surgery became vacant he entered the field of competition, but was invariably unsuccessful; his last attempt having been in 1851, when he competed with the celebrated Nélaton for the Chair of Clinical Surgery. The very fact of his having competed with such men as Blandin, Denonvilliers, Breschet, and Nélaton would show that he was a man of no mean talent; but he was particularly unfortunate, as may be seen by a retrospect of his professional career. If he succeeded early to the post of Hospital Surgeon, he was, in spite of his acknowledged capacity, an eager but unsuccessful candidate for more than twenty years for the Membership of the Academy of Medicine, and it was only in 1868 that he was raised to that much coveted position. It was only in 1852 he was appointed Chevalier of the Legion of Honour, whereas several of his own pupils were raised to that dignity long before that date. Chassaignac was a man of great erudition, of an inventive turn of mind, and a bold operator. He was the author of several works, and the inventor of instruments and new operative procedures which greatly contributed to improvements in surgery. His name will always be inseparably connected with the *écraseur* and the drainage-tube in surgery; and, for the operation called amygdalotomy or tonsillotomy, he laid down certain rules which tend to avert accidents and lessen the chance of non-success. For instance, if, in a case of double tonsillitis, it became necessary to remove both the amygdalæ, M. Chassaignac performed the operation at one and the same sitting by placing two guillotines in position at the same time; and the reason given by him was that there was a saving of time both for surgeon and patient, and, if only one tonsil were removed, several circumstances, such as dread of the operation, might prevent the patient from applying again. Another rule was, to remove the entire tonsil, and not a part of it, as practised by some surgeons, as in the latter case the gland was liable to grow again. The removal of the entire gland could be better effected with the guillotine than with the other instruments in use; there would be less injury to the neighbouring tissues; and less risk of hæmorrhage. M. Chassaignac had been for some time in failing health. This was noticed to date so far back as about ten years ago, when, according to the inexorable law of age, and having attained his sixty-fifth year, he was obliged to retire from his hospital surgeoncy. If mental depression may be considered one of the remote causes of diabetes mellitus, the relation between cause and effect may with some degree of certainty be made out in the present case, for, since his retirement from his official position, the constitution of the deceased gentleman fast broke down, and he was carried off, on the 26th of August, by the diabetic affection from which he so long suffered, in the seventy-fifth year of his age.

ALCOHOL IN THE TREATMENT OF PAUPER PATIENTS.

REPLYING to a circular issued by the Local Government Board, calling attention to the report of Dr. Webster, Medical Officer of St. George's, Hanover Square, Infirmary, on the disuse of alcoholic stimulants in the treatment of patients under his care, Dr. Charles Gross, Medical Officer of St. Saviour's Union Infirmary, has reported to his Board of Guardians, stating that during the year 1878 a sum of £954 6s. 1d. was spent in his Infirmary for wines, spirits, and beer. Of that amount, £132 7s. 6d. was for beer supplied to officers as rations; £129 9s., extra diet for certain inmates employed on the labour of the house; £46 14s. 1d. for those employed in the laundry; leaving a sum of £646 5s. 7d. as spent on the sick. The sum of £646 5s. 7d., for stimulants supplied to the sick and infirm, compared most favourably with the amounts spent at other establishments. For instance, Poplar and Stepney Sick Asylum, with an average of 450 patients, spent £625, being £1 7s. 9d. a head; the Central London Sick Asylum, Cleveland Street (226 patients), £278, or £1 4s. 7d. a head; Chelsea Infirmary (240 patients), £349, or £1 9s. 1d. per head; Lambeth Infirmary (540 patients), £564, or £1 0s. 10½d. per head; Central London Sick Asylum, Highgate (446 patients), £612, or £1 7s. 5½d. per head; while at the St. Saviour's Infirmary they had an average of 830 patients, the cost of stimulants £646, or 15s. 6¾d. per head. Dr. Webster took credit, in his report, that his low death-rate was owing to the disuse of alcoholic stimulants, and gave figures to endeavour to prove that statement. To controvert that, the report stated that Poplar and Stepney Infirmary, with an average of 450 patients, had nearly the same proportionate expenditure as Highgate. According to Dr. Webster, they would expect the death-rate to be about the same; but the former had 19 per cent. of deaths, whilst Highgate had the lowest of any, 10½ per cent. The death-rate in the St. Saviour's Infirmary during the year 1878 were 16 per cent.; 3,108 persons being under treatment, with 508 deaths. They must look further, therefore, for a reason for the great differences in the death-rate of similar institutions. The reason was simply in the class of cases admitted into the different infirmaries from different neighbourhoods. In the St. Saviour's Infirmary, they got some of the worst classes of disease from some of the worst districts in London—such as St. George's New Town, the Mint, and Lock's Fields. In that respect, they resembled the Stepney and Poplar Sick Asylum, whose death-rate was 19 per cent., or 3 per cent. higher than St. Saviour's, where the number of hopeless cases admitted was very great: many were so advanced in disease, and often so steeped in drink and debauchery, as to preclude all hopes of recovery. During the year 1878, no fewer than fifty-seven persons died within forty-eight hours after admission. It was not necessary to enter into the general question of giving stimulants in the treatment of disease. A

parish infirmary was not the place to begin experiments on the sick poor as to how little stimulant they could possibly bear. As long as the present system of medicine was in force—as long as they were taught in their text-books on medicine, and by practice in their hospitals and medical schools, that for certain conditions of disease alcohol in some form was advisable, nay necessary—so long was it their duty to use it. Nor was the class of persons whom they got as patients such as to render an innovation of that kind proper or advisable. Several of them were aged people, who had been accustomed for many years to take some form of stimulant; and to many of them a little beer or spirit in sickness was not a luxury, but a necessity. The report concluded by stating that, in the St. George's Union Infirmary, the expenditure of such an unreasonable sum as £8 3s. 6d. for wine, spirits, and beer among 2,496 patients in one year represented a want of consideration for their comforts that amounted almost to hardship, and reflected little credit on the administration.

MEMORIAL TABLETS.

THE Municipal Council of Paris has decreed the erection of a memorial tablet in the Hospital for Sick Children. It is to be consecrated to the memory of five *internes*, who died in the prime of life, victims of their self-sacrificing devotion in nursing patients with diphtheria and small-pox. Four of the five had contracted diphtheria at the bedside of their little charges.

DR. SIMS ON INCISION OF THE CERVIX UTERI.

DR. J. MARION SIMS (*American Gynæcological Transactions*, vol. iii, page 91) presents the following conclusions from his vast experience. 1. Transverse incision of the cervix uteri for stenosis is suitable only in cases where the intravaginal cervix is normally developed, where its two segments are symmetrical. 2. Antero-posterior incision of the cervix uteri for stenosis is suitable only for cases where the intravaginal cervix is abnormally developed, where the posterior segment is two or three times as long as the anterior and associated with anteflexion. 3. The bilateral incision belongs to Simpson, and no one else. 4. The antero-posterior incision belongs to Sims, and no one else.

M. LITTRÉ.

M. LITTRÉ, the well-known author of Robin and Littré's *Medical Dictionary*, is in a very delicate state of health, brought on probably by overwork and want of proper nourishment. It seems that M. Littré's ideas about eating and drinking were always different from those of other people. Thus, while working at his dictionary, he lived merely on fish and eggs, of which he only took very small quantities. His daily ration consists now of two cups of milk. His greatest trial at present is that he can neither write nor dictate. He spends his days sitting in his chair, with his eyes closed and his arms folded. From time to time he makes a sign, whereupon his grand-niece fetches the book to which he points, and from which she reads a few pages to him.

UNIVERSITY COLLEGE HOSPITAL.

THIS hospital, which has been closed for the last six weeks for alterations and repairs, will be reopened for the reception of patients on Monday next, the 22nd instant. Although a modern building, having been opened only in 1836, its architect had introduced many of the sanitary features now felt to be most objectionable in a hospital, and particularly the opening of the closets directly into the wards. This has now been entirely remedied throughout the building, and fortunately without the necessity for great structural alterations, as at the Westminster Hospital. The unsightly projections in the corner of each ward being done away with, a corresponding addition of cubic space has been gained, whilst the admission of foul air from the closet had been guarded against by cross-ventilation and double doors. Admission of fresh air has been secured by cutting "Tobin's slits" in the window frames or by special ventilating frames on the same principle, as proposed by Mr. Marshall. A thorough investigation of the sewers has been made, with the unexpected discovery of a large cesspool beneath the out-patient waiting-room, covered only by a broken slate, and receiving the refuse of the dispensary as well as of several closets. The sewers have been put into thorough repair and properly ventilated, and the cisterns (one of which threatened shortly to emulate that of St. George's) and water-supply have been thoroughly overhauled. Lastly, wood-pavement has been laid on each side of the hospital, which will be a great boon to all residing within it, since the traffic to and from the North-Western Railway is enormous. By the acquisition of three houses in University Street, the removal of the whole of the domestic offices and the greater number of the bedrooms of the nursing department has been effected, so that considerably increased accommodation for patients has been gained; whilst by removing partitions the size of some of the wards has been increased and their sanitary condition improved. Accommodation will now be afforded to two hundred patients, half the beds being medical and half surgical, the special departments having not been overlooked. With increased opportunities for clinical study, one of the great difficulties of the authorities of University College will be removed, for it must hitherto have been difficult to offer its numerous students sufficient variety of disease for their instruction. Still it may not be out of place to remind the present members of the staff of the good work done in bygone days with only half the number of beds by Williams, Walshe, and Jenner, on one side, and by Liston, Cooper, and Erichsen, on the other. It is, after all not the size of the hospital, but the use which is made of the material afforded for the bedside instruction of the student, which makes the character of a medical school.

THE PRIZES OF THE ACADEMY OF MEDICINE IN PARIS.

AT a recent meeting of the Academy of Medicine, M. Bergeron read an interesting report on the prizes offered by the Academy during the last year. It appears from this report that comparatively few candidates avail themselves of the opportunities afforded them. Thirteen prizes had been offered; of these, six were not competed for, and only a few manuscripts have been sent in for the others. Three new prizes have been offered. The prize Adolphe Montienne, value 1,500 *francs*, will be awarded, either yearly or biennially, for important scientific investigations in medicine, surgery, or veterinary medicine. The St. Paul prize will be given as a reward for works that have tended to advance our knowledge of diphtheria. The Hanski prize will be awarded, once in two years, to the best work on the existence or non-existence of contagion at a distance.

DR. SAYRE IN PARIS.

OUR Paris correspondent writes as follows:—"Dr. Sayre, the well-known American surgeon, has just been paying a visit to Paris, and I have had an opportunity of witnessing one of his demonstrations of the application and utility of his plaster-of-Paris jackets in the treatment of deformities of the spine. The subject for demonstration was a lad aged 20, a Swiss, and a waiter in the hotel where Dr. Sayre had been staying. The doctor noticed a spinal deformity in the lad (lateral curvature), and, with the instinct of a thorough surgeon, proposed to treat the lad by his method. The lad, of course, jumped at the offer, and the only condition Dr. Sayre made was that the application should be made in the presence of *confrères* who would be specially invited to witness it. I was one of the favoured; and in the presence of about a dozen *confrères* of different nationalities Dr. Sayre proceeded with his demonstration, and with each step of the operation, which was very skilfully performed by his son, the why and wherefore being at the same time most obligingly explained. I need not here enter into details, as Dr. Sayre's method is now so well-known. I may, however, remark that, as expressed by Dr. Sayre, the operation, to be successful, must be performed according to the rules so distinctly laid down in his book, and the material with which the apparatus is made should be of unexceptionably good quality, and it is through inattention to these conditions that failures do and must occur. One of the principal, if not essential, elements in the construction of the jacket is the quality of the plaster, which must be extremely fine, pure, and genuine, for, if it be at all adulterated, the whole apparatus would be rendered not only useless, but positively injurious. I must say I was most favourably impressed

by the demonstration, and only regret there were none of the Paris hospital surgeons or orthopædists present. This was owing to unavoidable circumstances; most of the leading surgeons were out of town, but there were a few of the younger hands present, who, I trust, have profited by the lesson, and will vulgarise a practice which will render immense service not only to humanity, but to themselves. Dr. Sayre having left Paris, I took the liberty of calling on the patient yesterday (the fourth day after the operation), and was glad to find that he was well and doing his work in the hotel. He assured me he suffered no inconvenience whatever from the jacket; he never felt his back so strong since the age of sixteen, when the deformity was first noticed; and he has great hope, and indeed feels certain, that the apparatus will greatly conduce to his comfort, and enable him to earn his livelihood, if it do not thoroughly cure the spinal deformity. There is one incident which occurred during the application of the apparatus, and which I think worth noticing here, as it may be erroneously interpreted by some who were present. As soon as the operation was over, which occupied only a few minutes, the lad fainted, but rapidly recovered after being laid in the horizontal position, the opening of windows, the removal of the 'dinner-pad', and the administration of a glass of brandy and water, which he relished. The fainting, in my opinion, was induced as much by the stifling atmosphere of the room, which was very small, as by any compression due to the apparatus itself."

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during August, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other Companies, and by the Tottenham Local Board, was: Colne Valley 1.3, Kent 1.6, Tottenham 1.6, New River 3.3, Lambeth 5.0, East London 5.3, Chelsea 5.8, Grand Junction 6.3, West Middlesex 6.4, and Southwark 6.5. The waters supplied by the five companies drawing their supply from the Thames were polluted with organic impurity to such an extent as to be "quite unfit for dietetic purposes". The Grand Junction water was slightly turbid, and contained "abundance of moving organisms"; but the water delivered by each of the four other companies drawing their supply from the Thames had been efficiently filtered. The Lea water sent out by the New River Company was of much better quality, but that delivered by the East London Company was scarcely superior to Thames water, was slightly turbid, and contained moving organisms. The deep-well waters delivered by the Kent and Colne Valley Companies, and by the Tottenham Local Board, were of their usual excellent quality. Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town was clear, and of about the same quality as in the previous month. Dr. Mills reports that the Loch Katrine water supplied to the city of Glasgow "was light-brown in colour, and contained very little suspended matter".

MENTONE.

A HOUSE of rest for clergymen and other professional men is about to be opened at Mentone, France, in which it is hoped that those who have been overworked may obtain such change and rest as may restore them to health and usefulness. The scheme has the approval and support of the Archbishop of Canterbury and the Bishops of London, Exeter, Lichfield, and Gibraltar. The conditions on which applicants will be admitted are:—1. That the health of the applicant is such as to make a winter in a mild climate necessary, or at least advisable. 2. That he is unable to obtain this without such assistance as St. John's House will afford. 3. That his medical advisers are able to give a fair hope that, with the benefit of a winter abroad, he will be able to return to his work. 4. Each applicant will be asked to give references to two clergymen, and to a medical man who is fully acquainted with the case. 5. Those who are admitted will pay their own journey to and from Mentone, and £1 per week for board and lodging during the time they are in St. John's House. Applications for admission should be addressed to the Rev. C. Wyatt Smith, Middleton House, Upper Tooting; or to the Rev. H. Sidebotham, 67, Thistle Grove, Brompton (after October 6th, St. John's Parsonage, Mentone), who are the Honorary Secretaries.

THE MURCHISON MEMORIAL.

A SUBSCRIPTION-LIST for the above object has been opened in India, and Mr. Shirley Deakin, Surgeon Bengal Medical Service at Allahabad, has undertaken to receive and transmit all contributions to England. Drs. Charles and Boyes Smith of Calcutta, Dr. Vandyke Carter and Dr. Hunter of Bombay, along with other leading medical officers, are also acting on behalf of the memorial. In Madras, Dr. Fumell, and in Colombo, Dr. Kinsey (Civil Principal Medical Officer), are receiving subscriptions. In Sydney, Dr. Maclaurin (late R.N.), and in Melbourne, Dr. John Williams, have been nominated to act in conjunction with the home committee.

CAUSES OF FEVER IN AGRA.

THE *Bombay Gazette* states that, since the opening of the Agra Canal, there has been a great increase in fever in the civil lines of that city. Seeing the ill reputation that attaches to canals elsewhere, it is not going too far to assume that some, at least, of the sickness is due to this cause. The only fact that militates against this view is, that the canal is not an irrigation one in the neghbourhood of Agra, but simply a still-water channel for the conveyance of boat-traffic. The water is not spread about on the surface, but in most cases is in cuttings. Still the percolation must affect the wells in the neighbourhood, and it is a question whether these in any way are connected with the fever. Certain it is that, wherever the canal has extended, a tremendous outbreak of fever has taken place. At Kosee, for instance, which adjoins the canal, popular rumour makes out that one-fourth of the inhabitants died last year. Hasty generalisation on such a subject can only do harm; but the evil seems serious enough to demand a searching inquiry.

PARSEE MUNIFICENCE.

THE well-known Parsee philanthropist, Mr. Byramjee Jeejeebhoy, has given 20,000 rupees towards the establishment at Ahmedabab of a Medical College, to be called after him. We lately reported a donation from the same gentleman of 40,000 rupees for the establishment of a similar institution at Puna.

THE WAR AGAINST INFECTION AT JARROW.

A LOCAL Act, which contains sanitary provisions far in advance of those in the general public health law of the kingdom, is that recently passed for Jarrow, the working of which we shall watch with particular interest. These provisions have not received the publicity which they deserve, and we are glad therefore to find that the Local Government Board have made special mention of them in their last report. The Act authorises the Town Council to require the notification to them of all cases of infectious disease, the fee for each certificate being a shilling, and only one such fee being payable for the same illness in the same house or family. It empowers the corporation to provide shelter or house-accommodation for the healthy members of a family in which infectious disease has appeared; to provide nurses for infectious cases; to order the temporary closing of public or private day schools and other places of public resort in neighbourhoods threatened or affected with dangerous epidemics of infectious disease; to order the temporary closing of any shop, dairy, or place for the storage or sale of provisions, clothing, or other articles liable to retain infection. It further authorises the corporation to declare any house or room where dangerous infectious disease exists to be an "infected place"; and, on such declaration being made, no person in such "infected place" is to continue any occupation involving the handling of any clothing, food, or article likely to retain infection, which is intended for sale or for the use of other families; and no bedding, clothes, or other articles likely to retain infection, are to be removed. The corporation moreover are empowered to pay compensation for any direct loss sustained by reason of the exer-

cise of the above powers, while the obligations of the statute may be enforced by a penalty of £5, and a further penalty of £2 a day in the case of a continuing offence.

ENTERIC FEVER AT SELBORNE.

IT ought to be enough to make the Reverend Gilbert White turn in his grave to think that the delightful village which he has so charmingly described should be invaded by a government inspector on account of its unhealthiness, and that the intruder should report it as nothing better than a whited sepulchre: yet such is the verdict of Dr. Blaxall, who was sent down by the Local Government Board in May last to investigate the circumstances of a considerable epidemic of typhoid fever in the village. Dr. Blaxall has an adequate sense of the beauties of the locality, yet he cannot shut his eyes to the pollution almost at their source of the two streams of the village, to the utter want of drainage, to the dangerous and unwholesome system (which is almost universal) of allowing excrement to be retained for prolonged periods in pits which are merely excavations in the soil, or to the pollution which inevitably results of the wells sunk in the permeable soil of the village. When, as in last year, a case of typhoid fever was imported into the place, and the evacuations were thrown into the common privy of a particular row, it is not surprising to learn that, the poison having duly percolated from the privy to the well supplying the row, four of the houses there were almost simultaneously invaded by the disease. Again, the infection having been transplanted to another part of the village, and another well being specially polluted in precisely the same way, no one can wonder at the occurrence of fifteen cases amongst the persons using the well, or at the subsequent spread of the disease all over the village through the medium of infected privies or wells. Altogether, a total of forty-six cases of typhoid fever, with three deaths, distributed over twenty-four families, may fairly be ascribed to the neglect of the local sanitary authority to perform their most obvious duty of preventing the accumulation of filth. Dr. Blaxall gives some severe but well deserved strictures on the apathy of the authorities in the presence of this epidemic; and it is to be hoped that his careful report will rouse them to a sense of their position.

THE SALE OF FOOD AND DRUGS ACT.

PERHAPS the most interesting, certainly the best written, portion of the recently published report of the Local Government Board is that relating to the action taken last year in the country generally under the provisions of the Sale of Food and Drugs Act. The report shows that while the growing demand for excessive cheapness has a tendency to produce spurious imitations, yet, speaking generally, adulteration is diminishing, and that its character, where it exists, is much less noxious than formerly. The total number of samples examined was 16,191, of which 2782, or 17.2 per cent., were adulterated. By far the largest number of samples were those of milk, in the quality of which there was a decided improvement, as compared with 1877, though it cannot be regarded as satisfactory that, even now, more than a fifth of the samples examined fail to reach the necessarily low standard of genuineness generally adopted by analysts. About seven per cent. of the samples of bread, and 1.8 per cent. of those of flour, had been tampered with by the addition of alum. Coffee shows some increase of adulteration as compared with 1877; but pickles, jams, and confectionery give but a small amount of adulteration. Only two samples of wine out of seventy-six were reported against—a result somewhat surprising. Nearly five per cent. of the samples of beer were returned as adulterated, excess of salt being the adulterant in most of the cases. Only half of the samples of spirits examined were found genuine; but this result is due almost entirely to the practice of diluting spirits with water, and there was scarcely an instance of the addition of such ingredients as capsicum or oil of vitriol. Less than five hundred samples of drugs were submitted to analysis, which, in view of the practical defeat of the objects of the physician that adulterated drugs may occasion, is much to be deplored. Thus the analyst for the West Riding of Yorkshire writes that "the dilution of sweet spirit of nitre by addition of water causes a gradual decomposition of the nitrous ether on which its medicinal value depends, thus rendering it worthless". A good many samples of violet powder were examined, public attention having been drawn to the matter by the Loughton disaster. No admixture with arsenic was discovered elsewhere; but in several instances substances which would act as irritants rather than as sedatives were sold under the name of violet powder. Cocoa appears to be extensively adulterated; and some samples at Hackney, labelled, it is true, as mixtures, were found to contain only from ten to fifteen per cent. of cocoa, and should rather have been described "arrowroot flavoured with sugar and cocoa". This compound, as the analyst of the district points out, is comparatively useless as a food, for the quantity used for making a cup of cocoa would scarcely have greater nutritive value than a single mouthful ot bread and butter.

DIPHTHERIA AT CRANFIELD.

DR. CORY of St. Thomas's Hospital has presented to the Local Government Board a not over clear report on the circumstances of a recent outbreak of diphtheria at Cranfield and other villages in the Ampthill rural sanitary district. The exciting cause of the outbreak has not been satisfactorily made out; but it seems feasible that the infection may have been imported from Bedford, which suffered terribly from diphtheria last year (JOURNAL, vol. i, 1879, p. 659). The sanitary arrangements of the villages were found to be of the usual imperfect country type, but the influence which these may have had on the spread of the disease is not discussed. The general results of the inquiry are quite negative in character; but there is an element of interest in it, in the fact that school attendance is shown not to have influenced the spread of the epidemic. It is true that the majority of first attacks in the various households was in children attending school, but these were at the period of life (as subsequent attacks in the same houses showed) when susceptibility to diphtheria is greater than among adults. The following circumstance is significant, as showing what care is needed in accepting *primâ facie* appearance of school influence before other circumstances have been taken into account. All the Cranfield cases of diphtheria (ten in number) occurred on the south-east side of the village, except one which occurred on the opposite side in February 1879, at a remote part of the village. The nine cases attacked on the south-east side were distributed among three households, the first sufferers in which were children attending the National School at Cranfield. The number of children attending the Cranfield school from houses on the south-east side was 148, and from houses on the north-west side 116; and it is to be supposed that those attending school on the north-west side were as much exposed to infection at the Cranfield school as those on the south-east side, yet not one of the former were attacked. Altogether twenty-seven cases occurred; and of these, five were under three years old, eighteen (or two-thirds of the total) were between three and fifteen, and four were older than fifteen.

SCOTLAND.

GIFT OF A HOSPITAL AT WEMYSS.

THE Wemyss Local Authority met last week, when Mr. R. G. Wemyss of Wemyss offered to build and maintain at his own expense a hospital for the reception and treatment of cases of epidemic disease. The condition attached to the gift is, "that the Board will undertake to send all cases of infectious disease to the hospital". The Board agreed to this condition, and cordially accepted the munificent gift.

DISPENSARY FOR WOMEN AND CHILDREN, EDINBURGH.

THIS dispensary (which is unique in having only a female physician as its working staff) has completed its first year. The report, which is signed by its female secretary and treasurer, states that the number of patients attending during the year was 681, the whole number of visits paid, 2,464, and of prescriptions given, 3,942. A sum of threepence is charged for each prescription to defray a part of the expense of the medicine, and only twelve patients were found unable to pay this. The

dispensary is in future to be conducted on the provident principle. Dr. Sophia Jex-Blake, who has done the work during the year, will now be assisted by the appointment of Dr. Agnes McLaren as second attending medical officer. The President of the College of Surgeons, and Drs. G. W. Balfour, Angus Macdonald, and Peel Ritchie, are the consulting staff.

HEALTH OF GLASGOW AND EDINBURGH.

THE mortality in Glasgow last week was notably low, amounting to 14.5 per 1,000. In the corresponding period last year, it was 19, and in the two years 1876-77, 21. In Edinburgh, the mortality last week was 18 per 1,000. There were seven deaths from zymotic diseases, of which six occurred in the old town. Seven deaths were due to diarrhœa. At a recent meeting of the Public Health Committee of the Edinburgh Town Council, the medical officer of health, referring to the low death-rate, directed special attention to the unusual absence of cases of diarrhœa during August, when the death-rate was 15.26 per 1,000. The mortality in Leith was 20 per 1,000.

THE GLASGOW MATERNITY HOSPITAL.

THE directors of this institution have applied to the Glasgow Town Council for permission to occupy, free of expense for twelve months from now, a part of the old Fever Hospital in Parliamentary Road. The reasons for this request are, that it has been found necessary to close in the meantime the present maternity hospital, owing to the appearance of puerperal disease in it; and further, it is expected that the present building will be shortly taken down and rebuilt. The Health Committee of the Town Council have agreed that the request should be granted, but there seems a difference of opinion as to whether it is a wise proceeding to locate the Maternity Hospital in such a building as the old Fever Hospital.

PERTHSHIRE MEDICAL ASSOCIATION.

A PRELIMINARY meeting of the medical profession of the county was held some time ago to consider the propriety of forming a Medical Association for Perth and surrounding district. It was unanimously agreed that such an Association should be formed, and rules were approved of for the conduct of its affairs. The first monthly meeting of the Association was held in the directors' room in the Infirmary, on September 5th, when the following were elected office-bearers :—*President:* Dr. Frew. *Vice-President:* Dr. Robertson, Stanley. *Secretary:* Dr. Baird. *Treasurer:* Dr. Graham. *Members of Council:* Drs. Bramwell, Nairne; Irvine, Pitlochry; Morrison, Dunning; F. H. W. Laing, Bridge of Earn. A paper was read by Dr. Bramwell, "On Nerve-Stretching in Sciatica, with Cases". As already over one-half of the members of the profession in the county have become members, the success of the Society seems assured.

THE ANTISEPTIC TREATMENT IN THE GLASGOW ROYAL INFIRMARY.

THERE have just been made public the results of an inquiry, instituted by the managers of the Royal Infirmary of Glasgow, as to the rate of mortality among the patients treated antiseptically, compared with those treated by the ordinary methods. This institution is favourably adapted for such an inquiry, as some of the surgeons are strict followers of Lister's antiseptic system, while others are directly opposed to it and treat their cases with ordinary surgical dressings. As the patients are placed under very similar hygienic conditions, it was suggested that some comparison should be made as to the results obtained under these very different plans, and this has now been done. The returns obtained embrace the practice of the hospital for the last four years, representing about eight thousand cases. These were treated by five surgeons, who had thus about four hundred annually under their care. Each surgeon has one day in rotation in which he receives every patient that comes for admission on that day, so that there can be no selection of cases; and this rotation is kept regularly throughout the year. The returns take in the whole number treated to a conclusion in each ward for each year, with the respective results; and they show the percentage of mortality of patients under the care of each surgeon, in each ward, and in every year separately. The whole mortality having been ascertained, the deaths that took place within forty-eight hours were eliminated, as they could not be affected by any treatment. The result of the whole returns is to prove that, under antiseptic treatment, the mortality is a little more than one-half of those treated in the non-antiseptic manner; and it is remarkable that, with the increasing adoption and close application of antiseptic treatment, the mortality has regularly declined. These returns are of great interest and value; and the managers are to be congratulated on looking so carefully into the question.

LIGATURE OF THE EXTERNAL ILIAC ARTERY.

PROFESSOR GEORGE BUCHANAN performed this formidable operation, in the Western Infirmary, Glasgow, on Tuesday, in the case of a man suffering from a large diffuse aneurism of the left common femoral artery. The patient progresses favourably.

REGISTRAR-GENERAL'S REPORT FOR AUGUST.

ACCORDING to the report issued by the Registrar-General for August, the deaths in the eight principal towns in Scotland numbered 1,701, of whom 828 were males and 873 females. This is the smallest number of deaths registered any August since 1862, and 810 under the average of ten previous years. The death-rates in the different towns were, per 1,000 of population: Greenock, 11; Aberdeen, 15; Glasgow and Edinburgh, 16; Dundee, 17; Leith and Perth, 19; and Paisley, 26. Thirty-eight per cent. of the deaths were of children under five years of age. In curious contrast to the death-rate over all is the fact that Greenock, with the lowest death-rate, had 48 per cent. (the highest) of deaths under five years; while in Perth, the infant mortality was 29 per cent. of the whole. Zymotic diseases caused 238 deaths, or 14.0 of the entire mortality. Of 26 deaths from fever, 9 were typhus and 17 enteric. Diarrhœa caused 59 deaths, and dysentery 2; cardiac diseases 127, and premature birth debility 44. Phthisis caused 14.2 per cent., and other inflammatory affections of the respiratory system 15.1 per cent. of the deaths. From violent causes, there were 67 deaths, of which four were suicides. Six deaths were ascribed to the direct effects of intemperance and one to delirium tremens. Six deaths at over ninety years of age were registered, the oldest being ninety-seven. There were 3,339 births, of whom 1,729 were males and 1,610 females. During the month, the mean barometric pressure was 0.168 inch less; the mean temperature less by 1°; the mean humidity greater by 1; and the rain depth greater by .60 inch than during the average of the same month for twenty-two years.

POISONING BY TOBACCO IN DUNDEE.

ON Sunday, a lad named George Soutar, fifteen years of age, residing in Dundee, while out walking, chewed some tobacco and inadvertently swallowed a piece of it. On going home, he became very ill, vomiting, and being convulsed. Continuing to get worse, Drs. Miller and Pirie were sent for and were soon in attendance. It appeared to them to be a case of nicotine poisoning. Notwithstanding all their efforts, the lad died the same night in great suffering.

SOCIETY FOR THE RELIEF OF DESTITUTE SICK, EDINBURGH.

THE third quarterly meeting of this excellent society was held last week. The treasurer reported that £496 2s. 3d. had been distributed, by means of a visiting committee of twenty-seven gentlemen, in the form of money, meat, coal, and clothing. As the aid is only given to well-ascertained cases, it is of great value, in dispensary and poor practice, in enabling the recipient to procure the suitable diet, etc., ordered by the visiting medical man or student.

SELKIRK SEWERAGE.

THE inhabitants of Selkirk are to be congratulated on the completion of a complete sewerage system, extending over five miles. Ample provision has been made for ventilating the sewers by means of ventilating-shafts carried as high as the chimneys; also for suitable inspection by manways at various points; and for flushings, by tanks connected with the main water-supply.

IRELAND.

THE salaries of the medical officers of health for Ennistymon Union, Clare, have been reduced one-fourth.

DONNYBROOK Graveyard has been closed against future interments, on the report of Dr. MacCabe, Inspector under the Local Government Board.

DR. ROUGHAN, Local Government Board Inspector, in a recent report of the Tuam Workhouse, states that the accommodation for the infirm classes is deficient, and that the clothing and bedding are discreditable.

THE Bandon Board of Guardians have taken advantage of the new Act respecting residences for dispensary medical officers, and have arranged to provide a house for the medical officer of the Templemartin District, near the dispensary, from which he at present resides about twelve miles.

VACCINATION FEES.

THE Act of Parliament, by which the fee for a successful vaccination has been increased from one shilling to double that amount, has, as was expected, created considerable dissatisfaction among numerous Boards of Guardians in Ireland. Recently at Sligo, Galway, and Waterford, the Guardians have shown their dislike of the increased fee, and have proposed to reduce the salaries of their dispensary medical officers in proportion.

INSANITARY CONDITION OF LIMERICK.

THE insanitary condition of this town has long been a reproach to the Urban Sanitary Board, who appear unable or unwilling to cope with the evils complained of. The Local Government Board have had repeated communications with the authorities on the subject, and last week inquired as to the progress which had been made towards the construction of a disinfecting chamber, and suggested that the owners or occupiers of all houses unprovided with sanitary accommodation should be served with notices, as directed by the 45th section of the Public Health Act. The corporation state that the construction of a disinfecting chamber has been postponed for the present, owing to the heavy local taxes. As regards slaughter-houses, it appears that only a few are licensed, while in other cases the animals are killed in dwelling-houses or behind the victuallers' shops. Notice has been given to have steps taken for the erection of a public slaughter-house, which is urgently required, as the condition of the majority of those existing is a disgrace to the town.

THE VACCINATION AMENDMENT (IRELAND) ACT, 1879.

THE Local Government Board for Ireland have lately issued a circular to the various unions in reference to the amendment of the Vaccination Act, which became law on the 15th of last August. Attention is directed to the third section of the Act, which requires that the child be taken for vaccination within three months after its birth, or as soon after as may be practicable, instead of within six months, as heretofore; while the fourth section provides that the child vaccinated shall be brought to the medical officer who vaccinated it, who is empowered to remove lymph from it for the performance of other vaccinations. The seventh section enacts penalties for the violation or neglect of these requirements—viz., a penalty not exceeding twenty shillings for preventing the medical officer from taking lymph, and a similar amount for neglecting to take a child to be vaccinated or to be inspected after vaccination. By the sixth section, the medical officer is to be paid two shillings, instead of one shilling as formerly, for every person successfully vaccinated or revaccinated by him within his dispensary district, provided he has made the required report to the Committee of Management. By the tenth section, the Guardians are authorised to institute proceedings for the purpose of enforcing compliance with the provisions of the Act, and provides that the medical officer of any dispensary district who may be required by the Guardians to attend such proceedings shall be entitled to receive, in addition to his actual expenses, a sum not exceeding one guinea for each day's attendance required, and given as the court shall certify. All expenses incurred in the prosecution are to be certified by one or more magistrates, and are payable out of the poor-rates.

SMALL-POX AT BALLYMENA.

THE following resolution has been adopted by the Ballymena Dispensary Committee with reference to the spread of small-pox in that town: "That, in the opinion of this Committee, a thorough inspection of the infected districts should be made by a competent medical man, so that the extent of the epidemic may be known, and satisfactory arrangements made to cope with the danger arising therefrom." They also recommend that Dr. Gilmer be appointed for one month, at a salary of two guineas a week, to make the inspection and report each week to the Committee.

INTERCEPTING HOSPITAL, QUEENSTOWN.

A WASH-HOUSE, etc., having been added to the plans of this proposed institution by order of the Local Government Board, the guardians of the Cork Union are in a position to advertise for tenders for its erection, and also to construct a temporary shed during the construction of the hospital. The cost of the hospital will probably be about £1,000.

HEALTH OF BELFAST.

AT the monthly meeting of the Belfast Town Council, held on Sept. 8th, the report of Dr. Browne, medical superintendent officer of health, was adopted. During the four weeks of August, the total births registered were 566, and the deaths in the same period amounted to 298, giving a natural increase in the population of 268 individuals. The average death-rate for the month was, on the corrected population, equal to 17.74 per 1,000 inhabitants. The death-rate has steadily declined during the month of August, and the average rate shows that the public health of Belfast is in a satisfactory condition. The amount of zymotic diseases has been unusually low, while the amount of general diseases has also been comparatively small; and it may be remarked that the mortality from zymotic affections would have been trifling, had not diarrhœa and whooping-cough been prevalent among children.

THE ARTISANS' DWELLINGS ACT.

IN view of the facilities given by the recent amendment to this Act, whereby certain provisions which formerly rendered its operation very expensive—particularly in the item of compensation—have been removed, the Corporation of Dublin have adopted a resolution, expressive of their opinion that the Act might be put into more extensive operation in Dublin; and they have authorised their Artisans' Dwellings Committee to give immediate attention to the subject, and to prepare schemes with estimates. It is satisfactory to know already that the Act promises to be of great benefit to Dublin. The Artisans' Dwellings Company, although but a short time in existence, has proved not only a fair financial success, but has also demonstrated that the death-rate of the inhabitants of their houses is at a much lower percentage than among the inhabitants of Dublin generally; and it may reasonably be anticipated that, when certain unhealthy areas are cleared and notorious fever haunts demolished, and the poor decently housed, as can be now reasonably effected by this Act, the death-rate of the city will be considerably reduced.

INQUIRY INTO THE HEALTH OF DUBLIN.

INTIMATION has been officially communicated to the Town Council of Dublin that, at last, His Grace the Lord-Lieutenant proposes to appoint a Royal Commission, composed of Colonel Rawlinson, C.B., R.E., Chief Engineering Inspector of the Local Government Board in England, and Dr. M'Cabe, Inspector of the Local Government in Ireland, "to inquire and report into the sewerage and drainage systems of the city of Dublin, and their effect on the sanitary condition thereof". While gratified that, as we have always urged, an inquiry by competent persons should have been granted, we trust that—*pace* the terms in which the Chief Secretary for Ireland communicates the Lord-

Lieutenant's instructions to the Corporation—the Commissioners will not confine their inquiries solely to the drainage of the city. There are many other conditions in addition to the acknowledged imperfect system of disposal of sewage at present in existence in Dublin, which have as great an influence in maintaining its high death-rate. In the several applications to the Government for an inquiry which have been made by the Dublin Sanitary Association, these causes have been clearly laid down, and repeatedly commented on in this JOURNAL. What is wanted is a *bonâ fide* investigation by experts into *all* the causes which have rendered Dublin so notoriously unhealthy a city; and a report as to the means to be adopted to check the mortality from preventable disease. As the opportunity for doing this now exists, it would surely be a weak and false-sighted policy to investigate one only of the many causes of the evil it is desired to subdue. The Town Council have appointed a large Committee of their body to bring forward all necessary evidence that may be required by the Commission, and to obtain information as to such system of the disposal of sewage and domestic scavengering as the Committee thinks necessary. They have also pointed out that, except the inquiry be promptly held, it will be impossible to take action next session, or any action recommending legislation that may be made by the Commission.

A POSSIBLE NOVEL SOURCE OF INFECTION.

INADVERTENTLY, it is to be hoped, the Guardians of the North Dublin Union—a sanitary authority—advertised for sale by public auction last week the material of the "Glasnevin Fever Sheds". These sheds, which are composed chiefly of wood, consist of eighteen houses. They were built about thirty years ago, and have been in constant use up to the present day for the reception of patients suffering from all forms of epidemic infectious disease. It is presumable, therefore, that their timber has become more or less infected; and there is every possibility that such wood, if used in the building of other houses, or even broken up and stored as fire-wood, might be the means of spreading dangerous infectious diseases. Fortunately, a member of the Public Health Committee of the Corporation seeing the advertisement of the auction the day before it was to take place, wrote a timely letter of warning to a morning paper. By this means, the proper authorities were put into action; and what might have proved an unusual source of infection, was promptly checked. The suggestion that the "sheds" should be burned as they stand, is one we should be glad to see carried out.

BRITISH MEDICAL ASSOCIATION.

SECTION OF PHYSIOLOGY.

WE have received the following since the report of the proceedings of this Section was published in the JOURNAL of September 6th.

WEDNESDAY, AUGUST 6TH.—*The Mode of Propagation of Nervous Impulse.* By J. J. CHARLES, M.D. (Cork).—Dr. Charles discussed the principal theories which have been advanced to account for the mode in which nervous impulses are propagated, and he showed that the chemical theory is the one best supported by facts. He suggested a hypothesis in accordance with the chemical theory to explain the peculiar phenomenon that an impulse gathers force as it travels along a motor nerve.

THURSDAY, AUGUST 7TH.—*Physiological Apparatus.* By Professor CHARLES and Dr. C. Y. PEARSON (Cork), who gave a demonstration on some recent physiological apparatus. Among the apparatus exhibited were the following, each of which was described by Dr. Charles: Hirnes' instrument to illustrate the influence of "negative pressure" on the heart and large blood-vessels during respiration; Donders' large instrument to exhibit the amount of the elasticity, as well as its variation, in the living muscles of man; Krœnecker's double sphygmoscope; Hermann's model heart pump, to illustrate his theory of the action of the auricles; Hawksley's chronograph for measuring short periods of time in physiological experiments by means of vibrating reeds; Helmholtz's apparatus for determining the velocity of the impulse in a motor nerve of man; Gowers's hæmoglobinometer; Marey's apparatus to exhibit the changes in the volume of the hand and forearm. Many of the experiments with this instrument, originally performed by François Franck, were shown, such as the influence of pressure on the brachial artery, of ice applied to the shoulder, of contraction of the muscles of the hand and forearm, etc. Reference also was made to the action of alcohol and of nitrite of amyl on the volume of organs, and an explanation was offered of the mode in which counter-irritants act. The plethysmograph of Dr. Mosso of Turin, to exemplify the influence of the activity of the brain on the volume of the forearm and hand, was shown; and it was suggested that this instrument might be advantageously employed in the examination-hall to determine the ease or the difficulty with which candidates could solve problems, etc.

FRIDAY, AUGUST 8TH.—*On the Velocity of the Circulation through the Lungs in Man.* By J. J. CHARLES, M.D. (Cork).

MILK TYPHOID AT CHICHESTER.

SOME months ago, we had occasion to comment on the unhealthiness of many of our cathedral cities, and on the slow progress which they make in sanitary matters. (JOURNAL, vol. i, 1879, page 744.) Another instance of the same kind is afforded by the case of Chichester, which has recently been reported on by Dr. Airy to the Local Government Board. The unhealthy state of Chichester was the subject of inquiry so long ago as 1865 by Dr. Seaton, whose report is in many respects equally applicable to the present moment. As regards drainage, for example, the city is in the same state now as it was fourteen years ago. The great bulk of the houses are still drained into cesspools, sometimes separate from, sometimes identical with, the privy pits, and often in dangerously close relation with wells, from which a large proportion of the drinking-water is still obtained. Dr. Seaton recommended that steps should be taken for establishing a complete system of drainage; but, though plans for this purpose have been submitted to the Council, Chichester remains undrained. The city is full of wells and full of cesspools, and the porous gravelly nature of the soil gives every facility for the soakage of filth from the cesspools into the wells. It is notorious that this often happens; and much of the well-water is wholly unusable. Yet less than a sixth of the houses are provided with any other supply than that from wells, although a water company in the town has ample for the whole population, if the citizens cared to avail themselves of it, and the Council enforced the disuse of polluted wells. The removal of accumulations of refuse is still much delayed, and the emptying of privies is left to private arrangement. The authority have no by-laws, and no hospital for infectious diseases. Moreover, their medical officer of health is also inspector of nuisances—a vicious arrangement that is, we believe, in force in no other district in the country, and one which clearly ought at once to be put an end to.

These unsanitary conditions must certainly have an important bearing upon the general health of the inhabitants of the city, the average death-rate amongst whom is 20.7 per 1,000. Fortunately, however, they were not involved, except indirectly, in a severe outbreak of typhoid fever which occurred in the spring of this year, and which was the immediate occasion for Dr. Airy's visit. Commencing about February 9th, and extending through March into April, there were about fifty persons attacked, six of them fatally, in thirty houses. On inquiry, Dr. Airy learnt that many of the cases of fever which had occurred had been of a somewhat uncertain type, and that considerable difference of opinion existed as to the real nature of the disease. On the one hand, there had been some cases of undoubted scarlatina; on the other, there had been cases that were certainly enteric fever; but not a few had shown a mixed character, at first having the semblance of scarlatina, but subsequently putting on a typhoid appearance. Many cases had presented a kind of abortive type, starting rather suddenly with rapid pulse and high temperature, as though about to prove severe, and then subsiding in five or six days without running a full course. This variety is by some practitioners recognised as characteristic of the locality, and is spoken of as "Chichester fever". Those cases personally examined by the inspector appeared to be of a typhoid character, though by no means well marked. Only a few of them showed any spots on the body, and in those cases the spots were scarcely more than points. Diarrhœa was by no means constantly present, though in some cases it was well pronounced. No instance of hæmorrhage from the bowels could be heard of as having occurred. The persons attacked were for the most part in delicate health previously.

Proceeding by exclusion, Dr. Airy has no difficulty in ascribing the epidemic to polluted milk. Of fifty-nine families supplied from a particular dairy, twenty-six, or 43 per cent., had, in the course of the epidemic, more or less distinct cases of typhoid; whilst forty families in the same locality supplied by other dairymen had a complete immunity from the disease. As to the method, however, by which the milk became poisoned, Dr. Airy is much less clear. He was satisfied that there had been no wilful dilution of the milk, and the only moment at which he could detect any opportunity for its specific contamination was in the act of milking. This operation is performed at the dairy in question in a milking-hovel, which stands in a meadow about thirty-five

yards from a stream, which Dr. Airy shows good reason for supposing to have contained at this particular time the poison of enteric fever. The milkman, having brought the cans clean from the dairy, takes them straight to the hovel, never rinsing them in the stream. Having gathered his cows and girded himself with a coarse apron, he proceeds to wash the udder of the cow he is about to milk, the udder being often soiled with the cow's own droppings or from lying in the meadow. For this purpose, he resorts to a bucket which has been filled from the stream. Having cleansed the udder and his own hands, he rapidly wipes them with his apron, and proceeds with his milking. His hands occasionally are moistened with the milk, and anything remaining from the previous washing on his hands or the cow's teats is thus brought into contact with the milk. In this way, an extremely minute portion of the water from the stream may become mixed with the milk in the can. Whether so minute a quantity of the poison could so rapidly impart its poisonous properties to the milk as to cause enteric fever in so large a proportion of those who drank of it is a question which, in our present state of knowledge, must be left open. We have some reason to think that very small quantities of infective material can go on multiplying when introduced into milk, somewhat as they go on multiplying when they produce disease in the human body, and it may be suggested as conceivable that the warmth of the milker's hands and of the fresh-drawn milk might accelerate such multiplication. Dr. Airy's suggestion is certainly an ingenious one ; and whether it be accepted or not, it will serve to show the vital importance of the utmost cleanliness in every operation of the dairy-farm, and the necessity of these being under the strictest hygienic supervision.

LUNACY.

THE thirty-third report of the Commissioners in Lunacy, dated March 31st, 1879, and addressed to the Lord Chancellor, has been issued. It will be found particularly interesting to those of our readers who have followed the recent articles in the JOURNAL on this subject, in many respects, and, perhaps, particularly so in regard to the recommendations of amendment of the law of certification. The Commissioners, as we have intimated, are disposed rather unwisely to consider themselves on their defence in respect to recent inquiries and criticisms, and show the tendency to crystallisation which is inevitable in official boards, who dread nothing so much as being shaken up, and are in their very essence defenders of the present status. The changes which they suggest may advantageously be compared with those which we have recommended, and we shall presently discuss them more critically in that relation.

According to the returns made to the office of the Commissioners, the total number of registered lunatics, idiots, and persons of unsound mind on the 1st of January last in England and Wales was 69,885, or an increase of 1,347 as compared with the 1st of January, 1878. The classification and distribution of the registered patients are as follows : Of private patients, there are in county and borough asylums 216 males and 260 females ; in registered hospitals, 1,422 males and 1,298 females ; in licensed houses (metropolitan), 1,058 males and 862 females ; (provincial), 790 males and 825 females ; naval and military hospitals and Royal India Asylum, 325 males and 17 females ; in the Criminal Lunatic Asylum, Broadmoor, 184 males and 49 females ; and 192 male private single patients, and 280 female. The pauper lunatics number in ordinary workhouses 5,014 males and 6,683 females ; in the metropolitan district asylums, 1,971 males and 2,337 females. Referring to the report of the Select Committee appointed on the motion of Mr. Dillwyn in 1877 and reappointed in 1878, the Commissioners say :—

"It was with some satisfaction, but with no surprise, that we found that the Committee, after sitting twenty-seven days to receive evidence, and examining a great number of witnesses, including the persons who had promoted the inquiry, and who held very strong opinions as to the objectionable and dangerous character of the present system, were able to report as their conclusion that, 'although the present system was not free from risk, which might be lessened, though not wholly removed, by amendments in the existing law and practice, yet, assuming that the strongest cases against the present system were brought before them, allegations of *mala fides*, or of serious abuses, were not substantiated'."

Agreeing with the Committee that the existing Lunacy Acts should be consolidated, and, assuming from a statement of the Home Secretary in the House of Commons that Bills for their consolidation will in due time be laid before Parliament, the Commissioners say :—

"For ourselves, we are not disposed to advocate any radical changes in the existing law regarding the care and treatment of the insane, and in particular, so far as our present experience extends, we are quite satisfied that the present system of certification, both of private and pauper lunatics, and of visitation of the asylums, hospitals, licensed and unlicensed houses where they are received, affords, in practice, ample safeguards as well against the admission of persons of sound mind as for the discharge of the insane patients without undue detention. At the present time, we are far from thinking that no improvements could be made in the existing regulations. On the contrary, our daily experience of the working of the Acts has induced us to note many points where amendment would be useful. The present occasion does not appear suitable for stating *seriatim* all these points. This could only be done on the preparation of Bills for consolidation and amendment ; and, indeed, very many minor difficulties which have from time to time arisen on the construction of the Acts would disappear on redrafting the faulty clauses, and further experience may, of course, show the desirability of other improvements. We think, however, that we may with propriety avail ourselves of this opportunity of suggesting, for your lordships' consideration, and in anticipation of any legislation, the following modifications of the present system as to the reception of patients under order and certificates, on which that system chiefly rests, and at the same time we may notice a few other, and perhaps the most important, of the miscellaneous amendments which we should be glad to see effected."

The Commissioners then make various suggestions—1. As to medical certificates, they recommend that the names and addresses of persons furnishing facts indicative of insanity not observed by the certifier himself should be given. 2. As to the order of reception, while loth to insist in all cases—that of a foreigner for example—on the signature of a relative, they think in its absence the order or authority should state distinctly that no relative is available, and should give more precisely than by the present form is required the reason for the signature appended. 3. They would extend to connections by marriage, such as the wife's father or brother, the stepson or daughter's husband, the prohibition against the admission of private patients on certificates signed by certain relatives of the person signing the order, or taking the charge. 4. The so-called statement of mental condition of the patient forwarded to the Commissioners' office after two and within seven days subsequent to admission should be made by statute more precise than at present, so as to constitute, in fact, an additional certificate. 5. While the Select Committee advocated the extension of institutions of the character of the present registered hospitals, the Commissioners are of opinion that, though for the reception of the richer class of patients licensed houses under proper management are not unsuitable, for the class removed a degree or two above the mechanic paid by weekly wages, an increase in the number of public institutions for the insane, adequately supported, would be a great boon. The Select Committee appear to think that such establishments might be provided, in the first instance, by a compulsory charge on the county-rate, as in the case of asylums. The Commissioners feel that any extension of the registered hospital system on its present basis must be accompanied by stricter provisions than now exist, both as to foundation and management. 6. The system of removing patients from licensed houses and hospitals to the seaside or elsewhere for change, which has much extended of late years, should, under proper checks, be greatly encouraged. 7. In the case of the death of a person in charge of a single patient, power should be given, with the Commissioners' consent, to transfer the patient to the care of another without the necessity of procuring new certificates. 8. The powers of the Commissioners to discharge a patient from a hospital or licensed house, on being satisfied he is detained without sufficient cause, should be extended to a single patient. 9. The Commissioners recommend further provision for the protection of female patients from abuse by officers, attendants, etc. 10. With regard to idiot children of the private and pauper class, the Commissioners recommend that in the case of hospitals and licensed houses where idiot children and congenital imbeciles alone are kept, power should be given to relax the rules as to residence of a medical officer, and as to constant entries in books and medical journals. 11. They also recommend that power should be given to appoint a substitute for a Commissioner temporarily disabled from illness or unavoidably absent.

MARKET DRAYTON RURAL DISTRICT.—Contrary to the experience of the majority of sanitary districts, the death-rate in this locality was less in 1878 than in 1877. A total of 237 deaths was registered, against 253 in 1877, showing a decrease of 16, and a death-rate of 15.85 per 1,000. The sanitary state of the district seems to be improving, since only 15 deaths occurred from zymotic diseases, against 26 in 1877. The aggregate number of deaths under the age of five years was 56; and 17 deaths were ascribed to old age, one woman dying at the age of 95. The water-supply of the district is described by Dr. Sandford as very deficient and impure. When wells are obviously fouled by soakage from privies and the like, there is small wonder that five deaths from typhoid fever should be registered in the district during the year.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 15th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 15th, 1879.

WEST KENT DISTRICT.

THE first evening meeting of this district will be held at the residence of J. C. Armstrong, Esq., 197, Parrock Street, Gravesend, on Tuesday, September 23rd, at 6.45 P.M.: J. ARMSTRONG, M.D., in the Chair.

Mr. Jessett of Erith has kindly consented to introduce the subject of "Fractures".

A. H. B. HALLOWES, M.R.C.S., *Honorary Secretary.*

Maidstone, September 2nd, 1879.

NORTH OF ENGLAND BRANCH.

THE autumnal meeting of this Branch will be held in Bishop Cosin's Library, Durham, on Tuesday, September 23rd, at 2 P.M.; G. H. PHILIPSON, M.A., M.D., President, in the Chair.

Members desirous of reading papers, or making other communications, are requested to give notice to the Secretary at their earliest convenience.

Service in Durham Cathedral at 4 P.M. Dinner in the Castle Hall, Durham, at 5 P.M. Dinner tickets may be obtained from the Secretary, six shillings; inclusive of wine, nine shillings. Gentlemen who intend to be present are particularly requested to intimate their intention before Monday, September 22nd, in order that proper arrangements may be made for the dinner.

T. W. BARRON, M.B., *Honorary Secretary.*

10, Old Elvet, Durham, Sept. 10th, 1879.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this district will be held at the Albion Hotel, Ramsgate, on Thursday, September 25th, at 3 o'clock: President, Mr. S. WOODMAN, F.R.C.S.

The following papers and communications have been promised.

1. On Urinary Calculus. By the President.
2. Case of Recovery from Traumatic Tetanus. By Mr. R. Hicks.
3. Remarks on Strangulated Hernia. By Mr. Edmund Owen.
4. Disguised Scarlatina; also, Specimens of Tubal Gestation and Mitral Stenosis. By Mr. T. F. Raven.

The President invites members to luncheon at his residence, 5, Prospect Terrace, from 1 to 2 o'clock.

Dinner will be provided at the Albion Hotel at 5 o'clock precisely. Charge, 6s. 6d., exclusive of wine.

All members are entitled to attend these meetings, and to introduce friends.

Gentlemen who intend to be present, are requested to communicate their intentions to the Honorary Secretary not later than Tuesday, the 23rd instant.

WM. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, September 15th, 1879.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting of this district will be held at the White Hart Hotel, Reigate, on October 9th, 1879, at 4 P.M.: F. B. HALLOWES, Esq., in the Chair.

The following papers are promised.

1. Dr. D. W. Chas. Hood: On Croup and Diphtheria.
2. Mr. Hallowes: A Clinical Report upon an Outbreak of Enteric Fever at Redhill in the early part of 1879.
3. Dr. John Walters: The Treatment of *Post Partum* Hæmorrhage by Injections of Hot Water.

The dinner will take place at 6 P.M. Tickets, 6s. a head, exclusive of wine.

JOHN H. GALTON, M.D.Lond., *Honorary Secretary.*

Woodside, Anerley Road, S.E., September 15th, 1879.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE next ordinary meeting of this Branch will be held at the Assembly Rooms, Tenby, on Wednesday, September 24th, at 1 P.M.

Dinner at the Gate House Hotel. Further particulars by circular.

Members wishing of read papers, etc., are requested to communicate the titles to either of the Honorary Secretaries, without delay.

ALFRED SHEEN, M.D.
J. HANCOCKE WATHEN. } *Honorary Secretaries.*

September 10th, 1879.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE first meeting of the above district for the present season will be held at the Castle Hotel, Hastings, on Friday, September 26th, at 3.30 P.M.: Dr. ALLEN in the Chair.

All members of the South-Eastern Branch are entitled to attend, and to introduce professional friends.

Papers, etc., are expected from the Chairman, "On the Medical Aspects of Provident Dispensaries"; from Mr. Gabb, "On a Case of Skin-Disease"; Mr. Campbell, "Case of Perineal Section"; and from Dr. John Williams, of University College Hospital, on "Antiseptic Midwifery".

Notice of intended communications should be sent to the Secretary as soon as possible.

Dinner will be provided at the hotel at the ordinary charge.

THOMAS TROLLOPE, M.D., *Hon. District Secretary.*

9, Maze Hill, St. Leonard's-on-Sea, Sept. 9th, 1879.

SHROPSHIRE AND MID-WALES BRANCH.

THE annual meeting of this Branch will be held at the Salop Infirmary, Shrewsbury, on Tuesday, September 30th, at 3 o'clock in the afternoon; JAMES BRATTON, Esq., F.R.C.S., President, in the Chair.

The annual dinner will take place at the Lion Hotel, at 5 o'clock P.M. the same day.

Members intending to read papers, or bring forward subjects for discussion, are requested to communicate with

HENRY NELSON EDWARDS, *Honorary Secretary.*

Moreton House, Shrewsbury, September 15th, 1879.

READING BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held in the Athenæum, Reading, on Wednesday, September 3rd. Dr. BATEMAN, the retiring President, introduced Mr. ROYDS, the President for the year.

President's Address.—After referring to the loss the Branch had sustained by the death, at a ripe age, of its old member Dr. Woodhouse, the PRESIDENT expressed his strong desire that his year of office might be signalised by a large addition to the number of members, whereby the Branch (perhaps under a less exclusive name) might take a more worthy part in the rapidly growing and increasingly powerful Association to which it belonged. He suggested that the action taken by many other Branches in holding meetings, useful in a professional and enjoyable in a social point of view, in neighbouring towns in rotation, might well be copied by the extended Reading Branch. He combated the objection that might be raised to this, that it would take up time and withdraw the members from their own sphere of labour, by protesting against our yielding (in what should be our more noble and intellectual vocation) to the high-pressure spirit of the age, and permitting ourselves to become the slaves instead of, as it should be, the masters of our work. He enlarged upon and condemned the too frequent practice in the profession of undertaking an unreasonable amount of work, especially in the out-patient rooms of hospitals and among dispensary and club patients—quoting a recent paper by Dr. Bridges on the work done in the casualty department of St. Bartholomew's Hospital, with which some of his own experience very much coincided; and expressed the opinion that work so done, besides being unprofitable pecuniarily, was wasteful of educational material, and had a tendency to give rise to a perfunctory performance of what ought to be serious duties. He then referred to the life of the late Sir Henry Holland as an example to be followed in the manner in which he made a point of securing an adequate annual holiday, and purposely restricted his practice within manageable limits; and dwelt upon the advantages, both in a professional and social point of view, of the annual meetings of the Association, the offices of delegates to which, he urged, should not be made mere formal appointments, but should be accepted with the full intention of performing the duties, and thus

utilised as an opportunity for obtaining such relaxation as would act as a safety-valve in the high-pressure sameness of much of our professional life. Having enlarged upon the advantages to be derived from the considerable extension of the Branch which he would like to see, he concluded by anticipating, at no very distant date, the time when the Branch might undertake the honour (with its by no means light responsibility) of entertaining the British Medical Association itself in annual meeting assembled.

A Vote of Thanks to the President for his address was proposed and carried unanimously.

President-elect and Council.—Mr. Smith of Heckfield was chosen as President for 1880-81. The executive of the Branch was re-elected.

Dinner.—The members present subsequently dined together at the Queen's Hotel.

CORRESPONDENCE.

THE ARMY MEDICAL SERVICE: OPEN COMPETITION.

SIR,—I have just perused your able leader on open competition in last week's JOURNAL; and, while agreeing with much that you say in that article, I must ask you to allow me to take exception to the inference you draw from an impromptu question put by me to Mr. Ernest Hart at the recent meeting of the British Medical Association at Cork. My object in putting that question was to awaken the meeting to the importance of the step it was about to take in pronouncing, *ex cathedrâ*, as it were, in favour of competitive examinations for medical appointments in the army and navy.

If the principle of open competition, I again ask, be so good for the military medical services, why is it not equally so for all other medical appointments? That civil hospitals are not State-endowed does not appear to me to affect the question; nor can I see the difficulty of contrasting appointments to such hospitals with those in the public services. Dispensaries, poor-houses, public lunatic asylums, county infirmaries, and many of the public hospitals in this country at least, are largely subsidised, if not entirely supported, by grants from public funds, or by taxation; and many of the medical officers holding such appointments are in receipt of fixed or fluctuating salaries. Why should not all such appointments be thrown open to public competition, so that, to use your own words, "all shall have an equal right to compete for them who desire to do so"?

It appears to me that competition has not been resorted to in such cases, not for the reasons stated in your leader of the 6th instant, but simply because the most competent men for such posts would decline the ordeal on the very legitimate ground that no form of examination which could be devised would cover all the qualifications that should be considered in filling up such appointments, while the failure of the unsuccessful competitors might be attended with very serious consequences to them in after-life. And so I venture to think it is with competitors for the public medical services. An examination on the science and practice of medicine and surgery may test the competence of medical men to practise those branches of their profession either in the army or in civil life; but there are other qualifications—such, for example, as a good general education—which are equally essential to a successful military medical career, but which the present competitive examinations do not profess to touch.

But the real question at issue in this discussion is, "Do the competitive examinations deter competent men from offering themselves as candidates for the army?" The War Office Committee say they do; and in this opinion I concur, partly for the reasons given in the Committee's report, and partly on account of the examination itself, which is a most searching one. To use the words of the late Dr. Parkes: "I believe that, with the exception of the examination at the University of London, no other is equal to it." That such an examination, and the cost, trouble, and loss of time involved in feeing grinders and in preparing for it, should deter some at least from competing is not very surprising, to say nothing of after-consequences should they fail.

In order that I may not be misunderstood, permit me to add that I do not think the present high standard of professional qualification required from those who desire to enter the public services should be lowered; but I think there is a method, other than public competition as now conducted, by which this undesirable result may be avoided, while the portals are opened sufficiently to admit all who are really competent, without inflicting avoidable injury on those who may be found incompetent, from whatever cause, to take their place in the ranks of the Army Medical Department, and to perform its duties with credit to themselves and advantage to the public service.

The importance of the subject must be my excuse for having trespassed so largely upon your space.—I am, etc.,

T. CRAWFORD, Surgeon-General Army Medical Department.

Dublin, September 8th, 1879.

THE ARMY MEDICAL DEPARTMENT.

SIR,—The remarks of Surgeon-General Crawford on the question of competition for commissions in the Army Medical Department at the late meeting of the British Medical Association are strangely inconsistent; and I think the most casual observer will admit on reading them that Dr. Crawford felt that he was defending a very bad case. He states "that, as far as he knew, the competitive examination for the army in London had been the means of reducing the number of first-class medical men who, under the private system, would be ready to present themselves for commission in the medical service of the army. He did not wish to be understood to convey that the department wished to abolish the system of public competitive examination."

Again, in reply to Mr. Hart, he says: "The competitive system was not intended to be abolished *if a sufficient number of candidates presented themselves* to justify the application." I quote from the report as given in the JOURNAL of the 16th instant.

We are thus led to believe that competition deters good men from entering the army; but in the event of their presenting themselves in sufficient numbers it is to be resorted to! What strange logic! Now, I altogether deny that competition ever deterred good candidates from coming forward; and nothing proves more clearly the great weakness of the position of the authorities than its proposed abolition. I am convinced, on the other hand, that, provided the service is made sufficiently attractive, the competitive examination will prove an additional inducement to the really clever men, and will increase the spirit of emulation among them. The causes of the unpopularity of the service are unfortunately only too well known; and, until these causes produced their legitimate effects by stopping the supply of candidates, nothing was ever hinted as to competition being injurious to the service. Dr. Crawford also states "that the Director-General would succeed in a short time, he had no doubt; but he would succeed more quickly if he could obtain the support of the British Medical Association". Now, the Director-General has always had the support of the British Medical Association; and, if the recommendation of that body had been carried out, we should long since have ceased to hear any complaints as to the scarcity of candidates. They would have come forward in abundance, and there would have been no necessity to resort to the measure truly described as "smashing the index".—I am, sir, yours truly, R. M. C.

August 25th, 1879.

THE VICTORIA UNIVERSITY.

SIR,—The feebly apologetic letter of the Chairman of the Council of the Liverpool School of Medicine in your JOURNAL of the 6th instant overflows with false premises and slight reasoning. Taking his three headings, we (as everyone must) concur in conceding the necessity for a popular degree in medicine for English students. A cursory glance over the *Medical Directory* shows that the proportion of University graduates practising in any English town does not exceed fifteen per cent. of the whole medical men practising in it, whereas in any Scotch town the proportion forms about seventy per cent. of the medical practitioners.

Secondly, having perused carefully your article on the Victoria University in a recent number of the JOURNAL, as well as the correspondence which has been from time to time elicited on the subject, the "reasons for the late opposition to the proposed medical degree of the Victoria University" seem to me to culminate in the sentiment "jealousy". Sour grapes are very unpalatable; and to have one provincial town receiving preference over others is equally acidulous. In the present instance, however, there are special claims which cannot be overlooked. Not only is Manchester a greater centre than Liverpool, or Leeds or Birmingham can ever become, but its people have made most excellent use of their opportunities. I believe Manchester is not the oldest provincial medical school, but it has distinguished itself over its compeers in being the first to throw off the slavery of self-government by its teachers, and in having attracted from all parts distinguished teachers. As long as the teachers of a medical school form the elective and proprietary of that school it cannot succeed. This is a usage of the past; and, as shown in the election for the lectureship in surgery in the Liverpool School of Medicine, it is the most imperfect system. Glancing over the prospectus (just issued) of Owens College, I find composing its senate two Fellows of University College, London; four fellows of Cambridge Colleges, and one of University College, Oxford; and seven F.R.S.s. In the medical department, I observe four F.R.S.s and two

F.R.C.P.s. What other provincial medical school can boast of so many titled men? They have worked, and have earned their honours. Why do not the medical departments of other provincial schools go and do likewise? Owens College, with its two thousand pupils, is well known to all; but who ever heard of the Liverpool School of Medicine? Its teachers have never distinguished themselves as teachers or as original workers, and are unknown to their fellow-townsmen, as well as to those at a greater distance.

Lastly, to argue that the standard for the London University degree should be lowered, in order to allow more candidates to graduate, is puerile indeed. Let the London University retain the "blue ribbon" of the profession as long as possible, by maintaining the standard for its M.D. degree as high as possible. Scientific men are not necessarily unpractical men, and the public should be taught this. The status of the medical profession in England is very low, and this is encouraged by such views as are expressed in Dr. Banks's letter. Let the teachers of the provincial medical schools which are trampled on by Owens College School of Medicine blame themselves, and not others.—Yours truly, QUOITS.

September 12th, 1879.

DR. BARNES' CASE OF FIBRO-MYOMA OF THE UTERUS.

SIR,—I have read with great interest the case related by Dr. Barnes at the Section of Obstetrical Medicine at Cork, and reproduced in the BRITISH MEDICAL JOURNAL for September 6th, of the removal of a fibro-myoma from the uterus, followed in about eighteen months by amputation of that organ for inversio. Dr. Barnes gives a very brief account of the removal of the fibroid by the *écraseur*, and that the patient made a good recovery, but that in eighteen months, or thereabout, he was again called to the case, and then found another tumour, which he believed to be a polypus, but which proved to be the uterus, and the immediate removal of which he considered to be imperative at all hazards from the condition to which the patient was reduced. Happily she recovered, with the loss only of a senile uterus. Dr. Barnes goes on to ask some very pertinent questions under the circumstances, viz., "When was the inversio produced?" and then he tells us "it might have arisen before the removal of the tumour in the first operation, or during that operation, or at some subsequent time?" "Which", he says, "is the more probable? It is difficult to understand how the uterus could turn itself inside out after the tumour was removed." Quite so; in that proposition I entirely agree; and I think moreover that I am in a position to throw some light upon the point, inasmuch as Dr. Turrell did me the favour to send the case to me for my opinion just a month before Dr. Barnes performed his first operation. In the necessarily imperfect examination in my room (there was considerable bleeding) I decided that there was a large fibroid, which ought to be removed without delay. In a more careful examination, however, at her own residence, before operating, I found that there was decided inversio uteri, the prolapsed body of the uterus being much enlarged from some cause; or, that the inversio was complicated by a large fibroid, paralysing or attenuating the walls of the uterus, and thus causing the inversio. I declined to operate without further time for the investigation of the precise nature of the case and consideration how best to deal with it. Dr. Barnes further says, "another question arises, might not reduction have been effected, and amputation avoided?" To this I say emphatically, Yes, but it must have been immediately after the first operation. I think there would then have been but little difficulty in its reposition by the hand, or with the additional aid of a repositor. One question I would further ask Dr. Barnes. He says that to check the free bleeding after amputation, he swabbed out the part with tincture of iodine—will Dr. Barnes kindly tell us how he protected the peritoneum from injury? and what was done to the wound after amputation? As, unfortunately, I was not present at the reading of the paper, I trust Dr. Barnes will pardon me the remarks I have felt called upon to make now. JOHN SCOTT, F.R.C.S.

10, Tavistock Square, September 15th, 1879.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

SANITARY SCIENCE CERTIFICATES.—The next examination for sanitary science certificates at Cambridge will begin on Tuesday, October 7th. Candidates (who must be on the *Medical Register* of the United Kingdom) should send in their applications to Professor Liveing, Cambridge, before the end of September.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL APPOINTMENT.

HODSON, H. Algernon, L.R.C.P.Ed., appointed Medical Officer and Public Vaccinator for the Bovey District of the Newton Abbott Union.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HEXHAM RURAL DISTRICT.—Sanitary work in this district seems to be progressing, especially as regards water-supply, to which the sanitary authority has devoted much attention. Drainage schemes are in course of being carried out, and the Goux system of excrement disposal is being largely adopted. There is still room for great improvement in the dwellings of the labouring class, although much has been done to better their condition. Overcrowding is still a serious evil in the district, both from a moral and sanitary point of view. During 1878, 485 deaths were registered, equal to a rate of 17.5 on the estimated population. Zymotic diseases caused 72 deaths, 2 of these being from typhus, 18 from enteric fever, 10 from scarlatina, and 13 from diphtheria. Dr. Maclagan gives no particulars whatever as to the circumstances of these deaths—a defect which seriously diminishes the value of the report. Some remarks on the necessity of the registration of disease are weighty and to the point.

MILITARY AND NAVAL MEDICAL SERVICES.

INDIAN MEDICAL SERVICE.—The following candidates for Her Majesty's Indian Medical Service were successful at the Competitive Examination held at Burlington House on August 28th, 1879, and following days. Thirty-nine candidates competed for sixteen appointments, afterwards raised to seventeen. All were reported qualified.

	Marks.		Marks.
1. J. W. U. Macnamara	2185	10. J. L. Poynder	1965
2. F. Burness	2141	11. C. J. Willis	1960
3. G. W. S. Dennys	2130	12. F. C. Reeves	1925
4. H. O. Stuart	2085	13. A. R. Campbell, M.D.	1920
5. J. C. Marsden	2050	14. J. McD. Stewart	1900
6. A. C. Thompson	1995	15. J. Sykes	1900
7. J. F. Tuohy, M.D.	1985	16. J. Hoey	1865
8. G. J. Ward	1975	17. A. G. Collington	1860
9. C. A. Daubeny	1970		

OBITUARY.

THOMAS TATUM, F.R.C.S.

WE have to record the death of an old and much valued official of St. George's Hospital. Mr. Tatum died at the house of his son-in-law at Eastbourne, on Friday last, the 5th instant, aged 77. He was a native of Salisbury, where he received his preliminary education, after which he commenced his medical studies at St. George's Hospital, in the Hunterian School in Great Windmill Street, and finished them in Paris. In 1827, before passing any examination, he was elected House-Surgeon at St. George's Hospital, and became Assistant-Surgeon in 1840, succeeding to the surgeoncy in 1843. This post he resigned in 1867, when he was appointed one of the consulting-surgeons. He became a Member of the College of Surgeons in 1828. He was one of the first three hundred Fellows appointed by the charter of 1843, and was elected a member of the Council in 1857. In 1830, he was associated with Mr. Herbert Mayo in teaching anatomy in the Hunterian School in Great Windmill Street the year previous to the opening of King's College. On the institution of the anatomical school in connection with St. George's Hospital in Kinnerton Street, he was appointed the lecturer on anatomy. He performed these duties until he succeeded to the lectureship on surgery, which he retained until 1867. Upon his resigning the surgeoncy to St. George's Hospital, his former pupils and friends attested their kindly feelings towards him by presenting him with a testimonial in the form of some plate.

Mr. Tatum was of a very reserved and retiring character. He was little met in the medical societies, and rarely spoke at any. His contributions to the literature of the profession were, a paper in Holmes's *System of Surgery*, on Injuries and Diseases of Muscle; a paper read before the Royal Medical and Chirurgical Society, on Tumours in Muscles; and some papers in the *Lancet* and *Medical Times and Gazette*.

He married a daughter of Mr. William Brodie, some time M.P. for Salisbury. She was a niece of the late Sir Benjamin Brodie. He was a remarkably good dissector, a dexterous operator, a fluent lecturer, no mean naturalist, and a good linguist. When he commenced practice, a successful career was foretold for him; but Mr. Tatum's feelings and inclinations rather induced him to eschew private practice. He was a gentleman in the true sense of the word, genial in disposition, and tolerant of the opinions of others—perhaps we might say, without quite sufficient confidence in his own. He never made an enemy, but a great many attached friends, who have for some time much lamented that the state of his health enforced his retirement. He leaves, by a second marriage, a son, a Member of the College of Surgeons, and a brother, a Fellow of the College. His remains were brought to London and interred in the Brompton Cemetery on Wednesday last.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 4th, 1879.

Churchouse, William John Franklin, Chard
Fooks, George Ernest, Harrow
Leech, Henry Richard, Birmingham
Pearce, Henry, Eastbourne
Thomson, George James Crawford, Newington

The following gentlemen also on the same day passed their primary professional examination.

Deane, Edwin, Charing Cross Hospital
Gibbs, Francis Charles, St. Thomas's Hospital
Green, Edwin Collier, St. Thomas's Hospital
Kinneir, Francis William Edward, St. Bartholomew's Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, September 11th, 1879.

Fisher, Frederick Charles, 60, Cadogan Place, S.W.
Vachell, Edward Shearman, Bath
Woodhouse, Tom Percy, Pontefract, Yorkshire

The following gentlemen also on the same day passed their primary professional examination.

Pollard, George, St. George's Hospital
White, Edwin Francis, St. Thomas's Hospital

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ABBEYLEIX UNION—Medical Officer for Ballyroan Dispensary District, at a salary of £100 per annum, and the usual Registration and Vaccination Fees. Election on the 26th instant.

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

*BELGRAVE HOSPITAL FOR CHILDREN, Pimlico—Resident House-Surgeons. Board and lodging. No salary. Applications to the Honorary Secretary at the Hospital on or before October 4th.

BETHLEM HOSPITAL—Two Resident Medical Students. Applications on or before October 11th, 1879.

*BIRMINGHAM GENERAL HOSPITAL—Assistant Physician. Salary, £100 per annum. Applications on or before September 29th.

*BRIGHTON AND HOVE LYING-IN INSTITUTION—House-Surgeon. Salary, £120 per annum, with furnished apartments, coals, gas, and attendance. Applications on or before October 2nd.

CLIFDEN UNION—Medical Officer for Clifden Dispensary District (Mishhoffin Electoral Division), at a salary of £90 per annum, £10 yearly as Medical Officer of Health, Registration and Vaccination Fees. Election on the 24th instant.

*CUMBERLAND INFIRMARY—Assistant House-Surgeon. Salary, £60 per annum, with board, lodging, and washing. Applications, with testimonials, not later than September 23rd.

*GLOUCESTER COUNTY ASYLUM, West Gloucester—Junior Assistant Medical Officer. Salary, £100 per annum, with board, lodging, and washing. Applications on or before September 22nd.

*KENT AND CANTERBURY HOSPITAL—House-Surgeon. Salary, £80 per annum, with board, lodging, and washing. Applications on or before September 26th.

*MANCHESTER ROYAL INFIRMARY, DISPENSARY, and LUNATIC ASYLUM—Honorary Assistant Surgeon. Applications on or before Sept. 20th.

*NEWCASTLE-UPON-TYNE INFIRMARY—Junior House-Surgeon. Salary, £50 per annum, board, lodging, and washing. Applications on or before September 24th.

*NORTH SHIELDS AND TYNEMOUTH DISPENSARY—House-Surgeon and Dispenser. Salary, £120 per annum, furnished house, gas, coals, etc. Applications must be forwarded by October 1st.

PORTUMNA UNION—Medical Officer for No. 1 Dispensary District. Salary, £100 per annum, and £12:10 as Medical Officer of Health, together with Registration and Vaccination Fees. Election on the 20th instant.

QUEEN'S COLLEGE, Galway—Professorship of Practice of Medicine. Candidates to forward testimonials to the Under Secretary, Dublin Castle, on or before the 29th instant.

RADCLIFFE INFIRMARY, Oxford—House-Surgeon. Salary, £105 per annum, with board, lodging, and washing. Double qualification and registration as a medical practitioner requisite. Application on printed form, to be obtained of Secretary, to be returned, with testimonials, on or before October 4th.

*ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Election on October 1st.

SHILLELAGH UNION—Medical Officer for Hackelstown and Coolkenno Dispensary District. Salary, £100 per annum, and £15 a year as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 23rd instant.

SLIGO UNION—Apothecary for Sligo Dispensary District, at a salary of £80 per annum. Candidates must not exceed 40 years. Election on the 25th instant.

*TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, coals, gas, and attendance.

TULLAMORE UNION—Medical Officer for Clara Dispensary District. Salary, £100 per annum, and £15 as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 24th instant.

*VICTORIA HOSPITAL FOR CHILDREN—Medical and Surgical Registrar. Applications on or before September 20th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum.

*WILLITON UNION, Somerset—Medical Officer for the Porlock District. Salary, £50 per annum. Applications on or before September 22nd.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

BENTHALL, W., Esq., M.R.C.S., appointed Resident Clinical Clerk to the East London Hospital for Children and Dispensary for Women, Shadwell, E.

CANT, William J., M.R.C.S.Eng., appointed House-Surgeon to the Lincoln General Hospital.

ELLIS, Heber D., M.B., appointed Medical Officer in Charge of H.M. Military Hospital and Troops in the Eastbourne District, *vice* J. A. Hicks, L.R.C.P.Ed., resigned.

GLANVILLE, Francis Ferratus, M.R.C.S.E., L.S.A.Lond., appointed Resident Surgeon to Ramsgate and St. Lawrence Dispensary, and House-Surgeon to Seamen's Infirmary, Ramsgate.

HANDFORD, Henry, M.B., appointed Assistant House-Surgeon to the General Hospital, Nottingham, *vice* W. J. Cant, M.R.C.S.Eng.

HEWETT, Augustus, Esq., M.R.C.S., L.S.A., appointed House-Surgeon to Western Branch of the Brighton and Hove Dispensary, *vice* Alfred Upton, M.R.C.S., L.R.C.P., *resigned*.

TONGE-SMITH, Winckworth, M.B. & C., appointed Resident Medical Officer to the London Fever Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

MANING.—On September 15th, at 5, Tredleston Road, Derby, Fannie, widow of the late Herbert Stanley Maning, Esq., L.F.P.S.G., L.M., and Mem. Brit. Med. Ass. (who died July 23rd, 1879), of a daughter.

PARSONS.—On September 17th, at Paddock House, Ridgway, Wimbledon, the wife of T. E. Parsons, M.R.C.S.Eng., of a son.

MARRIAGES.

DAVIDSON—DEANE.—On September 11th, at St. Leonard's, Streatham, by the Rev. Stenton Eardley, M.A., assisted by the Rev. F. M. Beaumont, M.A., Charles Davidson, M.D., Coventry, formerly Surgeon Royal Navy, to Ellen, fourth daughter of the late Edward Deane and Mrs. Deane, Fernleigh, Streatham.—No cards.

SHUTTLEWORTH—HADWEN.—On the 10th instant, at St. Paul's Church, Scotforth, Lancaster, by the Rev. Wm. Lockwood Martin, M.A., Vicar of Bettisfield, Flintshire, assisted by the Rev. Wm. Armitage, B.A., Vicar of the Parish, George Edward Shuttleworth, M.D., Medical Superintendent Royal Albert Asylum, Lancaster, to Edith Mary, eldest daughter of Henry Hadwen, Esq., of Ashfield, Lancaster.—No cards.

DEATH.

ROYSTON.—On the 11th instant, at Brighton, Melvenia, the beloved wife of Charles Royston, M.D., of 1, St. Stephen's Crescent, Westbourne Park, London, W., in her 50th year.

MEDICAL MAGISTRATE.—Dr. Daniel Lyne has been made a Justice of the Peace for Cork County.

BEQUEST.—The Belfast Royal Hospital has received £100 under the will of the late Mrs. Dummett.

VACCINATION.—Mr. Ralph Goodal, of Silverdale, Staffordshire, has received a Government grant for meritorious vaccination, amounting to £63:3. This is the fourth grant of a similar kind that he has received.—Mr. C. Ashenden, of Hastings, has been awarded a Government grant (third time) of £52:12 for efficient vaccination.

DIPHTHERIA has lately been very prevalent in Muthill, Perthshire. The Medical Officer, Dr. Diamond, who himself had a severe attack, treated all his cases with quinine, chlorate of potass, and tincture of steel internally; and tincture of steel, either whole or half strength, as occasion demanded, topically. This treatment, along with nourishing diet, is reported to have been in all cases successful.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY—Quekett Microscopical Club (University College, Gower Street), 8 P.M. Ordinary Meeting.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

RETIRED.—Holmes's *Principles and Practice of Surgery*, or Erichsen's *Science and Art of Surgery*; Playfair's *Science and Practice of Midwifery*; Swayne's *Obstetric Aphorisms* is also an useful little book.

THE CONDITION OF THE PUPILS IN POISONING BY CHLORAL-HYDRATE.

SIR,—In a case of poisoning by chloral-hydrate, recorded in your JOURNAL of June 28th, 1879, it was noted that the pupils were "strongly contracted to the size of a pin's head"; and Dr. Coghill, in his report of the case, after referring to the observations of myself and others on this subject, has suggested that any apparent discrepancy in the condition of the pupils "must be sought for in the difference of the amount of the drug swallowed, and the corresponding rapidity of its action". But clinical observation has shown that dilatation of the pupil occurs only as a very rare and as an exceptional condition during the hypnotism produced by this drug. In some "Clinical Notes on Poisoning by Chloral-Hydrate," which I read before the Harveian Society in October 1878, I gave a careful analysis of the recorded cases of poisoning by chloral-hydrate, and I pointed out that contraction of the pupils had almost been invariably observed during the hypnotism produced by it. Among the observations in this paper are a well-marked case of recovery from 240 grains of chloral-hydrate, observed by myself (*Lancet*, August 3rd, 1878), in which there was extreme contraction of the pupils; Dr. Levinstein's case of recovery from 300 to 360 grains of the drug, in which, six hours after the poison had been swallowed, there was "extremest contraction" of the pupils (*Medical Times and Gazette*, September 9th, 1876); and a corresponding non-fatal case, recorded by the same observer, in which 360 grains of chloral-hydrate had been swallowed in one dose, and in which it was noted, one hour and a half afterwards, that the pupils were contracted (*Lancet*, February 21st, 1874); a non-fatal case observed by Dr. David Young of Florence, in which 180 grains of chloral-hydrate had been swallowed in one dose, and in which it was noted, three hours afterwards, that the pupils were firmly contracted, whilst, six hours later on, it was again noted that the pupils were contracted (BRITISH MEDICAL JOURNAL, December 25th, 1875); a non-fatal case observed by Dr. G. W. Cole, in which an elderly man had swallowed 240 grains of chloral-hydrate in one dose, and in which it was noted, three hours afterwards, that the pupils were "strongly contracted" (*Lancet*, November 11th, 1876); a non-fatal case, observed by Mr. Hulke, in which 320 grains of chloral-hydrate were swallowed in one dose, and in which it was noted, very soon afterwards, that the pupils were extremely contracted (*Clinical Society*, November 27th, 1874); a non-fatal case, observed by Mr. Snell, in which apparently more than 480 grains of chloral-hydrate had been taken in one dose, and in which, almost immediately after the poison had been swallowed, it was noted that the pupils were "much contracted" (BRITISH MEDICAL JOURNAL, March 27th, 1875); and a non-fatal case, observed by Dr. Tizard, in which 160 grains of chloral-hydrate had been taken in one dose, and in which it had been noticed, soon afterwards, that the pupils were "moderately contracted" (BRITISH MEDICAL JOURNAL, September 21st, 1878). A fatal case has been recorded by Mr. Thomas Chambers, in a lady, aged 70 years, who died about nine hours and a half after taking only ten grains of chloral-hydrate, and in which the pupils were observed to be "slightly contracted" about fifteen minutes after death had apparently occurred (BRITISH MEDICAL JOURNAL, May 25th, 1872). Among the more pronounced symptoms of poisoning by chloral-hydrate, referred to by Dr. Erlenmeyer (*Med-Chir. Rundschau*, October 1872), and by many later writers on the subject, is contraction of the pupils; and Dr. McKendrick, in a paper on the Physiological action of Chloral and Bromal Hydrates and Iodoform (*Edinburgh Medical Journal*, vol. 20, 1874–5), has demonstrated that the pupil contracts with great rapidity to its smallest diameter, after the administration of bromal-hydrate in rapidly poisonous doses.

This more or less strongly marked contraction of the pupils in poisoning by chloral-hydrate (which is antagonistic to the local action of atropine on the iris), appears to be simply an exaggeration of their condition during the hypnotism produced by the drug when given in medicinal doses; and M. Labbée, in his article on Chloral (*Dict. Encycl. des Sciences Méd.*, tom. 16), states that there is contraction of the pupils after twenty to sixty grains of the drug have been administered, either by the mouth or by the rectum. Previously to the occurrence of hypnotism, I have observed, in common with others, that there is a tendency in the pupils to dilate. According to the observations of Dr. Hammond (*New York Medical Journal*, February 1870, quoted by M. Labbé), this preliminary dilatation of the pupil is associated with decided vascularity of the inner structures of the eye; but when, soon afterwards, sleep has occurred, this hyperæmia is succeeded by an exsanguine condition of the retina and contraction of the pupil. I have, moreover, had the opportunity of observing, in common also with others, that when, by galvanism or by any other means, a chloralised patient has been temporarily roused from sleep, the contracted pupils at once dilate; and Van Lair has remarked that the contraction of the pupils, during the hypnotism produced by chloral-hydrate in non-poisonous doses, can be overcome, and that the pupils can be made to dilate by irritating strongly the skin, or, better still, by uttering a loud cry close to the ear of the sleeper. On the other hand, Dr. B. W. Richardson (*British and Foreign Med.-Chir. Review*, January 1875) has recorded the case of a middle-aged man who had dilatation of the pupils some hours after taking 240 grains of the drug in divided doses; and Dr. Cleveland lately stated, at a meeting of the Harveian Society, that dilatation of the pupils occurred in an otherwise exceptional case of poisoning by chloral-hydrate, under his own observation.

With reference, therefore, to the condition of the pupils in cases of poisoning by chloral-hydrate, it must be admitted that contraction is the rule, and that dilatation is an altogether exceptional phenomenon, during the hypnotism produced by this drug in the human subject. MM. Feltz and Ritter have observed dilatation of the pupils after the injection of chloral-hydrate in poisonous and rapidly fatal doses into the veins of a dog. But the value of the clinical evidence adduced seems to be in no degree lessened or impaired by experimental observations on the effects produced by this or by other narcotics on any of the lower animals; and it is, moreover, well known that the effects produced by opium in causing contraction, and by belladonna in causing dilatation of the pupils in the human subject, are not in accordance with experimental observations on such of the lower animals as are physiologically capable of resisting the usually poisonous influence of these drugs.—Yours, etc.,

WILLIAM SEDGWICK.

12, Park Place, Upper Baker Street.

VACCINE AND GLYCERINE.

SIR,—In the BRITISH MEDICAL JOURNAL for this week, in an article headed "Vaccination with Thymolised Lymph", I notice that Dr. Emil Stern states that the admixture of glycerine with vaccine lymph almost invariably renders it inert. I had occasion about three years ago to revaccinate the children in the Liverpool Seamen's Orphanage on account of the prevalence of variola in the district. My supply of lymph being limited by the sudden demand, I vaccinated one hundred and eighty of the children with lymph diluted with glycerine and water, and found that only fifteen of the number failed to take.—Believe me, yours truly,

September 6th, 1879. HENRY Y. PITTS.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN AUGUST 1879.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health.

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.		Hardness. (Clark's Scale.)	
			As Nitrates,&c.	Saline.	Organic	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	20.20	0.120	0.120	0.000	0.011	15.2	5.0
West Middlesex..	20.90	0.149	0.120	0.000	0.011	15.7	4.8
Southwark and Vauxhall	20.50	0.109	0.105	0.000	0.006	15.7	4.8
Chelsea.....	20.00	0.101	0.090	0.000	0.010	14.7	5.4
Lambeth	20.60	0.123	0.135	0.000	0.010	16.3	5.3
Other Companies.							
Kent	29.00	0.028	0.420	0.000	0.002	19.8	5.8
New River	20.20	0.107	0.120	0.000	0.004	15.4	5.0
East London	20.70	0.073	0.111	0.000	0.008	15.2	5.8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases.

MEDICAL TITLES.

SIR,—In your answer to a correspondent you very correctly say "there are excellent precedents for giving the title of 'Dr.' to an M.B. of an University". True, but have not all physicians an equal right to the title, be it the F.R.C.P., M.R.C.P., or L.R.C.P.? Why should this courtesy title of address be given to some and not allowed to all? Surely it is unfair to pick out the best men from among the non-graduate physicians and associate them with the graduates, by giving them the title of "Dr.", and then taunt the remainder as inferior, and refuse to give them the very title which has been freely granted to others of the same class. This is unjust and inconsistent. Let the M.B., F.R.C.P., M.R.C.P., and L.R.C.P. be treated alike with reference to the titles Physician and Doctor: let the latter title be accorded to all or given to none, and there will be no cause of complaint. Let Handfield Jones, Lionel Beale, and such like, be known as Mr. Handfield Jones, Mr. Lionel Beale, etc., and there will be little temptation for the L.R.C.P. to assume a title to which it is said he has no right. As long, however, as the disputed title is freely accorded to the M.B. and F.R.C.P., the M.R.C.P. and L.R.C.P. cannot be blamed for taking it, nor can it, with justice and consistency, be refused him.—I am, etc.,

September 6th, 1879. A PHYSICIAN.

*** In sending his name to us in confidence, our correspondent seems to overlook the distinction between the *courtesy* title of "Doctor" and the *academical* title of M.D. Being a licentiate of a college of physicians, he signs himself "—— ——, M.D." This, as far as we are aware, is not done by the distinguished M.B's, to whom we have referred as being ordinarily styled Doctors.

BUTTON-SUTURES.

SIR,—In the JOURNAL of June 21st, there is an article by Dr. Will of Aberdeen describing a modification of Professor Lister's button-sutures.

I may mention as a somewhat curious coincidence that, only a few days before the article had appeared, I had made a button on a principle entirely similar to that of Dr. Will's, although on a slightly different plan. It is many months, however, since I devised it, being led to do so by the remarks of Professor Lister and Mr. Chiene as to the awkwardness of application of the old button in many instances.

My button is produced at one casting; it is made of soft, pliable metal, and could be produced at the most trifling cost. The metal being very pliable, they can be easily straightened or re-bent on wishing to relax the sutures.—Yours obediently, J. D. DUNLOP.

Edinburgh, July 1st, 1878.

*** The ordinary paper-fastener of pliable metal gives a good idea of Mr. Dunlop's contrivance.

DILATATION OF THE PROSTATE.

SIR,—At the annual meeting of the Association this year, objection was taken by many speakers, in answer to Mr. Teevan, to so-called dilatation of the prostate. The latter gentleman responded that the Professor of Anatomy at University College used to teach that the prostate was dilatable, and the Professor of Surgery that it was not so. As an old University College student, allow me to say that I attended two courses of lectures from both Professors Marshall and Ellis, and that in the years 1872 and 1873 Mr. Ellis stated in his lectures that it was absurd to talk of dilatation of the prostate in operating for stone, and that dilatation invariably implied laceration of its substance. I may also state that Mr. Erichsen and Sir H. Thompson also both taught that the prostate should be cut and not lacerated, and that this organ is perfectly rigid and incompressible.—Faithfully yours,

St. Ives, Cornwall. BOYD B. JOLL, M.B.Lond.

ARSENICAL WALL-PAPERS.

SIR,—In reply to the inquiry of your correspondent "Rusticus", I may state that in my capacity of analyst to the Grosvenor Co-operative Stores, I have recently had occasion to examine a number of samples of wall-paper, and the method which I adopt and find eminently satisfactory is as follows.

Place the suspected paper in a saturated solution of chlorate of potash till wetted through, dry and burn under a bell-jar. Rinse the bell-jar with a little distilled water, and wash the ash with the same. To the solution thus obtained, apply Marsh's test for arsenic. For details of Marsh's test, refer to any elementary work on chemical analysis.—I am, sir, your obedient servant,

A. RIVERS WILSON, Ph. D., etc.

3, Adelade Place, London Bridge, E.C., September 3rd, 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

FOREIGN DEGREES.

SIR,—For some years past it has been asserted in your columns that continental diplomas have not been granted to English medical practitioners unless they were previously qualified in both medicine and surgery, and have also undergone a further creditable examination by the continental authorities granting these degrees. Permit me to say that the Medical Alliance Association are in possession of facts which disprove these assertions. Some of these facts were laid before the Duke of Richmond last year, when his grace, for a second time, received a deputation from our Association, and I shall take great care that they be brought prominently under the notice of the Select Committee of the House of Commons at its resumed sittings next year. As a specimen of what these facts are, the following two cases may be related.

1. A. B. kept a drug-shop and two unqualified assistants. He prescribed largely and visited largely, and had over his door the description "Dr." When death occurred among his patients, the certificates of the cause of death were filled up by the permission and in the name of a registered medical man living many miles from where A. B. practised. The Medical Alliance from time to time applied to the Apothecaries' Hall for leave to prosecute this man; and from time to time this leave was withheld, until at last the Association discovered that he had been admitted to examination by the Hall, and had passed. He continued to use the title of "Dr." I cautioned him that unless he at once ceased to do so the Association would prosecute him; and thereupon, not being able to undergo a probably successful examination anywhere in England or Scotland where he could get a better title than that of "Apothecary", he speedily ran over to the Continent, and returned to London as a full fledged Brussels M.D. He at once sold his drug-shop for £800, and is now doing a flourishing trade as an advertising sixpenny provident dispensary proprietor.

2. C. D. has not had one single hour's medical education, yet he holds two continental medical diplomas, one of which (the Giessen) states that it was granted to him after a satisfactory medical examination. What this "examination" must have been may be gathered from the following *verbatim et literatim* copy of a letter he wrote to a registrar of deaths who had refused to receive his death-certificates, and who was himself a registered medical man.

"March 24 1875.—Mr. —— The Written Statements of —— and Wife is in my hands. you having Stated to them that I Murderd a Man by pulling is Interals out that I was Convicted of Manslaughter, that I was a forgerer, that I forger'd the Name of —— who was dead, that I was Struck of the Rolls that I ought to have been transported years ago. I now inform you that should I hear any more such Slanderous Language I shall Immediately place the matter in the hands of My solicitor.—X."

So much for Brussels, so much for Giessen, and for Jena.—I am, sir, your obedient servant, R. H. S. CARPENTER.

130, Stockwell Road, S. W., August 30th, 1879.

ANTI-FAT.

SIR,—Out of a grateful heart and a rapidly diminishing circumference, I write to show "C. G." how what is one man's poison may be another man's meat. On the 14th of last August, I weighed 15 st. 6 lbs.—within a quarter of a pound of your correspondent. At the date of my letter, I weigh 14 st. 6 lbs. I have brought about this pleasing and gratifying result by taking three pills daily of the *fucus vesiculosus*, each pill containing three grains. My appetite is in its normal condition. My spirits, always exuberant, are now tip-top; and I have the unwonted satisfaction of realising that, day by day, I am getting—

"Smaller by degrees,
And beautifully less".

The pills are the easiest and pleasantest thing to take, causing no disarrangement within, while the good offices that they perform for one's outward man are palpable to the most superficial observer. Before Christmas, I mean to reduce myself another two stone, and then I shall no longer have occasion to sign myself,

A VERY BROAD CHURCH PARSON.

SIR,—Since my previous letters in reference to the fucus vesiculosus, I have tried it, and noticed the effects carefully in several cases.

A medical man in this town has lost 8 lbs. in three weeks, 1½ lbs. in the next three weeks, and, after twelve weeks, found himself 13 lbs. lighter. It is only fair to say that he strictly dieted himself, avoiding butter, sugar, beer, etc.; but this treatment he had tried by itself before, without noticing much difference in his weight. In another case, a gentleman lost 8 lbs. in six weeks, without any change of his diet. A lady lost more than 20 lbs. in nine weeks, also without any particular change of diet. The above all took the fluid extract, and found no ill effects on the general health. I can hear no complaints of diarrhœa, excessive micturition, nor smelling or sweating of the feet.

In another case, where the solid extract was used, there has certainly been less effect produced, but no unpleasant symptoms have occurred.—I am, yours faithfully, THOMAS FAIRBANK, M.D.

Windsor, September 1st, 1879.

PARACENTESIS POST MORTEM.

SIR,—The following facts have occurred to me during the last few days, and I think them unique.

On the 15th ultimo, I was asked to go and see a comparative stranger in the village at once. I went and found a middle-aged man obviously in the last stages of dropsy. I advised tapping, and afterwards urged it. On the 28th ultimo, the daughter was brought for me to look at her eyes—simple conjunctivitis neglected. I prescribed, and on September 1st saw her again. One eye was wholly better; the other considerably improved. I asked the mother to send for a lotion, when she said the vicar "wanted her to send her to the Infirmary". The lotion was sent for. On September 1st, I also saw the father (the former dropsical patient I have before spoken of), and told them his end was fast approaching (hæmoptysis). This morning, at a few minutes after five, I was knocked up. "We want you to go and tap yon man directly": this was said to me through the window by a publican and a friend of the sick man, who had been staying up with him. I answered in amazement—looking at the facts that it was seventeen days since I advised paracentesis, and that it was then certainly received with anything but favour, and that I had urged it afterwards in vain—"What, at this hour of the day?" "Yes; he's dead", was the reply. "He's so big"——

I did not tap him.—I am, yours truly, W. T R.

Ravensthorpe, September 1879.

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GELSEMINUM AS A POISON.

SIR,—Some years ago, a persistent neuralgia led me to use the tincture of gelseminum to a considerable extent. I several times overstepped the maximum doses of the text-books without suffering any ill effects. Having recently had an opportunity of experimenting with a quantity of the fresh tincture, I determined to ascertain how far one might go in taking the drug, and what the primary symptoms of an overdose might be. I took each dose about the same hour on successive days, and avoided tobacco or any other agent which might influence the physiological action of the drug. Here are the results as jotted down at the time of the experiment. On Monday and Tuesday, forty and sixty minims produced no effect whatever. On Wednesday, ninety minims were taken at 10.30. At 10.50, on rising from my chair, I became seized with an extreme giddiness and weakness of the limbs, which, however, quickly passed off. There was no nausea or other effect. The pulse was weak but normal. On Thursday, I took 120 minims. The giddiness of yesterday came on in a much milder form. On going out about one o'clock, however, I noticed for the first time that I had a difficulty in accommodating the eye for distant objects. It needed a distinct voluntary effort, and indeed a facial contortion to do it.

On Friday, 150 minims were taken. As I increased the dose, I found that the more marked physiological symptoms disappeared. To-day, the giddiness was almost gone, but I suffered from a severe frontal headache, with diarrhœa and general lassitude.

On Saturday and Sunday, I took three drachms and 200 minims. The diarrhœa was so persistent and prostrating, that I must stop at 200 minims. I felt great depression and a severe frontal headache. The pulse was still normal, but weak.

From these experiments I would draw the following conclusions.

1. In spite of a case described some time ago in which 75 minims proved fatal, a healthy adult may take as much as 90 minims with perfect immunity.

2. In doses of from 90 to 120 minims, the drug acts apparently as a motor paralyser to a certain extent, causing languor, giddiness, and a partial paralysis of the ciliary muscle.

3. After that point, it causes headache, with diarrhœa and extreme lassitude.

4. The system may learn to tolerate gelseminum, as it may opium, if it be gradually inured to it. I feel convinced that I could have taken as much as half an ounce of the tincture, had it not been for the extreme diarrhœa it brought on.

—Believe me, yours sincerely, A. C. D.

Clifton House, Aston Road, Birmingham.

INFANTILE DIARRHŒA.

SIR,—This scourge of the young is well known to be almost sure to follow every rise of the thermometer above 65 or 70 deg.; and if this high temperature be continued for any length of time, it will enormously increase the infant mortality. This I have frequently verified by my own experience, having in the first place heard the statement made by Professor Gairdner of Glasgow. Since, then, it is perfectly evident that the acidity of the milk of the cow, ass, or goat, as the case may be, given to infants, springs from the effect of heat upon it, it would, I think, be advisable that all food other than the maternal should be kept cool by means of ice before each administration in the very hot weather; or, in the event of this article not being procurable, should be kept in the coolest and shadiest place possible. Care should of course be likewise taken that the bottles be thoroughly well scoured previously to each refilling, as insisted upon by Mr. W. A. Budd of Exeter. When engaged in practice in the North of England, a summer or two ago, I frequently met with cases of infantile diarrhœa arising from the use of cow's milk pure and simple; and it was only the other day that I saw a little patient suffering from the same complaint, which originated without a doubt from the same cause. Of course, it is well known that the caseine of cow's milk cannot be assimilated by the infant stomach; and of this, in a general way, the majority of mothers are aware, although here and there one comes across the most lamentable cases of ignorance in this respect.

Mr. Budd states that, according to his own observations, diarrhœa hardly ever takes place amongst those infants that are fed on condensed milk; and this, too, I myself have noticed, and I consider that the small quantity of malt extract it contains, as well as the sugar of milk—to which is assigned by Mr. Budd the prevention of its turning sour—renders it so efficacious as a prophylactic, as it is thus so very nearly approximated in its constituents to the infant's natural food.—I am, etc.,

September 1879. WM. G. LAING, L.S.A.

TOBACCO AMBLYOPIA.

SIR,—Though unfortunately prevented from attending the annual meeting at Cork, I have read with special interest the report of the discussion on tobacco amblyopia in the Subsection of Ophthalmology. Mr. G. E. Walker of Liverpool is there reported to have said that he "had repeatedly seen complete blindness result in cases of tobacco amblyopia", and "for the cure of tobacco amblyopia complete abstinence was not enough; mercurialisation must also be largely employed". These statements make it appear that Mr. Walker has, from his observations, been led to form much more serious views as to the prognosis and treatment of such cases than I believe are now entertained by most observers, and which were expressed at the discussion by Mr. Nettleship and Dr. Hirschberg—viz., (*a*) that abstinence from tobacco is the essential point in the treatment, (*b*) that abstinence is generally followed by cure, and (*c*) that tobacco amblyopia never goes on to complete blindness.

Mr. Hutchinson, in reporting a very carefully collected series of cases of this disease (*Royal London Ophthalmic Hospital Reports*, vol. viii), says: "I do not recollect for many years to have seen a single case diagnosed as tobacco amblyopia which, in spite of treatment, went from bad to worse", and "recovery or great improvement of sight took place in forty-eight out of sixty-four cases"; and lastly, "of the eleven patients in whom the disease either did not improve or become worse, no fewer than eight had persisted in their usual allowance throughout. This is a strong fact."

With such a valuable series of cases as these to refer to, I will not waste your space with any details of those which I have had under my care more than to state that, with one doubtful exception, I believe all which were diagnosed as tobacco amblyopia, if they remained under observation, either very much improved or completely recovered on leaving off or much diminishing the tobacco and taking some such simple remedy as a few drops of nux vomica or tinctura ferri, though to this latter I do not attach any importance; in fact, one teetotaller came with V. $= \frac{20}{200}$ and J. 18, who in six months had improved to V. $= \frac{20}{20}$ and J. 1 without any other treatment than abstaining from tobacco and bathing his eyes with otio sambuci as a *placebo*. Mr. Hutchinson does not, in the report above quoted, mention his treatment, which, however, I believe I am correct in saying is either nux vomica or iron, and I never remember to have seen him or any one else resort to mercurialisation in tobacco amblyopia. I hope that, seeing the importance and interest attached to this subject, Mr. Walker may be induced to favour us with more details as to the cases which resulted in complete blindness—what was their vision when first seen? did they abstain from tobacco? what treatment was followed? and regarding the mercurialisation, does he diagnose at once by any special indications the cases requiring it, or is it only adopted when other means fail?

—I am, yours, etc., A. STANFORD MORTON, Senior Assistant-Surgeon to the Royal South London Ophthalmic Hospital.

STEADINESS OF SURGEONS UNDER AN ENEMY'S FIRE.

SIR,—I have read with much pleasure of the gallant deeds done by many of England's brave sons at the battle of Kambula and elsewhere throughout this war, now happily drawing to a close, but nowhere have I seen publicly mentioned an act which, for bravery and coolness, has not been surpassed by any other in this campaign. Though reported officially to the medical department, a considerable time must elapse before it receives the recognition which it seems to deserve. Allow me, through the medium of your columns, to be the means of rescuing it from oblivion, in justice to two of my brother officers who already served with distinction in the Ashantee campaign. During the hottest part of the action at Kambula on the 29th March last, Private Daley of the 90th Light Infantry, who had sustained a severe wound of the upper arm, was carried to the field-hospital; he was bleeding profusely, and it was found necessary to amputate his arm immediately. This was successfully done, under a very hot fire, by Surgeon D. Thornton, assisted by Surgeon A. Lennon Brown, both of the Army Medical Department.

It is needless to remark that even under the most favourable circumstances the performance of a surgical operation requires the greatest coolness and steadiness on the part of the operator and his assistants. The best proof that these officers possess such qualities in a marked degree lies in the fact of their having saved their patient's life under such very trying circumstances. I am happy to state that the man made a good recovery. Had the operation been deferred until the termination of the action, the man would, in all human probability, be now amongst his dead comrades of the 90th.—I am, sir, your obedient servant,

CHÁS. M. D. CUFFE, Surgeon-Major, Senior Medical Officer Wood's Column.

Camp, Wood's Flying Column, Zululand, July 22nd, 1879.

PAYMENT OF MEMBERS OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following is the copy of a letter which has been addressed to the President and Council of the College.

"Ferndale Villa, Birmingham, September 12th, 1879.

"Gentlemen,—The great habit of working for nothing in our profession has its disadvantages and affects injuriously the workers. It sprang from the purest benevolence, and has been of the utmost service to the poorer classes of the community, but it has frequently led to dead ingratitude and lowered the profession in the estimation of the commercial classes of the country, who would weigh the produce of a cultivated brain in coal-scales as they would minerals and metals. It has also led honourable members of our profession to forego their just due and to rob themselves. It has engendered a refined delicacy with regard to the business of the profession, of which mean advantage has been frequently taken, in the minor appointments of the profession. I confess that I was surprised when I heard the other day that this habit of working for nothing was in full force in the Council of the Royal College of Surgeons of England. Now, excuse me, gentlemen, if I say that the College is not a charitable institution, but the great surgical corporation of a rich country, and that it has an income amply sufficient to defray the expenses incurred in transacting its business. I am sure no Fellow or Member of the College would wish the members of the Council to be out of pocket while attending to the business of the College at great loss and inconvenience to themselves. The expenses ought most certainly to be paid, as a matter of course, out of the College funds; and, in addition to this, I think that fees should be paid to members attending the sittings of the Council. The expenses must be heavy on the country members of the Council, as their visits to London must be frequent; and I should be glad to hear that this part of the habit of working for nothing and paying the expenses has been abolished, and I trust that the enclosed resolution will be moved from the chair and carried at your next meeting.

"Resolution: 'That the expenses of members of the Council incurred in attending its meetings and transacting the business of the College be defrayed out of the College funds.'—I have the honour to be, gentlemen, one of your constituent atoms,

"JOHN POSTGATE."

PROFESSIONAL ETIQUETTE.

SIR,—I ask your opinion on the following. Last week, a gentleman staying at the sea-side left his lodgings as well as usual to go for a walk. When he had got some little distance, he had very severe hæmorrhage. Some one ran for A. (an allopath), who immediately went to the poor fellow's assistance. Soon afterwards B. (a homœopath) appeared upon the scene, and with A. remained with the patient until he was somewhat revived. A vehicle was then procured, into which the patient was put, and, lying in the arms of A., was conveyed home, B. accompanying on foot. In order that some little preparation might be made for the reception of the patient, a message was sent to the lodging-house to say that Major —— was being brought home ill; and it would seem that on the receipt of the message, some one (probably the lodging-house-keeper) sent for the nearest doctor, C. (allopath), not knowing that medical men were accompanying the sufferer. Accordingly, when A and B. arrived with the patient, they found C., who not only assisted them, but installed himself medical attendant in charge, although he had never seen Major —— before. A. and B. of course left.—Yours, etc., AN ASSOCIATE.

September 10th, 1879.

*** A. should apparently have continued the attendance, as he first appeared on the scene.

HOME FOR YOUTHS OF WEAK INTELLECT.

SIR,—Can any of your correspondents inform me of any institution into which a young man, twenty-four years of age, described by his father as "neither an idiot nor insane", but "weak-minded", could be received? Application having been made to "Earlswood", it was found that no inmates are received after sixteen. The young man was formerly in an asylum in Scotland, but dismissed as not being "insane". I shall be happy to afford all particulars of the case to any one who will kindly assist me with information regarding any institution where he could be received either "free" or at a very moderate board.—Yours faithfully,

Riding Mill-on-Tyne, Sept. 16th, 1879. J. M'GRIGOR MACLAGAN, M.D.

The Identification of the Prince Imperial's Body.

Sir,—The hazardous assertion of Dr. T. W. Evans, that no one but himself had ever filled the teeth of the Prince Imperial was surely made without sufficient reflection. The statement has been disproved by the letter of Mr. Oakley Coles (see British Medical Journal of August 23rd, 1879); by the letter of Mr. Jackson T. Bull, now of Brussels, who, upon my recommendation, operated upon the Prince at Woolwich; and by the proofs laid before you that I attended the Prince, and performed the operations specified in my previous communication. Mr. Bull says: "I take pleasure in enclosing the letters summoning me to Woolwich on the 25th July, 1873. I put in a small gold filling in an upper molar on the left side, and scaled the teeth."

Dr. Evans says that in his identification of the body he found gold fillings in five teeth in perfect condition, and in the places where he expected to find them. Now, in this case Dr. Evans could not have recognised his own work, for Mr. Oakley Coles filled one cavity in the first right upper molar that had been previously filled by Dr. Evans. Mr. Bull filled another in the left upper molar: and in 1877 (not in 1876, as erroneously stated) I found and filled two small cavities, and refilled two other teeth previously filled by Dr. Evans. Thus it appears that the operations of the latter were not eminently successful. It was our work, not his own, that Dr. Evans recognised. A physician from Madeira, who has had great experience, declares that it is almost impossible to open the mouth of an embalmed body; and most dentists will agree with me when I say that, under the circumstances, it would be impossible for Dr. Evans to recognise his own work from that of others in the profession.

Dr. Evans says (Journal, August 9th, 1879): "Dr. Rottenstein was not present at the identification of the remains of the Prince Imperial, nor did any operation of his contribute in any way to that identification; but I was present on that occasion, and there and then recognised my own work, as well as the peculiarities of the dental conformation."

This is an amusing case of *petitio principii;* for my presence or absence at the identification of the body has nothing whatever to do with the question. No one ever pretended to deny that Dr. Evans was present on that occasion; but one must be devoid of all logical ideas to take this as even collateral evidence bearing upon the question at issue. More pertinent are the proofs that I produce to show that the work upon which the identification of the Prince's body purposed to be based was not solely the work of Dr. Evans. It is true that he was the dentist of the Prince during the latter's childhood, but since a certain period he has not been exclusively employed. The Prince had very good teeth; and although I was called upon to treat other members of the imperial family, it was not until 1877 that he demanded my services. Before this period, I was called upon to recommend a London dentist, and proposed my friends Oakley Coles and Jackson Bull, both of whom attended the Prince, as already stated. I here lay the proofs before you, sir, and close this unsolicited discussion.—I am, sir, very respectfully,

Rue Royale, Paris, September 1879. Rottenstein.

The Administration of Alcohol in St. George's Infirmary.

Sir,—In your article on the above subject in the Journal of August 30th, you have properly given prominence to the only statement of "fact" in Dr. Webster's report by which he has endeavoured to prove that the "withdrawal of alcohol" from the aged or infirm inmates of St. George's Infirmary had been attended with beneficial results. The passage in the report will bear repetition: it is as follows. "Prior to their removal to St. George's Infirmary, more than thirty old women have been bedridden for various spaces of time, ranging from one to seventeen years. They had all been supplied daily with brandy or beer, or both. The whole of them are now able to leave their beds; many are able to walk about, some to work. Appetites have been developed for solid material, and an interest is once more taken in the surroundings. I am compelled to ascribe the amelioration of condition", says Dr. Webster, "to the altered moral state, greater physical energy, and improved food assimilation, brought about by the withdrawal of alcohol." Now, sir, so far from these "interesting words", as you describe them, resting "on a solid foundation of fact", as you suppose, I beg to assure you they are based on error from beginning to end; and as Dr. Webster's predecessor—viz., as medical officer of the old Infirmary of St. George's Union at Kensington for sixteen years—I beg to supply that "further explanation" which you rightly decide "ought to be forthcoming".

I have seen the old women in question. I remember every one of them, and I affirm without hesitation that they were not "bedridden prior to their removal to St. George's (new) Infirmary", though almost without exception they are very aged, many of them being paralysed or otherwise disabled, and some of them more or less imbecile. They were "able to leave their beds" when at Kensington; "many were able to walk about" then as now; and some to work—*i.e.*, some could "do a few stitches" occasionally, when so minded, which the nurse now in charge of them informs me is the extent of the "work" they now do.

I admit it to be probable that the old women had all been supplied with beer daily, for I usually allowed the aged and infirm inmates half a pint daily—a quantity of "alcohol" which Dr. Webster tells me he—though "by no means" a total abstainer himself—considers sufficient to produce all the evil results from which the old women are supposed to have recovered. But I boldly affirm that not one of them "had been supplied with brandy daily": and as a matter of course spirits having always been prescribed by me with the strictest moderation (both as to time and quantity), and only in cases of necessity.

I wished very much to bring Dr. Webster's statements with regard to the previous condition and the diet of the women to the test of the official records of the Kensington Infirmary, and with that object I obtained permission of the guardians to inspect the "medical relief books" of that defunct institution. Judge my surprise at being informed by Dr. Webster that all the said books had been destroyed, and that he had never seen them. I do not complain that Dr. Webster did not think it proper to consult me about persons who had been so long under my care, but I think it somewhat remarkable that (as I have ascertained) he did not even take the trouble of finding out something about them from my nurses. He frankly admitted to me, however, that he did not pretend to exactitude in the statements he had put forth, and that he had simply reported, for what it was worth, the information given him, long after date, by my poor old patients: hence the unfortunate error into which he has fallen, which is the more to be regretted as the paragraph referred to (really the most salient in the report) has been very generally quoted by the papers which have dealt with the subject. The explanation of the matter appears to be that Dr. Webster, little dreaming of the importance the guardians would attach to his report, did not exercise that care in collecting his "facts" which he would now desire.

Writing thus far from home, and without access to my papers, I cannot pretend to deal with the other points raised in your article; but as reasons sufficient for asking your readers to suspend their judgment on the question at issue—viz., the value of alcohol in the treatment of disease (so far as it is affected by Dr. Webster's "facts")—I would beg permission to state that the cost of feeding the inmates of the new Infirmary appears to be considerably in excess of the cost at the old Infirmary; that the ratio of deaths to cases treated was considerably higher during the first year of its operations; and that the gross number of deaths among the indoor sick poor of the union in 1878-79 was upwards of twenty per cent. more than in 1877-78—a "fact" to which I long ago called the attention of the guardians. But startling as it may appear to the medical mind, this fact made no impression on the guardians, and seems not to have been thought by them of importance sufficient to call for inquiry or to need explanation.—I am, sir, your obedient servant,

September 1879. T. Orme Dudfield, M.D.

Excessive Bucco-Pharyngeal Secretion.

Sir,—Would any of your older readers kindly inform me what in their experience has been the most satisfactory treatment for excessive secretion of the buccal and pharyngeal mucous glands? A patient has preserved for me about three pints of the fluid he spat in the course of a day. I have tried every remedy that reason and reading suggested to me, without effect. I can trace the source of the annoyance to no cause whatsoever. By inserting this you will greatly oblige

Templemore, September 2nd, 1879. A Member.

Hospital Out-Patient Practice.

Sir,—Can you or any member say what is my proper course o conduct under the following circumstances? I practise in a district within easy reach of a large hospital and medical school. I have a patient of the lower and ignorant class, whom I am attending for, say, iritis. I call one day and find him under a slightly different but practically identical treatment to that I have been pursuing, and am told that he has been to this hospital and consulted Mr. So-and-So, an oculist of undoubtedly the highest standing, and with whom I am in the habit of consulting, but who is quite unaware that I have prescribed for the patient. Under such circumstances, how should I act? Am I to carry out my own line of treatment or adopt that advised at the hospital, as I should do had the case been sent by me for consultation? The case I take is no hypothetical one, but simply taken for illustration, as similar cases occur now and then in all branches of the profession in my own experience, and I doubt not in that of my neighbours.

I acquit the hospital staff of all blame personally, and invariably have a note in reply when cases are sent by me for advice; but is the system not at fault which allows the reputation of a general practitioner of fair standing to be in some measure at the mercy of the, it may be, casual remarks of a teacher to his pupils—remarks that would never be made were it known that the patient had been under treatment by a professional brother?—I am, etc., Quærens.

Coiling of the Funis.

Sir,—A few days ago, I was called to attend a woman in labour with her seventh child. On my arrival, I found that there had been somewhat profuse hæmorrhage going on for several hours, and the patient had become very pale and weak. Finding the head in the cavity of the pelvis, I at once gave ergot, which, with the aid of some expulsive force, soon brought about delivery. The child, when expelled, was found to have the cord coiled seven times round its neck. Not having seen so many coils before, and not finding it stated in either of the obstetric manuals I happen to have by me, that such a number of laps sometimes occur, I venture to think that such a disposition of the funis is uncommon, and so record the case.

I notice that Churchill speaks of the *imaginary* evils which are attributed to the shortening produced by the coiling of the cord; but in the above case I feel sure that the accidental hæmorrhage was most undoubtedly due to there not being a sufficient length of free cord to admit the expulsion of the child without separation of the placenta.—I am, etc., George M. Hirons, L.R.C.P., etc.

Bournemouth, September 10th, 1879.

We are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Trollope, St. Leonard's-on-Sea; Mr. G. M. Hirons, Bournemouth; Dr. Tidy, London; W. B.; Dr. D. J. Mackenzie, Glossop; Dr. N. Cheevers, London; Mr. J. Tompsett, Spanish Town, Jamaica; Dr. J. H. Courtenay, Lucea, Jamaica; Dr. S. Macvie, Chirnside; M.B.; Mr. W. Simpson, London; Dr. Braidwood, Birkenhead; Dr. Wardell, Tunbridge Wells; Mr. J. Postgate, Birmingham; Mr. A. D. Pithie, Manchester; Dr. Diamond, Muthill; Mr. R. Goodall, Silverdale; Sine Timore; Mr. T. Partridge, Stroud; Inquirer; Mr. C. Ashenden, Hastings; Mr. H. N. Edwards, Shrewsbury; Dr. John H. Galton, Anerley; Mr. C. Heath, London; Mr. M. D. Makuna, London; Mr. Lennox Browne, London; Our Paris Correspondent; Mr. G. Cowell, London; The Secretary of Apothecaries' Hall; Mr. T. F. Hopgood, Sunderland; Mr. E. Hamilton, Dublin; The Registrar-General of England; Dr. W. A. McKeown, Belfast; A Member, Wilts; Dr. E. S. Sparks, Crewkerne; The Regietrar-General of Ireland; Dr. R. Spence, Burntisland, N.B.; Dr. P. Macpherson, London; Dr. J. M. Maclagan, Riding Mill-on-Tyne; Dr. Collie, London; The Hon Sec. to the Quekett Microscopical Club; The Dean of St. Thomas's Hospital; Mr. W. K. Treves, Margate; Dr. B. J. Tuck, Seaford; Our Glasgow Correspondent; Dr. J. Wallace, Greenock; Dr. H. H. Kane, New York; Our Edinburgh Correspondent; Mr. Knell, London; Dr. O. Sullivan, Cork; Dr. Bancroft, Brisbane; Mr. John Scott, London; Our Dublin Correspondent; Mr. W. Thomson, Dublin; Mr. Nettleship, London; Dr. G. M. Humphry, Cambridge; etc.

BOOKS, ETC., RECEIVED.

Transactions of the Ohio Medical Society. Columbus, Ohio: Cott and Hann. 1879.

CLINICAL LECTURE

ON

MALIGNANT STRICTURE OF THE HEPATIC FLEXURE OF THE COLON.

BY JAMES F. GOODHART, M.D.,
Assistant-Physician to Guy's Hospital and the Evelina Hospital for Children.

THE case to which I invite your attention, gentlemen, to-day is one of stricture of the colon; but, in order that those of you who know little about such things may follow me the more readily, it will be advisable, in the first place, to mention the common symptoms of intestinal obstruction, and also the various causes of the same.

The symptoms are vomiting; griping abdominal pain; constipation; more or less distension of the abdomen; abnormally visible peristaltic action of the bowels; and possibly, in some cases, diminished quantity of urine.

According as the obstruction is sudden and complete, or slow and for a long time incomplete, in its onset, you can readily understand that the symptoms will be likely to differ. Thus, in sudden cases, the vomiting and constipation are immediate, and the abdominal distension follows soon after. In the chronic cases, there is usually a history of paroxysmal colic for some time before the onset of more urgent symptoms. The abdominal distension slowly increases, and reaches an extreme degree, and the vomiting and absolute constipation come on at this late period. Moreover, throughout the illness, the visible muscular action is usually a prominent symptom. This is, I think, the simplest division of intestinal obstruction—into acute and chronic; and you will find that the various forms are readily classified in this way for clinical interpretation. It is not very elaborate, and therefore proportionately liable to error for exceptional cases; but it is correct for the majority of cases. Some writers attempt to classify according to the seat of the disease; this comes very much to the same thing, but is not quite so simple.

The following causes are usually enumerated:

1. Plugging of the intestine by foreign bodies and concretions.

Acute.
2. Internal strangulation.
3. Volvulus.

Acute or Chronic.
4. Intussusception.

Chronic.
5. Contractions.
6. Strictures.

Of these six, the first, except when due to a large gall-stone, is very rare, so that need not detain us. Nos. 2 and 3 are associated with very acute symptoms, early vomiting, pain, and distension of the abdomen. Intussusception occupies a somewhat intermediate position, as it is sometimes acute, sometimes chronic; and five and six have usually chronic symptoms.

The case is that of a man aged 27, admitted into the clinical ward on May 22nd, 1878, and who died on May 31st. He was an Irishman, born in Killarney, and had had no illness that he was aware of, with the exception of measles, and, four years ago, of gonorrhœa. His father and mother are alive and healthy. He has drunk very freely of spirits and beer, being for some time a bottler of whiskey, when he used to imbibe more than a pint *per diem*. From Killarney, he went to a sugar-factory at Bristol, where he used to drink considerably more than three quarts of beer in the day. During the last twelve months, he has not drunk nearly so much, only taking spirits at long intervals, and about a quart of beer per day. During the last nine months, the patient has suffered from attacks of griping pain in his right side, more especially after taking beer; he has never noticed that the pain was increased by food; and he has been so little troubled by it as to take not much notice of it.

About two months ago, he caught a bad cold, and was confined to his bed, and treated by a medical man. He then first noticed a hard swelling in his right side, just below the ribs. Previously, he had felt in good health, and had been able to work and eat well. He now began to have pain in this spot; and, though he got better of his cold, and began to work again, he felt weak, and his appetite failed. A month ago, he was seized with severe pain in his right side, and for two days his bowels were confined. This attack passed off, but only to be succeeded by another in a week's time. The pains generally came on in the evening, and, after lasting twenty-four or thirty-six hours, would go away. During the pain, he was always sick, and, in so doing, was relieved. The vomit was bilious, green or yellow. Sickness never came on immediately after food, nor has he ever thrown up any blood, but the ejecta have been of the nature of coffee-grounds. The vomiting has only existed for the last four weeks. The bowels have been irregular, at one time constipated, at another loose. The motions have lately been very black. He thinks he has wasted in the last three weeks. He has been able to take solid food till the last week, but since then has kept to milk and brandy.

When admitted, he is described by my clerk, Mr. Malpas, as of a dark sallow complexion, slightly jaundiced, with worn, pained, and somewhat pinched-looking face. He lies in bed on his back, with his legs drawn up; this being his most easy position. His tongue was furred and moist. He was always thirsty, but quite without appetite. The bowels had acted not long before he came in.

The abdomen was not at all distended—rather the reverse; so much so, that a tumour now to be described gave a slight prominence to the surface immediately over it. It occupied the right hypochondrium and right umbilical region, extending for an inch below the umbilicus. Its lower edge was well defined, but not its upper; the whole mass very tender and very hard. It was comparatively dull, but yet distinctly resonant on percussion, and between it and the right rib there was very distinct resonance; above this, came the hepatic dulness as usual, extending half a space higher than its normal limit. The swelling moved but very little, if at all, during deep inspiration. The pain came on in paroxysms, and, during them, the tumour became visibly more rounded, but there was no visible peristalsis. All the viscera seemed normal, and the temperature was normal. There was no ascites; no jaundice worth the name; no enlargement of the surface veins.

These, gentlemen, are the details of this case, wanting only that which no description can give—the something over and above the mere symptom which the eye takes in at once, and which is often all-important in making the diagnosis. However, I do not know that there was anything very striking in this man's appearance except that he was very pale, and looked proportionately ill. Will any one suggest a diagnosis?

Well, first of all, what may the symptoms indicate? A hard, somewhat nodulated lump between the umbilicus and the right ribs. In that region are the liver, gall-bladder, pylorus, head of the pancreas, the hepatic flexure of the colon, and, behind these, the suprarenal capsule and kidney, and some lumbar glands; and, lastly, mesentery and omentum may be displaced anywhere, and therefore must be mentioned. Bear in mind, too, that spinal curvature—lordosis, as this form is called—will sometimes so push forward the pancreas and aorta as to simulate an abdominal tumour or aneurism. To remember this is to make your diagnosis so far as *it* is concerned; because it is, of course, easy to examine the length of the spine; and, when there is curvature of one part, there is nearly always curvature of another part compensatory. This patient had no spinal curvature.

Then to take the other possibles *seriatim*. Had he any liver-affection? What liver-diseases are liable to occur in a young man of twenty-seven? First, there is hydatid disease, which has these features: that the tumour is cystic; that, therefore, it gives the physical signs of fluid, viz., a thrill—in some cases, a peculiar thrill—and the globular elastic tumour, generally speaking, bulging well into the right hypochondrium. It is a swelling comparatively free from pain. It is associated with little or no disturbance of the health. These are conditions, you will observe, which do not tally with those in this case. The tumour was not cystic, but very hard and unyielding. It was not even globular; nor did it occupy the region of a hepatic cyst; and, instead of being unassociated with disturbed health, the man, as I have told you, was evidently very ill. In these latter points, however, it might agree with the symptoms of hepatic abscess or suppurating hydatid; but then, again, these would give the same cystic bulging of the liver if they gave any sign; and it was not present. Then some syphilitic disease of the liver—was it that? Syphilis leads to the formation of large hard masses in the liver, which produce much matting of the surrounding parts, and therefore occasionally give rise to a good deal of pain; so that it might have been something of that kind, even though there were no other traces or history of anything of the kind. And, lastly, was it any malignant growth in the liver? Well, that is so exceedingly uncommon as a primary disease in anybody; and in a young adult of twenty-seven still more so, that any opinion of that sort was mentioned only to be dismissed. So, then, of all the possible affections in the liver, we have only one left, viz., some gummatous inflammation. But I did not think it was a mass connected with the liver at all; first, because the tumour itself was distinctly resonant; and, secondly, because there was still more marked resonance between the lump and the ribs, above the margins of which came the normal hepatic dulness in due course. You occasionally find a large liver coming some way below the ribs, overlapped by or covered by some intestine; so that, though really enlarged, the abdominal portion is hidden; but I never saw a liver covered

above by intestine and protruding below; and, if you think a minute, such a condition is hardly possible considering the relation of the intestine to its mesentery. Such a condition is just possible with regard to the gall-bladder; that the coils of intestine might enfold that viscus, and become adherent round it, giving resonance above it, and some transmitted resonance over it; and the gall-bladder is rather liable to set up inflammation round it, and fever. It becomes over-distended, and inflamed because over-distended. But I did not much think this was gall-bladder, because distension of the gall-bladder in young people is usually associated with some jaundice, and this was not; for though Mr. Malpas tells you the man was jaundiced, I think it would have been more correct to leave the earlier report, that the complexion was *sallow*, without the addition. He was sallow no more. Then, too, the fundus of a distended gall-bladder is not often adherent to the surface to such an extent as to produce a lump so defined as this was. It is a pyriform elastic swelling, to be felt only with care. Then, too, both liver and gall-bladder descend freely during inspiration; this tumour did not; though of course that symptom is liable to be modified by adhesion, should this have occurred.

Then we may take kidney and suprarenal capsule; and I may at once lay down this rule: that, unless very large or abnormally mobile, enlargements of these viscera do not produce any well-defined tumour so superficial as this was. A man may have twenty or thirty ounces of kidney in each loin, instead of four or five; and, unless there be any special renal symptoms, the tumours will very probably not be detected. This is because they are behind all the coils of intestine, and push these forward, so that the swelling is masked in this way. Renal tumours are indicated by a general fulness of the abdomen, or ill-defined resistance in either loin; and then, on careful manipulation, you will get fluctuation and so on. Now go and verify this for yourselves in the case of 19 in Philip ward. There is a man who has had symptoms of renal calculus on the right side. Go and examine his abdomen; and you will have learnt a lesson you will not forget. The same thing applies to the suprarenal capsule, though less generally, because growths in it of any size are apt to push forwards towards the median line, and may appear as definite tumours well defined, by pushing up the pancreas in front of them. As an outside chance, I put down tumour of the suprarenal capsule.

We have now left the pyloric region of the stomach and colon, omentum and mesentery. The pancreas may be left out of the question, because I might say the same of it as Sir William Gull used to say here of the jejunum, "that it has no pathology". That is a fact, though, worth your thought. Sir W. Gull used, I say, to take the ileum, jejunum, and duodenum, and enumerate the diseases of the first and the last, and find nothing to score against the jejunum. That is so; the jejunum is but rarely diseased primarily; and what is true of the jejunum is true of the pancreas, so far as we know at present; its diseases are not numerous. As between the remaining possibles, I said this: First, that the paroxysmal griping pain associated with vomiting that this patient suffered, and also the visible swelling of the abdomen which occurred at the seat of the tumour, together with the resonance over the tumour, were proof of some matting of the intestine, and so an impediment to its healthy painless muscular action, or else of some positive obstruction. There was, however, no distension of the abdomen, and the bowels, though not regular, were not confined; so I thought there could be no obstruction of anything more than a temporary kind; and, under such circumstances, intussusception or any malignant disease of the colon were hardly likely. I therefore turned to the stomach, the patient being a young man, and a former hard drinker, and suggested that he had some ulcer there, which had, as do so many gastric ulcers, slowly perforated into the tissues outside; making its way downwards and to the right, instead of backwards; and that the inflammatory thickening so set up, had caught the intestine, and led to the paroxysmal colic. That was my diagnosis; but, in making it, I had to do some violence to two sets of facts. The first was remarked upon by some of you, viz., that the man had had no symptoms of gastric ulcer. To this I replied, that gastric ulcer gives so few symptoms in many cases, that the absence of them is not to be relied upon, especially in hospital patients, who take so little heed of their symptoms; and, moreover, this man had had "coffee-grounds" vomit, and passed black stools—very like some gastric hæmorrhage. Secondly, the swelling in the abdomen was so hard, that I was strongly disposed to think it must be a new growth of some kind; and I also remarked that you must bear in mind that growths in the stomach and intestine do occur at earlier ages than most other growths; and I mentioned the case of a woman which is on record, where carcinoma of the stomach caused death at twenty-one.

Closer than that there was no ground for going; and, upon that diagnosis, and the prominent symptom being the one of paroxysmal colic, we gave him half a grain of opium three times a day, and kept him on milk diet, hoping that by this means the muscular coat of his intestine would go to sleep, and let the supposed ulcer or inflammation subside. Unfortunately, he was already, only we could not see it, in a hopeless condition; but let me continue the report of the case.

In the first two days he was sick, and had severe paroxysms of pain; still there was no visible peristalsis. The next two days he was quite comfortable, without sickness, the bowels acting with normal motions, and only one short paroxysm of pain. He was so comfortable, and complaining of feeling hungry, that I was somewhat thrown off my guard, and consented to his having a little fish. Whether from this increase of diet or not, I cannot say, but, on the evening of the day on which fish was taken, he had sudden and severe abdominal pain, which produced speedy collapse; and, notwithstanding a liberal administration of opium, wisely given by Mr. Horrocks, when I saw him the next day he had the sunken eye, the cold skin, the thready pulse, of a patient with acute peritonitis on the point of death. After this, he vomited everything given him, which was very little; for I believe the best treatment in peritonitis is to give no food at all, and plenty of opium; and he died about sixty hours after the onset of his last attack of pain.

The *post mortem* made the same afternoon discovered a cancerous stricture of the hepatic flexure of the colon. This had led to ulceration above it in the ascending colon, and a large fæcal abscess had formed in the right hypochondriac and lumbar region. Suppuration had extended from it to the viscera in the neighbourhood, and so to the general peritoneum. We also found evidence of old peritonitis in the form of old adhesions; and these were associated with, and probably due to, old tabes mesenterica, or caseous and now calcareous disease of the mesenteric glands.

Now, remember my diagnosis was gastric ulcer, opening into the tissues outside the stomach, and so leading to the formation of inflammatory material, which had caught up the colon and impeded its action, but had not constricted its calibre to any great extent. Inflammatory products outside the stomach there were in plenty, but they originated not in the stomach, but in a stricture of much tightness in the colon.

How was it that we failed to diagnose this? Well, because the proper or usual symptoms were absent. The symptoms of stricture of the colon are paroxysmal colic, visible peristalsis, constipation, and distension of the abdomen; and, of these, some are much more significant than others. For instance, the paroxysmal pain is present in most intestinal inflammation and obstruction, whether in small or large intestine. The visible peristalsis may or may not be present; but, at any rate, in a tight stricture of the colon you would expect to find constipation and distension of the abdomen. If these be absent, I hardly know any condition which would enable you to make a diagnosis; and I do not see in this case, now that we have the *post mortem* to guide us, how we could have arrived at a perfectly correct opinion. If there be no distension, you will be justified in assuming that obstruction, if it exist, is very high up in the small intestine; or that it is a general contraction, such as I mentioned to you; or that it is not complete enough to hinder to any material extent the passage of the intestinal contents. I took the latter view in this case.

But the *post mortem* shows, I think, why the important symptoms were absent; and, in so doing, conveys a very important lesson with regard to treatment; indeed, the most important lesson that can be learnt in these cases. Remember that the stricture occurred at the hepatic flexure of the colon, and that above that, ulceration had occurred in the mucous membrane of the bowel, and a communication had thus formed between the intestinal canal and the loose cellular tissue outside in the loin. This had allowed of the escape of a quantity of the contents of the bowel into the large abscess we found, which was without doubt due to the ulceration of the intestine, and some relief to the distension of the bowel above the stricture.

Now, it is a well known fact of *post mortem* experience that strictures of the bowel are *never complete*. There is always a certain amount of channel left, usually enough to squeeze the index or little finger through. So that it is probable that the fatal obstruction occurs from some temporary condition of the canal, which converts the partial into a complete obstruction. The treatment of these cases quite confirms this. Many are the cases, even of those which eventually have proved themselves due to carcinoma of the bowel, where the temporary condition has been tided over and the complete obstruction relieved. The conditions which cause this appear to be either paralysis of the muscular coat of the bowel; or some alteration in the direction or irregularity in action of the muscular force, by which means the contents fail to be propelled through the narrow canal in front of them; or some alteration in the contracted ring of bowel by which the existing canal becomes temporarily still more narrow. But whether one or all of these conditions hardly matters, because they all result more or less immediately from overdistension above the stricture. So that, in treating these cases,

this is what you aim at, the unloading of the bowel above the stricture and keeping it as empty as possible. If you can do this, the symptoms disappear and the patient regains health, which of course will be lasting or not according as the stricture is carcinomatous or not, and according as the overdistension can be obviated in the future.

The most obvious way of accomplishing your object is, to those who have not seen the ill effects of their administration, to give purgatives, the *rationale* of such treatment being, no doubt, apparently to stimulate the muscular coat behind the obstruction and so to force the contents of the bowel through the stricture, but this is what does not happen; purgatives seem to create somewhat analogous conditions to those occurring when a large theatre or church full of people is set on fire and all the occupants attempt to rush out at once. You know what happens. Half are crushed at the doors and the other half burnt inside. Convert that into terms of intestinal obstruction, and the result of purgatives is generally either to produce ulceration of the bowel above the stricture or to make the obstruction more complete than before.

The proper procedure first at hand is to reduce the contents of the intestine above and below the stricture to the smallest possible amount. Above, you are helped in this way by the vomiting which is usually present; and all that it will generally be necessary to do will be to be passive, and put no more in to replace that vomited. Your duty is to starve—yes, literally to starve—the patient. He may suck a little ice, and have a mouthful occasionally of the weakest broth; and this rather to calm his mind than to sustain his strength. We need not mind about that. Most of these patients have a certain reserve in their blood and tissues to fall back upon; and in bed strictly at rest they are in no danger of dying from a day or two of foodlessness. You will clear the intestine below the stricture by copious enemata frequently repeated. Then, as to drugs, the first and by far the most important one is opium. This controls and moderates the intestinal muscular action, and in so doing, without any other means, will often put a stop to the obstruction. So quickly does it accomplish this sometimes, that the opium pill would almost appear to act as a purgative, only that positions are changed now; purgatives constipate, sedatives open the bowel. If the symptoms are severe, give no more than opium and wait; but in the less urgent forms of obstruction, both belladonna and nux vomica are of use.

With regard to belladonna, Dr. Norman Kerr has published some remarkably successful cases of the subsidence of the symptoms of intestinal obstruction under one and two grain doses of the extract, given at frequent intervals. I have lately had a case under my own care where I pursued a similar plan, the patient taking twelve grains of the extract in about thirty-six hours; but, unfortunately, the result was not successful; peritonitis supervened, and death took place as colotomy was being performed. I do not wish to imply that this treatment is valueless. I think now that the case was perhaps of too long standing to allow of any hope of success except by operation; and would suggest that the belladonna should be exhibited in the earlier days of the obstruction if it is to succeed. We certainly lost valuable time, which might have allowed of successful colotomy, while pursuing the belladonna treatment.

I see no reason why ergot and digitalis should not be of use also; though they are less generally applied to. All such drugs, acting as tonics to the muscular coat of the bowel, induce a more persistent and forcible *vis à tergo*, replacing an irregular and inefficient muscular action. These, with warmth to the abdominal parietes, will be successful if any measures are of avail, and it will not often be necessary to do more by way of drugs. Some advise the administration of oil and other fluids to liquefy the intestinal contents; this is quite unnecessary, and even harmful, by adding to the quantity of liquid above the stricture, for it is a rule, to which I have seen no exception on the *post mortem* table, that *the intestine above the stricture is distended by fluid fæces, not by lumpy matter.*

Well, then, should all these measures fail, and you have to do with stricture of the colon, and have only to consider the question of the relief of the stricture apart from its nature and other complications, then the proper thing to do, no doubt, is to open the bowel above the stricture by some surgical operation. Now, in deciding upon such a thing as this, it is perhaps more common to look upon the operation as a way out of a difficulty by avoiding it; as a means to secure a permanent opening above the stricture—an artificial anus in fact. But—and this is the point I wish to insist upon, for here it is that one of the points of our case comes out—in many cases you will find that after the colotomy the bowels act and continue to do so by the ordinary channel. You relieve the overdistension by the operation, and the obstruction ceases. So that the operation is remedial in such. You do, in fact, by operation what you have previously attempted by drugs, and do not merely use a makeshift.

A very interesting case of this sort has been published in the *Guy's Hospital Reports* by Mr. Hilton. A medical man suffered for some time from abdominal pain and constipation, and eventually the obstruction became complete. Mr. Hilton saw him after twenty-eight days, and agreeing with the other medical men in attendance that the seat of disease was in the rectum or sigmoid flexure, opened the colon in the left loin. Four days afterwards, evacuations began to pass *per anum*, and from that time this continued to be the case; and the opening in the loin gradually healed. Eleven weeks after the first operation, all the old symptoms returned, and it became necessary to reopen the colon, when again fæces passed naturally *per anum;* and again—though this time vigorous efforts were made to dilate the artificial opening, the incision healed at the end of eleven weeks. The patient went on for some weeks, when it became necessary to open the colon a third time. But by this time ulceration had occurred in the colon above the stricture, and a large abscess had formed outside the bowel, opening the hip-joint, and from which he ultimately died exhausted. He lived a year almost to a day from the time he was first taken ill, and eleven months after the first operation.

In our case, you will remember, there was no distension of the bowel, and nothing that could be called constipation, and I attribute their absence to a similar reason to that which existed in the case just narrated; viz., to the presence of a safety valve above the stricture, the only difference being that in the one case it was made by the surgeon, in the other by the spontaneous morbid process of ulceration; and in our case, instead of being remedial it was a case of "out of the frying-pan into the fire". I can only suppose, however, that the ulceration which we found in the ascending colon had allowed the escape of fæcal matter into the cellular tissue of the right loin, and in this way had in some measure relieved the distension which must otherwise, almost of necessity, have ensued above the stricture, and so the bowel was allowed to act.

You may perhaps think that some less hazardous means of relieving the distension than that of colotomy might be adopted, and another operation has been practised with that end in view, viz., paracentesis. The distension is due partly to gas and partly to fluid fæces; and it has been thought that by withdrawing the former the severity of the case might be relieved. One of the distended coils has therefore been tapped by a very fine trocar and cannula. But there can be no doubt that this is an exceedingly dangerous thing to do; and I do not, from what I have seen and others have told, feel in the least inclined to recommend it to your notice. The danger is this: that the distension is, in the majority of cases, but little relieved—that alone is an objection fatal to its adoption—and the bowel remaining full and its walls tightly stretched, fæcal matter, which you remember I told you is *always* liquid, leaks out into the peritoneum after the withdrawal of the cannula from even the smallest puncture. I have myself seen this operation performed, and fæcal matter came out at once by the cannula, no relief followed, and the patient died not long afterwards of acute peritonitis. So do anything rather than this. You are taught, and quite correctly so, that small wounds of the intestine are comparatively dangerless, because the mucous membrane becomes everted and so closes the aperture; but this only applies to a contracted intestine; we are dealing with an overfull one. All the coats are in such a case distended probably to their utmost, the rugæ obliterated, and there is nothing to evert; and the smallest hole, under such circumstances, becomes a vent, and a vent, however small, in such a position, is fatal. Of course, all these points are beside the question in our case, because there was no distension of the abdomen and no constipation, so that we had nothing to consider but the treatment by drugs.

One other fact in our case must be alluded to, if for no other reason, because you will not find much about it in your books. We found evidence of old peritonitis, and the glands in the mesentery were caseous or calcareous, and there had evidently been a so-called tabes mesenterica of former date, from which the patient had recovered. That condition is of sufficient interest in itself to devote a lecture to; but the point in this case is, that such a state of things must of necessity somewhat modify the distension which we should expect as the result of obstruction, and might in some cases prevent it entirely. It may, in conjunction with the other previously mentioned conditions, have so acted here. It is quite obvious that if the intestinal coils are matted together and to the surrounding parts, and the mesentery itself be shortened and thickened, there is less chance at any rate of the usual uniform distension, and it may be, as I say, that none will be present.

This patient has been rich in lessons, in that the poor fellow is dead; but there is another patient now in Bright Ward, whom you should go and examine—though do so tenderly—to compare with this. The case presents a similar amount of speculative interest as that I have just detailed did concerning the exact nature and seat of the disease. I cannot now do justice to the very careful report of the case by Mr. Maylard; but, shortly stated, these are some of the features of it. She is thirty-five

years of age, and was admitted into Bright ward under my care on March 1st, 1878. She is a married woman, of phthisical family. She has had six miscarriages and four living and said to be healthy children. Her last confinement was thirteen months ago. She appears to have suffered many things of many physicians, or rather surgeons, and has been an inmate of at least four of the metropolitan hospitals for typhus, rheumatic fever, erysipelas, etc. Seven months before her admission, she noticed pain in the right umbilical and epigastric region whilst mangling. She vomited, and the pain was persistent. She tacked about between various dispensaries for two months or more; and a swelling was noticed in the abdomen by Dr. Stocker. A fortnight before she came here, she was seized with severe abdominal pain; vomiting, which all along had been occasional, had been much more severe; and for three days she had been unable to retain anything on her stomach. The bowels had been very confined, rarely acting under intervals of from four to twelve days. She looked pale and ill; and on examining the abdomen we found a tumour to the right of the umbilicus, a little lower than in the former case, but like it giving some resonance on percussion, and there was still more resonance between it and the margin of the ribs. It was ill defined at its margin, very tender to manipulation, and not displaced by deep inspiration. The abdomen was not distended. The morning temperature was over 100° F.

The difficulties in diagnosis here are similar to those in the man. The tumour has not in this case any of the hardness present in the other, and its position is somewhat lower; and for that reason, the ascending colon and cæcum must be added as possible seats of disease; and conning over the case, I look upon it as one of localised peritonitis, the cause of which is not evident. Possibly it is due to some ulceration of the colon or displaced cæcal appendix, possibly to disease of the gall bladder. We gave her half a grain of opium and a quarter of a grain of extract of belladonna in a pill three times a day, with hydrocyanic acid and bismuth, milk, lime- and soda-water; and, under that treatment, she had no return of sickness, though before it had been constant. Since that time, the chief additional symptoms have been that the tumour has shifted up a little, so that if you examine it now you might think it to be attached to the liver; that she has had throughout very considerable abdominal distension; that the bowels have been decidedly confined; and that she has had decidedly more distension and abdominal pain on a fuller diet than on a restricted one. There is, moreover, a history that, on April 3rd, she passed a stone about as big as the top of one's thumb in her motion. The nurse stupidly threw it away, so we can only conjecture that it may have been a gall-stone. If this be so, a pretty good case would be made out, for gall-stones encysted in the gall-bladder; ulceration of the gall-bladder; adhesion by inflammation to the part around; ulceration into colon or some part of the intestine low down; and some amount of constriction of the bowel as a result of the inflammation. But this is all very conjectural, because she has repeatedly passed scybala, and the supposed gall-stone may have been no more than a hard fæcal nodule; and our diagnosis practically rests where it did at first at chronic peritonitis catching up the colon and producing partial obstruction. The treatment has been such as I described, and she has latterly had copious enemata by the rectum. The prognosis in the case is somewhat gloomy; she is getting tired of the hospital, and will go out before long. She will then pay no attention to her diet or bowels, and will in that case soon get complete obstruction; though I believe if she could be kept under observation and guidance she might get well.

ABDOMINAL SECTION IN INTESTINAL OBSTRUCTION.

By T. R. JESSOP, F.R.C.S.,
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THE columns of the BRITISH MEDICAL JOURNAL could hardly be opened to the discussion of a more important question than the propriety of surgical interference in cases of acute hidden obstruction of the bowels.

When the papers of Dr. Clifford Allbutt and Mr. Pridgin Teale appeared in the number for January 11th, 1879, I was encouraged to hope that a difficult and perplexing surgical problem was about to be well thrashed out, that our leading teachers of medicine and surgery would eagerly seize the opportunity and freely enter the lists in so inviting a controversy.

The communications published in the JOURNAL of May 31st once again bring the question to the front—Is an exploratory operation called for when life is threatened by an acute concealed intestinal block, and, if so, under what specific circumstances?

More than twenty years ago, I assisted in making a *post mortem* examination of the body of a fine little fellow, the youngest son of one of our most respected citizens, whose disease, rightly and early diagnosed during life, was found to be a simple invagination at the ileo-cæcal junction. The case had run its course with much rapidity; there was a singular absence of all inflammatory changes, and by the simplest manipulation the gut was restored to its normal position. The conviction was forced upon everyone present, that an opportunity of saving the boy's life had been lost. Similar examples of intussusception are not rare; I can distinctly call to mind the particulars of three others, in which it was shown on *post mortem* examination that a reduction might readily have been effected.

Several cases are now recorded in which, by means of gastrotomy, invaginations have been successfully reduced; and no one I imagine would question the propriety of opening the abdomen in these cases when the diagnosis is assured, and after it has been made clear that other means have failed.

Many years ago, Mr. Seaton related to the members of the Leeds Medical Club the details of a case which, with the one given above, made a lasting impression on my memory.

A vigorous, healthy, and muscular man of thirty was suddenly seized with abdominal pain, vomiting soon followed, the bowels refused to act, and, in spite of appropriate treatment continuously applied, the patient died on the fifth day, with all the symptoms of a strangled gut. On *post mortem* examination, besides evidences of recent peritonitis in the lower half of the abdomen, a coil of the ileum was found suspended from the front abdominal wall, not far from the umbilicus, by an organised band an inch and a half long. In his remarks on this case, Mr. Seaton writes: "To me it appeared, and still does, that, apart from the danger of opening the abdomen, the division of the band would have cured the patient."

Examples like this, again, will have been met with in the experience of many physicians and surgeons. I have selected the two for special reference out of a considerable number within my recollection, because they afford typical illustrations of conditions recognisable in some measure at least, even at an early stage, and by general acknowledgment admitting of relief from surgical interference.

It is only within late years that I have put the operation of laparotomy to the test, and as yet I have not met with a case of invagination suitable for or requiring surgical aid. I have had the satisfaction, however, of advising in one case in which death was averted by the timely division of a constricting band. It occurred in the practice of Dr. Land of this town, by whom the operation was most ably performed.

The patient was a man aged 45, who, for several weeks prior to his seizure, had suffered daily from abdominal pains and from retching before breakfast. Whilst walking in the street, on the 24th of October, 1875, he was suddenly attacked by most violent pain in the body, so that it was with difficulty he made his way home. Dr. Land was soon in attendance, and by means of fomentations and the subcutaneous injections of morphia he was able to afford some relief to the man's intense suffering. Daily, however, the symptoms of obstructed bowel became more marked:—uncontrollable vomiting, passing from cibal to bilious, and finally becoming distinctly stercoraceous; all escape of fæces and flatus by the rectum absolutely stopped; a gradually increasing distension of the abdomen. On the 31st of October, seven days from the commencement, Dr. Land asked me to share the responsibility with him. Matters had now become grave in the extreme. We both felt that, if unrelieved, the man had not twenty-four hours to live. The progress throughout had so closely resembled that of a strangulated hernia, without the external accompaniments, that we decided to recommend an exploratory operation. This was performed after such delay only as was necessary to obtain assistants and instruments. An incision large enough to admit the hand was made through the linea alba below the umbilicus, with the immediate result of a large protrusion of distended small intestine. After vainly searching the several internal rings, our attention was being given to the ileo-cæcal region, when, on turning aside the intestines, a band thicker than a quill and several inches long was discovered, and beneath it a loop of bowel. Just as the cord was brought from the midst of the distended coils to the surface, stretched over Dr. Land's forefinger, it was seen to give way. The exact attachments of the band were not sought for; there was no bleeding; the visceral protrusion was ever on the increase; there had already been a prolonged exposure, and we were naturally anxious to complete the operation. It probably sprang from a spot corresponding with the base of the sacrum or the last lumbar vertebra and stretched thence to the right brim of the pelvis. The intestines, deeply injected, were replaced, the wound was carefully closed by means of wire sutures, made to include the peritoneum, and the abdomen was covered with cotton wadding and encircled with flannel. The after-

progress of the case was all that could be desired; the symptoms of obstruction at once ceased, and he slowly convalesced. His only inconvenience now arises from a feeling of weakness in the anterior abdominal wall.

It is not, however, in cases of intussusception, which are, generally speaking, easy of diagnosis and readily followed through their various stages, that the surgeon will experience his greatest difficulty in deciding whether or not to interfere, nor is it in cases like Dr. Land's, so closely resembling a strangulaled hernia in its symptoms, that he will feel himself most perplexed. There is, indeed, a fair amount of unanimity amongst authors as to the advisability of opening the abdomen in cases both of intussusception and of constriction by bands where the diagnosis is clear. But there are others, more numerous perhaps, of a much more doubtful character, in which the cause of the obstruction can only be determined by an exploratory incision; and it is in these that the question assumes its greatest importance—Is an operation of inspection called for? Are we right, that is to say, in opening the abdomen in an extreme case of bowel obstruction, when the nature of the obstruction is *not* apparent, on the possibility of finding some removable cause? The answer to this question, it appears to me, must depend upon the replies given to two others: What is the general experience of observers as to the causes of fatal obstruction? and are the chances of recovery in any degree lessened by an exploratory incision, where the cause is found to be irremovable by operation?

Mr. Teale answers the latter question by a decided negative. In four instances, I have searched the abdomen for a cause of obstruction; and, whilst I have not in any one of the four succeeded in discovering a state of things admitting of permanent relief, I have satisfied myself in each that death would, under any circumstances, have been inevitable; and in two, at least, life was prolonged considerably beyond what seemed possible at the time the operation was decided on. Now, I cannot share in Mr. Messenger Bradley's astonishment at this prolongation of life. It admits of a reasonable explanation, and it may fairly, I think, be reckoned upon in a majority of instances. No one would for a moment contend that, antiseptic precautions notwithstanding, an opening through the abdominal wall and a search amongst the intestines could be effected *upon a healthy person* without incurring considerable risk of inducing a dangerous or fatal peritonitis. But the conditions are wholly changed when we have to deal with viscera in a state of local or general acute inflammation; and it is probable that these are the states most likely to be met with in cases of obstruction from other than mechanical causes. To set against the element of danger introduced by the operation itself, are the facility and, if carefully managed, the safety, with which distension of intestines—a potent factor in the perpetuation of the diseased action—may be relieved, and the advantages to be gained by the removal of purulent collections and the general cleansing away of inflammatory products. One of the four cases above alluded to may serve as an illustration.

On the 8th of August, 1878, Messrs. John Teale and Waudby of Scarborough summoned me to join them in the treatment of the case of a young man visiting at the seaside from Sheffield. Mr. Waudby kindly furnishes me with a detailed account of the case, from which I extract the following. The patient, aged 33, was a fine strong man. On the 1st, 2nd, 3rd, and 4th of August, he complained of abdominal pains, at first in the region of the stomach, and afterwards in the right abdomen. Relief followed the use of an aperient. On the 5th, after having had a tepid bath, he played on the sands with his children, and subsequently, whilst sailing in a pleasure boat, he was seized with pains in the body so violent that he had at once to be conveyed to his lodgings. From this time, he began to vomit, and the bowels ceased to act. Mr. Waudby was now called in, and on the following day, August 6th, finding matters worse, he sought the help of Mr. John Teale. In spite of well directed treatment, the case assumed a graver aspect; and on the 8th, when I saw him, we all three considered him in the most imminent danger. Besides the block to the passage of both fæces and flatus, and the vomiting which took place after every act of swallowing, and which was, moreover, becoming decidedly feculent in character, the abdomen was tightly distended, the countenance was pinched and collapsed, and the pulse a mere flicker. After a most careful consideration of the case in all its bearings, we concluded that, as his symptoms might *possibly* be caused by an internal strangulation, and as his condition was rapidly becoming hopeless in spite of all that was being done for him, we were bound to offer him the chance of relief by operation. On opening the abdomen, it was at once evident that we had to deal with a case of diffuse purulent peritonitis. The intestines were everywhere thickly coated with semiliquid lymph, and numerous purulent patches were scattered in the furrows formed by the contiguous coils. In the neighbourhood of the cæcum was a large collection of pus, with which we interfered but little for fear of causing a fæcal extravasation. So much of the peritoneum as was exposed we cleansed, and, deciding that further interference was useless, we stitched up the wound. At the time of the operation, the severe symptoms had lasted three days, and he was then rapidly sinking. Mr. Waudby informs me he lived seven days after the operation, until the 15th; that the bowels acted on the 9th, the day after the operation, and that the patient always expressed himself as much relieved.

Upon a careful review of my own cases, I feel bound to affirm that my experience leads me to the conclusion that a patient's prospect of recovery is *not* prejudiced by an exploratory operation when the symptoms are found to be due to an acute local or general inflammation.

The former question is one which can be answered only by an appeal to the general experience of the profession, or by searching the records of reported cases, as has been done by Mr. Gay, Dr. Hilton Fagge, Dr. Brinton, and others, with the result of showing that in a large percentage of cases the cause of obstruction is purely mechanical, and, therefore, remediable. Invagination, concealed hernia, constriction of bowel by a band or omentum, volvulus, impaction of concretions or of foreign substances, together constitute, no doubt, a not inconsiderable proportion of acute obstructions; and typical instances of each of these present for the most part sufficiently distinctive features. Whilst, however, it is not a difficult matter to place on paper a categorical array of signs and symptoms, which shall apparently in the most satisfactory manner differentiate these various pathological states, and make it moreover plain as A, B, C, that to confound any one of them with, say a limited enteritis or a perityphlitis, would be an unpardonable blunder, every honest clinical observer must acknowledge the occasional correction in the *post mortem* room of a diagnosis confidently made and unwaveringly adhered to during life. One of my most valued friends, a physician who had, even whilst young, obtained a wide reputation amongst his professional brethren as a thoroughly accurate and trustworthy clinical observer and teacher, in the full belief that he was himself suffering from a concealed hernia in his right groin, begged for an exploratory operation; and yet, when the abdomen was opened after death, his request not having been acceded to, I found that the obstruction had been due to a typhlitis set up by the impaction in a patent appendix vermiformis of a fæcal concretion, just as was the case in the little patient I attended with Mr. Pickles, as reported in the JOURNAL for May 31st.

Cases like these do not afford any very strong argument, it is true, in favour of operative interference, and yet it is fair to remark that the little boy did not die more rapidly than did my poor friend, upon whom no operation was performed. Both were equally beyond the aid of physician and surgeon; with or without operation, they were doomed, I believe, to a certain and rapid death. In the case of the child, we entertained the question of gastrotomy at our first visit, only to postpone it until it seemed clear that *medical* help was unavailing—until, in fact, he was sinking from obstruction of *doubtful* origin. Had we been able to diagnose the case correctly, we should not have deemed a surgical operation called for, unless, indeed, it could have been undertaken at a much earlier stage.

The question is—What proportion do these and other irremediable conditions bear to the more purely mechanical? Are not cases like Mr. Seaton's and Dr. Land's more common than is generally imagined?

On the evening of the 21st of October, 1877, Mr. Newstead of Leeds called for me to accompany him to a patient's house under the following circumstances. An engine-driver, aged 34, took his train as usual from Leeds to Hull on the 20th of October, arriving at the latter place in the evening. Whilst waiting for his return train to be made up, he was suddenly seized with violent abdominal pain, accompanied by vomiting and faintness. Utterly incapacitated, he was conveyed back to Leeds as a passenger; and when seen by Mr. Newstead at midnight he was still vomiting, in pain, and collapsed. Next day, the symptoms remained unabated; and when I saw him on the evening of the 21st, about twenty-four hours after the commencement of his illness, he was restless, tossing from side to side, vomiting a dark fluid with a stercoraceous odour, moaning continually, and almost pulseless. There was some abdominal tension, but the man was too ill for us to determine the presence or absence of tenderness. He died at eight o'clock on the following morning, about thirty-seven hours after the seizure. We learnt from his wife that he had for some years been subject to attacks of diarrhœa, for which he had several times been compelled to seek medical aid. This information, the suddenness of the attack, together with the extreme and continuous prostration, led us to conclude that an old-standing intestinal ulcer had penetrated the peritoneum, and given rise to fæcal extravasation—an opinion we deemed fully warranted by the facts, and confirmed by the rapid termination in death. On *post mortem* inspection, our diagnosis was not verified. Stretched horizontally across the lower abdomen, the appendix vermiformis was

attached by its tip to the sigmoid colon; a knuckle of ileum had become adherent to the posterior and upper surfaces of the displaced appendix; whilst beneath the whole, and tightly held down and constricted, lay a coil of jejunum, black with congestion. The adhesions were readily separated by the finger without the occurrence of any appreciable lesion in the gut; and the neighbouring peritoneum, though congested, was not marked by any inflammatory products. Who can doubt that, had it been possible on Mr. Newstead's first visit correctly to diagnose the state of things discovered in this case after death, the operation of gastrotomy would have offered a very probable means of cure? Are such cases as this and the others I have mentioned more frequent than is generally supposed? I have myself seen several others; my medical friends have related to me many examples. What is the general experience of the profession? If it be in accordance with my own and many of my colleagues and friends, and if I am right in concluding that, under circumstances unfavourable for operation, the exploratory incision, by enabling the surgeon to relieve tension and to cleanse away harmful inflammatory products, is found, on the whole, to prolong life without adding to the sum of suffering, the exploratory incision ought to be more frequently resorted to than heretofore. At any rate, I protest against the term "unjustifiable" which has been by some applied to the operation, and apparently upon theoretical grounds only.

A CASE OF INTESTINAL OBSTRUCTION SUCCESSFULLY TREATED BY PUNCTURE OF THE SMALL INTESTINE.

By W. H. BROADBENT, M.D., F.R.C.P.,
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The following case may be related as one of the series now being published illustrating various methods of treatment of intestinal obstruction.

In February 1877, I was called by Mr. Rayner to a maiden lady, aged about 60, who presented the usual symptoms of intestinal obstruction—severe tormina, vomiting, and great distension of the abdomen. The seat of the obstruction was made out to be in the neighbourhood of the cæcum, the transverse and descending colon being empty. Opium and belladonna were given, food withheld, and enemata administered; and, the pain and vomiting being quieted, an examination of the rectum was made at a subsequent consultation, when a solid mass was felt pressing down into the pelvis on the right side. It was pushed up as far as possible, and very shortly flatus and fæces began to pass. It was ascertained, on inquiry after the examination, that about nine or ten years previously, the patient had been tapped, and that the contents of a suppurating ovarian cyst had been withdrawn. The shrivelled cyst had formed a tumour in the right inguinal region, where she had been accustomed to feel it, and where it was found after the attack. The obstruction was attributed to displacement of this tumour downwards, giving rise either to pressure upon the bowel, or more probably to dragging by adhesions.

There was a slight return of obstruction in March, and again in June, brought on by imprudent exertion; in the autumn, she had a more severe and prolonged attack while at the seaside.

On May 14th, 1878, I was again called to this lady by Mr. Rayner. She had then been suffering from complete obstruction of the bowel for several days, which persisted in spite of the treatment which had on the several previous occasions been successful. The tumour formed by the old cyst could now be indistinctly felt in the right inguinal region notwithstanding the great distension of the abdomen, and was only just reached by the rectum; the rectum was held open by adhesions, so that on passing the sphincter ani the finger moved freely in all directions in a large cavity. A vaginal examination was impracticable, on account of the contracted state of this passage.

The treatment was continued: in addition to the opium (gr. j) and belladonna (gr. ⅓) pill taken every three or four hours, and poultices with opium and belladonna over the abdomen, morphia was injected hypodermically. No food was given by the mouth, but enemata of beef-tea and brandy were administered every three or four hours, while once a day a copious enema of water or gruel was employed, for the double purpose of contributing to the relief of the obstruction and of washing out the rectum and removing particles deposited from the beef-tea, these being liable to become acid and set up irritation which causes the nutrient injections to be expelled.

No good result was obtained; and at length, after nearly a fortnight of anxious watching, and when complete obstruction had lasted three weeks, the intestine was punctured by a long aspirator-needle. The aspirator was used at first, but was found to be unnecessary; an enormous amount of gas gradually escaped, the tension of the abdominal walls, which had seemed ready to split, was relieved, and two days later (May 29th) fæces and flatus began to pass naturally.

Another attack came on in January 1879, and when I saw the patient with Mr. Bridges on January 4th, complete obstruction had existed for several days. The attempt was made to procure relief by enemata, opium, hypodermic injections of morphia, external applications of opium and belladonna on poultices, and in effect by treatment similar to that already described, but in vain. Ice also was applied over the right iliac region; it gave relief from suffering, but did not set the bowels free. The patient begged from the first that the gas might be drawn off, as in the previous attack; and, as there was no improvement, this was done, without waiting for the same length of time, on January 8th. The distension was removed, and during the following night a copious evacuation from the bowels put an end to the danger.

At this time, indistinct fluid vibration was detected in the right inguinal region instead of the solid-feeling tumour, and, on the subsidence of the abdominal distension, it was well marked. It was accordingly determined that on any recurrence of obstruction an attempt should be made to remove the cause by aspiration of the cyst, which was evidently refilling after an unusually long interval. The recurrence happened in May of this year, and I was called to the patient on the 7th by Mr. Gawith, to whose care she had been transferred. She had been suffering from bronchitis, and still had a severe cough. There were all the indications of obstruction; the signs of fluid in the right inguinal region were more distinct; and, on examination *per rectum*, an elastic tumour could be felt high in the pelvis, from the surface of which projected two or three small secondary cysts. On the 9th, a moderate sized aspirator-needle was plunged into the cyst, and about six pints of dark brown fluid were drawn off without any unfavourable results. At first, it seemed as if the desired effect were about to follow: a little flatus was said to escape when the enemata were used, and a small quantity of fæcal matter was felt in the rectum on examination. This promise was, however, illusory; and, as the distress increased, the intestine was once more punctured on May 20th. A considerable amount of gas had escaped; and the extreme distension was relieved, though not to the degree required, when, in the act of coughing, the coil in which the needle was planted was suddenly displaced to the left and slightly downwards, carrying with it the needle, which now lay flat on the abdominal wall. It was immediately withdrawn; but this was followed by a free escape of gas, which first issued with a hissing sound from the aperture in the skin, but soon rushed into the subcutaneous cellular tissue, and produced emphysema, which rapidly spread. This was circumscribed by pressure made by the hands, which also had the effect of directing any gas which had escaped into the peritoneal cavity to the internal opening in the abdominal wall. Another needle was at once plunged into a neighbouring coil of intestine, to take off pressure and prevent gas from passing into the coil from which it had escaped after withdrawal of the needle. Finally, when all issue of gas from the intestine appeared to have ceased, the subcutaneous emphysema was removed by squeezing towards and out of a puncture made by a lancet.

Strange to say, no bad effects of any kind followed; but the pressure had not been sufficiently reduced to permit of the removal of the obstruction. The distension soon became as great as ever; and, with considerable hesitation, the operation was repeated four days later. More gas escaped; the abdomen became soft and yielding, almost flaccid; when exactly the same accident occurred again, the patient coughed and displaced the intestine, the needle had to be hastily withdrawn, it was followed, as before, by gas which escaped from the puncture and rapidly diffused itself under the skin, where its progress could be both seen and felt. Similar precautions were taken, and happily no inflammation followed, but, on the contrary, a copious stool, and the bowels have since continued to act.

Since the above was written the patient has again suffered from obstruction, which was not relieved till the intestine had been punctured. This was done on August 1st with the same fortunate result as before.

I have recommended and practised puncture of the intestine several times in intestinal obstruction, and have never seen injurious effects. The precautions which I consider necessary are the following:

1. To secure, if possible, absolute freedom from peristaltic action of the bowel. This is done by giving an extra dose of opium by the mouth, or a considerable hypodermic injection of morphia, or both, three or four hours beforehand. No food of any kind should have been taken for some time.

2. To select, if possible, a coil of intestine which shall contain only gas, and not liquid. This will be in the jejunum, and is to be found above the umbilicus rather than below it. An indispensable condition

is, that scarcely any food shall have been taken during the entire attack.

3. To pierce the coil exactly at its most convex part. The abdomen should be carefully watched for some time at every visit, and especially before the operation. In some cases, where the walls are thin, the outlines of various coils may be traced even in repose; but this will be more distinct when peristalsis is provoked by pressure, friction, or manipulation of one kind or another; it will be seen also which coils shift and which keep the same position when contracting. The spot chosen for the puncture should be as nearly as possible over the centre of a coil which does not roll about, and by preference in the linea alba. If the needle happen to hit the line of contact between two coils, it may tear both.

4. To exercise great care and patience during the escape of the gas. The needle should be held lightly, but rather firmly, perpendicular to the abdominal wall, and should not be allowed to follow too readily any movement of the intestine. Under the circumstances of obstruction, the respiratory movements are not great. As the gas escapes from the coil selected for puncture, it will collapse under pressure from neighbouring coils, and the flow through the needle will cease; very soon, however, the air in the intestine will distribute itself and enter the empty portion, when it will again escape. This may be aided by gentle manipulation and pressure; but they should not be hastily resorted to: nothing is gained by hurry. Should the tube get blocked, aspiration may free it; but it is safer to drive a little air through the tube into the bowel than to exert powerful suction, which may draw the mucous membrane against the sharp needle.

It is better not to put on a bandage after the operation.

Puncture of the intestine can relieve obstruction only very rarely, and under exceptional circumstances. In the case related, in which there was reason to suppose that the cause of obstruction was external to the bowel, and was due to pressure by the tumour, or by adhesion, or to displacement and dragging of a portion of intestine, it was hoped that removal of distension might permit the parts to return to their previous condition and situation; and other conditions may be imagined in which this might occur, but it could have no effect on a stricture or intussusception. My own experience, however, would lead me to recommend puncture as a palliative; and, though I have no experience to guide me, I should think it might be an useful preliminary to inflation, manipulation, suspension head downwards, or other procedures in intussusception, twisting, or imprisonment of the bowel by adhesions.

A CASE OF ACUTE INTESTINAL OBSTRUCTION BY A BAND: OPERATION: DEATH TEN DAYS AFTER.

WITH REMARKS ON THE TREATMENT OF SUCH CASES.*

By W. H. A. JACOBSON, M.B., F.R.C.S.,
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J. M., AGED 46, was admitted into Guy's Hospital, under Dr. Mahomed (for Dr. Fagge), August 17th, 1878. On rising this morning, he was suddenly seized with colicky pains in the abdomen; these rapidly became most acute. Vomiting began soon after the onset of the pain. The bowels were open on the morning of the attack; the motion was scanty. He stated that he was perfectly well up to this morning. There was no previous "abdominal" history, save an occasional "liver attack" while in India some years ago. His work was recently very heavy.

During the first six days after admission, the pain gradually grew less and less; and the vomiting being stopped, but the boweis not open, a tentative dose of castor-oil and laudanum was ordered by Dr. Mahomed, on the supposition that the acute symptoms having passed away, the case would clear up as one of colic. On the morning after this gentle aperient, the bowels were open once, the motion hard and scanty; the severe pain and vomiting now at once returned. The case was then treated with opium and belladonna, but without real relief; and on August 25th, or on the ninth day, I was asked to see the patient by Dr. Mahomed, who considered that surgical interference would be ultimately required, and that, to be successful, it should be made use of early. I found the patient with very severe distress expressed upon his face; the abdomen but little distended; the abdominal-walls somewhat rigid; severe pain, localised just to the right of the umbilicus; frequent vomiting of greenish, not stercoraceous, fluid; evidence of slight, but distinct, swelling in the right iliac region, where there was a patch of dulness on percussion, just above the centre of Poupart's ligament; there was no œdema here, and there had been no shivering throughout, nor any rise of temperature save once (99.8°). Two utensils were shown to me, partly filled with fæcal matter, which had come away a few hours previously after a soap injection, ordered by Dr. Mahomed; the motion was not unlike in character to a typhoid stool, ochrey yellow in colour, liquid, with a few small lumps in it. From the fact that part of it contained recently discharged bile, it was clear that some at least had come from high up in the digestive tract, and in all probability had passed through the point of strangulation. There was no external hernia, and the rectum to the finger was empty and normal. I gave, as my diagnosis: "The symptoms point to some form of acute, but incomplete, intestinal obstruction, possibly a band or some partial nipping, but not complete strangulation of the small intestine."

During the next three days (the ninth to the twelfth of the attack), the bowels were open at least six times, three or four of these motions being copious, loose, and light-brown in colour. But at this time, or on the twelfth day, the vomiting returned, and now rapidly became stercoraceous; paroxysms of terribly severe epigastric pain again set in, and the patient's strength began to fail rapidly. On the 30th (thirteenth day), I found the following condition of the abdomen. Swelling in the right iliac fossa was rather more marked; there was no distinct tenderness here, redness, or œdema. The abdomen was not much distended; tympanites was slightly and equally marked in every part. No peristalsis nor distended coils were visible on looking at the abdomen; but, on lightly irritating the surface by scratching, a distended coil could be distinctly seen to rise up from the right iliac region; this coil reached upwards into the umbilical and left lumbar, and then curved down again into the right iliac region, where it disappeared. The visible up-springing of this coil, together with the very slight amount of tympanites present, made it probable that as yet there was very little peritonitis.

The question of operation was now finally discussed; and, as the answer to this question must depend on our being able to determine correctly two points—(α) What kind of obstruction is it? (β) Where is it situated?—I will now mention the grounds on which I had given the diagnosis of two days before, and those which now made me willing to operate.

There were not, and there never had been, any material swellings. The entire absence of any premonitory stage negatived the probability of the obstruction being due to a gall-stone, or to any growth involving the intestine either *ab intra* or *ab extra*. The absence of any local redness or œdema, the fact that there had been no shivering or rise of temperature, made it unlikely that the attack was due to inflammation about the cæcum or its appendix, though the symptoms pointed so distinctly to the right iliac fossa. Intussusception was put aside, from the absence of any characteristic symptoms—such as passage of bloody mucus, tenesmus, or sausage-like tumour. By this process of exclusion, the cause of the obstruction was brought down most likely to one of three conditions: 1. A band; 2. A twist or volvulus; 3. Some form of internal hernia, either retro-peritoneal or through some gap in the mesentery or omenta. Any of these might have caused a partial nipping of the intestine, and so brought about the apparent relief of symptoms which was noticed at one time in this case. Of the three, strangulation by a band was the likeliest in point of frequency; and the presence of a band was made more likely by the localisation of some of the most marked symptoms to the right iliac fossa; for, putting aside those cases in which the band is connected with the vermiform appendix, or that relic of the umbilical vesicle the diverticulum from the ileum, where one extremity of the valve will always be found within two feet of the ileo-cæcal valve, it is impossible to look through recorded cases of obstruction by bands, due to other causes, without being struck with the frequency with which the intestine involved is from within a few inches to two or three feet of the ileo-cæcal valve. On this point, I should lay more stress; because, if an operation be performed, the surgeon will do well, on the introduction of his hand, in order to search for the band, to pass it down into the right iliac region, and find the cæcum, and, if possible, the ileum, entering into it, and then trace upwards the small intestine to the point of obstructiom.

Such being the diagnosis, the advisability of an operation was laid before the patient on the following grounds. The attack had now lasted thirteen days; the improvement of a few days before had quite passed away, leaving the patient decidedly weaker; the pain returning in more severe and frequent paroxysms, and with vomiting now persistent and stercoraceous; and the feet and hands were now becoming cold. On the other hand, his pulse was fair, the temperature not raised, and the abdomen still but little distended, and showing very little evidence of peritonitis.

The patient having readily given his consent, the following operation was performed antiseptically. Ether being given, the chest and limbs covered with warm blankets, and the knees elevated over a pillow, a vertical incision (about three inches and a half long) was made in the centre of the

* An abstract of a paper read before the Hunterian Society.

right iliac region, running upwards from a point about an inch above and to the outside of the centre of Poupart's ligament. The aponeurosis of the external oblique and the fleshy parts of the next two muscles having been incised, the fascia transversalis and peritoneum were opened together; this opening was then enlarged, so as to admit a finger, on which the two layers were slit up to an extent corresponding to the superficial incision. No very marked protrusion of the intestines followed; the neighbourhood of the cæcum was first examined with the finger, and no evidence of ulceration or suppuration found about this or the appendix. The internal abdominal, the femoral and obturator apertures were then explored to make sure that no small hernia had escaped detection from without; and I may here mention that I know of a case which presented the symptoms of acute intestinal obstruction, where, *post mortem*, a tiny strangulated femoral hernia was discovered. The finger was next swept upwards, and, just to the left of the incision, or nearer the middle line, a very weak and delicate band was felt, which gave way at once before the finger. In the belief that this could not have caused strangulation, a further exploration was made in the same direction, and another and stronger band was met with; this felt granular and somewhat irregular, and apparently ran down from the omentum to lose itself about the brim of the pelvis. While attempts were made to lift up this band off the intestines, so as to divide it safely, it gave way, and a loop of bowel now at once sprang up into view, bearing at one spot a distinct pressure mark, which felt thickened and like a small pylorus. One or two shreds of lymph were noticed on this coil, which was still shapely and cylindrical, of a scarlet colour, save where, at the point of constriction, it was of a much darker tint. There was no appearance of general peritonitis. The wound was brought together with silver (deep quill and superficial) sutures. No vessel required ligature.*

The incision was made in the right iliac region, as the seat of mischief appeared localised to this neighbourhood. The median incision is said to have two advantages: one, that there is no hæmorrhage; the other, that ventral hernia is less likely to occur. In this case, there was no trouble from hæmorrhage or muscular contraction; and, from what is seen after ovariotomy, I imagine that ventral hernia is as likely to occur after one incision as the other.

Immediate and most marked relief followed the operation. The patient was sick but once, and that within the first three hours; his skin became warm again, and his face expressive of relief. On September 1st (the fifteenth day), or forty-eight hours after the operation, the bowels were open twice; for two days more, he improved, taking fluid food well. On September 3rd, or four days after the operation, the bowels were open again, and from this date the patient lost ground; obstinate diarrhœa set in, and continued day and night repeatedly, and, gradually sinking, the patient died at 11 P.M. on September 9th, the symptoms having pointed to an irrecoverable condition of that part of the bowel which at the time of the operation was set free from the constriction.

For notes of the *post mortem* appearances I am indebted to Dr. F. Taylor. "Intestines of moderate size, not distended with air. Their surface sticky here and there; two coils slightly adherent; nowhere any tangible lymph or pus. Some coils adherent to the abdominal wall by the slightest possible filamentous new tissue. In the left side of the true pelvis, close by the rectum, was found a coil of dark-greenish purple colour, easily lifted out, not adherent, nor in any way fixed. This was found to be small intestine, about ten feet from the pylorus; two transverse lines of indentation, three inches apart, seemed to indicate where this coil had been nipped. There was no adherent lymph on this dark coil, nor any alteration of its mucous membrane. Attached to the sigmoid flexure (which was empty) were two elongated appendices, two inches in length, with free extremities. It is possible that these had something to do with the constriction; but if so, they showed now no sign of ligature or cut surface. The omentum lay quite free over the upper intestines, caught only in its lower end in the inflammatory adhesion of the wound."

Such being the case, I cannot say if the strangulating apparatus consisted, as I thought at the time of the operation, of two processes from the great omentum passing down and becoming adherent below, and resulting insiduously from some old peritonitis. It is also difficult to account for the relief which followed from the bowels between the ninth and the twelfth days of the illness, unless we consider that up to that time the bowel had only slipped beneath the more delicate of the two bands, and that subsequently it passed beneath the second and stronger one.

Two questions will very probably be put: one, Why, before any operation was performed, was not any trial made of that method of treatment to which Mr. Hutchinson has given the name of "abdominal taxis"? The other, Was the operation of opening the abdomen justifiable at all in this case? I propose to try and answer these questions together.

More than twenty years ago (*Medical Times and Gazette*, 1858, vol. i), Mr. Hutchinson contended for the two following points.

1. Gastrotomy for abdominal obstruction is not ever justifiable.
2. As a rule, the method to which he gave the name of abdominal taxis was much to be preferred to any exploratory operation.

In August 1878, at the Bath meeting of the Association, Mr. Hutchinson again advocated these two points; but in this paper no results of this method in his hands were given. All that Mr. Hutchinson says on this head is: "Since that paper was written, I have practised this kind of treatment in many cases, and I have never once opened the abdomen without knowing with tolerable certainty what I might expect to find"; but, as to his own personal results of abdominal taxis and abdominal section, there is an entire silence; and I think that this is to be regretted, and the more so as it is well known how extensive and how ripe that experience is.

I am quite aware that there are several cases on record in which a strangulated hernia has been returned by inversion of the body, combined with taxis—a very old method in this country, and of late years more used in America. I also know of two cases in which abdominal taxis was used successfully in cases of acute intestinal obstruction: one recorded by Mr. Tay, in which the attack set in with acute pain, rapid onset of vomiting, very soon after the patient had had a slip while walking; vigorous kneading of the patient's abdomen, followed by well shaking of the body while the feet were uppermost, combined with the injection of large quantities of water, brought speedy relief; vomiting occurred but once afterwards, and free fæcal evacuation followed the next day. (*Medical Times and Gazette*, vol. ii, 1872; Sydenham Society's *Biennial Retrospect*, 1871-1872, page 194.) The other case is one recorded by Dr. Fagge. (*Lancet*, 1872, vol. ii.) Here, too, the symptoms came on suddenly; from the fact that enemata, on the third day, brought away a little blood and mucus, Dr. Fagge points out that this case (which is throughout a very obscure one) may have been one of intussusception becoming strangulated as soon as formed. With opium and belladonna, the patient grew gradually worse; and on the seventh day, Mr. Brookhouse having thrown up with a long tube a pint of gruel, with turpentine and castor-oil, manipulated the abdomen for a quarter of an hour. Five hours afterwards, the injections came away with two or three pints of broken-down fæces; twenty-four hours later, the enema and kneading were again repeated, and the patient rapidly recovered.

In my case, I did not make any trial of this method, because it was already the ninth day when I was asked to see the case; and I then thought that the time for manipulation had gone by. I now quite think that in this belief I was wrong; for I had not paid sufficient attention to the fact that, for the first eleven days, the obstruction was only partial. I had too clearly in my mind a case of acute intestinal obstruction by a band, in which abdominal taxis was practised on the tenth day, without good result; and when, on the eleventh day, the abdomen was opened and the band found, fæces were seen escaping, the band having now cut into the intestine.

While I attach the greatest importance to abdominal taxis, if used early, I think that perhaps this method, combined with inversion of the body, is *à priori* more likely to be successful in attempting reduction of hernia where a knuckle of bowel has passed from above downwards, more or less vertically, through one of the normal apertures, than in a case where a loop of intestine has passed horizontally under a constricting band, as in this case of J. M.

That Mr. Hutchinson has recommended this method so strongly, is quite enough to show that it deserves a more extended trial than it has yet received; but, in trying it, three points especially should, I venture to think, be borne in mind.

1. If not employed early, there must be considerable risk of doing further damage to a constricted, and so already weakened, intestine.
2. The manipulations may only send the strangulated loop more deeply beneath the strangulating band, or send more intestine beneath it, than what is already there.
3. Large injections of fluid may cause vomiting; and have this further objection, that the injected fluid may pass above the obstructed point and be retained there.

As regards the second question, whether any operation was justifiable in this case, Mr. Hutchinson, writing more than twenty years ago, contends that gastrotomy is never justifiable, on account of its fatality. I believe that, as time goes on, this opinion will be more and more modified. I will merely mention a few cases in which, the opening of the abdomen

* Throughout the operation I profited by the advice and assistance of my colleague Mr. Howse.

in some, and in others the opening of the intestine as well, has been performed with success.

Mr. Bryant (*Medico-Chirurgical Transactions*, vol. 65) operated successfully in a case of strangulating band; and Mr. Howse (*Guy's Hospital Reports*, third series, vol. xix) has met with like success in a similar case.

Abdominal section and enterotomy, with an artificial anus, was performed six times by the late M. Nélaton, three times successfully (*Gazette des Hôpitaux*, 1862, page 273). Three similar operations have been performed successfully in this country by Mr. Maunder, Mr. McCarthy, and Mr. Wagstaffe.

In the *London Medical Record* for December 1878 are two successful cases of abdominal obstruction and enterotomy for the removal of foreign bodies, quoted by Dr. Studsgaard of Copenhagen; one in his own practice, the other in that of M. Reali of Orvieto. Quite recently, Mr. H. Marsh, in a case of a woman of forty with acute intestinal obstruction, opened the abdominal cavity, and, finding a stricture of the sigmoid flexure, established a false anus by fixing this part of the intestine to the linea alba.

All that I would maintain is that, in certain cases of acute intestinal obstruction, where previous treatment has entirely failed, to open the abdomen is not only justifiable, but imperatively indicated. I know how fatal such operations have been; but I know also that very rarely (I speak of *acute* intestinal obstruction) a case gets well if left to itself. To some, the very recommendation of an operation at all may savour of that rashness which comes of inexperience. I would reply that the very want of success in previous operations is accounted for by the fact that they were too often not performed under those conditions which I am about to point out as being essential to success.

Very briefly, these conditions are the following: 1. The operation of opening the abdomen is only to be performed where certain previous treatment has failed. 2. It is only to be performed antiseptically, so that the risk of septic peritonitis may not be added to the list of dangers against which the patient has already to struggle. 3. But, above all, the operation must be performed earlier than has heretofore been the case. It is hopeless to perform it when symptoms of peritonitis or enteritis have set in. Those who wait, as I venture to say too many have waited, till the abdomen is generally and enormously tympanitic—till the temperature is persistently high, or is only falling before the inevitable end—till the pulse is running down and the patient in a condition of irrecoverable collapse; those who wait till any or all of these conditions are present, had far best not operate at all. It is only too easy to foretell the operation that follows. The abdominal cavity is opened readily enough, and then the difficulties begin; coils of enormously distended intestine at once crowd up at the mouth of the incision; the operator has the greatest difficulty in finding a contracted portion, and so of tracing out the point of obstruction; perhaps, during his endeavour to do so, a fæcal odour becomes apparent, showing that the intestine has already given way; or, granting that the seat of mischief is found, and the cause of strangulation removed, in spite of all his endeavours the surgeon finds himself with several coils of intestine outside the abdomen, and is at his wits' end to get them in again; perhaps he punctures them with the aspirator-needle; but, owing to the paralysis of the muscular and the infiltration of the cellular coat, which has by this time taken place, the puncture in the mucous coat is not closed, or does not slip away from directly beneath the opening in the serous covering; as the collapsed intestine is returned, liquid fæces are seen escaping at three or four points; any attempt to close these points with sutures only makes matters worse, and the patient sinks quickly after his removal from the table.

I have already pointed out the conditions which would guide us as to the time at which an operation, to be successful, must be performed. I will now mention a few points to be observed during the operation itself.* The strength of the solution to be used for spray and sponge must not be above 1 in 40; the solution must be duly warmed. If the operator be obliged to draw any coils out of the abdomen for the purpose of examination, the spray must not be allowed to play upon these coils, which are to be covered with carbolised lint, taking care that the smooth and not the fluffy surface of the lint is in contact with the intestine. If any amount of carbolised solution be believed to have entered the peritoneal cavity, this is to be removed by careful sponging; and finally, in closing the wound, catgut being unreliable, twisted silver sutures are to be employed.

In conclusion, I venture to suggest to you the following points in the treatment of a case of acute intestinal obstruction.

1. From the very first, it is not enough to refrain from giving solid food. The patient is to be fed by enemata, given *per rectum*, and consisting of milk and egg, wine or brandy, and given carefully twice or three times daily. If possible, only ice out of milk is to be sucked by the mouth.

2. If possible, no opium is to be given, as this drug has a dangerous tendency to mask symptoms; instead of opium, belladonna is to be given, and to be pushed in large doses. Many of those present may remember a paper in the BRITISH MEDICAL JOURNAL (August 31st, 1878), by Dr. Norman Kerr, on "Large Doses of Belladonna in Intestinal Obstruction". Five cases are given, somewhat briefly, and therefore incompletely recorded; all got well under the use of belladonna, though in three acute cases, two grains were given every hour, and sixteen, twelve, and fourteen grains were administered in these cases. I do not pretend to explain the benefit of this drug. I admit that its action would seem somewhat contradictory in the one case, as when rubbed into the perinæum for spasmodic stricture, appearing to remove spasm; in another, to set up contraction of involuntary muscular fibre. But in a case like the one which I bring before your notice to-night, where a coil has, perhaps by irregular action, slipped under one or more bands, I can imagine that belladonna, if given early and in large doses, may enable the bowel, if this remain empty, by its own contraction to set itself free once more. But on this point I should be grateful for any information.

3. At an early date, the method of abdominal taxis should be made use of. Mr. Hutchinson, in bringing this method forward, recommends that it should be carried out as follows. Under chloroform, a very copious enema of water is to be given by a long tube, and, the anus being kept closed round the tube with a cloth, the fluid should be forced in to the utmost point of distension. Then, simultaneously with the withdrawal of the tube and the escape of the water, the surgeon, with the flat of one hand on each side of the abdomen, should press gently but firmly on alternate sides, in such a way as to facilitate the movements of the coils upon each other. As much of this having been done as shall seem advisable, and the water having flowed out, let the patient (by means of a girth fastened to the bedposts) be raised by the feet till the trunk is inverted; and, whilst the patient is in this position, let the surgeon, with both his hands placed on the lowest part of the abdomen, press the whole mass of the intestines as high up as possible in the abdomen. Of course, during the whole of the time an assistant should carefully watch the effects of the chloroform on the pulse and breathing.

I have only one small alteration to suggest in the above details; and that is, knowing the difficulty of inverting a heavy patient, I think that it will be found better to overturn a chair, so that its sloping back be against the bed; over the chair-back let some clothes be laid, and the patient's body be gradually inverted over this by assistants standing on the bed. This will not only be found easier in the case of a heavy patient, but in that of a female one more decent in the eyes of any friends who may be present.

The above methods failing, I have only to urge an early operation, performed under the conditions already mentioned. It may be said, in answer to this, that recovery may and does ensue sufficiently often to make it worth while to wait. From the cases that I have seen, my own opinion would have been distinctly to the contrary—that, apart from those chronic or subacute instances where a case does well by an intussusception slipping back again or sloughing off; where a long-impacted scybalus or gall-stone passes on, or where a stricture is set free by partial ulceration of itself—that, putting aside such cases as these, acute intestinal obstructions, which have not yielded to such preliminary treatment as that sketched above, will end but in one way if left to themselves. No doubt the justifiability of these operations depends on the probability of a successful result; but hitherto, in nearly every case, the operation has been performed too late to guarantee any such success. For my own part, considering what has been attempted and what has been done in antiseptic surgery, and believing that great advances have yet to be made in the surgery of the abdomen, I trust that I do not assume too much when I say that, in a few years, we shall be able, in cases similar to that brought before you to-night, to promise a successful result with something like certainty.

* Similar precautions have been already insisted upon by Mr. Howse (*loc. supra cit.*).

NOTE ON THE DIAGNOSIS OF INTESTINAL STRICTURE.

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Physician to the Queen's Hospital, Professor of Materia Medica and Therapeutics in Queen's College, Birmingham, etc.

I AM led, by reading the interesting papers which have lately appeared in the JOURNAL on the important subject of intestinal obstruction, to draw attention to a point in diagnosis which I have not seen noticed in recent writings, except by implication, and which I have learned in the course of clinical work. It is this. *The presence of a*

tight stricture of the intestine, so low down as the junction of the sigmoid flexure and the rectum, is compatible with the occasional passage of fæcal masses of normal size and shape. Dr. Stephen Mackenzie, in his essay on Annular Stricture of the Intestine, published in the JOURNAL, May 31st, makes the following observation: "The fact that full-sized, properly formed fæces are occasionally passed, of course shows there can be no organic stricture (of the colon)." This statement is directly contrary to my experience. About twelve months ago, I saw an elderly man with Mr. Herbert Bracey of this town. He was suffering from intestinal obstruction. A solid motion which he had recently passed was shown to me; it was of normal shape and size. I was able to reach an annular stricture at the lower extremity of the sigmoid flexure. I sent the man into the Queen's Hospital at once. My colleague, Mr. Furneaux Jordan, performed left lumbar colotomy, if I remember rightly, the day after the patient's admission. The man died in a day or two, and an annular stricture of the intestine was found, at the necropsy, in the position I have indicated. It seems to me that the shape of the fæces, in cases of stricture of the colon or rectum, depends more upon their consistence than upon the size of the stricture. The consistence of the fæces may be such that, although solid, they may be slowly driven through the narrowed gut and subsequently become moulded into a fæcal mass of normal circumference in the portion of bowel below the stricture. A case reported by Dr. Walters in the JOURNAL for May 31st illustrates my point. A woman, aged 62, had "annular scirrhous stricture at the junction of the sigmoid flexure and rectum". "Sometimes, the evacuations were not larger than the little finger; at others, *large bulky motions would be passed*". While the passage of flattened or pipe-stem-like motions is suggestive of stricture near the lower outlet of the bowel, their absence and the passage of fæcal masses of normal calibre does not prove the absence of such constriction. I notice that two recent authorities avoid making an unequivocal statement as to invariable narrowing of the fæces in these cases of intestinal stricture. Dr. Bristowe (Reynolds's *System of Medicine*, vol. iii, page 75) writes: "If, however, the obstruction be in the vicinity of the rectum, solid motions *generally* soon assume a narrow tape-like or pipe-like form." Niemeyer (*Practical Medicine*, American translation, 1873, vol. i, page 568) observed: "In the ordinary forms of constipation, sausage-shaped fæces, of extraordinary size, are often passed; in stricture of the intestine, on the contrary, particularly when seated in the lower part of the intestine, they *often* have a very small calibre." I see that Dr. Leichtenstern, in his elaborate essay on intestinal obstructions (Ziemssen's *Cyclopædia*, vol. vii, page 517), is careful to say that flattening, lead-pencil-like shape, etc., of the fæces only occurs in *many*, he does not say in all, "cases of constriction of the rectum and colon". My proposition is, that stricture in these situations may exist without this alteration in the shape of the alvine evacuations. The converse, that this alteration in shape may occur without stricture, is pointed out by Dr. Leichtenstern and other writers. He says that this change of fæcal form may appear in cases of "starvation-intestine", and also in some instances of "violent rectal tenesmus"; but he does not state, as I do, that the passage of a motion of healthy bulk may occur even when there exists serious constriction of the lower part of the bowel, if a sufficient space remain above the anus for the evacuation to become moulded into a normal shape.

TREATMENT OF INTESTINAL OBSTRUCTION BY EXPLORATION OF THE ABDOMEN.

By T. PRIDGIN TEALE, M.A., F.R.C.S.,
Surgeon to the Infirmary, Leeds.

I HAVE read with interest in the JOURNAL of May 31st Mr. Messenger Bradley's address on the "Treatment of Intestinal Obstruction".

From his criticisms I feel convinced that he has not read my original paper in the BRITISH MEDICAL JOURNAL of January 11th, 1879. Had he done so, he would not have said "though six cases are alluded to, the only record which I have of his paper details, and that imperfectly, but one"; whereas I gave four cases at least with details as complete as I deemed necessary for my purpose. In using the word "obstruction" I meant not merely constipation, which may exist for many weeks with impunity, but obstruction to the passage of flatus, which immediately imparts danger to such a case. This was present in all my cases.

Again, Mr. Bradley would not have said of Case 6, "some obstruction, the nature of which is not particularised"; whereas my words are "that about eighteen inches of the lower part of the jejunum was black from congestion", and that "I concluded that the black portion of intestine was in a state of enteritis, and on the verge of gangrene".

Again, he says "Mr. Teale resorted to a number of small incisions, through which flatus escaped"; my paper says "I made a quarter of an inch puncture at each end of the protruded intestine, and caught in a bowl about two quarts of grumous intestinal fluid, and also let off a large quantity of flatus".

Mr. Bradley says "the patient lived for nine days, which seems to have surprised Mr. Teale very much". No doubt I was surprised, seeing that before the operation I did not think that the patient could live unrelieved twenty-four hours, and that the operation disclosed a foot of intestine almost gangrenous.

Mr. Bradley is still haunted by a fear of peritonitis, shutting his eyes to the teaching of hernia, the teaching of modern ovariotomy, and the teaching of the cases of exploration of the abdomen published by others and by myself.

The object of my paper was to reduce the dread of peritonitis to what I believe to be a more true position in the treatment of intestinal obstruction, and to maintain, that in those cases in which recovery seems hopeless, unless surgical relief can be given, we need not be deterred by the fear of peritonitis from submitting the patient to "the safer risk" of exploration.

I claim that as far as they go my cases support this object. Six are recorded. Three of the patients proved to be so exhausted as to be in a hopeless state. In one there was a burst bowel; in a second an abscess had burst amongst the intestines; in the third the intestines were obstructed by and studded with cancer. In none of these was there any question of setting up peritonitis. They form no argument, *quâ* peritoneum, either for or against exploration. A chance of recovery was neither given nor taken away.

Let us examine the three remaining cases. In all there was a healthy peritoneum. In all the nature and seat of the obstruction was unknown. One recovered completely. A second was free from peritonitis for nine days, until in a fit of coughing the abdominal wound was burst open, an accident which would in all probability not have happened had my attempt to relieve the obstruction by colotomy been successful. The third had no sign of peritonitis as a result of the operation, but died on the ninth day from bursting of the bowel and escape of fæces into the peritoneal cavity. In none of these cases did peritonitis prove the rock on which the case was wrecked.

It must needs be that, in the present state of "peritoneal surgery", exploration of the abdomen should be reserved, and rightly, for the most hopeless cases of intestinal obstruction, such as were all those which I have reported. Many will prove to have been hopeless from the beginning, some will prove to have been submitted to operation too late, a few will recover as a direct result of the operation. As we gain experience and confidence in our means of diagnosis and treatment, we shall rescue from death some of the cases now lost by delay. Is it too much to hope that we are now marching by means of failure onward to success in "peritoneal surgery"? May we not take a lesson from the position of ovariotomy of the present as compared with ovariotomy in the past?

One word more. Case No. VI in my paper, seems to point the way to dealing with distension of the intestines, one of the most formidable and dangerous factors in obstruction of the bowel. If further experience should confirm the teaching of this case, that we can effectually empty of gas and fluid distended intestines, and that intestines so emptied do not rapidly, if ever, regain their state of distension, we have therein the key to the successful treatment of an important class of fatal illnesses.

Leeds, June 1879.

CANCER OF THE RECTUM TREATED BY EXCISION.

By W. H. CRIPPS, F.R.C.S.,
Surgeon to the Great Northern Hospital; Assistant-Surgeon to the Royal Free Hospital.

EXCISION of the diseased portion of the bowel for cancer of the rectum has, since the time Lisfranc, found much favour with foreign surgeons. The operation had, however, fallen into disfavour in this country, and has only been revived during the past few years. In cases judiciously selected, this method of treatment is of the greatest value, both as regards relief from suffering and prolongation of life. But to suppose that it is applicable as a method of treatment in every case of rectal cancer is as unreasonable as the assumption that cancer should be removed by operation wheresoever situated. The operation cannot be considered in any way to rival or supersede colotomy, for as a rule it is applicable as a method of treatment for cases in which colotomy is scarcely admissible. Colotomy is a most valuable operation when the cancer is situated higher and causes obstruction or intense pain; while, on the other hand, for excision to be successful, the disease must strictly

be confined to the lower part of the bowel. No operation should be attempted unless there be a fair prospect of removing the whole disease; and this cannot be done unless the upper limit of the growth be fairly defined with the finger. Again, the disease must not have invaded the neighbouring tissues to an extent likely to interfere with its complete extirpation. Rather longer portions of the bowel can be removed from men than from women. As a rule, however, four inches is the limit that can be safely removed.

Rectal cancer almost invariably begins as an adenoid deposit in the submucous tissue. The microscopic structure of the growth bears an exact resemblance to the natural Lieberkühn's follicles in the superjacent tissue. If the growth be slow, this resemblance in structure is very perfect; if more rapid, the general plan of an adenoid structure can be traced, but neither the epithelium lining the follicles nor the retiform tissue in the interfollicular spaces can be well defined; there is no regularity in the shape of the epithelial cells, indeed, they rather resemble strips of protoplasm with longitudinal striæ than distinct columnar cells. Again, the fibrous element of the retiform tissue is represented by spindle- or oat-shaped cells rather than by the distinct fibrous structure found in more chronic growths. At first, the mucous membrane is intact over the growth, which can be felt like a foreign body beneath it. It commonly spreads as a thin layer between the mucous and muscular coats; and not uncommonly will the disease thus spread under several square inches of mucous membrane, while its thickness scarcely exceeds one-fifth of an inch; at other times, but more rarely, the disease increases more rapidly in thickness, pushing the mucous membrane inwards, producing a distinct tumour in the cavity of the bowel. Sooner or later, ulcerative action sets in. At first, the mucous membrane over the centre of the mass is destroyed, exposing the subjacent growth. Now, if this subjacent growth exist as a thin layer, it also is destroyed by a continuation of the ulcerative action. It thus not uncommonly happens that a deep ulceration is produced, the base of which, towards its centre, is composed of the remains of the hypertrophied muscular coat blended into a dense cicatricial tissue with the fibrous element of the part. Towards the margin of the ulcer the growth is again apparent, forming a prominent overlapping margin. From points of this margin fungating masses will in time project into the rectum, in which condition the disease usually comes under observation. Space, unfortunately, forbids a minute description of the histological appearance of these growths. The so-called scirrhous, medullary, and epithelial growths are merely "conditions" of adenoid disease, and can be accounted for by taking into consideration the time the growth has been in existence and the particular tissue affected. The appearance commonly regarded as indicative of scirrhous, medullary, or epithelial disease can all be found in various parts of the same specimen.

My experience of the operation of extirpation is too limited to express an opinion as to the rate of mortality likely to follow; and in the majority of cases the operation has been too recently performed to judge of the liability of the disease to return. In five cases in which I have operated, no death has occurred; while in nine operations at which I have assisted, two deaths resulted: one from peritonitis, one from collapse. The best result with which I am conversant is a case in which a well marked cylindrical cancer was removed nearly three years ago; the patient still remains perfectly well. The two following cases may perhaps serve as examples of what may be expected from the operation. A successful and an unsuccessful case have purposely been selected as illustrations.

CASE I.—A. M., aged 61, being kindly sent to me by my friend Mr. Doran, was admitted under my care at the Great Northern Hospital in April 1878. She was very thin and emaciated, and for some time had been unable to follow her occupation as a laundress. For more than a year, she had suffered discomfort in the rectum, and had lost blood from time to time, a mucopurulent discharge being persistent. During the last few months, the pain had greatly increased, her nights were sleepless, she was tormented with a constant desire to go to stool. She suffered from alternate attacks of diarrhœa and constipation, and could not retain her fæces when liquid. On examination with the finger, commencing just within the anus and extending upwards a couple of inches, an ulcerated mass of cancer was felt. This did not completely surround the bowel, a small portion of the anterior wall being free. The patient being placed under chloroform, and in the lithotomy position, a curved bistoury guided by the finger was introduced into the rectum, the point then thrust through the posterior rectal wall, and made to emerge at the tip of coccyx; the tissues intervening between this point and the margin of the anus were cut through with a clean sweep. The sides of the wound being held apart by the folds of the nates being forcibly drawn outwards, a semilunar incision was made at right angles to the first cut; this, the second incision, was just within the margin of the anus, and extended completely round the bowel, while in depth the point of the knife was carried well into the fat of the ischio-rectal fossa. The lateral and posterior attachments of the bowel were separated by the forefinger with the sparing use of the cautery and the knife. The dissection of the anterior wall was made more carefully and entirely with the knife. The free portion of the bowel was now seized and drawn down with a moderate amount of force, and cut through just above the disease by means of the benzoline cautery. No attempt was made to draw down the bowel, neither were any sutures or dressings used. The patient made a quick recovery, leaving the hospital in three weeks free from all pain, with some control over her motions, and her general health greatly improved. Three months after this operation, she had complete control over the motions, except when she had diarrhœa, at which times her linen would be a little stained. She complained of no pain, but of a slight itching sensation. Upon examining the parts, there was found a small rose-coloured elevation, of the size of a split pea, upon the anterior margin of the mucous membrane. This was snipped off pretty freely with scissors. Since then, the patient has been frequently seen; she suffers no pain whatever, has not the slightest symptom of any return of the disease, and states that she enjoys better health now (June 16th, 1879) than for many years past. When she has diarrhœa, however, she has to wear a diaper; this causes her no inconvenience. It is now one year and two months since the operation.

CASE II.—A. G., aged 54, a small emaciated woman, with a dark complexion, was admitted into the Royal Free Hospital, November 7th. She has six children living, in good health, and has lost none. The father and mother died at advanced ages; there was no family history of tumours or phthisis. The patient had good health until two years ago, but has always been subject to constipation, for which she has taken castor oil in considerable quantities. Two years ago, she began to suffer from pain and a feeling of weight in the rectum. Eighteen months ago, she first noticed a discharge of blood and mucus from the bowel. During the past year, she has lost flesh rapidly, having formerly been very stout. She had been for some months in a London hospital, but obtained no relief. Her sufferings were very great; she had lost control over the sphincter, the fæces escaping without her knowledge. Upon examination, the parts were found to be very tender, with a growth extending almost to the margin of the anus, about which the skin was œdematous and excoriated. A considerable mass of disease occupied the lower three inches of the bowel, taking the form of a large irregular ulceration with a hard base and fungating margins. At one point, the disease extended somewhat higher than three inches. The rectovaginal septum was implicated, but the mucous membrane on the vaginal aspect appeared sound.

Considering the length of time that the disease had existed, and the extent to which it had encroached on the anterior wall of the rectum, it did not seem a very favourable case for operation. The patient, however, was exceedingly anxious to have an attempt made to remove it, having been recommended to consult me for that purpose by my friend and colleague Mr. Macready. The operation was performed in an almost precisely similar manner to that in the previous case. There was no difficulty in detaching the bowel from its posterior and lateral connections, but it required some time and caution to dissect through the rectovaginal septum; this was done by keeping as near as possible to the mucous lining of the vagina; but even at the time there appeared a suspicion that the disease at this part had not been thoroughly removed. Whilst detaching the upper anterior part of the rectum, the peritoneal membrane was distinctly seen. The diseased bowel being drawn down was cut off with a wire *écraseur* a little more than three inches from the anus. Upon detaching the portion, a small coil of intestine was seen in the upper part of the wound, but it was not known at what period of the operation the peritoneal membrane had been opened. The knuckle of bowel was gently pressed up by the finger and disappeared. The wound was treated in the ordinary way, without any dressings or sutures, and kept thoroughly free from all discharge by frequent syringing with warm carbolic lotion. The patient never had a symptom of peritonitis, recovered quickly, and left the hospital at the end of the month free from all pain and much stronger and more comfortable than she had been for a long time; she had no pain on passing her motions, over which she had a fair amount of control. She appeared well and comfortable for three months; she then complained of some irritation about the part, and upon examination a soft fungating nodule could be felt springing from the anterior wall of the rectum. She suffered little pain. A month later, the disease had greatly increased, forming a considerable fungoid mass, blocking up the lower end of the rectum, causing some difficulty in passing her motions. It did not seem advisable to make any further attempt by a cutting operation; but, acting as other surgeons have done in these circumstances, as far as I could with the finger-nail and a blunt gouge, I scraped away the cauli-

flower mass down to its hard base. The growth was very soft, but did not bleed much. She was greatly relieved by this proceeding, the motions again passing with comparative ease. A rapid return is, however, inevitable.

The microscopic appearances of the growths in both the cases narrated were identical, the difference in result being probably due to a more thorough extirpation being possible in the first case.

Various methods of performing the operation of extirpation of the rectum have been practised. The ligature, the cautery, and the *écraseur*, either singly or combined, all have their advocates. From my own experience, however, these various adjuncts appear to be unnecessary. They greatly prolong and complicate an otherwise simple operation. The free and quick use of the knife for all the first part of the operation, reserving the wire *écraseur* for the final separation of the bowel, appears to me to be the best plan of operating. The preliminary posterior incision of Denonvilliers is of the greatest service during the operation, and completely unfolds the parts and gives plenty of room for dealing with hæmorrhage, while it subsequently affords perfect drainage to the wound. No good results from the drawing down of the cut bowel and stitching it to the cutaneous surface; the stitches always give way, and until they do so are a source of danger, by allowing matter to be pent up behind the bowel. I use no dressing nor sutures of any kind whatever; for anything that hinders free discharge is deleterious, owing to the near neighbourhood of the peritoneum and the rapid decomposition that takes place in this part of the body. A frequent gentle and thorough syringing, so as to prevent any accumulation in the wound, is probably the best way of preventing peritonitis.

SURGICAL MEMORANDA.

ANNULAR STRICTURE OF THE INTESTINE.

In the JOURNAL of May 31st, in the instructive account of annular stricture of the intestine, by Dr. Stephen Mackenzie, I find the following statement: "The fact that full-sized, properly formed fæces are occasionally passed, of course shows that there can be no organic stricture;" and, five pages further on, in the description of a case of colotomy, by Mr. J. Walters, we are told: "In stricture in this region, no positive reliance can be placed on the size of the stools." As both authors are writing about the symptoms of obstruction of the colon, there appears to be a marked discrepancy in their opinions.

In his *Observations on Diseases of the Rectum*, Mr. Curling mentions a case of stricture at the sigmoid flexure, in which the bowel below the stricture had undergone extraordinary dilatation; and it appears possible that, in such a case, we might have fully formed evacuations.

As the other authorities to which I have access direct their observations, in this connection, chiefly to the diagnosis of stricture in the lower part of the rectum, I should like to elicit further light on this subject, as it appears to me to have important bearings.

R. E. HEATH, M.D., Torquay.

VESICAL CALCULUS IN A GIRL.

A YOUNG girl, aged 17, rather deaf, and of weak intellect, had paid two or three visits to the infirmary here, as out-patient. She complained of great pain in micturition, and I treated her for irritable bladder, with considerable relief to her symptoms. Subsequently, her friends sent for me, late at night, to visit her at home, as her pain had returned with increased severity. I now introduced a sound, and at once detected a calculus at the neck of the bladder, which could also be easily felt *per vaginam* and *per rectum*. Giving her a suppository for the night, I promised to return and operate the next day. Dr. Brown, at present acting as *locum tenens* for the house-surgeon, having kindly administered chloroform, I dilated the urethra with the three-bladed dilator; a sponge-tent, previously introduced, having been ejected after half an hour, owing to the involuntary expulsive efforts of the patient. The stone appearing large, a lithotrite was at hand, but this was not required, as the calculus broke up in attempting to grasp it with forceps. On removing the broken pieces, I observed that they consisted of phosphates exclusively, and, on introducing my finger into the bladder, I at once felt something to the touch resembling a piece of wire. On calling Dr. Brown's attention to this, he suggested that it might be a hair-pin, which, on removing it from the bladder, it was seen to be. The pin was very rusty, and, here and there, phosphatic deposits were attached firmly to it. The portions of calculus removed by the forceps alone weighed half an ounce. A good deal has come away since, by the urine, and after washing out the bladder.

J. J. S. JOHNSTONE, M.D., Gloucester.

SELECTIONS FROM JOURNALS.

MEDICINE.

A RARE FORM OF DIPHTHERITIC PARALYSIS.—Dr. Dahlerup describes (*Ugeskrift for Läger*, 3rd series, vol. xxvi) the case of a boy aged 12, who, ten or twelve days after recovering from an attack of diphtheritic angina, was seized with difficulty of breathing, which increased to severe dyspnœa at the end of fourteen days. On examination, there was found to be orthopnœa, cyanosis, œdema of the feet, and moderate œdema of the lungs. The heart-beat was somewhat quickened, irregular, and very weak; the area of cardiac dulness was not increased. The heart-sounds were distinct. The pulse was rather feeble. The urine contained a large quantity of albumen. Under the use of digitalis and stimulants, there was slight improvement at the end of a week; the dyspnœa then increased, as did also the œdema of the extremities and lungs; and the patient became collapsed, and died. The temperature at no time of this illness rose above 98.6° Fahr. Dr. Dahlerup believes the case to have been one of progressive diphtheritic paralysis of the heart.

A RARE FUNGOUS GROWTH ON THE HAIR IN THE AXILLÆ.—Dr. Axel Key describes the following case in the *Hygeia* for 1878 (quoted in *Nordiskt Medicinskt Arkiv*, Band xi). A gentleman had for some time noticed that the hair in his axillæ stuck together, in consequence of being covered with a glutinous substance. The sweat of the axillæ coloured his shirt bright red. His condition in other respects was normal. On examination, Dr. Key found the axillary hairs greatly adherent; and a large part of them were covered with a gelatiniform substance like mildew. This had its seat on the free ends of the hair, where it formed partly isolated or confluent swellings, and partly bands like chains of pearls, or an adhesive mass surrounding the hairs. There were no changes in the skin. Microscopic examination showed that the changes were dependent on a peculiar fungous vegetation, which had a brimstone yellow colour by transmitted light. The development of the vegetation commenced in the form of small, slender, exceedingly delicate scales, which soon formed small round elevations, apparently homogeneous, but containing numerous small glistening spores. The scales seemed partly to lie on the outside of the hair, but for the most part the vegetation penetrated between the outer layer of the epidermis covering the hair. Here and there, the vegetation could be traced to the interior of the hair. No mycelium was found. Dr. Key has not been able to find a similar case recorded in dermatological literature. Buhl alone has described in the *Zeitschrift für rationelle Medicin*, Band iii, a new hair-fungus apparently like that described above; he calls it zooglœa capillarum. The disorder would, therefore, seem to be very rare.

DEATH CAUSED BY AN ASCARIS LUMBRICOIDES IN THE UPPER AIR-PASSAGES.—Dr. Fürst has published, in the *Wiener Med. Wochenschrift* for 1879, a summary of twenty-four cases of immigration of ascarides into the upper air-passages, from which we quote the following case. A girl, aged 4, had been received into Professor Billroth's hospital for congenital ectopy of the bladder. One evening, she suddenly had an attack of suffocation. Thinking that she must have aspirated some foreign body, the author explored the larynx without any result, and then performed tracheotomy, as she had suddenly ceased to breathe. As no cannula was at hand, a male catheter was introduced into the wound, but met with some obstacle. It was drawn out and then pushed in again, when it went in quite smoothly. Artificial respiration was then resorted to, but the child died. Two hours after death, a female live ascaris, about nine-tenths of an inch long, was seen hanging out of the nostril. It is evident that the catheter had been prevented from penetrating into the trachea by the worm, who probably then changed its position and wandered upwards. The *post mortem* examination revealed a male *Ascaris lumbricoides*, nearly half an inch long, in the jejunum. The author gives the following clinical sketch of the *modus operandi* of the immigration of ascarides into the air-passages. As far as concerns the etiology, vomiting, fever (as a high temperature always quickens considerably the movements of the ascarides), purgatives, abstinence from food—may all be looked upon as favouring the immigration into the larynx. Children are more liable to it than adults. The symptoms are not always the same; sometimes the worm sticks in the glottis, and such cases naturally invariably end fatally within a very short time. At other times, the worm passes the rima glottidis, when the patients die of bronchitis in the course of a few days. The majority of the cases that have hitherto come under observation belong to the first class. The patients become aphonic and asphyctic; occasionally

these symptoms are preceded by hoarseness during a few moments. Then comes a stage of great excitement, anxiety, and profuse sweating, which is followed by loss of consciousness. In cases of the second class, the patients feel much better after the worm has passed through the rima glottidis; but they do not recover their voice, and complain of pain in the anterior part of the throat. The diagnosis is very difficult and uncertain. In young children, the fits of suffocation are often completely masked by convulsions. If laryngitis, croup, diphtheria, spasm and œdema of the glottis, perforation of cold abscesses, or affections of the lungs may be with safety excluded, one is justified in supposing that a foreign body has penetrated into the pharynx or larynx. Then if it can be proved with certainty that no foreign body has been aspirated, and, moreover, if the patients are troubled with ascarides, it may be concluded that the foreign body in the trachea is an ascaris. This supposition will be rendered still more plausible if, after the worm has passed beyond the glottis, the asphyxia decrease and the trachea become painful. If it be not possible to extract the worm, either with the hand or by emetics and expectorants, tracheotomy must be performed. It has been resorted to in three cases out of the twenty-five, but each time with fatal issue. At the necropsy, the worm is generally found in the place where it evidently resided, judging by the symptoms during the patient's life. These places generally bear marks of inflammation, which have been produced either by the mere presence of the foreign body, or by its movements, or else by its peculiar irritating properties. The mucous membrane is red and injected, covered with bloody froth, and in some places eroded. Pneumonia of a circumscribed portion of the lung is sometimes caused by the protracted presence of the worm in one of the bronchi. The inflammatory symptoms are manifested principally in the arytenoid cartilages, as they are much affected by the migrations of the worm from the œsophagus. The usual symptoms of death by asphyxia are also always met with, as well as a certain number of ascarides in the intestines.

SURGERY.

ACUTE PURULENT CATARRH OF THE RIGHT MIDDLE EAR.—The following interesting case is recorded by Dr. Kratz in the *Berlin. Klin. Wochenschrift* for April 21st. The patient, a girl aged 9, had always enjoyed good health till about a week before she was seen by the author. She was then suffering from purulent catarrh of the right middle ear; and, on examination, a small opening of the size of half a lentil could be detected between the incus and the lower portion of the tympanum. The mastoid region was tender to pressure and œdematous; the external meatus was inflamed; the tympanum red, flat, and much swollen. The whole meatus was filled with thick yellow pus. The glands about the ear were swollen; but the parotid was free. The patient had a slight angina and fever. Her power of hearing was much impaired on the right side. When spoken to in a very loud key, she could hear at the distance of about twenty inches; the ticking of a watch only when put close to her ear; but the sound produced by a tuning-fork was distinctly heard over the whole of the head. After the meatus had been well syringed and all the pus removed, the opening in the tympanum could distinctly be seen. On pressing slightly with the finger on the jugular vein of the same side, pus was very rapidly discharged through the opening, the discharge ceasing when pressure was removed. This phenomenon was repeatedly produced, not only on the same day, but several days successively. The origin of it remains unexplained, as, under normal conditions, the jugular vein does not communicate directly with the interior of the tympanum. The possibility of an abscess having formed on the vein and communicating with the tympanum must be excluded, as nothing in the state of the patient proved its existence; and, besides, the circumstance that the pus was only discharged by pressing on the vein would disprove such a supposition. Another explanation of the phenomenon was, that the perforation was either a congenital deficiency or caused by caries. Under such circumstances, pressure on the jugular vein would drive the blood upwards, cause the bulb of the vein to dilate, and thereby cause the pus which had accumulated in the tympanum to be discharged. Similar cases have been observed by several authors—Toynbee, von Tröltsch, Schwartz, etc. The author was of opinion that the aperture was congenital.

DEPRESSION OF THE LEFT FRONTAL PROTUBERANCE.—Dr. Houillot publishes in the *Gazette Médicale de Strasbourg*, No. 1, 1879, the following case of injury to the brain, which was cured by trephining. The patient, a farm-labourer aged 28, had, in a fight, received a blow on the head with a cudgel, which stunned him for about a quarter of an hour. On the next day, he went to his work as usual, and worked for eight days, at the end of which time he fell down suddenly as if he had been shot, but got up again. From this time, he began to suffer from vertigo and somnolence. A careful examination was made, but nothing could be detected except slight paresis of the right arm and tremor. He vomited much during the day. A probe having been introduced into the oblique wound which he had on his forehead, it was found that the frontal bone was fractured and depressed. The patient was taken to the hospital, and it was decided to perform the operation at once. A cruciform incision of one and a half inches was made over the wound, and an opening measuring four-tenths of an inch in depth and one inch across was discovered. The fragments of bone having been removed by means of a hammer and chisel, a purulent collection was found beneath the dura mater. The latter was detached from the brain for a space of nearly two and a half inches, but had remained intact. The pulsations of the brain could be perceived. An antiseptic dressing was applied. There was almost no reaction; the temperature never rose beyond 98.6°; and the cerebral symptoms (cephalalgia, vomiting, slow utterance) disappeared almost immediately. The progress of cicatrisation went on very rapidly; and the patient, who had been wounded on May 4th, was able to return to his work on June 14th.

THE EARTH TREATMENT OF ABDOMINAL TUMOURS. — Dr. Addinell Hewson of Philadelphia has successfully treated by earth-dressing several cases of abdominal tumours, where either ovariotomy has been indicated, or where the case had been considered hopeless. An account of his proceedings may be found in No. 1 of the *Medical Bulletin*, published in Philadelphia. The material he used was pure brick clay of a yellow tint (due to the iron in it), and free from sand or grit. This was dried by a low fire or in the sun, care being taken not to let it be roasted, because in such a case its therapeutical action was destroyed. It was then rolled and sifted, and about a pound and a quarter mixed with sufficient water to constitute a thick paste, was spread all over the affected part. To make it dry quickly he laid a towel over it to absorb the water; the towel was then removed, and in its place a layer of cotton-wadding was smoothly spread on the paste, for the purpose of hastening the drying and of holding the clay when dry in its place. The dressing was then completed by a simple bandage and allowed to remain till it would fall off in from two to five days. He attributes the action of the earth to some chemical property which also had a calming influence on the pain. One of his first patients was a gentleman who was suffering from abscesses and diffuse inflammation of the cellular tissue of the knee, and had made up his mind to have his leg amputated. He recovered the use of his limb and was completely cured. The other patients who derived benefit from his treatment were all women suffering from tumours of the uterus and the broad ligaments; one of them had narrowly escaped ovariotomy, another had for years suffered severe pain during the catamenia, caused by a fibrocystic growth which involved the right ovary. In a third case, the patient had previously undergone ovariotomy, and induced electricity had been applied through the uterus. The tumour grew again after the operation and proved to be in reality a fibrous tumour of the uterus; there were besides several points of hernial protrusion of the bowels, on the spot of the wound, and she had the appearance and size of a woman at full term. The earth-dressing was applied under very unfavourable circumstances, but still proved successful, reducing her in size and preventing the hernial protrusion of the bowels by contracting the cicatrix.

ENTEROTOMY.—At a meeting of the Medical Society in Marburg, held last year, Professor Roser related a case of enterotomy for stricture of the bowel, and made some remarks on the subject. In the case referred to, the sloughing and separation of an invaginated portion of the small intestine was preceded by the formation of a cicatricial stricture; and an attempt was made to relieve the patient by enterotomy and the division of the cicatricial tissue. The patient died of peritonitis. Dr. Roser concluded his communication with the following remarks on enterotomy. 1. After opening the abdomen, the best plan, as a rule, is to introduce the hand as far as the cæcum, and thence trace upwards from the lower end of the small intestine; provided, of course, that there be no reason for believing the stricture to be in the large intestine or in any other special part. 2. When it is necessary to make an incision into and to empty a portion of intestine that is very full, it is safest to draw this portion of bowel forward and to lay the patient on his side, in order to prevent the escape of the contents of the bowel into the abdominal cavity. 3. In these circumstances, the escape of the intestinal contents is at first impetuous and explosive, afterwards intermittent. The first outflow is caused by elastic resiliency; that which follows, by the peristaltic action of the muscles. 4. In order to restrain this secondary escape, it may be of advantage to apply provisional sutures to the opening in the bowel, and to fasten the intestine by the

threads to the wound in the abdominal wall. After this, the sutures may be loosened when necessary, and the contents of the intestine allowed to escape. This is in accordance with Nélaton's teaching, that in many cases only a temporary opening of the bowel is necessary, and not a permanent artificial anus. 5. A temporary opening of the intestine is especially indicated in cases of valvular stricture, where the portion of bowel above the valve is much distended. 6. Among the forms of intestinal stricture demanding enterotomy, that which follows local peritonitis after the successful application of taxis for hernia merits special attention. If, some weeks after the reduction of a strangulated hernia, symptoms of ileus appear, there is reason for suspecting the presence of inflammatory adhesion and contraction. This suspicion was confirmed in a case which had recently occurred, in which enterotomy was performed, too late, on the twenty-third day after symptoms of obstruction appeared.—*Berliner Klinische Wochenschrift*, June 30th.

THERAPEUTICS.

PUERPERAL FEVER TREATED BY BENZOATE OF SODA.—Dr. Lehnebach writes in the *Allgemeine Medicin. Central-Zeitung* that in February last six cases of puerperal fever came under his care. In these cases, artificial interference had been necessary; and all the women were under the care of a very skilful and careful midwife. The source of infection could not be discovered. Three other women, under the charge of another midwife, in whom Dr. Lehnebach was called on to complete delivery by artificial means (one being a difficult forceps-case), were not affected. Of the six cases of puerperal fever, two (a primipara and a pluripara) died in a few days, in spite of the energetic use of quinine and wine. The symptoms were highly febrile, the temperature in the first case exceeding 109° Fahr. He was hence led to try, in the remaining four cases, benzoate of soda, as recommended by Klebs and Letzerich. The result was so remarkable that he believes that, if his experience be confirmed by that of others, benzoate of soda will be as much a specific in puerperal fever as salicylic acid is in acute rheumatism. Of the four patients in question, two were primiparæ and two pluriparæ. In the cases of the primiparæ, he was twice obliged to administer fifteen-grain doses of hydrochlorate of quinine along with the benzoate of soda, as the temperature rose to 105° Fahr. soon after labour. The action of the quinine was much more decisive than in the fatal cases, where he had given half a drachm; the temperature fell from 106° to 100.4° Fahr. Moreover, the quinine, when given with the benzoate, did not produce nausea; whereas in one of the cases it was almost immediately ejected by vomiting when given alone. Except in one case, the temperature did not again rise above 102.75° Fahr. Dr. Lehnebach says also that he has had much success in the treatment of gastric catarrh in children, and of diphtheria, from the use of benzoate of soda—administered in the latter disease both locally and internally.

THERAPEUTIC USES OF BORACIC ACID.—E. Kurz of Florence writes (*Memorabilien*, August 14th) that he has used an ointment of five parts of boracic acid and ten or fifteen of vaseline with much success in several cases of eczema of the face and limbs. One case of eczema squamosum, which had lasted five months, was cured in three weeks. In the case of a child whose whole head was affected with impetigo, the application of boracic acid, after the removal of the scales, produced a remarkably speedy cure. Two cases of prurigo, which had for a year resisted all other treatment, were cured in one and two months respectively by the application of the boracic acid ointment twice a day. The same treatment was successful in a case of non-syphilitic psoriasis of three years' standing, in which carbolic acid and arsenic had failed. In a case of exfoliative lupus of the nose, the use of boracic acid for a month had no effect; salicylic acid produced slight improvement. In two cases of severe gonorrhœa, injections of a solution of boracic acid (1 in 100 of water) almost completely arrested the discharge; a scanty secretion of mucus, which continued for a time, was cured by the use of subnitrate of bismuth.

THERAPEUTIC USES OF IODOFORM.—E. Kurz (*Memorabilien*, August 15th) says that he has used iodoform ointment with good result in cases of orchitis, strumous swellings, lymphadenitis, lymphangitis, periphlebitis, and exfoliations in the pelvis. In a recent case of indurated chancre, an ointment of one part of iodoform to ten of glycerine ointment produced a cure in a few days; secondary symptoms, however, appeared afterwards. In another case, a large soft chancre with bacony base and ragged edges on the inner part of the prepuce, was cleansed in a few days by the application of a similar ointment once daily; and the sore was completely healed in a fortnight. A patient with spinal myelitis had for several years suffered from prurigo of the arms and thighs, with moist eczema of the legs. Inunctions of the iodoform ointment produced marked improvement of the prurigo in the course of a week; but the eczema became worse. This was relieved, but not quite cured, by the use of boracic acid ointment. A scrofulous boy, with enlarged cervical glands, was treated by iodoform locally and cod-liver oil internally. After some weeks, no trace of the glands could be felt. In a communication to the *Allgemeine Medicinische Central-Zeitung* of September 13th, Dr. Lindemann states that he has found that the balsam of Peru is capable of completely masking the disagreeable odour of iodoform. The addition of two parts of the balsam to one of iodoform is sufficient; but a greater quantity of the former may be used. The best vehicles for ointment are lard, glycerine ointment, and especially vaseline; and for liniment, glycerine, spirit, and collodion. Dr. Lindemann gives the following formulæ. ℞ Iodoformii partem i; balsami Peruviani partes ii; vaselini, *seu* adipis suillæ, *seu* unguenti glycerini, partes viii. Fiat unguentum. ℞ Iodoformii partem i; balsami Peruviani partes iii; spiritûs vini rectificati, *seu* glycerini, *seu* collodii, partes xii. Misce. In making these preparations, the iodoform and balsam should be first rubbed together, and the other ingredients then added. Dr. Lindemann calls attention to the fact that the application of balsam of Peru has been recommended by Dr. Caspari and others in various cutaneous diseases and ulcerative processes.

THE ACTIVE PRINCIPLES OF SQUILL.—E. Merck (*Apoth. Zeitung*, No. 26, 1879) has made some observations on the constituents of the squill, and has separated three principles, which have received the names of scillipicrin, scillitoxin, and sallin. Professor Husemann of Göttingen has examined their physiological effects; and Dr. C. Moeller has written an inaugural dissertation on the subject. Scillipicrin is a white amorphous powder, very soluble in water, and hence well suited for hypodermic injection. It acts powerfully on the heart, retarding its action, and, in toxic doses (1 to 2 centigrammes in the frog) arresting it in diastole. Scillitoxin is an amorphous cinnamon-brown powder, insoluble in water and ether, soluble in alcohol. Its alcoholic solution leaves a long-continued bitter burning taste in the mouth; and the dry powder is very irritating to the nasal mucous membranes. It is easily but not absolutely soluble in aqueous alkaline solutions. When introduced under the skin of frogs in substance or mixed with sugar of milk, it is readily dissolved and absorbed. It has a far more intense toxic action on the heart than scillipicrin, one-eighth of a milligramme being sufficient to cause death in the frog. It arrests the heart's action in systole. Scillin is a clear yellow, crystalline, tasteless powder, sparingly soluble in water, soluble in alcohol and in boiling ether, from which it is again precipitated in the crystalline form on cooling. Its action on the heart is much less than that of the other substances, but it appears to produce *malaise*, vomiting, etc. Which of the two substances, scillipicrin or scillitoxin, is the more valuable diuretic must be ascertained by clinical observation. The remarkable antagonism of their action on the heart indicates that the use of extract of squill, or of scillitin, or of squill in substance, is not the best method of administering the remedy, and that a satisfactory result is only to be expected from the separate use of one of the constituents; scillin, which produces troublesome after-effects, being eliminated.

HYPODERMIC INJECTIONS OF FOWLER'S SOLUTION IN CHOREA.—Dr. L. Péroud, Professor of Diseases of Children to the Faculty of Medicine of Lyons, has employed hypodermic injections of arsenic in chorea since 1875. M. Henri Garin describes in his thesis (*Thèse de Lyon*, No. 14) results obtained in thirty-three cases of chorea in children at the Charité Hospital. In the method followed by M. Péroud, usually four or five drops of pure Fowler's solution are injected into the cellular tissue by means of a Pravaz's syringe. An injection is made every day; sometimes every second or third day. The region preferred for injection is some part where there is loose cellular tissue and few nervous filaments. It is sometimes preferable to inject at the level of muscles most affected. The cases related occurred in female children from the age of 4½ to 14½. Among them were recent, old, and relapsed cases; cases of rheumatic, of paralytic, and of cerebral chorea. M. Garin's reason for preferring subcutaneous injections are these: first, they do not give rise to gastric disturbance; second, the curative effect is generally more rapidly obtained; third, only very small doses, administered every two or three days, are needed. Subcutaneous injections cause little trouble in children; they give rise to no local irritation, although sometimes, when the organism has become saturated, slight indurations occur at the punctures. Sometimes intolerance of arsenic is met with; but this is rare, especially in children, who take it very well. Under the influence of hypodermic arsenical medication, rapid amelioration is the rule. At the same time that the chorea advances to cure, the children become fat, the weight of the body progressively increases, and the amount of solid matters excreted by the kidney diminishes. Under

the influences of arsenical injections, sixteen cases of chorea ended in recovery, after an average of thirty-two days' treatment and about eighteen hypodermic injections. In these sixteen cases, the treatment was purely arsenical. Of thirteen other cases of chorea submitted to injections of arsenic, and also to various other remedies, ten recovered; but a longer time was necessary. These thirteen were, moreover, almost all old or relapsed cases. Hence it may be concluded that arsenic has more chances of cure in recent and simple cases than in old and inveterate cases. This is contrary to the assertions of Aran and Ziemssen.

MIDWIFERY AND DISEASES OF WOMEN.

ELEPHANTIASIS OF THE LABIUM MAJUS.—Drs. Axel Key and M. Asplund describe in the *Svenska läkaresällskapets förhandlingar* (quoted in *Nordiskt Mediciniskt Arkiv*, Band xi) a case in which the latter removed from the right labium majus of a girl aged 21 a tumour weighing about ten *kilogrammes* (twenty-two pounds). It had a pedicle nearly six inches in diameter, and reached below the patient's knee when in the recumbent position. Its growth had been very rapid. The patient had also a sort of elephantiasis of the sole of the right foot and considerable swellings on the left leg and thigh. The tumour, which was twenty inches long, was uniformly long and soft, without any hard portions. On section, it was seen to be of uniform structure throughout, with a pale whitish grey colour and watery appearance. On pressure, a large quantity of nearly clear very gelatinous fluid escaped. Microscopic examination showed that the tumour was composed of perfectly developed connective tissue, with small lymph-spaces externally and very large ones internally. This was then a pure case of elephantiasis of the female genital organs; and Key considers the enormous swelling as a very rare specimen of the disease in these parts. It is interesting to observe that it was not alone, but that, as has already been stated, the thigh, leg, and foot were also affected.

OVARIAN PAIN IN PREGNANT WOMEN.—It is well known that, in examining pregnant women and trying to ascertain the position of the fœtus by abdominal palpation, the accoucheur will sometimes hit upon a spot which is so tender that a very slight pressure is apt to produce very severe pain. Dr. Budin's attention having been drawn to the subject, he has studied it carefully, and has come to the following conclusions (*Progrès Médical*, March 1st, 1879). The pain is limited to one particular spot, and has never, with one exception, been known to appear spontaneously, but is always caused by external pressure. On a level with the spot, a small body can be felt moving about under the exploring finger; it is of ovoid form, generally of the size of an olive, and can be moved transversely, though not up and down. If we draw an ideal line from the navel to the anterior superior iliac spine, we find this object either above or under or on the line itself. Dr. Budin thinks it the ovary. In following the back of the fœtus with our finger, we easily provoke the pain and find the ovary. In other cases, it could only be felt rolling under the finger when the uterus was contracted. The contraction having once ceased, it was very difficult to find it again. The left ovary seems to be much more tender to the touch than the right one; the pain is also generally prevalent on the same side. This is probably owing to the position of the fœtus, which lies generally with its back turned to the left and forwards. In two cases, however, where the child's back was turned to the right, the right ovary was painful. It is not yet decided whether this ovarian pain is spontaneously provoked during labour, and whether it can be produced after the ovum is expelled. It is also possible that ovarian pain has been mistaken for a peculiar form of neuralgia which has been called by several authors rheumatism of the uterus, or for the pain which is often caused by the head pressing on the uterine wall. Not one of the women in whom this phenomenon has been noticed was hysterical, so that evidently the pain could only be attributed to the compression of the ovary.

NERVOUS VOMITING IN PREGNANCY CURED BY ELECTRICITY.—Dr. da Venezia relates in the *Giornale Veneto di Scienze Med.* (January 1879) a case of chronic nervous vomiting in pregnancy which was cured by electricity. The patient was a young woman aged 24, in the seventh month of her first pregnancy. She had been suffering for the last two years from frequent attacks of vomiting after food, which had been so frequent during the last month that she had become greatly reduced in strength. The usual therapeutic agents were then employed; but, as no relief was obtained through them, the author resolved to try electricity. A faradic current of moderate strength was used, one of the rheophores being applied to the side of the neck along the course of the vagus nerve, and the other to the epigastrium. After the first sitting, the patient felt better; and after the fourth the vomiting had entirely ceased. The patient had six sittings of five minutes each, and after eighteen days she left the hospital cured and able to retain her food. The author draws attention to this fact, because electricity has not yet been much used in the vomiting in pregnancy, and also because it tends to confirm Professor Semmola's observations concerning its remarkable effects in nervous vomiting. Semmola, however, always uses the constant current.

PATHOLOGY.

ANTHRAX INTESTINALIS.—At a meeting of the German Medical Society in St. Petersburg (*St. Petersb. Med. Wochens.*, No. 27), the following case was reported by Dr. Kade. A girl aged 17, a seamstress, presented the following symptoms when received into the hospital. Her skin was livid; she was very restless and threw herself about; the heart-sounds were very loud; the throat and lower jaw were œdematous; the glands could be felt only with difficulty both here and in the groin; the abdomen was meteoristic and painful; the bladder empty. On being spoken to in a loud voice, she answered slowly and sensibly. There was an excoriated patch on her forehead, and a similar one on the inner condyle of the right femur, where the patient said she had had a pustule before. She had been taken ill three days ago with dysphagia, for which she had taken a dose of castor-oil. On the second and third days, she had felt comparatively well. On entering the hospital, she vomited once, and died three hours later. At the *post mortem* examination, the subcutaneous cellular tissue in the abdominal walls was found to be hæmorrhagically infiltrated; the abdominal cavity contained a serous liquid. The mesenteric and inguinal glands also presented a bloody infiltration. The whole of the intestinal tract was injected. In the duodenum, several semiglobular swellings were found, which became fewer in number in the small intestine, and disappeared in the large intestine. The spleen was soft, little enlarged; the liver was not enlarged, and was soft. Punctiform extravasations were found in the pelvis of one of the kidneys. Several bloody pustules, partly degenerated, were found on the aryepiglottic ligaments. In the apex of the right lung was a fresh infarct of the size of a walnut. The longitudinal sinus of the dura mater was filled with fluid blood. Minute extravasations of blood were on the external lamella of the sinus. The blood itself contained numerous bacteria.

MYCOSIS IN MAN.—Dr. J. Israel has published, in Virchow's *Archiv*, Band lxxiv, a recent observation on this affection. The patient, a woman aged 39, had had, ten months previously, a fall, striking her chest against a bedpost. Three months later, she had pains in her limbs and daily repeated attacks of fever, and entered the hospital in a state of great prostration. Her appearance was suggestive of general septic infection. The whole body was covered with marks and scars of old abscesses as well as with fresh ones; there was a particularly large one on the left side of the thorax opening into a fistula, through which large quantities of fœtid pus were voided. The pus was of a green colour, and covered with small yellow corpuscles of the size of a pin's head or larger, which could easily be taken out with the point of a needle. When examined under the microscope, these corpuscles were found to consist in the centre of a thick mass of fungi, from which long thread-like appendices issued, branching off in every direction. The space between the latter was filled up with pus-corpuscles which had undergone fatty degeneration. There were three different classes of fungi: delicate threads of mycelium, micrococci, and a third form, pear-shaped and brilliant. The same constituents were found in the other abscesses. The woman died three weeks after entering the hospital. The necropsy showed that the large abscess in the thorax communicated with a large cavity filled with pus in the left lung. The liver, spleen, intestines, and kidneys, were covered with purulent foci varying in size from a lentil to an apple, and containing the same species of fungi. In the kidneys, the convoluted tubes were found in several places to contain embola formed of fungi, though there was as yet no suppuration in their vicinity. There could be no doubt as to the abscesses having been caused directly by the parasites, although it was impossible in this case to find the primary source of infection. The author, however, has offered the following hypothesis. He had noticed before that, in cases of caries of the teeth which had given rise to abscesses in the gums, the pus of the abscesses contained fungi which bore a close resemblance to those which he discovered in this case of pyæmia or septicæmia; this led him to suppose that the patient in question had a carious tooth, whence the fungi might have been aspirated into the lungs, and by some chance into a pneumonic focus which had been caused by the fall, and ultimately have been carried through the system through the medium of the circulation.

INTERNATIONAL CONGRESS OF MEDICAL SCIENCE, AMSTERDAM.

THE Sixth International Congress of Medical Science was held in Amsterdam during the week from September 7th to September 13th.

Bright's Disease.—The following note was presented to Section I—that of Medicine—at the discussion on Bright's disease, by Professor Semmola of Naples. It comprised a *résumé* of the communication made by Dr. Semmola to the International Medical Congress at Brussels, on different kinds of albuminuria, which was reported in the *Gaz. Méd. de Paris*, 1875; also a *résumé* of further researches made by Professor Semmola, and communicated to the present International Congress of Amsterdam. He said:

1. My first researches were conducted as far back as 1850. I think that I was the first to show the classic influence of alimentation and diet on the quantity of urine which is secreted in Bright's disease. (See Jaccoud's work, *Manual of Internal Pathology*, Paris, 1873, vol. ii, p. 685.)

2. This influence of diet on the increase or decrease of albumen in the urine, according to the greater or less amount of nitrogenous elements in the food, was the starting-point of all my researches. It led me to conclude that it is absolutely necessary to direct our attention not only to the renal lesions, but also to general nutritive disturbances in which the albuminoid bodies are either not at all, or only imperfectly, assimilated and consumed.

3. This idea, which I have always endeavoured to develop concerning the etiology of Bright's disease, has, to my mind, been confirmed by another classical fact which has hitherto remained completely misunderstood. I mean the considerable and progressive decrease in the quantity of urea which is formed in the organism from the first stages of chronic Bright's disease. (See note at the end.)

4. I have always insisted on this classical and fundamental point, and have repeatedly made communications on the subject to the Académie de Médecine of Paris and to that of Naples. I especially insisted on this point in Paris (1867) and in Brussels (1875), and have convinced myself by the study of three hundred clinical cases that the decrease of the urea from the first stages of Bright's disease is owing to a defective oxidation of the albuminoid matter.

I find that in all books authors speak of the defective excretion of urea; but I have never yet been able to discover anything about the defective formation, which I am sure is a principal and fundamental fact: a characteristic phenomenon of Bright's disease.

It is caused by the total or partial absence of the cutaneous functions. In consequence of this suppression of the respiratory functions of the skin, two chemical disturbances arise, which are closely united from a biological point of view—viz., the alteration and inassimilability of the albuminoid substances, and defective combustion, *i.e.*, a decrease in the formation of urea. I leave it to experimental physiology to elucidate the part which the cutaneous functions play in the assimilation and combustion of albuminoid matter. I shall merely restrict myself to pointing out the intimate connection between the two which has been revealed by the pathological condition; and I foresee that it will lead to the solution of a problem which is of great importance both for physiology and pathology. As I have said before, this is a capital and fundamental fact, that can be repeated experimentally by varnishing to a certain extent the skin of a dog. It proves that the real chronic Bright's disease is a general affection, a defect in nutrition, in which the changes that take place in the kidneys (beginning with hyperæmia and ending with cirrhosis and atrophy) do not constitute the primary cause of the principal symptoms of the disease. Physiology fails to explain by what mechanism a morbid process, which has been confined to the kidneys from its very beginning—that is to say, at an epoch when they still fulfil their duty as purifying apparatus—could have had any effect on the production of urea, and thus act on the whole system. I beg my honourable colleagues to direct their attention to this point of renal pathology. It is a most important point, that has hitherto remained unobserved, because it can only be studied in the first stages of the disease, which only in rare cases come under notice in hospitals and clinics.

In all other cases of albuminuria that are not instances of true Bright's albuminuria, this decrease in the production of urea which runs parallel with the increase of albumen is not found. Consequently, it is of the highest importance to distinguish carefully between these different kinds of albuminuria so as to avoid a mistake that is often made and is dangerous, both clinically and therapeutically. The cause, the mechanism, the evolution, in short the *cachet* of the general chemical process of nutrition, combined with the decrease in the production of urea, and last but not least, the pathological alterations which take place in both kidneys, form a harmonious *tout ensemble*, which is always the same and constitutes the true type of Bright's disease properly so called.

6. The decrease in the production of urea which takes place in other cases of albuminuria is not in any way connected with albuminous filtration. It may exist in some cases, but varies very much according to the particular disease that has produced the albuminuria, and at the same time created disturbances in the general process of nutrition (heart-disease, etc.). Here, however, the decrease in the production of urea is not connected with the phenomenon of albuminuria; its progress takes place in an entirely different way, and it is not till the last stage of those various affections, *i.e.*, when the kidneys have become thoroughly diseased (amyloid degeneration, etc.), that a very considerable decrease takes place in the secretion of urea in the urine for want of filtration. It results from the aforesaid, that this decrease is a mechanical effect which gives rise to the accumulation of urea in the blood with all its fatal consequences.

7. In Bright's disease, properly so called, there are two causes for the decrease of urea in the urine. In the first stage of the disease, the decrease is caused by incomplete combustion, a defective nutrition, combined with changes in the albuminoid, which is gradually developed, owing to the suppression of the cutaneous functions. Later on, that is to say, when the affection of the kidneys has reached a further stage, a second decrease of the urea takes place in the urine owing to defective secretion.

8. The tendency to exaggerate the anatomical point of view of the affection has led to neglect of the chemical and more universal aspect of it, thereby producing a conclusion which is perfectly paradoxical so far as regards scientific pathology, *i.e.*, "clinical unity" and "anatomical plurality" (large white kidney, amyloid degeneration, etc.). It is impossible to perceive in what way a general alteration, which shows itself with the same symptoms and consequently must spring from the same causes, can bring forth different anatomical results. The final difference in the lesion shows that there has been a difference in the nature of the preceding morbid processes. By combining all the conditions under which the symptoms constituting the clinical aspect can exist, the successive evolution of the process, and the constant relation between it and its special causes, we shall succeed in reconstructing the edifice of true Bright's disease, and in distinguishing it as a peculiar pathological species which differs from other species of albuminuria.

9. The passage of albumen into the urine may take place through the three physiological factors that preside over the renal functions; viz., *a.* chemical constitution of the blood; *b.* degree of pressure; *c.* condition of the histological elements of the filtering apparatus.

10. Consequently, there are three classes of albuminuria, viz.: *a.* dyscrasic albuminuria (caused by excess of presence of the albuminoid constituents of the blood or by alterations occurring in them); *b.* mechanical albuminuria; *c.* Albuminuria produced by irritation, *i.e.*, by some local histological cause existing in the kidney. This species is caused by the irritating effect of all the agents that penetrate into the kidney, either from without or that are formed in the organism.

These three classes of albuminuria are closely related to different anatomical conditions of the kidney. If each one of these three conditions have been only transitory, the anatomical structure of the kidney may remain in its normal condition and no albuminous filtration will take place (as in series *a*). In other cases, it may be modified by a transitory morbid process, and then regain its previous normal condition. Finally, if the pathological condition that has given rise to albuminuria be persistent, the anatomical structure of the kidney undergoes a gradual change, and causes a particular defined lesion which differs according to the cause, and is in relation with each of the three factors which have modified the renal function so as to determine the filtration of the albumen. This will be more clearly shown in the diagram which follows:

If we look at the clinical history of Bright's disease properly so called, with a view to classifying it among one of the preceding groups, we find that it cannot be placed exclusively under either of these heads. It is a mixed albuminuria, *i.e.*, its complicated etiological mechanism contains all the other three mechanisms of the other classes of albuminuria, and it forms a pathological specialty that has nothing whatever to do with the other classes of this affection. Analysed in this way, Bright's disease reveals a constant evolution and a harmonious relation between the nature of the cause, the etiological mechanism, the chemical and anatomical alterations, and the clinical form. The *modus operandi* is as follows: *a.* The gradual effect of moist cold on the skin. The gradual action of moist cold is the only cause of true Bright's disease. Other causes produce albuminuria and lesions that differ from the true type. *b.* The respiratory functions of the skin decrease gradually, till they

cease completely. Their absence gives rise to the following disturbances, which appear at the same time, and are closely connected with each other: 1. Cutaneous ischæmia; 2. Accumulation in the blood of matter which ought to have been excreted by the skin; 3. Alteration of the albuminoid bodies, so that those which originate from the peptones are not assimilated; 4. Decrease in the combustion of the albuminoid bodies, and consequently in the production of urea.

Diagram of Classes of Albuminuria.

Variety of Albuminuria.	Causes.	Condition of Kidney.	Urea in the Blood and in the Urine.
a. Chemical conditions of the blood. Dyscrasic albuminuria.	Presence in the blood of an excess of albumen, owing to the diet.	Normal kidney.	The maximum of urea, sulphates, & phosphates contained in the urine varies according to the individual.
	An excess of the albuminoid constituents of the blood, owing to defective combustion.	Irritative hyperæmia, which is more or less intense according to the organ or apparatus whose functions are affected: the cutaneous surface, lung-disease, etc.	Progressive decrease of the urea in the urine, though it is not accumulated in the blood. Want of production.
	A change in the chemical constitution of the albuminoid bodies which circulate in the blood. This change renders them incapable of being assimilated, etc. (cachexia).	Fatty degeneration. Amyloid degeneration.	*Idem* owing to the gravity of the case which causes cachexia.
b. Degree of pressure of the current of the blood. Mechanical albuminuria.	Various neuropathic affections having a direct or indirect effect on the vaso-motor system.	More or less transitory renal stasis.	Amount of urea almost normal, within the limits of physiological oscillations.
	Pregnancy: in short, every kind of pressure exercised on the inferior vena cava or the renal veins.	*Idem*, but occasionally the stasis becomes permanent, owing to the general conditions of the organism, or to organic causes that produce the lesion.	Amount of urea not depending on the pregnancy or the organic causes that produce pressure.
	Cardiac diseases that have not yet reached the stage of compensation.	Persistent stasis, cyanosed kidney, cardiac kidney.	Amount of urea decreases in proportion as the affection of the heart increases.
c. Histological alterations take place in the kidneys. Irritative albuminuria.	All the irritative processes in the kidneys, from their first stage up to complete nephritis.	All the anatomical consequences of inflammation beginning at the first stage, and the degeneration of the different kinds of epithelium up to renal sclerosis and atrophy.	Amount of urea is normal or slightly increased, owing to the fever (acute stage).
	The albuminous filtration is more or less considerable in proportion to the *rôle* and effect that the inflamed elements may have in the mechanism of the urinary filtration.		Decrease in the production of urea, though there is no increase in the blood, owing to general disturbances in the combustion.
		This depends on the special histological seat of the inflammation and its particular course.	Decrease in the production of urea owing to defective filtration, and consequently accumulation in the blood.

If it were possible to arrest for a moment the harmonic solidarity of all the organs and apparatus, the kidneys might be excluded, as it were, for a certain time, during which first period they would be in no way connected with the true pathology of Bright's disease. But a similar abstraction can only be conceived in order to show that the anatomical lesions of the kidney are only a secondary process, and do not constitute the initial lesion of Bright's disease.

The four aforesaid causes produce the following effects upon the kidneys:

1. Renal hyperæmia. (Increase of pressure.)

2. Irritating effect of the said hyperæmia, owing to the accumulation in the blood of substances that ought to have been excreted by the skin, and its dyscrasic condition in consequence. (Inflammatory effects.)

3. Elimination of the albumen through the kidneys (the depuratory organs *par excellence*), because, the constitution of the albumen being altered, owing to paralysis of the respiratory functions of the skin, it has become an useless substance, and may almost be regarded as a foreign body in the organism.

4. The progressive decrease of the urea in the urine is the result of the decrease in its production.

Thus we have a twofold series of effects, that are closely connected with and complement each other, *i.e.*: 1. The general nutritive lesions, with all their characteristic consequences; 2. The anatomical development of the inflammatory process of both kidneys, from the first stage to the last. These two series of disturbances constitute Bright's disease, or Bright's albuminuria.

The differences which exist in the clinical form of other albuminurias, and the combination of various final anatomical lesions existing in the same kidneys, depend entirely on special etiological causes (alcoholism, gout, syphilis, etc.), which modify the general condition of the individual, and consequently add to the renal lesions that are peculiar to the inflammatory chronic process other elements that vary according to either the nature of the alteration, or to their seat being more or less confined to one or the other of the different histological elements which constitute the kidneys. It follows that true Bright's disease has nothing to do either anatomically or clinically with any of the other species of albuminuria, whatever may be their origin. I also believe that it is not at all true, though affirmed by several authors, that Bright's disease may be caused by alcoholism, gout, etc. Whether considered from a scientific or a practical point of view, this appears false; because it is a well known clinical fact that there is such a thing as albuminuria caused by gout, alcohol, etc. And each one of these affections corresponds to general nutritive alterations, which differ not only according to their etiology, but also are represented anatomically by considerable alterations in the kidneys, which in some cases are due to nephritis. These alterations, however, vary very much, so far as regards the affected spots; sometimes they are restricted to one kidney alone (embolic nephritis, pyelitis, stone, syphilis, etc.). If both kidneys be affected, we always find that there exists a secondary disease, in which predominates an inflammatory condition either of the elements of the parenchyma or of the connective tissue, and which is either due to the irritating effect of a foreign body that passes through the kidneys (alcohol, resinous matter, cantharides, etc.), or to the presence of a deposit of urea that irritates and inflames the neighbouring tissues. In cases of degeneration (fatty, amyloid, etc.), the kidneys are as much affected as many other organs (liver, spleen, etc.); and it would be absurd to regard these cases as belonging to Bright's disease. I repeat it again and again, I am justified by my researches in concluding that true Bright's disease is a constant clinical type, a pathological specialty the characteristics of which *intra vitam* are albuminuria, absence of urea, cachexia, and a peculiar anasarca. The anatomical changes consist in an inflammatory process of both kidneys, which progresses very slowly, and extends gradually over the whole of the organ. These changes, however, are not quite the same for all the elements of the kidneys, but differ according to the physiological part that each element plays in the discharge of the renal function. All the exclusively histological localisations that have been held up as special forms of Bright's disease do not exist in nature in an isolated condition. They may only predominate in some elements that are more affected than others. That this renal affection is always a bilateral one I have already mentioned. I believe that this constant bilaterality constitutes, from an anatomical point of view, the peculiar characteristic or the final control of true Bright's disease, thereby adding a new proof to what I have said, viz., that there exists a profound universal deterioration of the system, which precedes the outbreak of the disease, and must necessarily act on both kidneys at the same time, though with characteristic slowness.

According to my opinion, this constant renal alteration ought alone to be called "Bright's kidney", for the following reasons, viz.: It is caused by the effect of moist cold; the dyscrasia following it is of a particular nature; and finally it develops gradually from a simply hyperæmic state till it becomes atrophic. It may occasionally reveal somewhat different symptoms; but this only takes place when another cause (alcoholism, gout, etc.) is superadded to the action of moist cold. Thus we have a series of complicated effects, both in the clinical form *intra vitam*, and in the nature of the alterations which are found in the kidneys and other organs after death.

I shall have the honour of communicating in a few words the results that I have obtained in the treatment of Bright's disease, by taking the said doctrine as my starting-point. I shall submit them to the judgment of my illustrious colleagues, and thank them beforehand for their kindness.

POSTSCRIPT.—It is true, that several authors acknowledge that there is a more or less considerable decrease in the production of urea from the onset of the disease; but they ascribe it to the anæmic condition of the patient. Now, this decrease in the secretion of urea dates from the

first time that albumen appeared in the urine, that is, from an epoch when it is impossible to admit that an anæmic condition has been induced by the want of albumen in the blood.

I repeat it, and it is a most important fact, the decrease in the combustion of the albuminoid bodies is caused by an alteration which takes place in them after the suppression of the cutaneous respiration. The decrease of urea and elimination of albumen are two facts which are closely connected with each other from the first moment of the affection.

Beri-Beri.—M. VAN LUNT read a paper on beri-beri. After having given an exhaustive historical sketch of the affection, the author proceeded to speak of its geographical distribution. Beri-beri is met with principally in the tropics, but also in China and Japan up to the fortieth degree of north latitude, on the eastern coast of Australia and southwards of the Cape of Good Hope to the thirty-sixth degree of south latitude. The characteristic of this disease, which is regarded by the Germans as merely a variation of the affection commonly called pernicious progressive anæmia, is an impoverishment of the blood, together with all the symptoms of serous anæmia; *e.g.*, increasing prostration, shortness of breath, pains and formication in the lower extremities, the latter being rather stiff; and motor paralysis. At the same time, the said members grow anæsthetic, the anæsthesia spreading gradually over the whole of the cutaneous region, and coinciding with muscular hyperæsthesia. The patient has anasarca, and effusions take place in the serous cavities. The temperature is rather low than otherwise (97.8°). The affection is an essentially chronic one; sometimes there is an apparent amelioration of the symptoms, but the patient never recovers. Death generally comes on in the midst of nervous complications (coma, convulsions), or from exhaustion following vomiting. On examining the blood under the microscope, the number of the red corpuscles is seen to be greatly diminished; they also seem to have lost their tendency of forming rolls. The blood contains a large number of microcytes, and of granulated brilliant bodies. The solid principles of the blood (albumen, fibrin, fat, salts) are greatly decreased in proportion. In short, the blood has become hydræmic. All those who have carefully studied this affection in the countries where it occurs most frequently attribute it to the want of proper food, from which the inhabitants of the said countries almost constantly suffer. To this may be added other causes, such as overwork, pregnancy and lactation in the female sex, dampness of the climate, etc. The treatment, according to the author, consists in the administration of diuretics, tonics, analeptics, and principally in a strengthening diet. The affection might perhaps be prevented if the nations that are now decimated by beri-beri were protected from famine by prophylactic measures.

On Stammering.—M. CHERVIN of Paris read a paper on stammering. This disturbance of speech is generally ascribed to a spasm of the muscular apparatus that aids in the articulation of sounds. This theory, which is essentially false, has led surgeons to perform many unfortunate and useless operations (section of the tongue or of certain of its muscles, of the hyoglossus; extirpation of the tonsils, the uvula, etc.). M. Chervin thinks that stammering is caused simply by a disturbance in the co-ordination of the movements that are necessary to emit an articulated sound. This explains how it is that this disturbance of speech is frequently of an intermittent type; and why, under the influence of a methodical treatment, which is in reality only a series of gymnastic exercises, that are practised by the apparatus which helps to form articulate sounds, it is possible to cure this affection in a very short time. The author has gathered from statistics that, from 1850 to 1869, 13,215 young men in France were exempted from serving in the army because of stammering. Great discretion must, however, be exercised in delivering certificates on the subject, as stammering is very easily counterfeited. In general, fright and emotion play a great part in the etiology of the affection. It occurs more frequently in the male sex than in the female, which the author attributes to the fact that young girls are less exposed to violent emotions. The treatment lasts about three weeks. During the first week, the patient has to go through methodical exercises of reading and recitation for a certain number of hours daily; for the remainder of the time, he must be perfectly silent and isolated from his friends. In the second week, he is allowed to speak to his attendants or friends, but must speak very slowly, and pronounce each syllable distinctly. In the third week, the patient may converse freely, but must still speak very slowly.

On the Indications and Counterindications for Operations in Individuals suffering from Constitutional Diseases. — At the fourth general meeting of the Congress, Professor Verneuil spoke at length on the pathological importance of this question. His communication may be shortly summarised as follows. 1. Surgical operations are not formally counterindicated in individuals who are affected with constitutional diseases. They may be performed under such circumstances, are often useful, and in some cases even very necessary. 2. Their prognosis is much more serious than in healthy individuals. It is less certain, and more difficult to make; for we have no clue whatever as to the favourable or deleterious effect that the traumatic lesion may have on the general health of the patient; neither can we judge in what way the disease will affect the local process of healing. 3. The prognosis varies according to the different constitutional diseases, and for each of them considered individually. It varies also according to the degree of the alterations that have taken place in the different parts of the body. 4. The danger attached to the diathesis is not great as long as it is still confined within the boundaries of dyscrasia. It increases considerably with the manifestation of chemical and histological lesions. It becomes alarming when the principal viscera—such as the liver, kidneys, spleen, heart, lungs—are extensively affected by sclerosis, steatosis, amyloid degeneration, phlogosis; or when they present pathological products that belong specially to certain diathetic conditions—*e. g.*, tubercles, gummata, carcinomata, and various neoplasms. 5. We are not justified in depriving diathetic individuals of the benefit of surgical intervention, even in cases where it might be dangerous. It must be the aim of the practitioner to render the prognosis less serious, and to assure the success of the operation. He will succeed in doing this if he be very careful about choosing the most favourable moment for the operation, adopting the best method for performing it, and applying the most efficient dressing. He will also do well in putting the patient under a hygienic, dietetic, pharmaceutic treatment—in a word, under a medical treatment which is adapted to the constitutional disease. 6. The practitioner must be thoroughly well acquainted with the etiology, pathology, development, the end, and the medical treatment of constitutional diseases, in order to make sure of the indications or counterindications for the operation. In this way, he will be better able to judge whether he had better perform the operation or not, and to calculate with more or less precision what the chances may be. A knowledge of these conditions, which perhaps all surgeons do not possess to a sufficient degree, would tend rather to prevent surgical operations than to encourage them, and would inspire the operator with a higher degree of confidence in the efforts of nature supported by a comparatively mild therapeutic treatment. 7. A conscientious examination of the immediate or future effect of operations performed on individuals under some constitutional diathesis will tend to destroy many of our illusions respecting the power of surgical art. It is sad to say, though we must say the truth, that complete and lasting favourable results are very rare. No doubt, there may be many successful operations; but the therapeutic results may be far from successful. A manifestation of the diathesis or some intercurrent affection may be suppressed; but frequently the constitutional disease increases in force and rapidity. Many patients suffering from cancer and scrofula would live longer if they had remained under medical treatment, instead of passing through the hands of surgeons. 8. It is only just to add that, although the aforesaid operations are more frequently attended by palliative than by curative results, nevertheless they are sometimes extremely useful. In extreme cases, they may prolong life, render it less hard to bear, and give the patient at least a gleam of hope. In less serious cases, and where the constitutional disease may be successfully treated, the operation has a good effect upon the treatment, by allowing the medical man to gain time, suppressing an immediate cause of danger, and giving the therapeutic treatment greater scope.

M. Verneuil's address was much applauded, and he received a hearty vote of thanks from the meeting.

Extract from the Remarks of Professor Sayre of New York on the Treatment of "Spondylitis", and of "Scoliosis", by Partial Suspension to improve the position of the Body, and the application of Plaster-of-Paris Bandage to retain it: and his Conclusions. — Dr. SAYRE said: I am very much obliged for the invitation to make a *practical demonstration* of the plan of treatment adopted by me for some years past for Pott's disease, and also for lateral curvature of the spine. By this means, a more clear and definite understanding of the plan can be conveyed than it is possible to impart in any other manner with the same accuracy and attention to minuteness of detail which is so essential to success. It is neglect of these details in the preparation of the materials, used in the elastic shirt employed, and in the proper application of the gypsum bandage, that has caused the failure of the treatment in the hands of some.

I am quite confident that there is no case of spondylitis, or of scoliosis, that is in condition to be treated by any mechanical means which cannot be more successfully treated by this method than by any other yet devised. At the same time, it can be done with perfect freedom from pain or discomfort, and without any of those excoriations so common in the use of all other mechanical appliances. If any of these accidents should occur in the treatment of a case, it will be due not to the plan which I have suggested, but to the imperfect manner in which that

plan has been executed. I have known of cases in which the surgeon or physician had become convinced of the correctness of the plan of treatment, and then transferred the patient to the instrument-maker for its application; and of course, in the majority of cases, this transference to incompetent hands, would produce a failure, and thus bring the treatment into discredit.

I suppose that, in cases of cataract, hernia, ovariotomy, stone, aneurism, trephining, or any other surgical operation, if the same rule were to be adopted, it would be attended with similar results. Certainly no surgeon would expect his instrument-maker to perform any of these operations for him. Neither has he the right thus to expose the life of his patient to danger, or to impose upon the instrument-maker the delicate duty of the application of a bandage, which requires as much, if not more, skill than is necessary for the performance of any of the operations above referred to.

The first requisite is an elastic woollen shirt, knitted and without seams, similar to a stocking, with tapes at the top to tie over the shoulders, instead of sleeves, as the shirt can then be pulled tightly down, and secured by a safety pin between the limbs; and thus, by its elasticity, be made to fit accurately all the inequalities of the trunk. Previous to its being thus secured, a pad of cotton, folded in a napkin, should be placed under the shirt, over the region of the stomach; and in females it should also cover the mammæ. After the plaster has "set", this pad is to be removed, and thus allow room for the stomach to expand after meals, and also to prevent any undue pressure on the mammary glands. The bandages should be made of coarsely woven muslin, called "crinoline", so that the plaster can be rubbed into its meshes. They should be from three to four inches wide, and about three to four yards long. The gypsum should be pure, and freshly ground, and perfectly dry; it should be rubbed into the meshes of the cloth, and then rolled, but not too tightly. As thus prepared, the bandages can be kept in an air-tight vessel, ready for use at any moment. If the climate be very wet, it is as well to subject them to the heat of an oven for a few minutes before using, to evaporate any moisture the plaster may have absorbed.

When about to apply the dressing, the surgeon takes a single roll of the bandage, and drops it into a vessel of cold water, which should be deep enough to completely immerse it in the vertical position, and, as soon as the gas has all escaped, it is ready for use. As he removes it from the water, he squeezes out the surplus water, and drops into the basin another roll—end up—and, by the time the first one is applied, the next will be ready for use. This is to be continued until as many are applied as each particular case may require.

In cases of spondylitis, the patient is to be carefully extended by the head and axillary straps, until he is perfectly comfortable, and never beyond that point.*

I have learned that some surgeons administer an anæsthetic during suspension. I think this practice extremely dangerous, and should most strongly condemn it.

As soon as the patient has been extended until he is perfectly comfortable, apply the wetted roller-bandage smoothly over the skin-fitting shirt, not drawing it tightly, but simply unrolling it around the body, while an assistant follows with his hand and fingers, and presses it into all the inequalities and irregularities of the body, thus obtaining an accurate mould of the trunk in the improved position which extension has given to it; and, by keeping the patient in this position for a few minutes until the plaster has "set", he will then be retained exactly in the same position so long as the plaster remains unbroken.

After the plaster has "set", the pad which has been placed over the stomach and mammæ is to be removed. Slight pressure should be made over the lower part of the abdomen in the crista ilii before the plaster has hardened, so as to mould it to the form, and remove the undue pressure on the spinous processes and the crest of the ilium. As soon as the plaster has "set", the patient (unless paralysed) can go out of doors and take the ordinary exercise so necessary for health, and, if an adult, can resume some active employment by which he can earn his support.

The advantages claimed for this plan of treatment are:

1. Its applicability in all cases where any mechanical treatment can be applied, and by any physician in the country without the aid of an instrument-maker.

2. That, being accurately adjusted to all parts of the body when in its improved position, it gives more uniformity of support than can be done by any other means, and without making any undue pressure at any prominent point, and thus avoids all danger from sloughing and excoriations.

3. By absolutely immobilising the spine, and removing undue pressure from the inflamed portion of the vertebræ, it affords greater facilities for ankylosis than can be given by any movable apparatus.

4. The patients thus treated are capable of daily exercise in the open air, so necessary for health, and also of earning their support by manual labour.

5. By applying this treatment in the early stages of the disease before deformity has occurred, the patients will be cured (when curable) without any deformity.

Dr. Sayre then applied the treatment to a boy aged six years, who had a very bad angular deformity in the middle dorsal region from Pott's disease of two years' standing. He was unable to sit up or stand without support, and suffered intense pain on the slightest movement of the body. He had worn a "Taylor's spinal supporter" constantly for two years. When first applied, as stated by Professor Tilanus and Dr. Zegers, the deformity was scarcely perceptible; and although the instrument had been constantly applied and most carefully adjusted, yet the deformity had very materially increased, and the disease was still progressing. The boy was carefully suspended by the neck and axillæ until he expressed himself as feeling comfortable; and the change in his face was certainly most marked, being changed from a pinched expression of agony to a smile of real pleasure. Dr. C. H. H. Sayre, the son of Dr. Sayre, while the boy was thus suspended, then applied the bandages, his father rubbing each layer firmly together and carefully pressing them into all the inequalities of the body. A small pad was placed on either side of the projecting spinous processes to protect them from undue pressure. The head-support or "jury mast" was also added to take off the weight of the head, as suggested by Dr. S. W. Gross of Philadelphia. When the plaster had "set" and the head-swing had been properly adjusted, the little fellow ran around the Hospital without supporting his hands upon his knees as formerly, or resting on any article of furniture.

[Amsterdam, September 15th.—I saw the boy running in the ward to-day, and he says he has been free from pain since the jacket was applied.]

Dr. Sayre then applied the treatment in the case of a young girl with a very severe lateral curvature after she had suspended herself by the pulley and head-swing, as suggested by Dr. Lee of Philadelphia. When she came into the lecture-room, she was wearing a complicated spinal brace with lateral supports and springs worked by screw and lever, the object being to force the body straight. Before this instrument was removed, she was placed against the wall and her height accurately measured by Dr. Zegers. The instrument was then removed, and the same measurement taken. She had increased in height without any extension being applied very nearly three-quarters of an inch; thus proving conclusively that the instrument was not only of no use whatever, but absolutely injurious. The instrument was a very good imitation of Mr. Brodhurst's of London, and manufactured by Busch of Amsterdam. There was an extensive chafe on the projecting angles of the ribs, as also under the axillæ and from the shoulder-straps over the clavicles, showing that the instrument had been applied with as much force as the patient could endure, and yet she was much more erect when it was removed than she was when it was on. The knitted shirt was then put on, the mammary and stomach pads applied, and the shirt having been previously secured between the thighs, was then drawn up very firmly to make it entirely smooth, and secured by tying the tape over the shoulders. The patient then partially suspended herself by slowly climbing up a rope, which ran over a pulley and was attached to a collar under her chin and occiput. As she thus climbed up the rope, with her arms extended to their full length, until the heels were slightly elevated from the floor, a marked change took place in the curvature of her spine, which was very perceptible to everyone in the room. While she was thus suspended, Dr. C. H. Sayre applied the plaster-bandage, his father carefully rubbing in each layer and making gentle pressure into each intercostal space; and in a few minutes she was completely encased from axillæ to pelvis in the plastic cuirass. So soon as the plaster had become hard, she was placed against the wall where she had been previously measured, Mr. Lister of London and Dr. Zegers of Amsterdam again made an accurate measurement of her present position, and it was found that she had increased more than an inch and a quarter in height, and was nearly two-and-a-half inches taller than she was with the spinal brace upon her. After adjusting her dress, she seemed perfectly comfortable, could take deep full inspirations, and was certainly very greatly improved in her appearance.

The success in these two demonstrations was complete, and the superiority of the plan of treatment very frankly admitted by every member of the Congress present.

Professor Marey's Pedomètre.—M. Marey read a communication on experiments he has been making on walking, by means of a special

* The apparatus and mode of application are fully described in *Sayre on Spinal Curvature*. Smith, Elder, and Co., 15, Waterloo Place. London: 1877.

pedomètre, which registers the steps. This contrivance consists in a rubber-tube, which connects a rubber-ball placed in the sole of the shoe with the instrument itself that is suspended over the shoulders like a field-glass. In this way, he has been enabled to study the differences between walking on a level ground and walking up hill, for the step changes according to the declivity of the soil. Thus, in walking up hill, the step is longer by a fifth than in walking on level ground. This, however, applies only to the going up, as, on the contrary, the step is shorter in going down. The shape of the shoes has also great influence on the gait; the best shoes are those that are almost without heels, and where the sole is a trifle longer than the foot. Thus, the physiological experiments have only confirmed what had been foreseen by practised walkers, and revealed by the pathological phenomena which occur in individuals who use bad shoes, especially those of the kind called Louis XV. By means of the same instrument, M. Marey is able to register the movement of a carriage, and, in short, the "frequency" of any phenomenon which takes place during several hours. He obtains graphically a curve, which varies in length, and consists of a series of lines. The elevation of the curve is in direct proportion to the number of times the phenomenon has been repeated within a given time. He has also studied respiration during sleep, and has found that it remained the same during the first hours of sleep and became less deep only towards morning. The respiratory movements grow superficial towards 5 A.M. Finally, M. Marey presented, in the name of M. d'Arsonval, one of the most distinguished young French physiologists, the report of a highly-interesting discovery. M. d'Arsonval has succeeded in discovering a proceeding by means of which it is possible to calculate closely the amount of caloric thrown off in a given time. The method used hitherto was very imperfect, and consisted in placing the animal in an apparatus which was surrounded by ice, the water that was obtained from the melting of the ice being subsequently collected. This was a highly imperfect proceeding, and the conditions in which the animal was placed were very bad. M. d'Arsonval has constructed an apparatus, with a mean temperature of 30° C. (86° F.). Whenever a change takes place in this temperature, water flows in and the original temperature is re-established. The air which the animal breathes is of the same temperature, and it may be kept for hours in this apparatus. By means of this method, it will be possible to make numerous experiments respecting the temperature of the body under the influence of food, hunger, fever, putrid infection, etc.; and not only the sum total of heat that has been produced, but also the different phases through which it has passed. M. d'Arsonval has discovered that there exist very interesting differences between the heat produced by different animals. Thus, *e.g.*, the rabbit throws off one degree of caloric in twenty minutes, but the guinea-pig throws off more, which shows clearly that the bulk of the animal is not a sufficient indication for calculating the heat produced by living beings. These experiments are made with wonderful precision, and, owing to the graphic method, they may be carried on for a considerable length of time. All the mistakes that arise from the imperfections of our senses are eliminated, as the results are inscribed automatically.

On the Transfer of Sensibility.—A paper was read by Professor Eulenburg of Griefswald, called "Researches on the Transfer of Sensibility". The question asked was: Do the agents which modify to a certain point (either by increasing or lessening it) the sensibility of the cutaneous region of either half of the body, produce consecutively the same disturbance in a corresponding spot of the opposite half of the body? The author then proceeded to give an account of the agents which have appeared to him the most capable of modifying the sensibility of the skin. The following were the proceedings employed to increase the local sensibility: cutaneous faradisation (along the dorsal part of the right forearm till a circumscribed redness was produced); or mustard poultices prepared especially for this purpose by Aebler and Rumpf. The latter agent seems to be less reliable and to act less rapidly. For the purpose of diminishing the local sensibility, the author has used Richardson's method, which consists in irrigating the part with pure ether or "compound fluid", by means of a pulveriser. The effects of the proceeding were heightened by combining it with Zesamendi's modification (a superficial incision of the epidermis after irrigating the spot for about two minutes). In a very short time, a circumscribed ischæmia is produced, with loss of sensibility. M. Eulenburg has measured in all his experiments: *a.* the perception of space (*Raumsinn*) of the skin, by means of Sieveking's æsthesiometer; *b.* the faradic sensibility, by testing the minimum of sensibility with volta-faradic currents, according to Munk and Leyden's method. The following are the results obtained from the experiments made on ten persons (medical students). 1. The faradic stimulation of the skin produces an increase in the sense of space and in the electric sensibility of the stimulated part; simultaneously a decrease takes place in both these classes of cutaneous sensibility in the corresponding part of the body. These alterations migrate from one part to the other; in some cases, there is even a period of oscillations following the initial decrease in the corresponding part, during which the faradic sensibility seems to be increased. The normal condition is restored in both parts almost simultaneously. 2. Local hyperæsthesia (decrease in the "perception of space", and in the faradic sensibility) that is caused by the ether spray is constantly accompanied by a considerable increase of sensibility in the symmetric spot. The oscillations are absent in most of the cases, but the decrease is much more sharply defined than the increase in the opposed region. These experiences prove that transfer is a physiological fact which is simply exaggerated in pathological cases. Perhaps the cutaneous sensibility belongs to the bilateral symmetrical functions (similar to the secretion of sweat). The application of certain metals, or the approach of a magnet, would suffice to produce centripetal effects (functional alterations) in the regulating centres of this symmetric action.

Report of the Last General Meeting.

On the Functions of the Metric System in Medicine.—On international uniformity in medicine, (*a*) in private and in hospital practice, (*b*) as a general basis of medicine, (*c*) and of universal medical statistics, Professor Seguin spoke as follows:

When the Congress of Geneva separated, there still existed a considerable gap in the mode of communication between medical men. The metric system having since then been accepted by the American Medical Association, and a metric commission having been appointed by the British Medical Association, a constant current of observation and experimentation will soon be established. We hope that the time is coming when nobody will say what Professor Charcot was obliged to confess in Cork last month: "Gentlemen, it is not your national language that prevents me from becoming familiar with your works, it is your gothic weights and measures." And this obstacle has been removed in the interval between two sessions of the Congress by the power of disciplined minds. For what still remains to be done, unity in medicine will take as its starting-point the *mètre*. This will help us to understand the various names that are used to design quantities in other sciences—algebra, chemistry, natural philosophy, etc.—and without which a congress like ours cannot be said to be international. I will go further, and say more; even among nations who use the *mètre*, the physicians are far from having always applied it to its legitimate purposes—*e.g.*, there are only a very few who use it in making a diagnosis, and fewer even in making the prognosis of the disease, notwithstanding that we are beginning to expect the physician, both in hospital and private practice, to give us a mathematical account of the vital quantities that have been entrusted to him, and of the therapeutic quantities he has opposed to the pathological quantities in order to restore the equilibrium of life. New instruments seem to be invented almost as soon as they are needed, as Professor Marey has shown us; and, with their help, medicine has been enabled to give a mathematical account of its operations, and of the operations of the principal functions. Instruments such as these were dreamt of by Bouillard, Louis, Andral, and Bowditch, and the other founders of the numeric method of observation, and now we possess them. This is but a confirmation of the fact that important discoveries are foreshadowed, as it were, by dreams. Owing to these discoveries, less scope has been left to conjectures in our art, and we are more able to calculate with some certitude the probability of certain events. But it is not enough merely to possess those beautiful instruments, and to know how to handle them. We must use them according to an uniform plan, and register their results with mathematical exactitude. If we do not bear this in mind, every new analytic or graphic process that is discovered will only add new materials to the existing chaos. One thing alone can save us from such a misfortune; and that thing is the adoption of a general method, which, in our opinion, is the metric method of observation. The general adoption would be greatly furthered if the paper used for recording the observations were metrically ruled, so as to enable practitioners to make the same reductions or allowances without possessing an exceptional talent for drawing. Another important point is to render more perfect, by rendering them more precise, the records of observations that exist already, and some of which I herewith lay before you. They are very imperfect, I know; and will only cease to be so when you shall have corrected them according to the results of experience. It is clear that, with the aid of these notes, we shall be able to calculate our diagnostic and therapeutic operations with as much certainty as the banker calculates the balance between his debit and credit. If we leave on one side our personal practice, and pass on at once to the highest interests of our profession, we see at once in what way these instruments and methods will aid us in advancing medical doctrines and general medicine. This will be more clear when we have compared the individual observations that have been made on the uni-

form basis of the *mètre* and with identical methods, in order to discover the facts from which laws are derived. Must I add, that at the same time, and with the same notes, it will be possible to follow the effects of drugs on disease, and the reaction of the latter on the normal properties of drugs. Finally, the simple collection of these individual observations will furnish the materials for statistical tables that will not only refer to the death-rate, but be for the first time "medical". They will present to us a sort of diagram of the progress of health and disease in the human species. There remains much to say on the importance of adopting a general method in medicine, or rather medical mathematics; but, for fear of becoming too prolix, I pass at once to the conclusions of this work. 1. The metric system must be the basis of international medical unity. 2. The scales and degrees of the instruments must be metric, or at least uniform. 3. The records of observation, both in private and hospital practice, and the tables of medical statistics, must be prepared on an uniform plan, so as to give harmonious results. 4. The members of the Congress are requested to record their own cases as much as possible by graphic and numeric methods; to propagate the use of these methods among their colleagues; and to communicate to the members of the Commission any criticisms or improvements that may have been suggested to them by experience. The Commission will give an account of them in its next report. 5. We adopt the conclusions offered by Professor Gille in the name of the Pharmaceutical Section of this Commission. 6. We unite our petitions to those of the pharmaceutists, requesting you to adopt the conclusions of this twofold work which has been bequeathed to the present Congress by the Congress at Geneva. 7. Finally, we beg that you will help to fill the vacant places in this Commission that are due to the absence of many of its members, and especially to the regretted death of Dr. Wilkinson, ex-President of the British Medical Association, and the irreparable loss of Professor Gubler, who was more than our colleague, for he was our strength and our head.

M. GILLE having read his report on the same subject, the Commission Internationale du Système Métrique was reappointed and reconstructed as follows: Dr. Dechambre and Professor Marey, Paris; Guye, Amsterdam; Warlomont and Gille, Brussels; Sayre and Seguin, America; Ernest Hart, England.

TODMORDEN.—This is a somewhat meagre report for a district with a population of more than 23,000. The death-rate is given as 21.4 per 1,000, against 22.3 in 1877. The 496 deaths included 107 under one year of age, or 131 per 1,000 births. The mortality returns compare favourably with those for 1877, except as regards the deaths from five to twenty years. None of the zymotic diseases were especially fatal, but diarrhœa caused 16 deaths. There seems to be room for improvement in the scavenging and drainage, and the imperfect polluted water-supply deserves particular attention.

LIVERPOOL.—In this large municipality of over half a million persons, there were 20,612 births and 15,584 deaths registered in 1878. Both the birth and death rates were higher than in 1877; the death-toll amounting to 29.3 per 1,000, against 29.0 in the previous year. The rate of the parish itself was equal to 34.9 and that of the out-townships to 23.7 per 1,000. The increased mortality of the year was owing to the prevalence of measles and scarlatina, the former causing 444 and the latter 947 deaths; and to the great extremes of temperature in the summer and winter quarters. The hot weather in June, July, and August caused a large increase in the number of deaths from diarrhœa; and the winter frosts had a very serious effect upon the health of the aged, 337 more deaths from pulmonary disease being registered than in the corresponding weeks of 1877. The deaths of infants below the fifth year of age amounted to 7,408, and thus comprised 47.5 per cent. of the total deaths, the average percentage being 47.9. Zymotic diseases occasioned 3,698 deaths, and accounted for 23.7 per cent. of the total mortality, and 2.3 per cent. less than the average for the preceding ten years. "Typhus and infantile remittent fever", under which misleading title Dr. Taylor includes all continued fevers, caused 375 deaths, 122 of which were typhoid and 155 typhus cases. Diarrhœa was fatal in 979 and whooping-cough in 422 instances. Tubercular diseases occasioned 2,078 deaths, or 3.9 per 1,000 of the estimated population. Dr. Taylor's tables are, as usual, very full and interesting; and the details given of sanitary work show the magnitude of the operations essential for the supervision of a large town. Thus 52,000 visits were paid to the 1,100 lodging-houses in the town; 2,092 privies were converted into water-closets; 4,428 cases of infectious disease were reported; 7,107 visits were paid to houses for disinfection purposes; 35,052 articles were sent to the disinfecting apparatus; 190,000 pounds of veal, 100,000 of pork, 240,000 of fish, besides other viands, were seized and destroyed; and over 70,000 nuisances were dealt with.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, SEPTEMBER 27TH, 1879.

THE DOCTOR IN THE KITCHEN.

THE public mind is not yet sufficiently awakened to the importance of a thorough and active campaign against the waste of food which characterises the habitual dietary of rich and poor in Great Britain; but, from the extended welcome given to the few words which we wrote on the subject last week, it is apparent that the prospect of a winter of much scarcity has predisposed many to the earnest consideration of this question as one of much public moment. A good doctor, it has often been said, must be a good cook; and it is reported of a cynical physician of great repute that, being seen to issue from the kitchen of a large institution which he was visiting, he said, on being interrogated; "I always go to salute the cook; the cooks are the doctors' best friends; if they were not so bad, we should have but few patients. I owe half my income to bad cooks." This light witticism—"spoken ironical", as Artemus Ward would have it—conveys a serious meaning which we all recognise. A bad cook is wasteful of material, of money, of fuel, and of health; and, with a few exceptions, English cooks are all bad cooks, in one sense or other; unskilful in execution, or extravagant in selection, and destitute of sound and economical traditions. Neglecting for the moment the cooking of the rich—who are usually content with a diet as monotonous as it is heavy and excessive in nitrogenous elements—we may turn to those who most interest us, as the types upon whose model the poorer classes follow at a humble distance. If we look to the *cuisine* of the lower middle classes, and of the modest household of the curate, the clerk, and the skilled artisan, we see that, as a rule, the art of cooking begins and ends with roasting, boiling, or grilling a limited number of joints of meat and a limited repertory of vegetables. The smaller the household and the income, the less the range of choice, and the smaller the ingenuity in rendering common things digestible and palatable. The staple dinner of the hearty and well paid artisan is a rump-steak, or a cut of the best part of mutton or beef; and, when there remains cold meat or cold vegetables, or cold fish, the art of dealing with them, however simply, is little studied either by housewife or cook. In a French household, the little piece of stewed meat is preceded by a pleasantly flavoured soup, made with the bones and the parings of the meat, and some of the remnants of yesterday's dinner, with perhaps crusts of bread and some vegetables added; the meat itself is served with stewed beans, or carrots and onions, or potatoes. If the joint of one day be a piece of beef, next day the cold meat appears, perhaps cut in slices, with oil and vinegar, or with a mustard sauce. The cold potatoes and cold stewed beans or cauliflower of the previous day make an excellent salad next day, with perhaps a tomato added, cut in slices. The maccaroni and cheese left over from a previous meal reappears at the next, reheated with other sliced cold vegetable, celery or salsify, or whatever else, and covered with a little browned scraped cheese.

The commonest fish, such as ray—which diet poor and rich alike neglect—is served habitually with a little "brown butter"; and neither workman nor epicure need despise the nourishing and toothsome dish. Cold boiled fish reappears either "à l'huile", or with a sauce of oil and mustard beaten together into a cream, and is at least as welcome as on

the first day when eaten hot; or, with bread-crumbs and pepper and salt, a "panade" is made, in which much bread and a little fish make up a most nourishing and appetising *plat*. Even conger soup and dog-fish soup are not below the appreciation of a maritime population; and those who have tasted both on the coast of Normandy can answer for their being both palatable and nourishing. "Bouillon-baisse", the fish soup of Marseilles, is a speciality which it might not be easy to import; but any one who has tasted it, either in Marseilles, or in the Rue Boiel-dieu, in Paris, will not think it a dish to be despised. What a plebeian and usually coarse and tasteless dish is tripe, as usually prepared in England; how digestible, nourishing, and cheap a dinner may be made off "tripe à la Caen", at a hundred restaurants in Paris; and "soupe à la fromage", the plebeian ornament and charm of many a "petit souper fin"; and the whole tribe of vegetable *purées* in soup—potato soup, carrot soup, turnip soup—so simple, so nourishing, so inexpensive, and easily made. They are not unknown in England; but how rare! Again, in the art of cooking potatoes and fish, when shall we learn to fry fish, say, as the poor Jews in Whitechapel do? or potatoes as is done at the corner of every poor street in Paris? This mode of cooking is physiological; it is scientific; and, properly done, it is economical and delicious. English cooks use shallow frying-pans—in which it is impossible to fry properly—chiefly because they are too careless to strain or clarify the fat or olive-oil which they have used once, and to make it serve again and again, as all economical and reasonable cooks do or should do. Olive-oil is the best material for frying either potatoes or fish, and, if used carefully and strained and from time to time cleansed, may be used over and over again. Any one who chooses to take a lesson in frying potatoes at the corner of the street may see the wire bowl of potatoes plunged into a deep saucepan full of boiling fat, and rapidly cooked and browned in a sea of fluid without ever touching the bottom of the vessel; and, if he choose to carry off a pennyworth in a paper bag, he will observe that they are of a delicate amber colour; the water having been driven off by the great heat, they are dry, floury, digestible, and nutritious as they are savoury; and the proof of the perfection of the operation is, that they do not grease the paper bag.

We are reminded that we spoke last week of pork and beans as an economical and physiologically excellent food, unusually popular in some parts of America; and that bacon and beans are much used in rural districts of England. It is true: and bacon and beans make an excellent food, but as they are generally boiled, and as the beans are often tough, the dish is open to improvement. Cooked in a "Warriner" pot, in which the liquor of the meat is not lost, and the beans well steeped and softened first, and cooked with the bacon and impregnated with its juices, bacon and broad beans are an excellent dish; and boiled as it is usually—if the liquor be not wasted, but used for next day's pea-soup; and if the beans be soft, and if what are left be used with the sliced cold boiled potatoes for next day's salad—we have nothing to say except in praise of the dish. It becomes, however, monotonous, and the beans, unless young, are apt to have hard shells which are not easily vanquished. The American pork and beans are prepared by placing a piece of fat pork on a little iron tripod in a pie-dish of which the bottom is filled with haricot beans well softened or partially stewed, with a little salt and pepper strewed over the beans; this is put in the oven, and the fat of the pork as it falls upon the beans, softening them, adds its carbon to their nitrogen, and makes a dish of the smallest possible cost, on the level of the lowest culinary intelligence, and yet which may tempt any honest appetite.

In the simplest things, the grossest ignorance prevails. Fried steak and onions is a sort of *bourgeois* speciality of England; and yet, how few English cooks can prepare a *filet* to equal the Chateaubriand of a French cook; and how few cooks know how to make a good *purée* of onions. The onions should be fried first—Breton fashion.

At the dinner which the Emperor of Germany gave this week to the great officers of state and of the army at Strasburg—cooked no doubt by a French cook—the *pièce de résistance* was a *gigot Breton*. What is a *gigot Breton?* Nothing else than a leg of mutton roasted, served in a dish with haricot beans stewed closely in stock-gravy, and a *purée* of onions fried and rubbed through a sieve. It is a dish for a king, for an emperor; but it is the simplest of *bourgeois* luxuries, within the means of every well-to-do artisan or small tradesman.

The grave side of this question is that with improved cooking power, and with a wider range of selection of food, comes greater economy. All vegetables, beet-root, radishes (which hardly ever appear at our dinner-tables); celery, which we mostly eat in chips; raw chestnuts, which our cooks hardly know except roasted or boiled at dessert; red beans, white beans, maize, rice, coarse fish, cold fish, scraps of meat; the previous day's remnants of vegetables: these are among the elements out of which a reasonable and economical cook constructs a savoury and nourishing diet-list, with a due proportion of meat chosen not always from the choice parts. The servant of the tradesman learns in time to practise the like ingenious and pleasant economies in her own home; and the French artisan lives twice as well as the English working-man at half the cost, and that too in a capital such as Paris, where bread, butter, milk, sugar, coffee, in fact most of the necessaries of life, are from twenty to fifty per cent. dearer than they are in London.

FOREIGN DOCTRINES OF TREPHINING.

THE recent volume of *Revue des Sciences Médicales* contains a very exhaustive article, by M. Schwartz, on the recent history of trephining and the indications for this operation. The paper is divided into two sections, which treat respectively of primary and secondary trephining. It will be of interest to give an abstract of this valuable report.

Percival Pott, J. L. Petit, Quesnay, Méhie, and De la Touche frequently practised preventive trephining. The object of this operation was to prevent compression and inflammation of the brain, by opening the skull immediately after the accident. In the language of modern surgery, however, trephining is said to be primary when it is performed in the course of the first few days following the accident, and either before the period of inflammatory reaction, or even after it has set in. It is necessary to bear this point in mind. During the latter half of the present century, the operation had become almost obsolete. It was not until 1867, when Professor Broca published the results of his researches on the centre of localisation of speech, that the attention of French surgeons was again directed to it. An animated discussion took place at a meeting of the Société de Chirurgie, when it was discovered that trephining had been so rarely practised of late, that it was very difficult to collect a sufficient number of cases to justify or oppose the operation.

The year after this discussion, in which the most celebrated French surgeons joined, M. Larrey presented to the Society a paper on trephining, and the indications and contraindications for performing the operation. According to his experience, the operation was indicated: 1. In cases of fracture of the cranium, when the fragments of bone press on the brain, and give rise to serious symptoms, which persist even after the fragments have been removed; 2. In cases of fracture where the splinters and fragments of bones, or of foreign bodies, have penetrated into the substance of the brain, and it is impossible to remove them without trephining; 3. In other complicated lesions of the skull, where there are symptoms of an accumulation of blood or pus pressing on the brain, and the usual therapeutic agents remain ineffective.

The following were the contraindications for trephining: 1. When a foreign body has penetrated so deeply into the brain that it cannot be recovered; 2. If the blood or pus contained in the skull do not appear to form a focus in connection with the opening in the bone; 3. In all fractures which are not complicated by any phenomena of compression or of paralysis, etc.; 4. In cases of cerebral commotion or coma; 5. In epileptiform transitory convulsions; 6. In cases of encephalitis or encephalomeningitis.

The only drawback to this elaborate classification is, that it is almost impossible to distinguish between these different lesions at the bedside of the patient. This difficulty, in fact, was one of the principal strongholds of the adversaries of trephining. The surgeons of the day were

divided into two parties; but the prevailing opinion was against the operation.

In 1874, Sédillot strongly advocated trephining in cases of fracture of the inner table of the skull; but, as it is very difficult to diagnose isolated fracture of the inner table, little attention was given to his doctrine till 1876, when M. Sédillot presented to the Académie des Sciences a treatise on trephining, containing the results of one hundred and six observations made by him. Of these one hundred and six patients with fracture of the skull, seventy-seven were trephined and twenty-nine were treated by the expectant method. Of these latter, one recovered and twenty-eight died. Of the seventy-seven who were trephined, twenty-nine recovered and forty-eight died. No fixed time was given for the performance of the operation. Of nine patients on whom preventive trephining was performed, six recovered and three, or 33.3 per cent., died. Of sixty-eight on whom it was done for curative purposes, twenty-four recovered and forty-four, or 64.7 per cent., died; and of forty-seven, where the operation was deferred, fifteen recovered and thirty-two, or 67 per cent., died. It results from these numbers that the chances of recovery decrease in proportion as the operation is postponed.

About the same time, attention was attracted by the remarkable works of Hitzig and Ferrier on cerebral localisation. They proved, by their investigations, that there exist certain zones on the surface of the brain, in the fronto-parietal region, which, if irritated, will give rise to convulsions or contractions in the opposite half of the body. If these zones are removed or destroyed, paralysis of certain members follows. According to M. Vulpian, these zones act through the intermediary agency of the grey cortical matter, or through the white matter which is situated beneath the grey substance. Bochefontaine and Duret have shown that a certain proportion of the phenomena of irritation, such as convulsions and contractions, can be traced back to lesions of the nerves of the meninges, especially of the dura mater. These phenomena ought in fact to be regarded as true reflex actions, of which we know the centripetal tract, the centre, and the centrifugal tract. Having once settled the different centres of localisation in the brain, the next step was to discover what particular places on the skull would correspond to the said centres. This could best be done by ascertaining the position of the fissure of Rolandi, seeing that such of the motor centres whose position is sufficiently well known are situated around it. In the adult, the mean distance from the bregma to the upper end of the fissure of Rolandi is forty-seven *millimètres*. The number varies according to the conformation of the skull, but the deviations are very slight indeed. The bregma may be determined by the aid of Professor Broca's ingenious instrument, or by M. Lucas-Championnière's biauricular cartoons. The point where the biauricular line is intersected by the median line of the calvarium corresponds to the spot we wished to find.

In order to ascertain the inferior end of the fissure of sulcus Rolandi, draw a horizontal line for about seven *centimètres* from the external orbicular apophysis. If a perpendicular line be then erected on the posterior end of this line, and continued upwards for five *centimètres*, the inferior portion of the fissure of Rolandi will be found to correspond exactly to this point. The localisation of the centre of speech is determined in the following way. A horizontal line is traced from the external orbicular apophysis, and continued towards the crest of the frontal bone for about five *centimètres*. A perpendicular line, three *centimètres* in length, is erected in this spot. If the trephine be applied to the region which is situated anterior to the fissure of Rolandi, after it has been traced out in the way we have just described, it will affect the anterior motor centres. If the trephine be applied to the region situated behind the fissure of Rolandi, it will affect the posterior centres.

It is natural that, in proportion as a more thorough knowledge was obtained of the functions of the cortical substance of the brain, and especially that portion of it which is closely connected with the skull, professional opinion became gradually more reconciled to the operation. This new phase was ushered in by the works of MM. Proust, Terrillon, Lucas-Championnière, Pozzi, Gosselin, and Le Dentu. The two latter presented each a report on the subject; the former to the Académie de Médecine, the latter to the Société de Chirurgie, which contain a fund of valuable information for the surgeon.

It remains now to speak of the present state of the question in France. According to the opinion of such eminent surgeons as Dr. Legouest and Dr. Tillaux, the removal of splinters or fragments of bone from a fracture of the skull does not constitute primary or preventive trephining. It is merely a surgical operation, such as would be resorted to in any case of fracture, and performed with the aid of appropriate instruments.

Concerning primary trephining (for preventive trephining has become nearly obsolete, in spite of Sédillot's endeavours to restore it), modern surgeons are divided into three parties. Those who look upon the doctrine of cerebral localisation as not being sufficiently established yet, and who do not feel themselves justified in diagnosing a cerebral lesion from a functionary symptom, have remained, as it were, stationary. M. Gosselin and the German surgical school represent this opinion. The theories of this party may shortly be summed up as follows: Preventive trephining can be resorted to without any danger, and even be useful in cases where the skull has already been opened by a fracture; but it is more dangerous than useful, whatever the functional symptoms may be, when the skull has not been fractured, and would have to be opened by the operation. To the second category belong the surgeons who believe to a certain point in the doctrine of localisations. They admit that the operation may prove useful under the following circumstances: 1. In cases where it is necessary to remove foreign bodies or fragments of bone from the dura mater and the brain; 2. When it is necessary to promote the evacuation of accumulations of blood or serum between the dura mater and the brain, as these are liable to exert a deleterious influence on the brain, either through putrefaction or by pressure; 3. For the purpose of allowing purulent accumulations to escape.

Trephining is always dangerous when it establishes a communication between the arachnoidian cavity and the air. It follows that, in cases of existing fractures, it may be performed without danger. Messieurs Le Dentu and Legouest object to preventive trephining. Primary trephining may be resorted to in cases of convulsions which are caused by a limited depression of the skull, or by general hemiplegia accompanied by stertorous breathing and loss of consciousness. In all other cases it is best to wait, as it often happens that all these symptoms disappear without surgical treatment. If, however, the serious symptoms persist, or become more intensified, the operation must be resorted to at once, but no more crowns should be applied than are necessary. In short, the practitioners ought entirely to be guided by local symptoms, and not by the situation of the centre, the peculiar condition of which gives rise to certain symptoms.

The third class is represented by M. Lucas-Championnière. He teaches that trephining may be determined solely by the cerebral localisations, and that even preventive trephining is admissible. The operation is indicated in cases where it is necessary to raise up or remove fragments of bone which irritate the brain, to remove a foreign body, or to evacuate an accumulation of blood in the brain. It may also be performed at a later period for the purpose of removing splinters, raising a depression, or evacuating a purulent extra- or intra-cerebral gathering. If, however, no apparent lesions or accidents take place after a trauma of the skull, it is advisable to wait. If the patient present depression of the skull without any brain-symptoms, the surgeon must hold himself in readiness to trephine at a moment's notice. The same precautions must be taken in a case of traumatic fracture without depression.

If the patient be comatose, the operation must be resorted to in cases of depression of the skull, or of paralysis or convulsions of the opposite half of the body. M. Lucas-Championnière is so much in favour of trephining, that he regards it as indicated in cases of paralysis where a other symptoms are absent. In secondary paralysis, the indications are less formal. In general hemiplegia, the operation may be safely performed, as the lesion is probably an extensive one. In cases of con-

vulsions, with or without paralysis, the operation is *de rigueur* if the convulsions be localised.

As far as fractures of the inner table are concerned, trephining must be performed whenever the symptoms appear serious. The trephine must be applied to that particular spot of the surface of skull which corresponds to the affected centre. The latter can easily be identified by symptoms of paralysis or localised convulsions. It does not do to be too timid; and a number of trephines can be safely applied. In short, the author has come back to the doctrine of preventive trephining.

Dr. Otis, in his interesting work on *Gunshot-Wounds* during the civil war in America, has expended much labour on an exhaustive compilation of statistics on primary and preventive trephining. He tabulates the cases of one hundred and ninety-six patients who were trephined for gunshot-wounds: of these, 110 (56 per cent.) died; 46 operations for primary trephining were performed, with a mortality of 32, or 69.6 per cent.

Echeverria, in his work on *Trephining for Traumatic Epilepsy*, quotes 18 cases of what he calls primary trephining, out of which only 3 ended fatally. In Germany, the majority of surgeons were even more opposed to the operation than in France. Beck, Bergmann, Chelius, and Roser admit it only in exceptional cases. Nussbaum, Esmarch, and especially Stromeyer, are very much against it. It seems, however, as if of late a gradual reaction in favour of trephining were taking place in Germany, as is evident from Bluhm's treatise on the subject. In fact, Fischer, Roser, and Bergmann recommend trephining with a view to prevent encephalo-meningitis, and in certain cases of depressions of the skull which may be recognised easily by the existence of a wound or a visible depression of the bones of the skull. They do not think it safe to rely too much on certain functional symptoms. According to Bluhm, the death-rate in primary trephining is 55.26 per cent., which rises to 64.29 per cent. if we consider only the cases where the operation was performed for gunshot-wounds.

In short, in comparing the statistical tables drawn up by Sédillot, Echeverria, Otis, and Bluhm, it will be found that two are in favour of primary trephining, and two against it. We must, however, remember that out of the eighteen operations which Echeverria quotes as primary, only seven were performed in the course of the first four days after the accident. The remaining operations must be classified among the intermediary operations for trephining.

In comparing all the different statistical tables which we have quoted in this work, we find that the danger of the operation decreases if performed from five to twenty days after the accident, *i. e.*, if secondary or intermediate trephining be resorted to instead of primary. It must not be inferred from this that primary trephining ought never to be performed; we have as yet no right to emit a decisive opinion on the subject. But if the operation is to be resorted to at all, it must only be done on very precise indications; and it might even be unsafe to trust too much to the theory of localisation till our knowledge of the functions of the grey matter of the brain has become more firmly established, and we have discovered more satisfactory methods of applying antiseptic dressing to head cases.

INFANT MORTALITY IN LEICESTER.

About a year ago, we called attention to a few considerations with reference to the continually excessive rate of infant mortality prevailing in Leicester, pointing out that this excess was very far from entirely due to the exceptional fatality of summer diarrhœa, in so much as the mortality due to atrophy, debility, convulsions, teething, and premature birth, also showed a marked excess. Dr. William Johnston, the Assistant Medical Officer of Health for the borough of Leicester, has just issued his annual report for 1878, in which he expresses his conviction that the conclusions at which we arrived, as well as the arguments on which they were based, "are unsupported by facts". All the facts bearing upon the excess of infant mortality in Leicester are full of interest, as helping to throw light upon the excess in other large towns; it may, therefore, be useful to refer to the conclusions at which we arrived a year since, and briefly to examine the grounds upon which Dr. Johnston so decidedly pronounces them to be untenable.

It is beyond question that, while the death-rate of infants under one year of age in Leicester invariably shows a marked excess, the rate of mortality among children and adults aged upwards of one year compares favourably with the rates prevailing at those ages in most of the other large English towns. It is much to be regretted that Dr. Johnston, in his report for 1878, just published, does not deal scientifically with the mortality at different groups of ages in Leicester. In the first summary-table of his report, Dr. Johnston attempts to show the variations of infant mortality in Leicester during thirty-three years, ending 1878. This would have been a most valuable summary-table if the facts had been given for each year. But, in the first place, the rates of mortality alone are given, and secondly, the thirty-three years are grouped together in an apparently arbitrary manner in groups of four, five, six, and seven years. It is, however, still more fatal to the value of the table, that Dr. Johnston attempts to show the rates of infant mortality in these various groups of years by giving the proportion of the deaths under one year to a thousand of the population at all ages. This mode of calculation is entirely valueless for the purpose of measuring infant mortality for comparative purposes. The proportion of deaths under one year to births, has long since been accepted by vital statisticians as the most satisfactory standard for measuring infant mortality. Judged by this standard, discarding Dr. Johnston's arbitrary groups of unequal periods, and adopting in their place the census decades as far as possible, it appears that, in the six years 1845-50, the proportion of deaths under one year to births was equal to 213 per 1,000; in the ten years 1851-60 it declined to 202, rose again to 220 in the following decade, 1861-70, and has averaged 219 in the first nine years of the current decade. The average rate of infant mortality in the twenty large English towns during the past nine years, has been 174 per 1,000, and ranged from 144 and 160 in Portsmouth and London, to 219 and 222 in Leicester and Liverpool. The mortality statistics of Liverpool are unfavourable at all ages, but with Leicester the case is very different. The rate of mortality in Leicester at every age over one year is below the normal life-table rate, or rather has been in recent years. Dr. Johnston gives no true death-rates of the different groups of ages for Leicester, but we took the trouble to calculate these rates for 1877, and found that, at every group of ages over one year, the death-rate per 1,000 persons living at such group was below the average. Even between one and five years, the actual death-rate in Leicester in 1877 was but 29.56 per 1,000 living at those ages, whereas the life-table rate is 36.7. This is a remarkable fact, which is partly accounted for by the rate of mortality from all the principal zymotic diseases, except diarrhœa, being considerably below the average during 1877. In 1878, the death-rate in the borough was still lower than in 1878, and there is little doubt but that the true rates of mortality at groups of ages, would show similar results for that year. Dr. Johnston attempts to prove that the excess of infant mortality in Leicester is confined to the third quarter of the year, and that it is, in fact, entirely the result of diarrhœa fatality. We pointed out last year, and we have the authority of the Registrar-General's 40th Annual Report, recently issued, for reasserting, that the excess of infant mortality in Leicester referred to atrophy, debility, convulsions, teething, and premature birth, compared with that recorded in other large English towns, is proportionally as large as the excess of mortality due to diarrhœa. With regard to the marked excess of deaths referred to atrophy in Leicester, Dr. Johnston states that "there are several medical men of extensive practice in the town who regard diarrhœa as only a symptom indicative of, or incidental to, previously existing developmental disease; they accordingly assign the cause of death in many of their diarrhœal cases to debility, weakness, or atrophy". Dr. Johnston adds very naturally that, so far as he is aware, this mode of certification is not followed by the medical men of any other large English town. This remarkable statement appears to prove that the mortality statistics of Leicester, in consequence of this irregularity of

certification, considerably understate the fatality of infantile diarrhœa. It would be interesting to know whether the excessive proportions of deaths under one year, attributed in Leicester to convulsions and premature birth, could be explained in a similar manner. Whether this be so or not does not appear to seriously affect the conclusion we arrived at twelve months ago, and which we see little reason to modify. The death-rate in Leicester at every age, except in the first year of life, has been so low in recent years as to preclude the possibility of attributing the excess of mortality among infants aged under one year solely to what is usually understood by low sanitary condition. We then attributed it mainly to ignorant neglect of infant life, and we appealed to the women of Leicester to co-operate with the medical officer of health in an investigation of its causes. It is eminently satisfactory to find that the remedial and beneficial effect of *crèches* or day nurseries upon infant mortality, is now engaging local attention, and that their institution is already promising the best results.

IS PILOCARPINE AN OXYTOCIC?

In the *London Medical Record* for January 1879, there is an account of the experiments of Dr. Hyernaux with this drug upon pregnant rabbits. The results arrived at were that the drug produced no symptom of labour, but, when persevered in, reduced the animal to a moribund condition. In these experiments the drug was administered by hypodermic injection. The results obtained by Dr. Hyernaux on pregnant women were similar. He administered the drug by hypodermic injections to two women. In the first woman, labour resulted, but she had already been subjected to warm water enemas, and warm hip baths, which had excited the commencement of labour. In the case of the second woman, who was subjected to the action of pilocarpine alone, labour did not result. The constitutional symptoms, however, which were produced were marked. Immediately after the subcutaneous injection of three-tenths of a grain of chlorhydrate of pilocarpine, the patient's eyes became brilliant, then humid and tearful, the sight was obscured without great alteration of the pupil, the face became covered with sweat, which poured off in large drops. The pulse rose to 160 per minute, the respiration to 30. The whole body was bathed in sweat. The hands and feet were cold and sticky. There was profuse ptyalism, accompanied by watery vomit and diarrhœa. The urine was abundant. Lastly, it is stated that the patient felt very ill. Not the slightest symptom of labour resulted from all this suffering, although this patient received three injections. In the *Medical Record* for February is reported a case by Dr. Kleinwachter, in which three injections were given, and labour resulted at the end of three days. The lying-in was attended by symptoms of metritis, but the patient recovered. In the same number of the same journal, is reported a case in which Mr. Clay of Birmingham induced labour by pilocarpin. Eight injections were given, and by the *fourth day* the os uteri was dilated to the size of a halfpenny, but was still rigid. The constitutional symptoms as seen in Hyernaux's cases were present, and it is stated that at the end of six minutes after the first injection the pulse was 62, and hardly perceptible. *The collapse was so great that it was feared she would not rally.* The dilatation was eventually effected by Barnes' bags, and a living child delivered by the forceps.

Parisi of Verona relates, in the *Gazzetta Medica Italiana delle Provincie Venete*, a case in which the pilocarpin failed. Bergesio read an account, at the Congress of the Italian Medical Association, of two cases in which it was necessary to resort to Krause's method of inducing labour to aid the action of the pilocarpine. Dr. Cuzzi of Milan also failed in two cases to induce labour by means of the alkaloid. Whether or not pilocarpin may be of use in combating the urinæmic complications of eclampsia remains to be seen. Possibly, its diaphoretic and sialogogic properties may be turned to account in the treatment of puerperal convulsions. It is in this direction that future trials should be made. The rapid action of the drug upon the skin and salivary glands must be an important point in its favour in dealing with eclampsia.

Clearly the term oxytocic (hastener of labour) cannot be applied to a drug the effects of which are, after days of misery and dangerous illness, to reduce the patient's health and strength to the lowest ebb, while, perhaps, dilating the os to the size of a halfpenny, and most likely not changing it in the smallest degree. Whatever the value of the drug may be, it is not oxytocic. Professor Demme of Berne says that pilocarpin is an efficacious diaphoretic and sialogogue in the treatment of certain diseases of young children. In appropriate doses, it is well borne by the youngest patients. Unpleasant symptoms are very rare, and can probably be altogether prevented by small doses of brandy before the injection. The cases in which it seems especially suitable are the parenchymatous inflammations of the kidney, with dropsy, following scarlatina and diphtheria. The ages of the patients have been between nine months and twelve years. The doses administered have been from five *milligrammes* to two *centigrammes*.

Queen Charlotte's Hospital for Lying-in Women was re-opened on Saturday, the 20th instant.

Dr. Ramskill resigned his appointment of Physician to the London Hospital on the 23rd instant, after a period of twenty years' service; and he was on the same day elected a Consulting Physician to the hospital.

At Memphis, cases of yellow fever continue to be reported. Ten fresh cases were reported on Wednesday morning last, and six deaths were reported on Thursday and three deaths on Friday.

The Zoological Institute at Kiel, which was opened only last year, was partially destroyed by fire on September 3rd. The loss is estimated at 20,000 *marks* (£1000).

A coroner's jury has returned a verdict attributing the death of a patient in the Middlesex Hospital to the fact of the administration of chloroform when under delirium tremens to procure sleep. The patient was suffering from injury to the foot, and was the subject of delirium tremens.

The Examination for the Army Medical Department, which was announced to be held in September, has, we understand, been postponed, pending the consideration by the Treasury of the new Warrant. It is hoped by the War Office authorities that the Treasury decision may be given in time for an examination to be held before the next session of the Army Medical School at Netley.

On the representations of the authorities of Guy's Hospital, the Local Government Board have appointed Mr. John Gittins, one of the Public Vaccinators of St. Olave's Union, as a Teacher of Vaccination under the Order of Council of the 1st December 1859. This will be a great convenience to the students of Guy's Hospital, who have been obliged to attend the Central Station in the Blackfriars Road since the College of Physicians and the College of Surgeons have accepted no certificates of proficiency of vaccination except those signed by teachers authorised by the Local Government Board.

Francis James Hammond, 41, of Drury Lane, was on Tuesday last indicted, at the Central Criminal Court, for a felonious assault upon Ellen Saunders, with intent to procure abortion. He pleaded "Not guilty". The jury, without retiring, returned a verdict of "Guilty"; and Mr. Justice Lopes passed a sentence of ten years' penal servitude.

A case of death by accidental poisoning is reported from Higher Broughton near Manchester. The wife of the principal of the High School mixed a draught of "essence of almonds" and water, and drank it; she died rapidly of prussic acid poisoning. The sale of poisonous "almond essences" ought to be prohibited except under the proper precautions under which poisons are permitted to be sold.

A LETTER signed "Quoits" was admitted to our columns last week, as to which we desire to make a remark and to express a regret. Its statements were such as no writer should permit himself to make except over his own signature; and were, moreover, according to our estimate, altogether unjustifiable and contrary to the facts. The letter was admitted contrary to orders, and without being submitted to the editor.

THE new building of the London Temperance Hospital, now in course of erection in the Hampstead Road, will, it is stated, cost, when completed, £30,000, of which sum about £21,000 has been subscribed.

THE last *Gazette* contains a series of regulations issued by the Local Government Board for the conduct of the Metropolitan Infirmary for Children at Margate.

ROYAL COLLEGE OF SURGEONS.

THE vacancy in the Court of Examiners, caused by the resignation of Mr. J. E. Erichsen, F.R.S., the senior Vice-President of the College, will be filled up subsequently to the meeting of the Council on October 16th, when it is generally expected that the choice of the Council will fall on Professor John Wood, F.R.S., of King's College Hospital. The following Fellows of the Royal College of Physicians have been nominated for election at the quarterly meeting of the Council, to be held on the 16th proximo, for the office of Examiner in Medicine, in the vacancy occasioned by the resignation of Dr. Sieveking of St. Mary's Hospital, elected a Censor of the sister College: viz., Dr. William Henry Broadbent, Physician to St. Mary's Hospital; Dr. William Howship Dickinson, Physician to St. George's Hospital; and Dr. Samuel Jones Gee, Physician to St. Bartholomew's Hospital. It is stated that other candidates will no doubt be nominated.

SPECTACLES FOR SOLDIERS.

IT is announced that the French Minister of War has authorised the wearing of spectacles by soldiers on duty, subject to certificates of the military surgeons of their being necessary. This is, of course, especially necessary in a "territorial army" and under a system of conscription; but it is too reasonable not to recommend itself for general adoption.

SMALL-POX.

ONLY one fatal case of small-pox was recorded in London last week, against seven and three in the two preceding weeks; this was of a child aged thirteen years. The number of small-pox patients in the Metropolitan Asylum Hospitals has steadily fallen during the past five weeks from one hundred and eleven to seventy on Saturday last. Six new cases were admitted to these hospitals last week. Five deaths from small-pox occurred during the week in Dublin; not one in the English provincial towns.

THE DEATH-RATE FROM DIARRHŒA.

THE deaths referred last week to diarrhœa, in the twenty English large towns, showed a further decline from recent weekly numbers; the fatality of the disease was proportionally greatest in Liverpool, Salford, Leeds, and Leicester. In London, the deaths from diarrhœa, which had been 209, 146, and 134 in the three preceding weeks, further declined to 92, and were 8 below the average. Of these 92 deaths, 62 were of infants under one year of age.

THE CHINCHONA PLANTATIONS.

THE coffee bug has attacked the chinchona trees on an estate on the Nilghiri Hills in a very serious manner. The effect on the chinchona is unmistakably mischievous, dwarfing the stem and causing a stunted growth in the leaf. The leaves, a few days after being attacked, turn black and shrivel up. The proprietor of the estate in question has forwarded a specimen of chinchona affected by the bug to the Madras Government.

SPECIFICS AGAINST CHOLERA.

THE Punjab Government have made experiments with "Galen's cholera specific", which has from time to time been advertised in the press throughout India, and particulars have been received as to its efficacy. Two bottles of the specific were forwarded each to the Principal of the Medical School at Lahore; the Civil Surgeon, Peshawur; and the Civil Surgeon, Delhi, with a request that the medicine might be carefully tried, its action noted, and the result reported. The opinions of these three medical officers are not favourable to it; and the Inspector-General of Dispensaries, under whose superintendence the experiment was tried, considers that the evidence obtained "shows that it is not a specific for cholera, and does not show that it is of any value in the treatment of the disease".

INDIAN MEDICAL OFFICERS.

THE *Gazette of India* publishes the following rule, which is substituted for Clause 2, Article VIII, of the Bengal Military Fund Regulations: Surgeons-major who have subscribed as lieutenant-colonels, after twenty years' service, will be eligible for enrolment in the grade of colonels from the date of completing twenty-seven years' service; but, if the option be not availed of at the time specified, a health-certificate will have to be furnished, and arrears adjusted from the expiration of the said term of twenty-seven years. The rule as regards veterinary officers remains unaltered.

INSPECTION OF "CHILDREN'S HOMES".

MR. JUSTICE LOPES, in summing-up the evidence against Laura J. Addiscott, on her trial for injuring the health of children entrusted to her care in the "Home" of which she was proprietress, by neglecting to provide them with proper food, clothing, medicine, and medical comforts, observed that he could not help feeling the deepest regret, at every turn in the case, that all institutions where children were taken care of were not under direct Government supervision. In this case, the greatest possible neglect was apparent in regard to the sanitary arrangements of the premises where the home was held. The prisoner was sentenced to eighteen months' hard labour. The sentence was light. It is to be hoped that the remarks of the judge will bear good fruit. This is not the only instance of neglect which has been brought to light lately at similar institutions; and adequate sanitary, medical, and general inspection of such homes is much needed.

DISPUTED WILLS.

DR. LEGRAND DU SAULLE has lately published a book called *Medico-Legal Studies on Disputed Wills*, from which we take the following curious incident. The will of Louis Cortusio, a lawyer in Padua who lived in the fifteenth century, is one of the most original in existence. He forbids all his relatives and friends to weep at his burial. He who will persist in weeping shall be disinherited, while he who will laugh heartily shall be his principal heir or universal legatee. He forbids to put up any black draperies in the house in which he shall die, as well as in the church where he is to be buried. Both must be decorated with flowers and green branches on the day of his funeral. There must be no ringing of bells, but gay music. All the musicians of the town shall be asked to his funeral; they are to walk with the clergy, making the air resound with their instruments, and singing Hallelujah as if it were Easter-day. The bier which contains his body is to be covered with bright and many-coloured cloth, and borne on the shoulders of twelve maidens of age to be married, who must be dressed in green and sing many songs. The executor of the will must see that all these formalities are fulfilled in their least details; if not, the testament will be declared void. The relatives of the deceased protested against the will, but it was declared valid.

SUICIDES IN GERMANY.

A CORRESPONDENT from Dresden writes to the *Augsburger Zeitung* that the number of suicides has greatly increased in Saxony. The statistics for 1878 show that there were 1126 cases of suicide, of which 215 were women. In 749 cases, death was caused by hanging, in 217 by drowning, in 88 by shooting. The causes which led to the committal of the crime were: in 284 cases, melancholy; in 105, weariness of life; in 94, drunkenness and distemper; in 90, mental disturbances; in 89, poverty; in 65, physical suffering; in 39, unhappy love affairs. The

ages of those committing suicide varied generally between 90 and 14, whilst eight individuals had not attained their 14th year, and four were between 80 and 90 years of age. The number of suicides in England, or in London at any rate, during the last few weeks, has also been three times as great as it was last year at the same time. It is supposed that the bad weather, the lack of sunshine, frequent rain, the recent storms and inundations, have had a bad influence on the minds of the inhabitants.

LONDON HOSPITAL MEDICAL SCHOOL.

THE Medical College of the London Hospital having proved too small for the increasing requirements of the school, it has been decided to enlarge the present premises. Additions are being made to the library and laboratories; and the enlargement of the dissecting-room will be completed in time for the opening of the Winter Session.

PROSECUTION OF A DOCTOR OF MEDICINE FOR ILLEGAL PRACTICE.

WE read in a German contemporary that a duly graduated Doctor of Medicine of a Prussian university has lately been summoned before a court of law for practising without having passed the *staats-examen*. The charge against him was, that he had affixed in front of his house a large plate, bearing the inscription "Dr. W. Z., Doctor in Medicine, Surgery, and Midwifery", and also on his door a plate inscribed "Dr. Med. Z."; and that he had announced hours during which he might be consulted. Although he showed clearly that he was a Doctor of Medicine and had a right to use the title, he was found guilty of having used it in such a way as to lead the public to suppose that he was a duly recognised practitioner, and was fined sixty *marks* (£3).

THE SCARCITY OF ARMY SURGEONS.

FROM Simla it is reported by telegraph, under date of September 19th, that "the great scarcity of doctors is severely felt". On the other hand, at home, the Treasury delays the sanctioning of the long promised new warrant, in uncertainty as to whether it will prove satisfactory to the medical profession when it is issued, the examinations for admission of surgeons are postponed, and the Department is so undermanned that great hardship is inflicted upon surgeons, who are overworked, driven about from pillar to post, and unable to obtain reasonable periods of relief. It is well known that the Director-General was compelled to call in outside aid to meet the moderate requirements of the Zulu war, and that, at one time, forty civilians, untrained at Netley, and unskilled in military surgery, in the sanitation of camps, or in the necessities of the hygiene of troops, were employed in the late war. The Department is considerably below its strength, and is deplorably unpopular with the medical schools, so that there is little hope of improving its material until a satisfactory warrant be issued.

INFANTILE MORTALITY IN LEICESTER.

WE have been favoured, both by Dr. Crane, the officer of health, and Dr. Johnston, the assistant officer of health for Leicester, with copies of their respective reports to the Town Council for 1878. The interest in both centres in the explanations offered of the causes of the abnormal diarrhœa mortality which annually occurs at Leicester, and puzzles every one who has devoted any attention to the subject. Whilst Dr. Crane holds that the diarrhœa mortality is not the result of one cause only, but of several, such as early marriages, maternal inattention, artificial feeding, unscientific medication with cordials and soothing syrups, together with the effect of summer heat acting upon these conditions; Dr. Johnston brings forward many arguments to prove that diarrhœa, as it affects both adults and infants during the summer months, owes its origin, in a great majority of cases, to the introduction of minute living organisms (bacteria) into the system by means of air or in food, and that the disease depends upon putrefactive changes in the bowel contents, which changes are correlative to the development or multiplication of these microscopical organisms. To thoroughly understand Dr. Johnston's contentions, they must be read in the original, and those interested in the subject may profitably study a paper reproducing his views in the *Sanitary Record* for August last (see also JOURNAL, vol. i, 1879, p. 81). As we have before remarked, nothing short of a complete and searching Government inquiry will bring out the real facts as to the causation of the terrible mortality amongst infants at Leicester. Everyone who has gone into the question locally comes out with an explanation entirely different from any that have been promulgated before; and it is high time that some radical investigation should be made into the matter before another summer is upon us. The influence of diarrhœa upon the mortality statistics of the town is well shown by the subjoined figures. The total mortality was 2500, equal to a rate of 20.58 per 1000, with one exception the lowest ever recorded. More than a fifth of these deaths were from zymotic diseases, and 86.3 per cent. of these zymotic diseases were in children under five years of age. Diarrhœa alone caused 302 deaths, 275 occurring during the summer epidemic. All but nine of these were infantile cases, and 242 of the remaining 266 (or 88 per cent.) had not completed one year of life. When to this are added the deaths from whooping-cough, atrophy, convulsions, and other infantile disorders, we are not surprised to learn that, with the single exception of Norwich, the infantile mortality of Leicester was last year higher than in any of the other large towns. Whatever may be the causes, there can be no sort of doubt as to the question being one of imperial as well as local concern; and until the Local Government Board take up the matter heartily we see no prospect of any immediate remedy.

BABY-FARMING IN CHESHIRE.

THE charges of murder by baby-farming against the prisoners Barnes, to which we last week referred, are assuming a more and more serious aspect. Two of the three children found on the premises are dead, and the third is in a doubtful condition. The correspondence relating to children on whom they have traded extends to upwards of twenty towns, and includes nearly forty children entrusted to the prisoners who can at present be traced. From fifty to sixty witnesses will, it is stated, be called; and the dimensions of the inquiry in this most startling and distressing case will, it may be hoped, at last succeed in arresting the attention of Parliament and the Government, and securing a more extended application of the Act, and possibly some of those more stringent amendments of its clauses which we from the first maintained to be necessary; which were urged by Mr. Ernest Hart, Mr. Curgenven, and Mr. Charley before the Committee of the House of Commons, and for which we have since many times asked.

VACCINATION IN CHINA.

ACCORDING to reliable witnesses, the practice of vaccination has now become general amongst the Chinese, and the prejudice against it as a subtle device of the wily foreigner is rapidly dying out. But there is still a bar to its general adoption; and it is lucky for the propagation of Jenner's views that this difficulty is felt only amongst the Celestials, and not in Belgravian circles. It appears that a serious objection to the vaccination of Chinese girls lies in the fact that, without a few marks as evidence of having passed through small-pox, a marriageable maiden is wanting in one of her chief qualifications. Native swains in search of wives have not yet learned to accept the vaccination scar as a promise of future immunity; and, under these circumstances, the hesitation of Chinese mammas to allow their daughter's arms to be scratched with the lancet is easily understood.

RETURNS OF MORTALITY AND SICKNESS.

A CIRCULAR has recently been addressed by the Local Government Board to the several sanitary authorities in England and Wales, suggesting the way in which arrangements should be made for supplying medical officers of health with information as to registered deaths, and as to the sickness amongst paupers in their districts. This circular is an useful and much needed document. The work of a medical officer of health is shorn of half its usefulness if he do not receive information of the occurrence of infectious disease till long after it has happened, and has perhaps sown the seeds of infection broadcast. Even a weekly return from the registrar may be too late to be of much use; and the board therefore properly recommend that an immediate notice should be

given by the registrar of all deaths from infectious disease in fresh localities, and of all groups of deaths from such disease, or from diarrhœa, in any localities. The circular also recommends that the medical officer of health should be regularly supplied with information of the new cases of pauper sickness in his district. This information is stated to be valuable to him, not only as an index to the prevalence of non-fatal disease among all classes in the district, but as giving him occasion to exercise useful and immediate sanitary supervision over localities which are most apt to require such supervision. We believe that the majority of medical officers of health look upon these returns as of little real use, because the information they contain is too crude and vague to be of much assistance; but where the Poor-law medical officers are careful in preparing their relief lists, and especially in distinguishing the new cases, we can understand that the medical officer of health may often derive from the information thus afforded him very valuable help in nipping an epidemic in the bud.

THE GERMAN BATHS.

THE following are the statistics of visitors to the most frequented German watering-places during the summer of 1879. Aix-la-Chapelle (to August 30th), 15,447; Baden Baden (to September 1st), 31,461; Badenweiler (to August 23rd), 2,798; Bertrich (to August 28th), 1,024; Borkum (to August 15th), 1,450; Colberg (to August 15th), 3,910; Cranz (to August 15th), 2,888; Dievenow (to August 15th), 1,562; Eilsen (to August 6th), 1,368; Elmen (to September 4th), 2,031; Elster (to August 24th), 4,821; Ems (to August 15th), 8,720; Friedrichroda (to August 15th), 3,662; Glücksburg (to September 4th), 1,162; Herungsdorf (to August 15th), 3,285; Homburg (to August 31st), 8,111; Karlsbad (to August 15th), 21,019; Kösen (to August 27th), 1,589; Kreuznach (to September 7th), 5,150; Landeck (to August 18th), 2,982; Langen-Schwalbach (to August 28th), 3,567; Liebenstein (to August 15th), 1,141; Lippspringe (to August 24th), 2,325; Misdroy (to August 15th), 3,500; Münster am Stein (to September 7th), 1,075; Neundorf (to August 25th), 1,100; Neuenahr (to September 6th), 2,868; Niederbronn (to August 28th), 1,543; Nordeney (to August 16th), 4,384; Oeynhausen (to September 5th), 3,207; Pyrmont (to August 28th), 10,548; Reinerz (to August 18th), 2,770; Rothenfelde (to August 20th), 1,356; Salzbrunn (to August 18th), 2,255; Salzungen (to August 15th), 1,120; Schandein (to August 29th), 1,530; Schlangenbad (to August 9th), 1,051; Schwalbach (to September 7th), 3,727; Soden (to August 11th), 2,072; Suderode (to August 6th), 1,987; Swinemünde (to August 15th), 2,252; Teplitz and Schonau (to August 23rd), 10,346; Warmbrunn (to July 31st), 1,469; Weisser Hirsch with Oberloschwitz (to September 6th), 1,169; Westerland (to August 28th), about 1,500; Wildungen (to August 24th), 1,796; Wiesbaden (to August 15th), 54,382. In a number of other places the attendance, at the time when the statistics which we quote were compiled, was under one thousand.

SMALL-POX *versus* VACCINATION.

THE efficacy of vaccination as a prophylactic against small-pox is a matter which needs no discussion; but it is interesting to observe how the experience of the past is corroborated by the statistics of the present with regard to the comparative fatality of small-pox amongst vaccinated and unvaccinated persons. Thus Dr. Bernard's last annual report on the Stockwell Small-pox Hospital shows that, of 587 vaccinated persons admitted from January 1st to July 15th, 1878—on which date the hospital was closed for thorough cleansing and repairs—59 died, or a percentage mortality of 10.5. Unvaccinated persons were admitted to the number of 152, and of these 72 (or 48.3 per cent.) died. Of the vaccinated patients, 157 had good vaccination-marks, and the percentage mortality amongst this class was 4.4. There were 251 patients with moderate vaccination-marks, and of these 16 (or 7.1 per cent.) died; the percentage mortality amongst those with bad vaccination-marks being 20.6. No death occurred in vaccinated children under the age of five years; but there were 25 deaths amongst unvaccinated patients of the same age. Amongst the different types of small-pox, the hæmorrhagic was, of course, the most fatal in proportion. Discrete small-pox caused not a single death, though 329 cases of that type were admitted. Coherent or semi-confluent small-pox caused, with its complications, 43 deaths; confluent, 77 deaths; and hæmorrhagic, 11 deaths. Only one case of mischief arising from the 768 visits paid to patients lying dangerously ill is recorded, and this was a very slight attack. No patients were brought in public vehicles: but thirty-seven cases walked, or were carried in the case of young children, through the streets to the hospital. This is a fertile source of infection, and some means ought certainly to be devised to secure its discontinuance. It may be worth adding that during 1876, 1877, and 1878, a total of 3,110 small-pox patients were admitted to the hospital, of whom 2,448 were discharged cured, and 582 (or 18.2 per cent., calculated by the Registrar-General's formula) died. During the preceding five years, 3,178 patients were admitted, 690 patients died, and 2,587 were discharged, with a percentage mortality of 18.5.

THE STOCKWELL FEVER HOSPITAL.

THE report of the Committee of Management of this hospital has recently been issued, together with the medical report of Dr. Mackellar, on the circumstances of the cases admitted. The admissions in 1878 numbered seven hundred and thirty-three: comprising three hundred and thirty-five cases of scarlet fever; one hundred and ninety-two of enteric fever; one hundred and fifty-six of typhus; and fifty of other diseases. Room was found for all proper cases brought for admission, though sometimes the margin of available space was somewhat narrow. The managers have now resolved, as we have already reported, to erect a separate pavilion with twenty-four beds for typhus cases, in order to relieve the pressure on the enteric fever wards. The mortality amongst the patients was 20.0 per cent., five hundred and eight being discharged cured. Six deaths—one from typhus, one from enteric fever, four from scarlet fever—occurred within twenty-four hours after admission. One woman, suffering from typhus, was prematurely confined, the child only living twenty hours. A nurse and an assistant nurse were laid up with typhus; another assistant nurse with scarlet fever; and the stoker with mild small-pox. The nurse succumbed, but all the others recovered.

TWO CURIOUS CASES OF POISONING.

THE following case of poisoning by an overdose of santonin illustrates forcibly the well-worn adage, that a little knowledge is a dangerous thing, and may serve as a wholesome warning to amateur doctors. A native girl, aged 7, an inmate of one of the schools conducted under foreign auspices at Kinkiarg, complained of symptoms that were interpreted to point to intestinal worms. Accordingly, half-a-teaspoonful of santonin was administered in one dose early in the morning. For half-an-hour she appeared quite well, but she then suddenly fell down in a fit, became insensible, foamed at the mouth, with livid face and stertorous breathing. Fortunately, at this moment she vomited freely, and was placed by her attendants in a warm bath, in which she regained consciousness. Dr. Jardine, who records the case, saw her soon afterwards, and, on hearing of the dose of santonin, ordered a smart purge. The patient was well in the afternoon of the same day; and it is to the timely vomiting that she probably owes her life. Santonin, even in small medicinal doses, is sometimes capricious in its action, so that care should always be taken in its administration. A number of cases have from time to time been recorded in various medical journals, both home and foreign, where doses of six grains and under have been attended with most alarming symptoms.—Another equally curious case is recorded by Dr. James Watson as occurring at Newchwarg. Dr. Watson was sent for by a patient, who fancied he was dying of cholera, and whose symptoms proved to be sufficiently alarming to justify his fears. It was evident, however, that he was suffering from the effects of an irritant poison; and, on inquiry, it was found that an hour previously he had idly picked up a castor-oil seed, under the impression that it was a bean, and had chewed and swallowed about half of it. Five minutes afterwards, he suffered from a burning sensation in the throat, which extended along the whole alimentary canal, even to the anus. A few

minutes later, severe vomiting and diarrhœa set in, which rapidly reduced him to a very prostrate condition. Steam inhalations, with morphia and brandy internally, and mustard-poultices gave relief within an hour or two; but for two or three days the patient was weak, his digestion deranged, and he complained of dull aching which extended from one end of the bowel to the other. The interesting features of the case are the smallness of the dose which produced such severe symptoms, and the rapidity with which the poison acted on a strong man in perfect health. In Taylor's *Principles and Practice of Medical Jurisprudence*, mention is made of the poisoning of three sisters by castor-oil seeds. They took respectively "about twenty", "four or five", and "two" seeds. The first died; the other two recovered; but in none of the cases did the symptoms of poisoning occur until five hours after eating the seeds.

THE INTERNATIONAL WATER-SUPPLY COMMISSION.

AMONG the accessories of the Amsterdam Congress, was a meeting of the International Commission for Improving the Supplies of Potable Water. Mr. Edwin Chadwick presided; and among those present were Dr. Finkelburg, President of the Board of Health, Berlin; Dr. van Capelle, Medical Referee of the Minister of the Interior, Holland; Dr. Janssens, Chef de Bureau d'Hygiène, Brussels; Dr. Mouat, C.B., Inspector of the Local Government Board, England; Professor De Chaumont, F.R.S., Netley; Dr. Hardwicke; Dr. Overbeck de Meyer; Dr. Egeling, Medical Inspector, Leyden; Dr. Israels; etc. Dr. Mouat read an address for Mr. Chadwick, in French, in which the admitted essentials of good water-supply as accepted in England were summarised: they included constant pressure; disconnection of cistern-pipes; improved means of carrying away foul water; the selection of deep and pure water-supplies. The experience of prisons, shops, etc., was utilised for demonstrations of the sanitary necessity of pure water-supply. The delegates of various countries reported considerable progress in the water-supply of great towns, and especially a growing recognition by the public of the frequency with which impure drinking-water becomes a source of disease.

CHINESE OPERATIVE MIDWIFERY.

IN the series of Reports of the Chinese Customs Medical Officers, Dr. Alexander Jamieson, who edits the Reports for the Inspector-General, has given from time to time a number of most interesting, if horrible, instances of Chinese operative midwifery. Two cases which he records in his last report may be taken as fairly representative of the tortures which Chinese women have to endure at the hands of those who are supposed to assist the operations of nature. One evening Dr. Jamieson was called to see a native woman, aged 25, at the termination of her second pregnancy. She had been in labour three days, an arm presenting, and a series of native midwives had in turn maltreated her, and finally given her up. On examination, her general condition was found nearly as bad as could be, the bladder distended, the child's arm outside the vulva with the humerus broken just above the elbow-joint, the ends of the bone two inches apart, and united by what felt like an empty bag of skin. This will give some idea of the traction that had been employed. The child, dead of course, lay in the dorso-posterior position, thoroughly jammed in the pelvis. Dr. Jamieson succeeded in turning the child and effecting delivery, and eleven days afterwards the woman was about the house. In another case to which he was called, the woman was found dead, and the bed and the floor covered with blood. He was told that an arm had been presenting for two days and a half, and that the midwife, after Dr. Jamieson was sent for, had cut away the arm as high as she could reach. Profuse hæmorrhage occurred immediately, which was speedily fatal. The midwife then fled, carrying the arm with her. The people in the house said that the blood that flowed from the patient was black, and ran away like water out of a bucket. The knife had doubtless plunged into a mass of enlarged vaginal veins. In a somewhat similar case recorded in a former report, a midwife who was called in on the third day of labour cut into the child's head, and endeavoured to extract with an iron hook. Failing in this attempt, she and two other midwives, who had been previously called in, ran away, and the woman was left to die. When labour had lasted six days and a half, she was brought by her husband to hospital, when she was successfully delivered by Dr. Jamieson, and recovered. Other cases of the kind are recorded; but our readers will probably have had more than their fill of horrors in those cases already cited.

POSTING-PROOFS.

A PROPOSED new feature in connection with the postal system of the country has lately been brought before our notice. Mr. A. Clifford Eskell proposes that, for the moderate sum of one farthing, an official proof of the posting of any packet, post-card or letter shall be given; so that on any future occasion, when it is found needful to furnish such a proof that a document was actually posted, it shall be immediately available. The advantages of such a plan are many and obvious, and the system is simplicity itself; while the cost is certainly very moderate. It is suggested that the posting-proofs, as they are to be called, shall be sold in small books of three proofs for a penny, or 3½d. for one dozen, and so on. When it is wished to send a letter to the post, and to have the comfortable satisfaction that it has actually been posted, one will tear a leaf out of the small book, copy the address of the letter on to it *legibly*, and forward it by messenger or clerk with the letter, and the officials at the post-office, after comparing the letter and the address, to see that they agree, will stamp the small slip with the office-stamp and post the document themselves, whilst the messenger returns with the "posting-proof", which can be reattached to the small book whence it came, so as to be available for reference at any time. It seems that the extra work that will be caused at the various post-offices, if this promising new scheme should come into operation, will be slight, and, at a very moderate computation, the gain to the Post-Office receipts will be at least £200,000 *per annum*. The year which has witnessed the demise of Sir Rowland Hill might well be further characterised by such a valuable addition to the many and enormous advantages which his system of cheap postage has conferred on the inhabitants of these islands.

THE SUSPENSION-TREATMENT OF SPINAL CURVATURE.

AMONG the more interesting demonstrations of the International Medical Congress at Amsterdam, were those by Dr. Sayre of his method of treatment of spinal curvature and Pott's disease by suspension and the plaster jacket. The method was already known and successfully practised by a few surgeons in Holland. The brilliant success of Dr. Sayre's remarkable demonstration will undoubtedly contribute to popularise rapidly this invaluable boon to surgeons and patients. The cases included one of a patient wearing one of the recent modern and highly improved apparatus for the treatment of lateral curvature. At once, on removal of the apparatus, it was found that the patient stood nearly an inch higher without it than with it, as will often be found, on careful measurement, after removing any "special instrument"; for nearly all, by the downward pressure on the shoulder, actually depress the column vertically, while they exercise lateral pressure on the convexity of the spinal curve. The suspension made and the jacket applied, the patient, carefully measured by the surgeons present, was found to have gained another inch and a quarter, and moved about with an ease and comfort to which he had long been a stranger. The immediate satisfaction and relief afforded, and the rapid and easy cures of Pott's disease and of spinal curvatures effected by Sayre's method and jackets, are now matters of such everyday knowledge and experience, that we can readily appreciate the enthusiastic satisfaction with which the demonstration and introduction of this method of treatment was hailed by new audiences of surgeons to whom they are still novelties. Dr. Sayre received the accustomed and well deserved tribute of enthusiastic approval of the large, crowded, and highly informed section of foreign surgeons before whom his brilliant demonstration was made. We say accustomed, because the same experience may have been noted wherever Dr. Sayre has demonstrated his method before an audience of medical men, whether at the great hospitals of London, at the congresses of Manchester, at Liverpool, or at Cork. We regret to have to note an exception. At the in-

stance of Dr. Charcot, Dr. Sayre, who was intending to visit the congress at Montpellier, was persuaded to pay a visit to Paris, to demonstrate his treatment by suspension and the application of the jacket to some of the surgeons of that metropolis. Dr. Charcot especially asked M. St. Germain to afford facilities for that purpose. Although suffering acutely from articular rheumatism and neuralgia, Dr. Sayre gave such a demonstration at the Hôpital des Enfants, in the presence of M. St. Germain. That gentleman has since published "une appréciation", which he will certainly regret when he takes the trouble to come over to England and see for himself that what he condemns as "illogical and cruel" is proved by daily practice to be a painless, pleasant, speedy means of cure; that what he declares to be impossible is done every day; that every country surgeon can do what he cannot; and he will probably then regret that, in a moment of ill-informed spleen, he has descended so low as to rail at the appearance, manner, and even the dress of a great surgeon who has added to the resources of our art a most beneficent, simple, and widely applicable means of relieving a wide-spread malady, and who has not shrunk from any labour or expenditure of time in laying his methods before the judgment of his profession, and communicating those details of practical execution of which it is evident that M. St. Germain still remains scornful, because he has not realised their importance, and remains, therefore, unsuccessful.

CHILD-COLONIES DURING VACATIONS.

THE *Augsburger Zeitung* speaks very highly of an experiment that has been made this year in Saxony, and has been attended by such good results that it is intended to repeat it in future. This is nothing else than the formation of child-colonies during vacation-time. The following is said to have been the origin of the experiment. At the time of the last examinations at Dresden, a gentleman who happened to be among the spectators noticed how miserable and ill a number of the children looked. He pointed this out to the president of a hygienic society, who resolved to try what child-colonies during school-vacation could do. His plan was that the poor and miserable children of the town-schools should be sent to the country during the great vacations, where every opportunity would be afforded them to become physically strengthened by means of a judiciously regulated diet, plenty of exercise in the fresh air, healthy dwellings, etc. They were to be placed under the care of their teachers during the whole time. A committee was accordingly elected, and 5,400 *marks* (£270) collected. The children proposed by the schools numbered 280, of whom 66 were chosen; 36 boys and 30 girls. The most healthy localities were selected by medical men, and six child-colonies established. The children were much in the open air, took long daily walks, cold baths, etc. Their bedrooms and sitting-rooms were clean and well aired. When they returned home at the end of three weeks, the doctors who had examined them previously to their departure were surprised to see the results that had been obtained. As it had been feared before starting that the more delicate among the children might not be strong enough to bear the fatigues of the excursions, and that grave accidents might result from over-exertion, they were again examined and the results published. Children between eight and thirteen years of age generally do not gain more than half a pound in weight during the same space of time; now, the children belonging to the colonies gained three-and-a-half pounds in the same time; it is true that some of them, *i.e.*, the most delicate, only gained one-and-a-half pounds, but then they were not strong enough to walk much and to join in the excursions. Many even weighed twelve pounds more; they were those who had new milk daily, and partook of a fortifying repast in the middle of the day, etc. The chest-dimensions expanded considerably in those who went out on excursions in the mountains and breathed methodically and systematically in the woods. The increase in some cases was as much as six *centimètres*. The other symptoms of anæmia, such as pallor of the tissues, catarrhs, inflammation of the eyes, etc., disappeared. The report of the inspectors has confirmed this statement by showing how much the muscles of the youthful colonists gained in strength. Many children who at first had to be left behind in the excursions were soon able to go on long walks. The same experiment has been repeatedly tried in Switzerland, and has answered very well. Here the children are placed two or three at a time in families of farmers, etc., who take charge of them for a slight remuneration. The same plan is also adopted in America.

BRITISH, COLONIAL, AND FOREIGN DENTAL QUALIFICATIONS.

IT is not left for the Medical Council to determine the registration of qualifications granted under the Dentists' Act by the medical authorities therein specified. But the Council is empowered to require of the licensing bodies an account of the terms upon which their qualifications are granted; and if the course of study and of examinations is not such as to secure "the requisite knowledge and skill for the efficient practice of dentistry or dental surgery", and the defects are, after due remonstrance, continued, the facts of the case are to be laid before the Privy Council. For, by that body alone can an order be issued suspending the right to registration of qualifications so granted. The Privy Council, upon the question of qualifications, is to the Medical Council a court of reference, the decisions of which are absolute. In respect to Colonial and Foreign qualification, the rule is reversed. Here it is for the Medical Council to determine whether a qualification furnishes sufficient "guarantees of the requisite knowledge and skill for the efficient practice of dentistry or dental surgery", and, if it do not, to refuse registration to the holder thereof; but, if required, the grounds of refusal must be stated in writing, and the rejected applicant may appeal to the Privy Council, the decision of which, in this as in the previous case, is final. Whether British or foreign, the claim to be placed upon the *Register* rests on the qualification furnishing sufficient "guarantees of the possession of the requisite knowledge and skill for the efficient practice of dentistry or dental surgery". The Medical Council has, after full deliberation, determined the course of study and examination necessary to the fulfilment of the foregoing clearly expressed condition; and the British medical authorities empowered to grant dental diplomas have accepted the provisions so determined. Unless a foreign qualification comes up to this settled standard, its possessor, as such, obviously can have no just claim to be put upon the *Register;* and it is not conceivable that the Medical Council will entertain the project of placing upon the *Register* inferior qualifications merely because they are foreign or because they are held by a few persons who are already registered as in practice before July 22nd, 1878. The Council has probably shown unlooked-for liberality in allowing the Harvard and Michigan dental diplomas to be placed upon the *Register*. The operation of the Sections of the Dental Act relating to foreign qualification has an interest extending to medical as well as dental practitioners. For they are in substance identical with corresponding and unchallenged Sections of the Government Medical Bill; and the interpretation put upon them in respect to foreign dental qualifications will apply to foreign medical qualifications should the Government Bill become law.

SCOTLAND.

IMPORTANT CASE AS TO UNSKILFUL TREATMENT.

IN Glasgow, a commercial traveller has raised a case in the Sheriff Court against a medical man in Glasgow for alleged unskilful treatment in the setting of a leg, and negligence, whereby the usefulness of the limb has been impaired, and the complainer rendered unable for active employment. The sum sued for is £500.

DUNDEE LUNATIC ASYLUM.

THE Royal Lunatic Asylum in Dundee being of old construction and insufficient in size, as well as too closely surrounded by populous localities, it has been resolved to build a new asylum at West Green, about five miles from Dundee, where a sufficient amount of suitable land has been obtained. Last week, Lord Ramsay laid the foundation stone of the new buildings, which, when completed, will be sufficient to accom-

modate 300 pauper lunatic patients, and 70 private patients. The buildings also comprise a chapel, superintendent's house, farm buildings and lodges. The new asylum is to be two storeys in height, and 600 feet by 300 feet in length and breadth respectively. In the single rooms, 1,040 cubic feet are to be allowed per head, and, in the dormitories, 780. The views from the front of the asylum will be exquisite. The asylum building is estimated to cost £40,000, and, with land and other buildings in addition, the cost will be £60,000.

FIFE AND KINROSS ASYLUM.

ACCORDING to the annual report of this asylum, there were admitted during the year 76 patients, and 46 were discharged. The number under treatment had been 370. The percentage of deaths among the total number under treatment was 5.1.

SCARLET FEVER AT MOTHERWELL.

SCARLET fever is assuming an epidemic form at Motherwell. Several cases have proved fatal in the upper district of the burgh. In Windmill-hill Street, one medical man had as many as fifteen cases under treatment.

ATTEMPTED SUICIDE IN A PRISON CELL.

A WOMAN named Morrison, residing in Edinburgh, went into a chemist's shop there, and asked for a dose of laudanum. Being questioned as to the purpose for which it was wanted, she explained it was to poison herself. Having been refused her request, she became violent, was taken to the police-office, and, while in a cell, endeavoured to strangle herself. Unsuccessful in this, she determined to drown herself. Of course she was then watched. In court, Dr. Littlejohn, in his evidence, stated that the conduct of her husband had led her to threaten and attempt suicide.

HEALTH OF EDINBURGH AND GLASGOW.

THE mortality in Edinburgh last week was as low as 14 per 1,000. Nearly one-half of all the deaths were of children under 5 years of age There were 7 deaths from zymotic diseases, of which 6 occurred in the Old Town. In Glasgow, the death-rate was 17 per 1,000, as compared with 19 last year.

ANDERSON'S COLLEGE, GLASGOW.

AT the quarterly meeting of the trustees of this institution held on the 22nd inst., the vacancy in the chair of Botany, caused by the retirement of Professor Patterson, was filled up by the election of Mr. Alex. S. Wilson. This gentleman is well known as an excellent botanist and lecturer, having most ably filled the lectureship during the past summer session. At the same meeting, the question of establishing an aural lectureship in connection with the College was under consideration, and it was remitted to the managers to make the necessary arrangements for the institution of a lectureship on Diseases of the Ear.

CONVICTION FOR MILK ADULTERATION IN GLASGOW.

AN important conviction has just taken place at the instance of the Sanitary Department of this city. A milk-dealer, in the east end of the town, was, on the 19th inst., summoned and fined £2 by the Sheriff for selling milk adulterated with added water to the extent of 27.8 per cent. The defender pleaded innocence, inasmuch as the milk was sold as he received it from the farmer. From the evidence and testimonials produced, this seemed to be the case, but the sheriff held that he had no alternative but to find the defender guilty, as he was the responsible person and should have guarded his customers from imposition.

THE REGISTRAR-GENERAL'S RETURNS FOR SCOTLAND.

FROM the weekly returns of births, deaths, and marriages, in the eight principal towns of Scotland for the week ending Saturday, September 13th, we find that the death-rate in the eight chief towns was 16.8 per 1000 of estimated population. This rate is 1.3 under that for the corresponding period of last year. The lowest mortality was recorded in Perth, viz., 7.8; and the highest in Dundee, viz., 20.0. The mortality from the seven most familiar zymotic diseases was at the rate of 2.9 per 1000. There was a slight increase in the number of deaths from diarrhœa, whooping-cough, and scarlet fever. Acute diseases of the chest caused 69 deaths, being 17 above the number recorded during the previous week.

LOCH KATRINE WATER.

THE monthly report on the quality of the Loch Katrine water, prepared by Professor Mills, has just been issued. The results are returned in parts per 100,000: total solid impurity, 3.04; organic carbon, 0.155; organic nitrogen, 0.009; nitre nitrogen, 0.008; total combined nitrogen, 0.017; chlorine, 0.65; hardness, 1.11. The water sampled was very light brown in colour, and contained little suspended matter.

NEW FEVER HOSPITAL FOR PAISLEY.

AT a meeting of the Sanitary Committee of this town, on the 18th inst., it was decided to proceed at once with the erection of a fever and small-pox hospital in the vicinity of the Riccartsbar Asylums. It is stated, however, that definite action is already being taken to defeat this decision, as it is thought that, owing to the contiguity of the asylums and the populousness of the district, there may be danger from the sewage of the proposed hospital.

GLASGOW SOUTHERN MEDICAL SOCIETY.

THE thirty-sixth annual meeting of the above Society was held on the evening of the 18th instant, when the office-bearers for the ensuing session were elected. They are as follows:—*President:* John Niven, L.R.C.S. *Vice-President:* T. F. Gilmour, L.R.C.P.E. *Treasurer:* Ed. McMillan, L.R.C.S.E. *Secretary:* Andrew J. Hall, M.D. *Editorial Secretary:* Alexander Napier, M.D. *Seal-Keeper:* William Macfarlane, M.D. *Court Medical:* Peter Stewart, M.D. (Convener); R. W. Forrest, M.D.; James Dunlop, M.D.; James Morton, M.D.; J. S. Nairne, L.F.P.S.G.

IRELAND.

DR. COLLIER has been elected medical officer of Collon Dispensary District, Ardee Union, at a salary of £100 *per annum* and fees.

THE Kells Town Commissioners have appointed Dr. Halton medical officer of health at an annual salary of £15.

DURING the week ending September 13th, six deaths from scarlet fever were recorded in Cork, a disease which has been almost absent from that town until the last three months.

WHOOPING-COUGH has been very prevalent in Belfast during the past nine months. In the first quarter of the present year, it caused sixty-three deaths; in the second quarter, ninety-four deaths; and in the eleven weeks of the current quarter forty-four fatal cases have been recorded.

AT a recent meeting of the guardians of the Boyle Union, Roscommon, a resolution was unanimously adopted to reduce the salaries of the sanitary officers of the union one-half, in consequence of the increased fees which dispensary medical officers receive under the new Vaccination Act. We trust the Local Government Board will refuse to sanction such an arrangement.

A SPECIAL meeting of the Portumna Dispensary Committee was held on September 20th to elect a successor to Dr. Samuel Coates, medical officer of the district, who had resigned from ill-health. There were three candidates for the post; Dr. Coates, junior, son of the late medical officer, being elected by a large majority of votes.

MEDICAL RELIEF TICKETS.

As an example of the indiscriminate manner in which medical relief tickets are issued, we may state on the authority of a provincial paper, that the medical officer of a dispensary district in the Thurles Union has for some weeks been attending several patients on visiting tickets signed by a member who has been dead for a considerable time.

SALARIES OF MEDICAL OFFICERS OF HEALTH: CARRICKMACROSS UNION.

AT a late meeting of the Carrickmacross Union, it was decided to reduce the salaries of the medical officers under the new Public Health Act from £15 a-year to £10, and to dispense with the consulting sanitary officer altogether. In consequence of this determination, the dispensary medical officers of the union addressed a communication to the Local Government Board requesting their interference, and pointing out that, under the Public Health Act of 1874, they were appointed sanitary officers at a salary of £15 a-year, a sum which they always considered very inadequate remuneration for the duties imposed on them, duties which they were obliged to perform, no option having been left them of declining the appointment. The Local Government Board have taken the matter up, and have recently informed the guardians that, having regard to the fact that the duties of the medical officers of health have been increased by the sanitary order lately issued, they do not think it advisable that their salaries should be reduced, and they request that the guardians will reconsider the subject, and also inform them whether the present consulting sanitary officer is also one of the medical officers of health.

DUBLIN ROYAL SANITARY COMMISSION.

MR. ROBERT RAWLINSON, C.B., Chief Engineering Inspector to the Local Government Board, has arrived in Dublin, and, in conjunction with Dr. MacCabe, will, next Tuesday, open the inquiry, to which we last week referred. The terms under which the Commissioners are empowered to act authorise them to make and institute an inquiry touching and concerning the present system of sewerage and drainage in the city of Dublin, in so far as such sewerage and drainage affect the sanitary condition of the said city, and the state of the river Liffey, and to inquire whether such system is directly or indirectly prejudicial to the public health, and whether any and what changes are necessary therein with a view to sanitary improvement. Mr. W. Jerrold Dixon, Barrister-at-Law, is the Secretary to the Commission.

IRISH MEDICAL ASSOCIATION.

AT a meeting of the executive of the Irish Medical Association, held on Tuesday, September 16th, at the Royal College of Surgeons, Dublin—Dr. Speedy, Chairman of the Council, in the Chair—it was moved by Dr. J. W. Moore, seconded by Dr. Pollock, and unanimously resolved: "That the Council of the Irish Medical Association have heard with the liveliest satisfaction of the appointment of Dr. T. W. Grimshaw as Registrar-General for Ireland, and hereby convey to him this expression of their gratification at his well merited promotion to such a responsible and important position under Her Majesty's Government. At the same time, the Council feel much regret in accepting the unavoidable resignation of Dr. Grimshaw as a member of the executive of the Association, and desire to express their grateful thanks to him for his inestimable and unwearying services to the Association and to the profession at large." A similar resolution has also been passed by the Executive of the Dublin Sanitary Association.

PRESENTATION TO DR. J. G. BEANEY.

ON Thursday, the 11th instant, a deputation of Dr. Beaney's Dublin friends waited upon that gentleman, at his London residence, to present him with an address album on the occasion of his departure for Australia. The deputation consisted of Sir William Carroll, M.D., and Professor Quinlan, M.D. The album was artistically designed in Irish bog oak, and was very similar to the one presented by the people of Ireland to His Royal Highness the Duke of Connaught on his marriage.

THE BRITISH COMMISSIONERS' REPORT ON THE PLAGUE.

SURGEON-MAJOR COLVILLE and Dr. Payne, the British Medical Commissioners, have reported to the Lord President of the Council the results of their visit to the plague districts in Russia, and of their communications on the subject with official and other persons capable of affording information on the object of their mission. Their report consists of three communications, of which the first was made from Tzaritzyn on the Volga, and the last was drawn up after their return to London, and bears date June 16th. To the report is appended a map of the Government of Astrakan, showing the villages affected with the plague, the quarantine stations, and the general sanitary cordon. Although the term International Commission was used in connection with the appointment of Commissioners of the various European nations, there appears to have been really no joint commission, the Russian and foreign delegates having decided to act independently, though some of them travelled in company. Drs. Payne and Colville subsequently met some of the Commissioners, and had the advantage of communicating with physicians delegated by most of the European countries.

The statistics and historical information are not complete; but it appears that the epidemic last winter, so far as is known, was confined to seven villages; four on the right bank of the Volga: Vetlanka, Prischibinskoi, Nikolskoi, Stantzkoü; and three on the left: Selitrenoi, Michaelowka, and Ubaczna. They visited all these except the last two.

In the seven villages, the total population of which might be 10,000, they were told by Count Loris Melikoff that about 480 people are believed to have died. Of the 480 deaths, about 360 are set down to Vetlanka alone, out of a population estimated to have been before the outbreak about 1,700; and next to Vetlanka, Selitrenoi suffered most, the number of deaths being 35; while in the other villages the numbers were inconsiderable. It is clear, the Commissioners remark, that there is some confusion in these numbers, as the items do not tally with the total, and perhaps, in the 480 deaths, are included some from other causes than plague. The attack is said to have begun at Vetlanka in October 1878. "The disease, as at first observed, consisted in fever, accompanied by buboes (or inflammatory swellings of the glands), which were almost always on the thigh, and continued to present this type through October and November, without, it is said, causing any great mortality. Suddenly, about December 8th, the character of the disease is said to have changed. Congestion of the lungs and spitting of blood became prominent symptoms, and buboes either did not occur, or were not observed, in consequence of the rapidity of the fatal cases of the disease, which carried off its victims after one, two, or three days' illness. The total mortality also became much greater, thirty or forty persons dying daily in the village. The three doctors in the place all died. Another physician, Dr. Krassowsky, was sent down by the Government; he found that many bodies remained unburied for days; that the priest was dead, and that panic prevailed. This extreme fatality of the epidemic lasted till about January 1st, 1879, when it began to decline. Although the doctor sent down by the Government would not hear of the disease being called plague, but called it "epidemic pneumonia", the British reporters coincide in the opinions expressed by the Russian physicians, that it was an epidemic of true or Levantine plague—the same, Dr. Colville adds, as he had previously observed in Mesopotamia.

After investigating such histories as they could get of the mode of extension of the epidemic from one village to another in the epidemic, they discuss three theories of the origin of the epidemic. The one is that it was introduced by a woman belonging to Vetlanka, who visited Astrakan in the autumn of 1878, and stayed with some relations in a part where a mild form of plague had occurred the autumn before; on her return to Vetlanka, she was attacked with plague, and this was the commencement of the epidemic. This is the accredited view of the origin of the epidemic. The second theory—that of Count Loris Melikoff—is that the disease was introduced by Cossacks bringing home with them plunder; articles of plunder derived from the spoils of Turkish troops coming from Bagdad or some part of Asiatic Turkey infected with plague. This latter theory the reporters reject. Dr. Colville speaks very strongly in favour of a theory of "independent origin" of the epidemic in the low land in the bed of the Volga—a view which would accord with preconceived opinions which Surgeon-Major Colville is understood to have derived from previous observation elsewhere. Dr.

Payne is careful to point out that the origin remains uncertain, and that the theory of independent origin does not depend upon any doctrine of the spontaneous origination of specific febrile diseases *de novo*, but only implies the more generally accepted view that new outbreaks of such diseases may occur by germs lying dormant being brought into new vitality by a change of physical condition.

This part of the report is naturally the least satisfactory, and is sure to be the most criticised. On the subject of the value of quarantine, which was being carried out with the help of a cordon of five thousand men, with great difficulty and expense, it appears to have been neither complete nor efficient. The answer which the reporters give to the question, whether the elaborate and expensive arrangement instituted by Count Loris Melikoff had any effect in checking the spread of the epidemic, runs thus: "It must be pointed out that the arrangements were not put in force till, as it now appears, the plague was dying out in every part of the district, and had, indeed, ceased everywhere, except in the village of Selitrenoi, where it arose and continued later than elsewhere, and around which a separate sanitary cordon was maintained until forty days from the last death—that is, till March 26th." The reporters justly lay stress on the excellent local measures of disinfection and destruction observed; and on the general sanitary measures adopted —from which, probably more than from anything else, immunity from recurrence may be anticipated.

On the whole, the reporters have produced an interesting document from very meagre materials. Having neither seen a case of plague during life, nor a *post mortem* examination of a case, they have no direct information to give either as to the clinical characters or morbid anatomy of the plague: "the same is true", they observe, "with regard to the immediate propagation of the disease, whether by personal intercourse, contagion, infection, or otherwise". Obviously, therefore, but for the previous opinion of Surgeon-Major Colville, and the necessity for producing some narrative, the reporters might have been tempted to write their report on a very small sheet of paper. They are to be thanked for having been more discursive, and for having procured at secondhand a good deal of interesting matter, and for having given in their opinions on it. They do not so entirely agree as to be able to state their conclusions in the same words; Dr. Payne prudently disclaiming the right to pronounce an opinion on certain points as to "spontaneous origin" of a more than doubtful value, as to which Dr. Colville is disposed to be rather positive. The history of this outbreak will only ultimately be written by comparing the documents and statistics now in possession of Professor Eichwald and the reports of all the various Commissioners: the European Commissioners, however, all arrived late; and we must look to Russian sources for our most valuable information. Thus far the chief lesson appears to lie in the importance of energetic and radical measures of local sanitation, and the wortlessness of an extended system of quarantine.

THE WAR IN ZULULAND: THE ADVANCE ON ULUNDI.

A CORRESPONDENT writes from Ladysmith, under date August 1st, 1879, as follows.

I purpose giving you, in the following letter, some details connected with the medical arrangements for the Second Division, and its line of communications, and also an account of the advance on Ulundi and the final proceedings, that is, to the present date, after which a new *régime* will be established. A Base Hospital for 150 beds was organised at this station, 100 miles from Maritzburg, under Surgeon-Major Babington and two civil surgeons. The place consists of a few houses, traders' stores, and a roomy church capable of containing thirty wounded. It is situated on the high road north, which, a few miles further on, divides; one way goes to Dundee, the other to Newcastle and Utrecht. Two hospitals were established at the last two mentioned stations as Base Hospitals for Wood's column, before the latter combined with the Second Division at Upoko; since when these two are used as convalescent stations only, in medical charge of Surgeon-Major Hickman at Newcastle, and Fitzmaurice at Utrecht. The latter station, notwithstanding its great height above the sea, has had a prevalence of enteric fever, which it is now quite free from, owing to proper sanitary improvements having been made. In Ladysmith itself, enteric fever exists, but the cause is not quite traceable, I believe. Dundee is forty-six miles north from here; a couple of stores and a farm, owned by an enterprising Scotchman, who named the spot. It has a hospital for fifty patients, under Surgeon-Major Ward. Landman's Drift, on the Buffalo river, is ten miles north-east of Dundee; and Surgeon Drury has accommodation there for fifty patients. This is a very cold station, being exposed to the full sweep of a prevailing wind between the Doornberg and another large hill to the right. Still it is healthy, and the cleanest place along the route. Koppie Allein, or "Solitary Hill", is a fort built by us near a small and lonely (allein) hill on the left bank of the Blood River, across which is Zululand proper; although Cetewayo claims all ground to "The Buffalo". Here is also provision for fifty sick. It must be understood that the accommodation for sick at all these stations along the line is expansive. From this onwards there is, at all the constructed forts, but one marquee inside the walls, as it was not intended that sick should be detained in Zululand. Fort Newdigate is the first, about twenty-five miles inland, with Civil-Surgeon Lindon left in charge; next Fort Marshall, with Civil-Surgeon Beresford, fifteen miles; and lastly, Fort Evelyn, twelve miles, having Civil-Surgeon Gubbins detailed for duty there. As the column marched on from this place, the number of sick was almost *nil*. The medical officers of the Second Division were as follows: Senior Medical Officer, Surgeon-Major Semple; Sanitary Officer, Surgeon-Major Hunt; Cavalry Hospital, Surgeon-Major Bourns; Infantry Hospital, Surgeon-Major Elgee; whilst there was for duty with these hospitals, Surgeon Blair Brown of the army, and Civil-Surgeons Busley and O'Callaghan. The medical officers attached to regiments in the Second Division were all of the Army Medical Department: Surgeons-Major Robinson, Smith, Stock, Comerford, and Townshend. The medical details for the Flying Column were, Surgeon-Major Cuffe, Senior Medical Officer; and in charge of hospitals, Surgeons Anderson and Browne, of the army, and Civil-Surgeons Connolly, Glanville, and Jolley. Surgeon-General Woolfreyes had himself been with the Division as far as Thabanago, and made all arrangements when he was called away.

Three days before the Second Division began its bivouac march on Cetewayo's capital, Surgeon-Major Stafford arrived, bringing six ambulances laden with medical stores, after a very risky journey across the enemy's country, with only eleven mounted men as an escort; but the supplies came just in time for use. On June 30th, the Division descended from "Entonganini", or "Magni Bonium", the highest hill in Zululand, into the Umvolosi valley, well wooded with the mimosa tree. When six miles down, an impi was seen across the river, advancing from Ulundi, and a hurried laager was made; but it did not attack our troops that day. No tents were taken with the force, except twenty for the hospitals of the Division and Flying Column, which were united on July 1st. On July 2nd, the laagers of both columns were approximated as a means of safety for "the camp" preparatory to the final attack. On the 3rd, the Zulus opened a sharp fire on our water-parties at the White Umvolosi, wounding one of our skirmishers, this side of the river, in the knee. This was the day of the reconnaisance by Buller, in which he left three men dead across the river, and brought three wounded troopers back. These latter men were dressed by Surgeon Connolly and Surgeon-Major Stafford, under fire from the Kranz on the other side. All night long on the 3rd, the Zulus were heard on the hills around, singing the war-song, and were even seen by the outlying picquets dancing their war-dance.

The medical arrangements for the battle were as follows: Surgeon-Major Semple as Senior Medical Officer; Surgeon-Major Stafford in command of the Mixed Bearer Company of Army Hospital Corps and Natives; Surgeon G. Browne for duty with it, and in charge of the Divisional Staff. Besides these, there were the regimental medical officers, as named before, of course accompanying their regiments. Surgeon-Major Elgee, with the Infantry Field Hospital, was left behind at Camp Entonganini; and Surgeon-Major Bourns with the cavalry one at the camp across the river. No ambulance accompanied the force, by Lord Chelmsford's orders, which I think was a great error, for, as the troops were to fight in square, some shelter was needed for the wounded. One water-cart was brought, and attached to the Bearer Company in the centre. The transport for the wounded consisted of four Ashantee cots and six stretchers with the Bearer Company; besides these, there were, in all, forty additional stretchers with the various regiments, but no details for carrying these latter, except the two regimental carriers for each stretcher. The "dressing-place" was appointed beside the water-cart, and when the battle began, it was without shelter of any kind, which would not have been the case had even six ambulances been permitted to accompany the force. As it was, the wounded were all attended to under a converging fire of bullets dropping over the heads of the square, killing one and wounding two horses of the army medical officers, who, marvellously, themselves all escaped.

When the firing began, and the medical officer commanding the bearers was going to take some stretchers towards the face of the square, on looking round, the stretchers were all on the ground, and the bearers had all concealed themselves beneath them. After being compelled to rise, however, they behaved right well, and did their duty.

Surgeons-Major Stafford and Scott (the latter on the staff of Lord Chelmsford), and Surgeon Brown, attended the wounded under a sharp dropping fire at the dressing-station. Many cases of interest occurred, to which I will afterwards refer. Ten men and one officer killed, and twelve officers and about seventy men wounded, comprised our loss, although a few officers and men in addition were afterwards discovered to be slightly hurt, which brought up the total number of casualties to over one hundred. Two men died in the square after they were brought in.

The whole force then marched towards Ulundi, the King's kraal, to support the Basutos sent to burn it. Eight European soldiers were detailed for each stretcher containing the seriously wounded, and eight natives from Bengough's Irregulars to bear each of the remaining cases, many slight ones being carried on the ammunition wagons. This means of transport was the best that could be improvised, but it was certainly unsatisfactory; and, too late, it could be seen what a mistake had been committed in forbidding the ambulances to be brought. The camp being reached, the wounded were carefully looked after; seven Basutos and two Zulu prisoners were amongst them. The transport arrangements next day to the camp at Entonganini were entrusted to Surgeon-Major Stafford, but great difficulty was experienced on the journey of ten miles. The white soldiers especially, being unaccustomed to carry heavy burdens in addition to their equipment, appeared to feel severely the task imposed upon them. It was late in the evening when the last of the wounded arrived. Those of Wood's column were detained with the column itself laagered up at the bottom of the hill that night, and came on to Entonganini next day, being transferred on the 7th to the Divisional Hospital previous to Wood's departure for Kwamagwasa on the 9th. Heavy rains occurred from the 7th to the 9th, swamping the encampment and hospital-tents, and creating much discomfort. During this weather, over a hundred oxen died from hardship, hunger, and exposure.

When the wounded from Wood's column arrived, it was decided to establish one large field-hospital for all, in charge of Surgeon-Major Stafford, who thenceforth was solely responsible for the whole administration under the senior medical officer. Civil Surgeon O'Callaghan was detached to Wood's force, whilst Surgeon Connolly was transferred with the wounded belonging to it. There were then one medical officer in charge, and five others—Surgeons-Major Elgee and Bourns, Surgeon Brown, and Civil Surgeons Connolly and Busby—doing duty, so that the wounded had plenty of medical assistance. On the 9th, Lord Chelmsford visited them in hospital and said adieu, and on the 10th the whole division commenced the downward march to Jackal Ridge, nine miles; the wounded accompanying, some in cots or on stretchers borne by hospital-bearers and native soldiers; and the less serious cases in the ambulances which had remained at Entonganini.

Halts were ordered on the march, and milk, wine, brandy, lime-juice, and other comforts given to the sick. In this way, they travelled on to Upoko River, where, on the 16th of July, the field-hospital was ordered to proceed under escort, and in command of Surgeon-Major Stafford, to Ladysmith, *viâ* Landman's Drift, there to hand over to the base hospital all the wounded. All the sick, as distinguished from the wounded, were also taken (twenty-two in number, convalescents) and sent to Utrecht to recover; whilst all who were likely to be invalided to England, including seven wounded officers and forty-three regular troops, were brought to Ladysmith, where they arrived—all doing favourably but two—on the 27th of July, and were handed over to the base hospital, in charge of Surgeon-Major Babington and three other surgeons, one of whom, Surgeon Stoker, had been sent out by the Stafford House Committee to attend to the wounded. This Committee, no doubt, is actuated by motives the most tender and humane; but I would ask them to consider what the inference is of sending out delegates to treat our wounded soldiers. The medical officers of the army do not, I am sure, require supplementary assistance, nor do they desire to be relieved of their ordinary duties in time of war. There is, however, no doubt in the world, that we are unable yet to break with the ancient usages connected with the nature and quality of the diets and medical comforts for the sick and wounded, and I can well believe that some changes in this respect towards providing for a large increase in the list of medical comforts is occupying the attention of the able, energetic, and clever head of the department; nevertheless, the act of sending out *personnel* as well as *matériel* for the sick soldier is undoubtedly misunderstood by public opinion, and it inflicts a most grievous wrong on the army medical officer. The army surgeon is working against difficulties totally unknown to other branches of the service, as they are to the public. There is an unknown, or some would say very much known, power oppressing the department, a power that will not allow, not to say encourage, it to emerge from the difficulties surrounding it; and the public must endeavour to discover the cause of this. Whose fault is it that the Army Hospital Corps was not long ago sufficiently strengthened so as to enable it to perform its own duties out here with the hospitals, instead of a mixed system having still to be adopted? Who is to blame for the medical department being either wholly deprived of, or only partially supplied with, proper transport—its own—in the field? These two comprise the chief obstacles out here; but with the well sustained energy of the medical officers and their efforts on all occasions to make things fit, there has been not one case where the medical arrangements of the Second Division did not operate towards the comfort and well-being of the wounded.

The medical report I have to make is that of seven officers wounded and about fifty men. Amongst the former are Major Bond, 58th Regiment, an oblique gunshot wound of the right forearm, shattering the ulna and causing considerable displacement, but doing well so far. Lieutenant Jenkins, 17th Lancers, gunshot wound of the lower jaw, with a double fracture—one where the bullet struck, at the right side of the symphysis; and the other being a bone splinter by *contre-coup*. Lieutenant Liebenrood, 58th Regiment, wound of the ankle, splintering the astragalus; and a second of the right arm; both recovering. Lieutenant H. Phipps, 24th Regiment, wound of the left arm, without fracture. Captain Harbord, Natal Light Horse, a ball entered the front of the right elbow and passed out behind, fracturing the olecranon. Lieutenant Cowdall, Natal Horse, a ricochet-ball entered the left thigh sideways, and lodged in his trousers-pocket against a clasp-knife; no fracture. Lieutenant Lukin, Natal Native Contingent, a flesh bullet wound of the leg.

Among the men, there were five wounds of the head and face; two of the neck; one of the chest; two of the abdomen; three of the back and spine; sixteen of the upper and seventeen of the lower extremities, admitted into hospital. Besides these, three Basutos, four men of the Native Contingent, and two Zulu prisoners (all wounded), accompanied the convoy to Ladysmith. One Basuto was struck behind the right ear, the ball entering and lodging behind the right eye, which is protruding slightly. It is impacted somewhere near the orbital plate, and has not yet been extracted.

With a brief account of the two Zulus wounded at Ulundi, I will conclude.

Pechongo, of the Fregobamakosi Regiment, commanded by Fuduna Fujagaba, had a gunshot wound of the left knee-joint, penetrating; the bullet was extracted from under the skin, where it lay superficially. He persistently refused an operation until, a large abscess forming in the joint, it was decided to remove the leg, on the twenty-sixth day after the injury. This was done at Ladysmith by Surgeon-Major Stafford, assisted by Civil Surgeon Apthorpe. The operation was performed at the middle of the thigh, to save life; the patient being under chloroform, which he resisted. Antero-posterior flaps were preferred. On the fourth day afterwards, he was doing well under Dr. Apthorpe, as Surgeon-Major Stafford had gone back to the front with his field-hospital. Isikloo, aged 18, of the same regiment, had a gunshot wound of the left ankle, penetrating the joint; it is not, however, a very serious case.

THE FRENCH ASSOCIATION FOR THE PROGRESS OF SCIENCE.

THE eighth session of the French Association for the Progress of Science was held at Montpellier from August 18th to September 4th, under the presidency of M. Bardoux, who was formerly Minister of Public Instruction in France.

Several very interesting papers were read on different subjects; and the following are short abstracts of the most important reports.

M. LEUDET of Rouen read a paper on Affections of the Peritoneum in Drunkards. These consist—1. In gradually progressive ascites, which can only be cured by tapping and the administration of powerful cathartics, provided the mucous membrane of the intestines be healthy; 2. In a granular peritonitis which in exceptional cases ends in the formation of adhesions between the serous membranes. In some cases, the peritoneal cavity contains a bloody fluid, but never a purulent one. The aforesaid lesions progress very slowly and insidiously. M. Leudet thinks, too, that they are of a similar nature to the alterations produced by alcoholism both in the liver (cirrhosis) and in the intestines (enteritis, ulcerations).

M. LIVON communicated a paper on Contributions to the Physiological Study of Salicylic Acid. His researches were undertaken with a view to ascertaining the effects of salicylic acid on respiration and on the muscular system. He has found that these effects manifest themselves by an increase in the exhalation of carbonic acid, which appears to be in direct proportion to the dose of salicylic acid that has been taken. Convulsive shocks have also been observed both in human

beings and in animals. Thus, if a frog be poisoned with salicylic acid, tetanic phenomena often occur. Under those conditions, it was necessary to find out whether the drug affects the muscles directly, or whether it acts on the central nervous system. By alternately interrupting and restoring the communication between the leg of a frog and the central nervous system, it has been ascertained that the action of salicylate of soda concentrates itself mainly on the latter. The rapid cessation of the muscular contractility is also due to a direct action of the drug on the nervous system, and not to the intermediate agency of the muscular fibre. M. Livon quoted here the case of a woman whom he had attended, and who had convulsions after taking two *grammes* of salicylate of soda.

M. CHALOT of Montpellier contributed a paper on Injections of Chlorhydrate of Pilocarpine after the Operation for Cataract by Extraction, and in some other Cases. After having observed that injections of this kind have not given any satisfactory results in uni- or bi-lateral hydrarthrosis, in simple hydrocele, or after amputations, the author proceeded to give the history of the use of pilocarpine in affections of the eye, and related several cases that had come under his notice in the service of M. Courty. In one case, where extraction of the cataract had been performed after von Gräfe's method, he injected chlorhydrate of pilocarpine; but, another treatment having been carried on at the same time, he was unable to arrive at a definite conclusion on the subject. In another analogous case, the patient became unconscious, and exhibited phenomena of intoxication after the fourth or fifth injection; that was the only result that had been obtained in this case. The same took place in four or five more cases of affections of the eyes that were treated in the same way. Patients, as a rule, do not tolerate these injections easily, and often object to them. They are frequently followed by symptoms of excitement, and in some cases of intoxication. There seem to exist no relations between the physiological and therapeutical effects of the drug, and no good results have ever been obtained.

M. L. H. PETIT read, in the name of M. QUINQUAD, a paper on the Relations between Disease and Hæmatic Lesions. This highly interesting paper, which bristles with numbers, and is based on many hundred analyses of blood may be summarised as follows. Every disease must give rise to a hæmatic lesion, as the blood is a mirror in which the slightest disturbances of the organisms are reflected. To every morbid affection corresponds a certain chemical alteration of the blood. This is why the chemistry of the blood forms such an important point of medical diagnosis.

M. MARQUIS of Hyères read a paper on Intestinal Gravel. After having summarised the interesting works of M. Laboulbène on the subject, he proceeded to give a case of intestinal lithiasis that had come under his notice. The patient was a very anæmic woman, who constantly passed in her stools small granular oblong brownish bodies, which were evidently formed in the intestines, but were neither biliary nor renal calculi. There was simultaneously a considerable hypersecretion of the intestinal mucus. It seemed as if the gravel were produced in greater quantities the more anæmic the patient became.

M. SÉGUIN of New York spoke at length on the necessity of adopting the metric system in America and Great Britain.

M. BROCA, jun., read, in the name of M. de VARIGNY, a paper on Cerebral Atrophies in Patients who had undergone Amputation. It appears that cerebral atrophy does not occur constantly in such cases. It is often very difficult to diagnose when it exists. He did not think that it could be of much importance in the study of localisations. The facts that are actually known do not seem either to strengthen or to weaken Ferrier's theories on the subject.

THE LOCAL GOVERNMENT BOARD REPORT.

THERE is but little of purely medical interest in the recent report of the Local Government Board, which differs from its predecessor of last year in being a plain record of work done, without any self gratulation on its accomplishment.

During the year 1878, the Board approved the appointments of the medical officers of health for forty-seven more districts, making a total of 1,206 appointments confirmed since the passing of the Public Health Act of 1872. The returns showing the state as regards vaccination of the children born in 1876 must, on the whole, be considered satisfactory. Of the entire number of births in 1876, only 4.3 per cent. remain unaccounted for, as against 5.1, 4.8, 4.8, and 4.7 per cent. respectively in the four preceding years. The returns show a marked difference in the amount of vaccination in different parts of the kingdom. The metropolis is still conspicuous as furnishing the largest proportion of cases which escape vaccination; but a substantial improvement is exhibited in these returns as compared with those for the previous year. The several Unions show, however, widely diverging results, the amount of default being in some districts very great. The whole of this question is now under inquiry by Dr. Stevens, one of the Board's most experienced inspectors, and it is to be hoped that something may be done in the direction of greater efficiency of the metropolitan vaccination staff before another epidemic of small-pox comes upon us. The divisions of the kingdom that are numerically the best vaccinated are the eastern and south-western, in both of which, 97 per cent of the entire number of children are duly disposed of in the vaccination register; and there are about a dozen individual counties in which the proportion rises to about 98 per cent. of the births. Of all the counties in England and Wales, there are only nine in which the proportion of cases unaccounted for reaches or exceeds 5 per cent. of the registered births.

During the year, the public vaccination of 276 unions, comprising 1,396 districts, was inquired into by the Board's medical staff. To the vaccinators in 760 of these districts, grants of money were made to the extent of £11,994, the grants varying from seven shillings to £271. Under the stimulus of these awards, and the close supervision over the work of public vaccination now exercised, the vaccination is reported as now reaching, in most cases, a very high standard. No less than 9,590 applications for lymph were received by the national vaccine establishment during the year, and 14,954 charged points and 22,096 tubes of lymph were distributed.

Besides about twenty-one local inspections into matters connected with the provision of hospitals for infectious diseases, and a number of by-law inquiries, twelve inquiries were made by the Board's medical department into particular outbreaks of infectious disease, or the repeated occurrence of such disease. One of these—in the Dewsbury registration district—was of exceptional length; and two others—the Kilburn diphtheria epidemic and the violet-powder poisoning cases at Loughton—were of quite unusual interest. Dr. Bollard continued during the year his valuable inquiry into effluvium nuisances, a further instalment of which, concerning substances of mineral origin, is promised us in the forthcoming report of the medical officer. In speaking of the reports of local medical officers of health, more than 1,400 of which are annually received by them, the Board record an advance in the quality of the reports received, and an increasing appreciation on the part of the officers of the necessity for systematic sanitary work, not merely dependent on the actual presence of infectious disease.

This is a matter on which we have often had occasion to comment. No medical officer of health can be said to be fulfilling his functions—functions which are essentially preventive—unless he supervises his district systematically, irrespective of the presence or absence of infectious disease. It should be his highest aim to secure the removal of unwholesome conditions before they have become associated with the outbreak of disease; and it is only by the regular survey of the district that he can do this with satisfaction to himself or to his authority.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 15th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 15th, 1879.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting of this district will be held at the White Hart Hotel, Reigate, on October 9th, 1879, at 4 P.M.: F. B. HALLOWES, Esq., in the Chair.

The following papers are promised.

1. Dr. D. W. Chas. Hood: On Croup and Diphtheria.
2. Mr. Hallowes: A Clinical Report upon an Outbreak of Enteric Fever at Redhill in the early part of 1879.
3. Dr. John Walters: The Treatment of *Post Partum* Hæmorrhage by Injections of Hot Water.

The dinner will take place at 6 P.M. Tickets, 6s. a head, exclusive of wine.

JOHN H. GALTON, M.D.Lond., *Honorary Secretary.*

Woodside, Anerley Road, S.E., September 15th, 1879.

SHROPSHIRE AND MID-WALES BRANCH.

THE annual meeting of this Branch will be held at the Salop Infirmary, Shrewsbury, on Tuesday, September 30th, at 3 o'clock in the afternoon; JAMES BRATTON, Esq., F.R.C.S., President, in the Chair.

The annual dinner will take place at the Lion Hotel, at 5 o'clock P.M. the same day.

Members intending to read papers, or bring forward subjects for discussion, are requested to communicate with

HENRY NELSON EDWARDS, *Honorary Secretary.*

Moreton House, Shrewsbury, September 15th, 1879.

EAST YORK AND NORTH LINCOLN BRANCH.

A CONJOINT meeting with the Yorkshire Branch will be held at York, on Wednesday, October 8th.

Gentlemen who intend to read papers are requested to inform the Secretary of the titles before the 27th instant.

E. P. HARDEY, *Honorary Secretary.*

35, Regent Terrace, Anlaby Road, Hull, Sept. 18th, 1879.

WEST SURREY DISTRICT.

THE next meeting of this district will be held at Guildford, on Friday, October 24th, 1879.

Gentlemen desirous of reading papers or cases are requested to communicate at once with the Secretary.

A. ARTHUR NAPPER, *Honorary Secretary.*

Broad Oak, Cranleigh, September 22nd, 1879.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE first evening meeting of this district was held at 197, Parrock Street, Gravesend, the residence of J. C. Armstrong, Esq.; the chair being taken by JOHN ARMSTRONG, M.D.

An exhaustive and well-written paper on Fractures was read by Mr. JESSETT of Erith, who enlarged at considerable length on their pathology, varieties, and treatment.

Dr. J. BRAXTON HICKS kindly gave the history of a most interesting case of Extra-uterine Fœtation; and afterwards showed tracings of the abdominal and fœtal movements.

A cordial vote of thanks to the Chairman for presiding, and to J. C. Armstrong, Esq., for his hospitality, closed a very pleasant evening.

BORDER COUNTIES BRANCH: ANNUAL MEETING.

THE annual meeting of the Border Counties Branch was held at the County Hotel, Carlisle, July 25th, 1879. In the absence of the President owing to illness, Dr. TIFFEN took the chair at one o'clock. The following other members were present: Drs. Barnes, Lockie, Campbell, Brown, Murphy, Elliott, Maclaren (Carlisle), I'Anson, Horan (Whitehaven), Dick (Harrington), Burt (Kendal), Arras (Wetheral), Smith (Dumfries), Taylor (Penrith), Rigg (Burgh-by-Sands), and Erskine Stuart (Dunse).

New Member.—John A. Erskine Stuart, L.R.C.S.E. (Dunse), was elected a member of the Branch.

Report of Council.—Dr. MACLAREN then read the report of Council as follows:—

"The Council have the pleasure of submitting their eleventh annual report to the members of the Border Counties Branch.

"*Number of Members.*—At the commencement of the year, there were ninety-nine members on the list; during the year, eight new members have been elected, three have resigned, two have left the district, and one has died, so that the present number is one hundred and one.

"*Meetings.*—During the year, meetings have been held at Dumfries, Whitehaven, and Melrose. At these, ten papers have been read to the Society on subjects of general or original interest; the attendance of members has on the whole been good, and the discussions have been ample. At Dumfries, at the invitation of the local members, those who attended the meeting were driven to Carlaverock Castle, and the attractions of the spring meeting were increased by an inspection of Abbotsford and Melrose Abbey.

"*Spring Meeting.*—The Council recommends the Branch to fix the spring meeting at Gilsland, for the purpose of making it a conjoint one with the Northern Counties Branch.

"*Death of the President-elect.*—The Council has to regret the loss of one of its members, Dr. Reeves, who was chosen President-elect at the last annual meeting. He was a member of the Branch from its formation, contributed many interesting papers, and took a lively interest in all its proceedings. He will be long remembered by the members not less for his ability than for his geniality and candid honesty.

"*Financial Statement.*—The balance in hand at the end of 1877 was £4 8s. 8d. The receipts from eighty-nine subscriptions and twelve arrears are £12 12s. 6d. The disbursements amount to £14 0s. 1d., leaving a balance of £3 0s. 7d.

(Signed) "JAMES GILCHRIST, *President.*
"RODERICK MACLAREN, *Hon. Sec.*"

It was moved by Dr. BARNES, seconded by Dr. LOCKIE, and unanimously agreed to, that the report of the Council be adopted.

Dr. BURT moved, and Dr. I'ANSON seconded, a vote of thanks to the office-bearers of the past year, which was carried unanimously.

Meetings.—It was resolved that only one meeting in addition to the annual meeting be held during the ensuing year, and that this meeting take place either at Gilsland or Hexham, as may be arranged for the purpose of meeting the North of England Branch.

Office-bearers.—The following office-bearers were then chosen. *President-elect:* Dr. Campbell. *Honorary Secretary and Treasurer:* Dr. Kendall Burt. *Honorary Secretary for Scottish Section:* Dr. Smith. *Council:* Drs. Rigg, McBean, Dick, Tiffen, I'Anson, Symons, Barnes, Hoggan, Grierson. *Representative on the Parliamentary Bills Committee:* Dr. Taylor.

The retiring President (Dr. Gilchrist) was elected a permanent Vice-President of the Branch.

Dr. Tiffen then vacated the chair, and introduced the President for the year, Dr. MACLAREN, who delivered his inaugural address "On the Progress of Surgery during the Past Twenty Years".

On the motion of Dr. I'ANSON, seconded by Dr. DICK, the thanks of the meeting were given to Dr. Maclaren for his address; and he was requested to publish it.

Papers.—The following papers were then read.

A Case of Poisoning by Soda Salicylate. By J. KENDALL BURT, M.B. and C.M. (Kendal).—This was the case of a lady who had taken sixty grains in six hours (twenty grains every three hours). The symptoms were as follows. First, attacks of unconsciousness for the first fifteen minutes; each attack lasting three minutes. Second, after attacks of delirium for three hours, each attack being about twenty minutes in duration; perfectly lucid intervals of a few minutes each. A pulse of 120, very feeble. Temperature reduced from 102° to 99°.

Sulphur as a Topical Application in Diphtheria. By JOHN A. ERSKINE STUART, L.R.C.S.E. (Dunse).—Sulphur precipitatum (milk of sulphur) used as a topical application has been very useful in my practice in seven cases of diphtheria, either blown on through a quill, or stirred up with water and swabbed on. It causes almost immediately after application blackening of the membrane and detachment of it. To show its rapidity of action, six of these cases only required an average of 2.6 visits. In opposition to the views of Dr. Oertel in his Report on the Epidemic of Diphtheria in the Royal Household of Darmstadt, and of Dr. Braithwaite of Leeds in his last *Retrospect* (January to June 1879), and the Reporter in the *Medical Record* of June 15th (the two latter criticising my first notice of the subject in the *Practitioner* of April 1879), I am of opinion that the action of sulphur in this disease is a specific action, not a mere "scouring powder" (Dr. Oertel), nor that its action is principally by friction. I use no friction. I have found the application of carbolic acid, sulphurous acid, and solution of muriate of iron in equal parts a pretty sure remedy locally applied, but deleterious from making fresh abrasions a fitting field for the growth of new membranes. The use of strong caustics is to be strongly deprecated. The sulphur treatment is easily used, and is not at all disagreeable to the patient.

Operation for a Case of Strangulated Inguinal Hernia. By WILLIAM BROWN, M.R.C.S. and L.R.C.P.E. (Carlisle).—The patient was a male aged 60, and had been the subject of a hernia for the last ten years. The hernia became strangulated while the patient was walking, about five o'clock on the afternoon of Thursday, July 17th. Symptoms of strangulation soon followed; and when I was called in at eight o'clock in the evening they were urgent. On examination, a large scrotal hernia was present in the right groin, measuring twelve inches in length from the external ring to its most dependent part. The tumour was exceedingly tense, absolutely dull on percussion, with an indistinct feeling of fluctuation and impenetrable to transmitted light. Taxis was tried without success. When thoroughly under the influence of ether, taxis was again fairly tried without avail. The operation was then proceeded with in the usual way, and the sac arrived at by the division of two coverings upon the fingers. When the sac was opened, several inches of somewhat congested bowel came into view. When the stric-

ture was freed, the bowel began to descend rapidly, but this anticipated difficulty was overcome by raising the pelvis to a height and returning the gut in successive portions. Wire sutures were used for the skin-wound. All the symptoms of strangulation vanished with the operation, and his pulse and temperature have been normal since the operation. The skin-wound has healed by first intention. This case shows the importance of an early operation. In this case, antiseptics were totally neglected; and, though the hygienic conditions of the man's habitation were anything but satisfactory, the case has so far done remarkably well.

Dinner.—The members and their friends afterwards dined together; Dr. Maclaren in the chair, and Dr. Campbell in the vice-chair.

HOSPITAL AND DISPENSARY MANAGEMENT.

A PAIR OF DISPENSARIES.

A HANDBILL has lately been freely distributed, both in the east and west end thoroughfares, which states that an "united surgery and dispensary (self-supporting) for the treatment of all diseases" has been opened by "Dr. Hursley, Physician and Surgeon", at 72, City Road, Finsbury Square, and also at 2, Oxendon Street, Piccadilly. Dr. Hursley is extremely liberal of his time, for he attends at his dispensaries from nine in the morning till ten at night; and his charge is only one shilling a week during illness. In fact, this is only another example of the "shilling dispensaries" upon which we have often expressed our opinion. They have sprung out of the provident movement; but they have neither the advantages nor the safeguards which belong to the provident system. They simply offer the poor medical attendance and medicine on very easy terms, which are not calculated to raise the working classes or to uphold the dignity of the profession.

OBITUARY.

PYE HENRY CHAVASSE, F.R.C.S., BIRMINGHAM.

WE record with regret the death, on the 21st inst., of Mr. Pye Henry Chavasse, a prominent member of the profession in Birmingham. The deceased was born at Cirencester in 1810, and at an early age selected the medical profession for his career in life, and became a pupil of his cousin, Mr. Thomas Chavasse, who then carried on an extensive practice in the Old Square, Birmingham. Having completed his pupilage, Mr. Chavasse entered as a student at University College, London; and in 1833, was admitted a member of the College of Surgeons and a Licentiate of Apothecaries' Hall, and shortly afterwards commenced to practise in Birmingham, directing his attention more particularly to the diseases of women and children. The active duties of his profession were vigorously pursued up to five years ago, when failing health compelled retirement into private life. In 1852, the deceased was elected a Fellow of the Royal College of Surgeons. Although not connected with any of the hospitals, Mr. Chavasse took great interest in the welfare of the various medical institutions of the town in which he lived, and was a regular attendant at the meetings of the Birmingham Branch of the Association and kindred societies, and held, at one time, the office of President of the Queen's College Medico-Chirurgical Society. His name, however, is more generally associated with various popular medical works, dealing with maternal cares and duties, numerous editions of which have been published, and whose usefulness is furthermore exemplified by their translation into nearly every European language and also into several of the languages of Asia.

For some time the exact nature of the disease under which the deceased laboured was somewhat obscure, but latterly the symptoms pointed towards cerebro-spinal sclerosis, and a *post mortem* examination revealed the existence of that lesion.

Of a frank and genial disposition, Mr. Pye Chavasse was always a firm friend to his professional brethren, and those who were his patients held him in the highest esteem.

ANDREW MUNGLE, M.D.

WE regret to announce the death of this most promising student of the Edinburgh University, at the early age of 20, on September 13th, of typhoid fever, at the Sunderland Infirmary, where he had been doing duty during the absence of the house-surgeon. He was born on September 26th, 1858, was educated at the Edinburgh Academy, and received his medical training at the university of that city. During his college life, which he commenced in 1873, at the age of 15, he distinguished himself highly in nearly all the classes he attended, both in Arts and Medicine, carrying off several medals and other rewards. Being too young to graduate, he spent nearly a year at the Dumfries Infirmary as assistant house-surgeon. After passing his final examination with distinction at Edinburgh about two months since, he acted as *locum tenens* at Ayton, Berwickshire, and lastly at the Infirmary at Sunderland, where he died after an illness of eleven days. He was much admired by his fellow-students for his hard and earnest work and his kind and amiable character, and by them his loss will be deeply felt. Although he was only a month at the Sunderland Infirmary, so highly was he esteemed by the medical staff and the committee, that the whole of the staff and many of the members of the committee followed his remains to the station on their removal to Edinburgh.

MILITARY AND NAVAL MEDICAL SERVICES.

THE ARMY MEDICAL WARRANT.

SIR,—So the new warrant, I hear, has foundered on the rock of finance. Its promoters could not expect any other fate to be in store for it. It was a preposterous and absurd attempt to extract public money for a small but chosen band of men at the expense of the many.

I am, sir, not above receiving as much money as a generous public likes to bestow, but, if asked whether or not my services would be overpaid by such a scheme, my answer would be unhesitatingly in the affirmative.

Medical officers as a body have never asked for more pay; they have asked for fair play and justice; and a very little tact in consolidating the various warrants would have sufficed all parties, and averted the present *fiasco*.

It is to be hoped that the Secretary of State for War will now write a new warrant in one line. "The warrant of 1858 will take precedence of all later and immediate issues; excepting the new designations." The rank of deputy surgeon-general is useless and unnecessary; it will cease to exist, and be replaced by that of brigade-surgeon. It is to be understood that the possessor of this latter title is to give evidence of his professional knowledge and ability, whilst, at the same time, he has the ability to execute administrative work whenever called on to do so. He is not to be an administrative officer, but a purely executive officer with administrative ability.—I am, sir, your obedient servant, OLD WARRANT.

August 22nd, 1879.

ARMY MEDICAL DEPARTMENT IN INDIA.

SIR,—I wish to draw the attention of surgeons who may be thinking of entering the service, to certain facts which I think cannot be sufficiently grasped at by outsiders. Owing to the comparatively small number who have entered the service during the last few years, and promotion going on all the same, the number of surgeons-major to surgeons has now assumed the proportion of about three to one. All duties having anything of an irksome nature are delegated to surgeons, and the amount of such duties has vastly increased in proportion to the diminution of surgeons, a certain number being promoted whose turn has come round, while a sufficient number do not enter the service to fill up the gaps.

Whenever a move takes place (now a pretty constant thing), the surgeon-major remains quietly in his place, and the surgeon has to go. This is more especially the case in India, where, from October 1st to March 15th, or occasionally a little later, troops are marching or travelling by rail all over the country, in all cases a surgeon being sent to accompany them; and often he has to make one march after another for months together, of course being quite unsettled all the time. This marching ceases during the summer months; but at this time cholera is most frequent, and if the station that he happens to be at escapes, very likely he is sent off to some other place where the epidemic has broken out. As a rule, very short notice is given to him before making any of these moves (this may be unavoidable in cholera time); but the hardest part of all is, that, on coming into a new district, he comes under the orders of a new principal medical officer, who may, and frequently does, cancel any previous orders the surgeon has received as to returning to his former station immediately on completion of the duty he has been ordered away for. I could quote several instances in which a surgeon has got short notice of a move, has hurried away with a small stock of necessaries, and then has been detained by the new principal medical officer, who states he has no one to take his place. This state of things effectually prevents a surgeon from making himself comfortable in any station. The fewer belongings he possesses, the better, as he must leave the most of them after him when suddenly ordered off, and then he will have either to part with them at a sacrifice, or undergo the expense of having them sent after him. The pay that the surgeon gets in India is 317 rupees per month; no advance on what was given in the old days of assistant-surgeons. This pay does not amount to £1 per month more than his home pay and allowances, whilst everyone else serving Government gets an increase of pay for serving in India, amounting very often to nearly double the amount of his home pay. There is no possible way open to the surgeon of the Army Medical Department of adding to his 317 rupees per month. Lock hospitals (though intended for the protection of British—not Indian—troops), jails, staff appointments, etc., are chiefly held by officers in the Indian Medical Department; but in cases where they are held by officers in the Army Medical Department, surgeons-major apply for and get them, thus adding to their already comfortable incomes. There is, therefore, no chance of any of these appointments being held by surgeons. All senior officers appear to comfort themselves with the reflection that they had to rough it when they were young, but now, at their time of life, they go in for ease. This reflection, however, is no comfort to a man, the tenure of whose appointment is limited to ten years.

On consideration of the above facts, I think few men can be shown who have wasted their lives more than the surgeon, Army Medical Department, who is compelled to waste five years of his life in India, with scarcely any comfort to himself, owing to the uncertainty of his movements; risking his health all the while, and getting inadequate remuneration, with no prospect of adding to it. These matters exist, and are not remedied, in spite of the fact that it is surgeons, and not surgeons-major, who are so urgently required in the department at present. —I am, sir, faithfully yours, PETERKIN.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, September 18th, 1879.

Torbitt, Charles, Oldbury, Worcestershire

The following gentlemen also on the same day passed their primary professional examination.

Munyard, Thomas G., Westminster Hospital
Prentice, Zachariah, Guy's Hospital

At the Preliminary Examination in Arts, held at the Hall of the Society, on the 19th and 20th of September 1879, the following passed, and received certificates of proficiency in general education. In the First Class, in order of merit:

1. H. Armstrong and L. Pickering. 3. J. H. Menzies. 4. A. W. Clark, S. Herbert, G. R. Hulbert, and Florence J. Jebb. 8. F. Bromhead, H. G. Haines, R. T. Westbrook, T. D. White, and W. S. R. Woodforde. 13. H. A. Desvœux, C. S. Robinson, and H. H. Tomkins.

In the Second Class, in alphabetical order:

G. G. Adams, T. E. Adams, R. H. J. Allen, S. G. Allen, A. B. Avarne, W. G. Axford, G. L. Baker, R. H. Bates, C. E. Bean, W. H. Bell, C. N. Bensley, A. Blakiston, J. F. Boissiere, J. A. Bradbury, E. M. Brown, C. S. Browning, L. W. Burton, H. D. Buss, A. K. A. Cæsar, J. C. Cater, P. E. Cleaver, J. W. Cockerill, J. W. Cook, E. R. M. C. R. Cousins, J. J. G. Crang, Mary Crawley, T. W. Crook, J. O. D'Aquiar, J. W. Dawes, C. Dolman, J. O. Downes, J. B. Drew, F. D. L. Eusor, A. P. Feddon, H. Fitton, S. H. Fox, E. S. Fry, G. F. Gilbert, J. Good, O. B. Granville, H. W. Haydon, H. H. Hewitt, C. E. Humphryes, C. R. Huxley, A. E. Huxtable, F. J. Jaynes, Mary A. Kenealy, H. R. Kenwood, C. J. Kirkpatrick, W. E. Lowe, Mary McGeorge, J. H. McRice, J. T. R. Maddox, R. Mills, C. E. Morris, Margaret Morice, A. G. Momber, J. J. Parsons, A. M. Page, D. E. Phillips, T. Pitman, H. Potter, A. J. Richards, W. B. K. Richards, W. S. Richmond, L. Roberts, A. M. Ross, P. C. H. Ryan, F. O. Smith, Augusta Stolte, R. Swyer, W. E. Swyer, W. S. Tebb, A. H. Tenison, M. Thompson, J. Thorpe, A. F. Tidswell, Jas. H. Walker, G. J. Walklett, D. H. R. Walwyn, H. E. Watts, and T. Young.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDEE UNION—Medical Officer of the Workhouse, at an annual salary of £85, and £15 as Consulting Sanitary Officer. Election on the 30th instant.

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

*BELGRAVE HOSPITAL FOR CHILDREN, Pimlico—Resident House-Surgeons. Board and lodging. No salary. Applications to the Honorary Secretary at the Hospital on or before October 4th.

BELFAST ROYAL HOSPITAL—General Superintendent. Salary, £200 per annum, with rations and residence in the house. Applications on or before September 27th.

*BIRMINGHAM GENERAL HOSPITAL—Assistant Physician. Salary, £100 per annum. Applications on or before September 29th.

*BRIGHTON AND HOVE LYING-IN INSTITUTION—House-Surgeon. Salary, £120 per annum, with furnished apartments, coals, gas, and attendance. Applications on or before October 2nd.

*BROMPTON HOSPITAL FOR CONSUMPTION—Resident Medical Officer. Salary, £200 per annum, with board and residence. Applications on or before October 8th.

FAREHAM UNION—Medical Officer for the district of Titchfield. Salary, £100 per annum, and usual extra medical fees. Applications before September 30th.

*GENERAL LYING-IN HOSPITAL, York Road, Lambeth—House-Physician. Applications on or before October 15th.

HARTLEPOOL FRIENDLY SOCIETIES' MEDICAL INSTITUTION—Two Resident Medical Officers. Salary, £150 per annum, a proportion of accouchement fees, free residence, coal, and gas; rates and taxes (except income-tax) paid by institution. Applications not later than October 7th.

*LEICESTER INFIRMARY AND FEVER HOUSE—Honorary Physician. Applications on or before October 4th.

*NORTH SHIELDS AND TYNEMOUTH DISPENSARY—House-Surgeon and Dispenser. Salary, £120 per annum, furnished house, gas, coals, etc. Applications must be forwarded by October 1st.

QUEEN'S COLLEGE, Galway—Professorship of Practice of Medicine. Candidates to forward testimonials to the Under Secretary, Dublin Castle, on or before the 29th instant.

RADCLIFFE INFIRMARY, Oxford—House-Surgeon. Salary, £105 per annum, with board, lodging, and washing. Double qualification and registration as a medical practitioner requisite. Application on printed form, to be obtained of Secretary, to be returned, with testimonials, on or before October 4th.

*ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Election on October 1st.

*TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, coals, gas, and attendance.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 93, Welbeck Street—Assistant-Physician.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY—House-Surgeon and Secretary. Salary, £100 per annum.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CAMERON, James, M.D., appointed Medical Officer of Health and Public Analyst for the Parish of Hendon, Middlesex.

GWYNN, Edmund, M.D., appointed Medical Officer of Health for Hampstead, *vice* C. F. Lord, Esq., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

BRUNTON—STOPFORD.—On September 20th, at St. Peter's Church, Dublin, by the Venerable C. P. Reichel, D.D., Archdeacon of Meath, assisted by the Rev. J. F. Bickerdike, *Thomas Lauder Brunton, M.D., F.R.S., London, to Louisa Jane, youngest daughter of the late Venerable Edward Adderley Stopford, LL.D., Archdeacon of Meath.

DEATH.

*CHAVASSE, Pye Henry, F.R.C.S., at Hagley Mont, Edgbaston, Birmingham, on September 21st.

PRELIMINARY EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the recent Examination in Arts, etc., for the diplomas of Fellow and Member of the Royal College of Surgeons, 431 candidates underwent that ordeal—viz., 294 for the Membership, and 137 for the Fellowship.

APPOINTMENT UNDER THE ADMIRALTY AND WAR OFFICE.—The Lords Commissioners of the Admiralty have appointed Mr. Z. C. Bryan Surgeon and Agent for the Care of Sick and Wounded Seamen and Marines at Little Hampton; and the War Office authorities have appointed the same gentleman to take medical charge of the troops, *vice* Dr. Candy, deceased.

PUBLIC HEALTH.—During last week, 3,145 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 19 deaths annually in every 1,000 persons living. The annual death-rate was 14 per 1,000 in Edinburgh, 17 in Glasgow, and 24 in Dublin; whilst in the twenty English towns the death-rates were as follow: Portsmouth 11, Norwich 12, Brighton 15, Wolverhampton 15, Nottingham 16, Bradford 16, Plymouth 16, Birmingham 17, Bristol 17, Hull 17, Sheffield 18, Oldham 19, Leeds 20, London 20, Manchester 20, Sunderland 20, Leicester 21, Salford 23, Newcastle-upon-Tyne 25, and the highest rate (26) in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.7 per 1,000 in the twenty towns, and ranged from 0.0 and 1.4 in Wolverhampton and Oldham, to 4.8 in Manchester, 4.9 in Leeds, and 6.3 in Liverpool. In London, the deaths exceeded the average by 30. The annual death-rate from all causes rose to 19.7. The 1,366 deaths included 1 from smallpox, 27 from measles, 60 from scarlet fever, 16 from diphtheria, 36 from whooping-cough, 21 from different forms of fever, and 92 from diarrhœa; thus, to these diseases 253 deaths were referred, being 24 below the average, and equal to an annual rate of 3.6 per 1,000. Different forms of violence caused 46 deaths; 39 were the result of negligence or accident, including 14 from fractures and contusions, 6 from burns and scalds, 2 from drowning, 1 of a child aged two years from sucking lucifer matches, and 9 of infants under one year of age from suffocation. Seven more cases of suicide were registered. At Greenwich, the mean temperature of the air was 57.6°, and 0.5° above the average. The general direction of the wind was north-easterly, and the horizontal movement of the air averaged 6.1 miles per hour, which was 5.4 below the average. Rain fell on three days of the week, to the aggregate amount of 0.29 of an inch. The duration of registered bright sunshine in the week was equal to 22 per cent. of its possible duration.

COUNTERFEIT EGGS.—The *Allgemeine Medicinische Central Zeitung* quotes the following from the *Neue Preussische Zeitung*:—It is well known that in America everything is counterfeited; the wooden hams and nutmegs sent from the New England States are well remembered. Eggs are now also counterfeited; and this manufactory is carried out on a large scale. On one side of a large room the reporter saw several large copper vessels, filled with a thick glutinous yellow mass, which a man was constantly stirring. This was the yellow of the egg—the yolk. On the opposite side were similar vessels, in which the white was fabricated. The egg-shells were made of a white substance resembling plaster-of-Paris, by means of a blow-pipe, just as soap-bubbles are blown. After being dried in an oven, the egg-shells were filled: first with artificial albumen; then with some of the artificial yolk; and lastly with a little of the artificial albumen. The small opening at the end of the egg was closed with white cement: and the greatest achievement of modern civilisation, the artificial egg, was ready. In appearance it resembled a natural egg; but, whether cooked or raw, it was indigestible and injurious to health.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Obstetrical Society of London, 8 P.M. Cases:—Cholera in the New-born, by Dr. Lucas. Papers:—Mr. Alban Doran, "Deficient Development of the Uterus, Atresia of the Os Externum, Atrophy of the Ovaries"; Dr. Chambers, "Case of Congenital Inguino-Ovarian Hernia (double)—Operation"; Report of Subcommittee on the Specimens removed.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

DR. A. RANSOME (Manchester).—It will be published at the earliest opportunity.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

FOREIGN DEGREES.

SIR,—In answer to my letter to you of last week, I have received numerous letters from gentlemen holding foreign degrees, and also from other gentlemen. It is quite impossible for me to discuss this question *privately* with all these gentlemen *simultaneously*, and I have, therefore, requested those of them to whom I have not as yet been able to reply, to address me through the columns of the BRITISH MEDICAL JOURNAL, when, if they write in their own names and attach to them the description of their qualifications, it will give me great pleasure to reply to them; but anonymous communications I must decline to notice.—I am, sir, your obedient servant,

130, Stockwell Road, S.W., September 24th, 1879. R. H. S. CARPENTER.

SIR,—Seeing Mr. Carpenter's letter on this subject in the BRITISH MEDICAL JOURNAL of last week, I wrote to him privately, and received from him in reply an intimation that he would prefer that all correspondence should be publicly conducted. I therefore venture to trouble you with this.

In his letter, Mr. Carpenter mentions the case of A. B., who, having only the L.S.A. diploma, was admitted to examination, and received the degree of M.D. from the University of Brussels. In my letter to Mr. Carpenter, already referred to, I asked him to give me the name of A. B.; or, if he did not feel at liberty to do that, at all events to furnish me with the year of his graduating. As Mr. Carpenter has not thought proper to do either, I am necessarily writing to some extent in the dark with respect to this particular case.

Now, sir, the authorities at Brussels admit that formerly men with only one qualification did occasionally gain admission to the examination, which they furthermore confess was not always as stringent as it now is: but, sir, bygones must be bygones, and whatever was the case formerly, the Regulations of the University of Brussels for the examination of candidates without residence distinctly state that a double qualification is now a *sine quâ non*. If by any means a singly qualified candidate have gained admission to the degree, it will be a fact as interesting to us as to Mr. Carpenter himself. With regard to the examination itself, no discussion can be of any use. Those who have *not* been present at an examination can hardly be expected to know very much about it; and those who *have* (and it is entirely open to the public throughout) know that it is a good one—a thorough test of a man's theoretical as well as of his practical knowledge. I would suggest to those numerous gentlemen who write about the examination, without in reality knowing anything about it, to take a trip to Brussels (or as these gentlemen, with singular unanimity, almost invariably term it, "run over to the Continent") and see and hear what is required of candidates. The next examination will commence on Tuesday, October 7th.

I think the whole subject should be looked at fairly, and that it should be remembered that many of our British examinations now are very different from what they used to be, and that a great many gentlemen who obtained their diplomas some years ago, did so on much easier terms than are exacted of candidates of the present day.—I am, sir, your obedient servant,

F. ERNEST POCOCK, M.D.Brux.

20, Golborne Road, Westbourne Park, September 24th, 1879.

SIR,—As a foreign graduate, I request you will allow me space to reply to Mr. R. H. S. Carpenter's letter on foreign degrees in the BRITISH MEDICAL JOURNAL of September 20th. The case of (1) A. B., I think, is one very commonly met with in this country. There is nothing surprising in meeting with a man now and then who is sufficiently well educated to pass a good medical examination, but who is in other branches of knowledge badly educated. It must be remembered that the University of Brussels admits registered British practitioners to examination for the M.D. without testing their extra medical knowledge, presuming that, if registered in this country, they are well educated in other branches. This man appears to have been registered here before passing at Brussels, according to Mr. Carpenter's statement. I am acquainted with three British graduates who can only just manage to speak the Queen's English. With regard to case No. 2 (C. D.), I confess I am unable to account for such a state of things. One thing I am convinced cannot be—that is, I am quite sure such a man has never presented himself for examination and passed at either Giessen or Jena. To obtain either of those degrees, a man must undergo an examination upon all medical subjects before the whole Faculty of Medicine, which C. D. could not have done, if, as Mr. Carpenter says, he never had one hour's medical education. There needs further explanation of this case. It is possible that this fellow, who appears to be unfit for a learned profession, bought his degree from the widow or representative of some deceased medical man, and then assumed his name. Such things have been frequently done before. This second case seems almost too absurd for serious consideration. We must not in this country imagine that the authorities of all other universities, save our own, are asleep or indifferent to their responsibilities and interests. Foreign universities are conducted upon just as good principles as (some think better than) our own; though, perhaps, people in this country, with their insular prejudices so deeply rooted, cannot understand it.

In conclusion, I think many will agree with me that Mr. R. H. S. Carpenter, in his zeal, has brought bad evidence to support his cause. Both cases are isolated ones; the first corresponding exactly with many British graduates, the second representing a state of things too absurd for intelligent men to believe it can exist exactly as related by your correspondent.—I am, sir, yours, etc.

H. J. HARDWICKE, M.D.Giessen, M.R.C.P., F.R.C.S.Ed.

Sheffield, September 1879.

SIR,—If Mr. R. H. S. Carpenter will obtain from Giessen a copy of rules and regulations for the degree of M.D., he will, I think, after perusal thereof, change his opinion as to the course of study necessary for graduation. Had C. D., being well-to-do, obtained his diploma by personation? Had he possessed himself of some other man's diploma? Relatives of deceased practitioners show a tendency to preserve rather than to destroy documents of the kind.—I am, etc.,

Hastings, Sept. 20th, 1879. J. BEADNELL GILL, M.D.

SIR,—Mr. Carpenter is somewhat sweeping in his denunciation of foreign degrees. In looking over the names of those gentlemen possessing foreign degrees practising in this country, one is rather impressed than otherwise by the good professional position and known social standing which the possessors of the said degrees occupy. One remembers the kind of examination candidates in former years were submitted to for the degree in some of our northern universities, and doubtless abroad at the same period degrees were conferred upon conditions even more favourable. Half a

century ago, the fashion led men of eminence to seek a continental degree; the custom is not unlikely to become revived, in case the obstacles to graduation in England be not removed.—I am, sir, your obedient servant,

September 20th, 1879. COSMOPOLITAN.

A SUFFERER.—It is contrary to our custom for us to comply with such a request. A Sufferer should consult some practitioner of repute in his own neighbourhood, who, if he considered further advice necessary, would doubtless intimate to our correspondent the names of several consultants, the opinion of any one of whom might then be obtained.

PEPSINE WINE AS A REMEDY FOR THE SICKNESS OF PREGNANCY.

SIR,—Dr. William Fraser, in an article on "Sickness during Pregnancy", recommends the use of pepsine wine very strongly. I have used this preparation in a manner similar to what he has, but have been disappointed with my results. Probably the pepsine wine I used was not of a good quality. I would esteem it a great favour if Dr. Fraser would furnish in detail instructions how to make it, so that it could be relied upon. The preparation of the wine does not appear, so far as I know, in the *Pharmacopœia*.—I am, yours respectfully, A MEMBER.

INFANTILE DIARRHŒA.

SIR,—I beg to apologise for a mistake which has inadvertently crept into the latter part of my letter to you on the subject of "infantile diarrhœa" appearing in the JOURNAL of September 20th, the mistake being due to an omission on my part in copying rather hastily from my rough original. The last paragraph should properly read thus: "Mr. Budd states that, according to his own observations, diarrhœa hardly ever takes place amongst those infants that are fed on condensed milk; and this, too, I myself have noticed, and have also heard the same statement made with regard to 'Mellin's' (?) extract: and I consider that the small quantity of malt-extract contained in the latter, as well as the sugar of milk—to which is assigned by Mr. Budd, with regard to condensed milk, the prevention of its turning sour—renders it so efficacious as a prophylactic, as it is thus so nearly approximated in its constituents to the infant's natural food." *In vitium ducit culpæ fuga* (Horace), so that if you will give this letter an early insertion in your paper you will much oblige, sir, your obedient servant, WM. A. G. LAING, L.S.A.

69, Lemon Street, Truro, September 21st, 1879.

SCARBOROUGH.—Mr. Alfred Haviland, Medical Officer of Health, Northampton, proposes the planting of the whole of the North Undercliff with pine-trees from one end to the other. The effect of pine-trees, when massed together, on the atmosphere is, he considers, most beneficial to those suffering from delicate lungs (consumptives). The trees would further add to the beauty of the northern cliffs, whilst robbing the winds of much of their harshness.

SIGNATURE OF VACCINATION CERTIFICATES BY UNQUALIFIED PERSONS.

SIR,—I should like to know your opinion, as well as that of your readers, on the conduct of a medical practitioner who allows an unqualified assistant to sign his (the medical man's) name to vaccination certificates on infants whom he has never seen. The matter, I venture to think, is of very great interest to the medical profession: as, if the law allow an unqualified assistant to sign the name of his principal to certificates of this and the like nature, most medical men will employ unqualified assistants rather than qualified; the former class being undoubtedly cheaper, and one which a certain class of medical men treat with a disrespect which a qualified man would not put up with. Enclosed is my card and address, but not for publication.—I am, etc., COUNTRY SURGEON.

*** It is decidedly wrong for a medical practitioner to certify cases of vaccination performed by an unqualified assistant when he has never seen the cases.

MEDICAL CERTIFICATE OF THE CAUSE OF DEATH.

SIR,—By Section 20 of the Births and Deaths Registration Act, 1874 (37 and 38 Vic., c. 88), it is enacted that: "In the case of the death of any person who has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give, etc. . . . a certificate stating to the best of his knowledge and belief the cause of death, etc." And under Section 39 of the same Act, every person who refuses or fails, without reasonable excuse, to give or send any certificate in accordance with the provisions of the Act, is liable to a penalty not exceeding forty shillings. I maintain that I have a reasonable excuse for not giving or sending any certificate of the cause of death of any person or persons attended in their last illness by me, either as a registered medical practitioner or union medical officer, unless I am paid for giving or sending the same.

An expression of your valuable opinion, as well as that of the members of the profession generally, on the subject will oblige. I enclose my card, and am, sir, yours truly. SINE TIMORE.

*** We fear that a court of law would not admit non-payment of a fee as a "reasonable excuse", provision for such payment not being made in the Registration Act.

M. P.—Dr. Blandford's *Insanity and its Treatment* (published by Simpkins, Marshall, and Co.) is a handy and practical work. Bucknill and Tuke's *Manual of Psychological Medicine* (published by J. and A. Churchill) is a standard book of reference.

ZULU.—The best work on Cottage Hospitals is *The Cottage Hospital: its Origin, Progress, and Management.* By Henry C. Burdett. It is published by J. and A. Churchill, New Burlington Street, London.

THE ALCOHOL QUESTION.

SIR,—In the JOURNAL of July 5th, 1879, under the heading "Treatment of Disease without Alcohol", you publish some statistics of Dr. Webster of St. George's. I should like to know how he arrives at his percentage of death-rate, or on what data he framed his comparison with the other hospitals enumerated. For instance, he states his mortality has been 12½ per cent. on an average number of 559 patients. Now, the deaths at St. George's during the year have been 313 (BRITISH MEDICAL JOURNAL, August 1879). The total number of patients admitted from Lady-Day 1878 to Lady-Day 1879 has been 2142. Taking number of admissions and average number of patients, I cannot reconcile his percentage with my calculations. In the interest of the alcohol question, I write for information as to how he worked out his figures.—Yours faithfully, ENQUIRER.

BICYCLES IN COUNTRY PRACTICE.

SIR,—I would feel greatly obliged by any of your readers giving his experience of the use of a bicycle or tricycle in country practice. I am told that many country practitioners now make use of them in their rounds.—I am, etc.,

September 17th, 1879. COUNTRY PRACTITIONER.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161A, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

CASE OF FŒTAL MONSTROSITY.

SIR,—Not long ago I attended a woman in her fourth confinement. After a somewhat tedious labour, she was delivered of a male child, presenting a most striking deformity. The cranial bones were imperfectly developed, the top of the head being one pulpy mass. The child was entirely destitute of eyes, the left eyebrow only being visible about an inch external to the socket. What represented the nose was simply the bony framework, on each side of which were two distinct fissures, extending through the upper lip, resembling an enlarged form of double harelip, accompanied by a double cleft-palate. Its cheeks were hanging down like dog's ears, giving the child a most hideous appearance. I could with ease discern the epiglottis. Singular to remark, the external ears were perfectly formed. The second and third phalanges of the fingers on the right hand were absent, there being no fingers on the left. The trunk and lower limbs were well developed, and apparently well nourished.

In conversation with the mother some days afterwards, I ascertained that some months previously her eldest boy had been amusing himself with some dynamite caps, which exploded, injuring the little fellow severely about the face and hands. Attracted by the boy's shrieks, she rushed to the spot where he was, and the sudden shock to her nervous system, at seeing him in such a disfigured condition, completely upset her, and it was a long time before she recovered from the effects of it. This occurring about the eighth week of the woman's pregnancy, made me think that there must have been some connection between the effects of the accident and the monstrosity.—Yours faithfully, GEO. LOWE, L.R.C.P.

Middleton-in-Teesdale, September 2nd, 1879.

Dr. W. WILBERFORCE SMITH.—The matter is scarcely of sufficient public interest to warrant us in assigning to the memorandum in question the position sought for it. If desired, it can appear next week in this part of the JOURNAL.

ENQUIRER.—The evidence of Dr. Sharpey, Sir Wm. Gull, Dr. McKendrick, Dr. Rutherford, and others, contained in the Blue Book issued by the Select Committee on Experiments on Animals, will supply material for meeting the habitual misstatements of anti-vivisectionists. The opening address of Dr. Pye-Smith, delivered in the department of Anatomy and Physiology at the recent meeting of the British Association at Sheffield, and published at page 349 of the BRITISH MEDICAL JOURNAL for August 30th, 1879, might also be consulted.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. T. Pridgin Teale, Leeds; Dr. L. A. Sayre, London; Dr. James Sawyer, Birmingham; Dr. A. Fergus, Glasgow; Dr. G. M. Edmond, Stonehaven; Mr. J. C. Uhthoff, London; M.A.; Dr. J. Cameron, Hendon; Mr. T. R. Jessop, Leeds; Dr. Andrew J. Hall, Glasgow; X.; Dr. F. W. Barry, Settle; Dr. J. J. Charles, Belfast; Dr. J. B. Gill, Hastings; Dr. Worthington, Sidcup; W. J.; Dr. H. Mac Cormac, Belfast; Dr. Marten Perry, Spalding; Mr. A. W. Moore, London; Mr. Reginald Harrison, Liverpool; Dr. W. Wilberforce Smith, London; Mr. R. Jeffreys, Chesterfield; W.; Medicus, London; Dr. Spencer Smyth, Forest Hill; Dr. F. Barnes, London; Mr. E. P. Hardey, Hull; Zulu, London; Dr. A. Ransome, Manchester; Dr. Clement Godson, London; Mr. A. A. Napper, Cranleigh; The Secretary of Apothecaries' Hall; Dr. R. A. McKechnie, Rutherglen; The Registrar-General of England; T.; Dr. Wade, Birmingham; Mr. S. Woodman, Ramsgate; Dr. Bond, Gloucester; The Registrar-General of Ireland; Dr. A Carpenter, Croydon; M.; Mr. G. Eastes, London; Dr. Saundby, Birmingham Dr. Broadbent, London; Our Dublin Correspondent; Dr. F. E. Pocock, London; Dr. Fairlie Clarke, Southborough; Mr. J. Wilson, Bray; Dr. J. S. Ramskill, London; A Physician; Dr. M'Kee, Belfast; Dr. P. Horrocks, London; Dr. A. W. Wallace, Parsonstown; Mr. James Tompsett, Spanish Town, Jamaica; Professor Rutherford, Edinburgh; Dr. H. J. Hardwicke, Sheffield; Dr. V. Poulain, London; Dr. Copeman, Norwich; Our Glasgow Correspondent; Our Edinburgh Correspondent; Dr. A. T. Bacon, Leeds; Dr. H. Rayner, Hanwell: Dr. Stewart Woodhouse, Dublin; Dr. Jukes Styrap, Shrewsbury; Mr. C. J. Wright, Leeds; Mr. W. A. G. Laing, Truro; Dr. W. White, Manchester; Dr. J. Dougall, Glasgow; Junius; Mr. J. Tomes, Caterham Valley; Mr. Jabez Hogg, London; Dr. W. O. Markham, London; D. A. B. Duffin, London; Hydaston; Dr. Edmund Gwynn, Hampstead; Mr R. G. Fendick, Bristol; Dr. J. F. Goodhart, London; Mr. Talfourd Ely, London; Mr. R. H. S. Carpenter, London; Dr. T. F. Chavasse, Birmingham; Dr. John Williams, London; The Dean of Guy's Hospital; Mr. T. M. Stone, London; Mr. W. M. Taylor, Gateshead; Dr. Mackey, Brighton; Mr. A. H. Hallowes, Maidstone; Mr. H. Cripps Lawrence, London; Mr. H. Dayman, Southampton; etc.

BOOKS, ETC., RECEIVED.

Manual of Practical Anatomy. By J. Cossar-Ewart, M.D., F.R.C.S.E., F.R.S.E. With Outline Plates. London: Smith, Elder, and Co. 1879.

A Demonstration in Antiseptic Surgery. By Joseph Lister, F.R.S., LL.D. Dublin: John Falconer. 1879.

INTRODUCTORY ADDRESS
ON
THE PRESENT POSITION OF MEDICINE.

Delivered at King's College.

By ALFRED B. DUFFIN, M.D., F.R.C.P.,
Professor of Morbid Anatomy and Pathology, and Physician to King's College Hospital.

THE Lecturer, after offering a cordial welcome to the old and new students of the School, said to the latter:

I have alluded to the great trust that you are on the eve of confiding to us. It will obviously be a matter of extreme concern to you to know something of the method in which it will be met on our side; to ascertain something of the principles which will guide us in assisting you to prepare yourselves for your future career. I say advisedly, prepare yourselves. This I take to be the true meaning of the term "education". We may help to develop the abilities and faculties you may possess, provided you co-operate with us. We may sow the seed, but the return depends primarily upon the soil. It rests, then, ultimately with yourselves whether your residence here shall be a season of profit or of loss.

Now, the experience that you will gain here may be referred broadly to three chief sources—*precept*, *practice*, and *association*. The first you can acquire from your teachers; the second you must obtain for yourselves; the last you will get from your friends.

Under the term *precept*, I would include much more than a series of formal lectures. It comprehends the whole system of instruction as between teacher and pupil. Lectures, doubtless, form no inconsiderable part of this method. Some men are apt to decry lectures. They say that they could acquire from books all that is to be obtained in the class-room, and that the facts brought before them fly by too rapidly to produce any lasting impression. Now, both these arguments, however specious, are unsound. It would require a vast extent of reading to cover anything like the ground often occupied by a single lecture. Your teacher has already gone over and analysed this mass of material on your behalf. He has selected those subjects which it is most important should be presented to you early. He has made it his business to weed out all extraneous matter, to sift controverted questions, and to epitomise results. These he imparts to you clearly and concisely. There is, moreover, a vividness, a reality, about spoken language, which no mere written symbols can convey. But the lecturer has much more than this to communicate. His individual experiences, his observations, his discoveries, are often to be found in his lectures, and nowhere else. As regards the transitory impression produced by lectures, that I venture to affirm depends upon the listener. Attention and note-taking will soon dissipate that difficulty. To take notes that shall be of real service is an art calling for no little skill; but it is one well worth acquiring. You will refer years hence to your College notes as to one of your most valuable possessions. The fault of most beginners is the attempt to take down too much. You cannot reduce to writing the *ipsissima verba* of the teacher. Try for the governing words that are the key to the sentence or paragraph. Jot these down at the time in any order they may happen to fall. When you get home, while the subject is still fresh in your memory, expand them into readable shape. The advantages of this system are twofold. On the one hand, you do not, in your zeal to transfer remark No. 1 to paper, lose its context remark No. 2. On the other hand, you apply your critical faculties to your notes, and work them into a consistent whole. Should you fail in accomplishing this, set aside any obscure passages for reference to your teacher when you next meet.

This leads me to the second and perhaps more important application of the term teaching by precept. It is colloquial instruction, that which each man will obtain for himself from the individual professors, tutors, and demonstrators in the form of question and answer. The second source of your experience will be *practical*. Here you must rely upon your own hands and ears. Almost every class has its practical associate: the practical chemistry and toxicological classes, the practical biology demonstrations, with their microscopical and chemical subdivisions, and pre-eminently the dissecting-room. In alluding to the dissecting-room, I feel that I cannot do better than repeat to you the words that I heard from the lips of my revered teacher, Professor Bowman, when I for the first time sat upon those benches: "They are a scene of study to which no other profession affords a parallel. While they retain their novelty, you cannot enter them without a certain reverential awe, inspired by the thought that you are walking among the dead. An earnest and right-minded man will not too forcibly repress this feeling; nor forget in that customary place the honour due to human dust; nor so dismiss his own mortality from his recollection as to behave with any unbecoming or ill-timed levity. He will strictly apply himself when there to the acquisition of the necessary knowledge, reminding himself sometimes that the dead body on which he operates has once been tenanted by the soul of man; that in all probability the Divine Spirit has once deigned His presence there; and, finally, that its scattered elements are destined to be one day reconstructed, and, in a changed and purified stage of incorruption, to resume their mysterious but essential part in the life of an immortal being."

At the Hospital, you will from the first be required not only to see, but to listen, to handle, and, if need be, to taste. You cannot too early begin to familiarise your senses with the objects presented to you. You will find that, as you train them by an ever-increasing experience, they will become more delicate, more discriminating. The amount of information that you will thus acquire is simply immeasurable. It will continue to increase through life. As you know, the erudite touch of the physician has passed into a proverb. Let me, however, most earnestly remind you that you will be brought into contact with sick and suffering people, many with their sensibility painfully exalted, their minds and bodies wearied by want of rest and the exhaustion of disease; others with their senses blunted, and the little intelligence they may ever have possessed obscured by the course of their illness. To be patient, gentle, circumspect, forbearing in dealing with men so situated, will constitute not the least important part of your training for after-life. As soon as you have mastered some of the rudiments of observation, and have ascertained somewhat of the method according to which various morbid conditions are investigated and dealt with, you will be early invited to participate in the practical working of the Hospital. Clerkships and dresserships—first of out-patients, later of in-patients—will be severally offered to you for competition. The multitudinous technicalities of our art may thus be readily acquired. A man becomes conversant with the application of those many instruments of precision—the stethoscope, the ophthalmoscope, the laryngoscope, the sphygmograph, the thermometer, the microscope, etc. He there also practises the simpler surgical manipulations; and lastly, learns to systematise the mass of facts passing before him, by keeping records of the cases brought under his superintendence. If a man acquit himself creditably in these subordinate positions, still higher prizes open up to him. The house-surgeoncies and resident clinical assistancies are within his grasp. In these, although with much increase of responsibility, he will be admitted to a more immediate and important share in the treatment of disease.

Another source of your practical attainments is presented by our periodical class examinations, and by the labours of our most excellent ally the medical tutor. Now, the object aimed at by our class and tutorial examinations is totally different from that intended by the various forms of qualifying examination. These latter, to which you will be submitted by the great examining bodies—the University of London, the Royal College of Surgeons, etc.—are designed to act as a protection to the public, so as to exclude all candidates who do not evince an, I fear, rather ill-defined amount of information. They are imposed upon us by external authority. They are intended as safeguards against negligence and incompetence. Far different is the object of our class examinations. They also are designed to gauge the amount of your knowledge, but with a view to correcting its deficiencies—making it thorough and accurate, and insuring that your progress be safe. They are but too often regarded as purely competitive, to determine who are the leaders of the class, to whom prizes should be adjudged. This is, I believe, an entirely secondary object. The prize is indeed a stimulus to exertion, and a just reward of success; but the aim of the class examination is, first and foremost, the advancement of every member of the class. Prizes, then, should be regarded simply as graceful marks of the recognition of merit, which, fairly won, may be honourably worn, and which are intended to stir up a spirit of generous emulation.

The third head under which I said that you would find experience was that of *association*. You will now enter a society differing in many fundamental respects from any among which you have hitherto lived. Not only will you be brought into daily contact with your professors, but you cannot help shortly becoming more or less intimately acquainted with each other. A number of men of about your own age, with similar aspirations and prospects to your own, will become your daily companions. You have still to acquire a knowledge of the aptitudes, whether intellectual, social, or moral, of the vast majority of these men. They cannot fail to exercise a powerful influence on the development of your character, and, conversely, you will influence them in return. From every one you can learn something valuable. Hence I would recommend you to scrape some sort of acquaintance with all your associates. But, before you honour any man with your friendship—before you open

up your inmost thoughts to him—try him well; watch how he will act under emergency; labour to ascertain whether he is endowed with stability and integrity of character. The possession of similar aptitudes and desires draws men together as it were by a loadstone. Each one of you will soon find out to what set he belongs. The friendships cemented thus early will follow you through life; and I am sure that your teachers, who sit around me, will all admit that their sincerest and most lasting friendships were selected from among their fellow-students.

You will, then, readily perceive how large a share of your education devolves upon yourselves. Not only are we anxious to store your minds with facts, but we wish to raise your sense of responsibility and self-reliance, to elevate your character and your judgment. "This double movement, moral and intellectual, is essential to the very idea of civilisation, and includes the entire theory of mental progress. To be willing to perform our duty, is the moral part; to know how to perform it, is the intellectual part. The closer these two parts are knit together, the greater the harmony with which they work." (Buckle, vol. i, p. 175.)

The reason of this is that you are entering upon a *liberal profession*. What constitutes a liberal profession? It has been defined by one who was eminent both as a surgeon and as a philosopher, the late Mr. Joseph Henry Green, as "the application of a science by its actual possessors to the wants of the community, and the cultivation of a science for its own sake. This must ever constitute the difference between a profession and a trade." We have, then, two objects presented to us, distinct, yet mutually dependent. On the one hand, our life of relation as members of the commonwealth; on the other, the advancement of knowledge for its own sake. It is with the former of these two aspects that I shall chiefly deal to-day.

As members of the community, our aims are so extensive that we may almost say, with the Latin poet, "Humani nihil a me alienum puto". They may be briefly summed up under two heads: first, with reference to society at large; and, secondly, to its individual members. We aim at encouraging the general wellbeing of mankind, by favouring the growth of a robust and healthy population, by tracing out the causes of disease, and diminishing the rate of mortality. In the individual instance, we endeavour to arrest or moderate the course of disease, to mitigate suffering, and to prolong life. Our duties thus bring us almost equally in contact with health and with disease, so that a knowledge of the science of medicine comprehends both. Medicine, indeed, is essentially a branch of that great division of natural science called Biology; that is, the science of life. This includes all the phenomena manifested by living beings, whether in health or in disease. It is impossible for us to understand or to mitigate unhealthy conditions, unless we have a preliminary knowledge of healthy states, and of how they are to be maintained. Biology thus naturally breaks up into two divisions. Those events which characterise the state of health are included under the term Physiology; those which relate to disease under that of Pathology. But life has been defined as "organisation in action"; and here we find these two great fields again subdividing. We must discriminate between the structure and the function which it has to perform. With the former, anatomy (whether normal or morbid) is concerned; with the latter, physiology and pathology. Neither can we stop here. Our life of relation must also be considered. The causes which act upon us from without, and the modifications which they severally induce in the manner in which our various functions are performed, must be duly appreciated. Indeed, they introduce the active elements of experiment into biology. The method in which our surroundings act upon us constitutes the very point at which practical medicine sees its opportunity for useful interference. The study of the condition under which health is maintained, and of the modifying influences that assaults from without are capable of exerting on the course of disease, have given rise to hygiene on one side, and to therapeutics on the other. The former concerns itself with the prevention of disease; the latter with its cure. That department of biology with which the medical profession is chiefly concerned thus readily subdivides itself into four great chapters: physiology, pathology, hygiene, therapeutics. Whilst we make these subdivisions for purposes of study, let us not forget the solidarity that unites all the sections of biology. Nowhere can we draw any exact line between health and disease. Dr. Wilks has justly observed, in his Hunterian Oration: "The study of the two branches must be pursued together; for the very derangement of parts gives a clue to their uses. The daily task of the physician is one of physiological investigation, as well as the treatment of disease." Physiology, then, is our corner-stone. I cannot too strongly impress upon you the importance of studying it thoroughly. Without an extensive knowledge of the healthy structures and functions, it is simply impossible for you ever to acquire any adequate acquaintance with the morbid ones; without both, you will fail to appreciate the effects and value of either the hygienic or therapeutic experiment.

I must beg to be understood to use the term experiment here in its largest sense. Every dose of medicine that we administer, every meal that we consume, partakes of the nature of experiment. Indeed, experiment may be defined as the grafting of some new condition upon those already existing. In common parlance, when this new condition is imported irrespectively of any agency on our part, and when we simply record the change that it produces, we are said to make an observation; when we ourselves import the new condition, we are said to make an experiment. The difference between observation and experiment is thus one of detail rather than of kind. But the value of experiment in its narrower sense must be obvious. In simple observation we neither control the antecedents nor regulate the disturbing agency; in experiment we more or less govern both. "To simplify complications", says Buckle (vol. i, p. 231), "is in all branches of knowledge the first essential of success. This is very familiar to the cultivators of physical science, who are often able by a single experiment to discover a truth for which innumerable observations have vainly searched. The reason is that by experimenting on phenomena we can disentangle them from their complications and thus isolating them from the interference of unknown agencies, we leave them, as it were, to run their own course and disclose the operation of their own law."

We are often taunted with the backwardness of applied medicine. Our detractors forget that rational treatment was impossible so long as those preliminary portions of biology which constitute the foundations upon which alone a true scientific method can rest were not sufficiently advanced. It is only within quite recent times that physiology itself has emerged from the darkness of ages. Even minute anatomy must be regarded as a work of our own epoch. Each department of natural science has had in its turn to contend with the ignorance of the generation in the midst of which it has been developed; each, as it has acquired a solid basis, has laid up material for the growth of its successor. The science of life has thus had to wait until an adequate number of facts and laws had been stored up by the advance of the preliminary sciences and until instruments of precision had been invented such as should render practicable the observations that it required. But within the present century this work has progressed with wonderful velocity. A science of physiology, deep, extensive, and solid, is being rapidly evolved. We no longer refer everything to a vital principle representing something utterly transcending knowledge. The laws of inductive research have been applied to most of the vital functions. The conditions regulating the circulation, respiration, digestion, and to some degree even the nervous system, are passing swiftly into the domain of acquired knowledge. I am far from asserting that the natural laws which have been hitherto revealed to us will suffice to solve all the problems of physiology. I cannot presume to anticipate in what shape the term vital principle will ultimately survive. That the tendency of advancing knowledge must be to circumscribe its application is obvious. All that we can say about it at present is that it represents a force about which we have no knowledge, and about which we cannot reason. It is an abstract speculation, probable indeed, but outside the limits of exact physiology.

Morbid anatomy has also made immense strides, and both from the side of causation and from that of development the outlines of a pure pathology are beginning to be defined. We have ceased to regard disease as a separate entity. We rather consider it as an abnormal condition of the body than as something introduced from without. We discriminate with increasing clearness between the disease and its cause. I have already alluded to the vast importance to be ascribed to disturbing agencies over the whole range of the biological field. It is especially when the potency or number of them is sufficient to excite that hostile reaction either in our functions or structures, or both, which we call disease, that their value becomes manifest. It is then no longer sufficient to recognise the existence of a malady, to be able to define its extent or to predicate its importance to the individual sufferer. We now also aim at ascertaining its cause and the separate steps by which the functions and tissues have been severally interfered with. The causes of many maladies have now been traced out, and the methods by which they gain admission into the system have been ascertained. The specificity of many poisons, whether of mineral or organic origin, the conditions of the multiplication and propagation of these latter, the results of their residence in the animal economy have been gradually revealed to us. I will allude to one illustration of this truth, and to one only. The fearful ravages of pyæmia had long become a matter of national importance, and had proved the curse of many surgical hospitals. The history of the poison upon which pyæmia depends, the method of its elaboration and propagation, have now been elucidated in every essential detail. Most important of all, a series of searching experiments and of brilliant deductions has placed us in the position of victors over this dreaded foe. Gentlemen, it is one of the greatest sources of pride to King's College that we possess in our midst the master mind that has most largely

and most directly contributed to these glorious results. The antiseptic method may still be destined to save more lives than even armies have destroyed.

We are also beginning to understand more clearly the consequences of disobedience to definite physiological laws. We know the results of breathing an air chemically impure or laden with mechanical particles; we understand the conditions under which changes of temperature affect us injuriously, the consequences of dietetic errors, whether in quantity or quality, of intellectual and emotional overstrain, etc.

In the present day, therefore, we recognise that every form of sickness from the fearful epidemic pestilence in which our forefathers saw the direct interposition of preternatural power, down to those mysterious constitutional taints which are transmitted from parent to child, are really due to material causes, are governed by natural laws, and are, to a great extent, within our control.

Hygiene, or the method of preserving health, is already elevated to the dignity of Sanitary Science; whilst its sister, Prophylaxis, or the art of warding off morbific influences, is admitted to be one of the most valuable advances of modern medicine.

Our means of detecting the presence of disease have also largely increased. Our instruments of precision now reveal to our senses the physical conditions of many internal organs, whilst chemical and microscopical analysis offer us timely information of secretory changes. Our powers of diagnosis, then, have been greatly increased. But a deeper acquaintance with pathology and improved means of diagnosis have also taught us that many diseases which were formerly regarded as trivial symptoms are really due to hopeless disorganisation of vital organs. Where our predecessors only saw a comparatively unimportant ailment, we recognise a liver almost converted into fibrous tissue, a heart with valves utterly incompetent, a disorganised kidney, vessels converted into tubes brittle with lime and oil. In all such examples, we may, indeed, hope to alleviate, but the first result of our diagnosis is to preclude all chance of cure. We thus see how the advance of the collateral sciences is defining the limits of therapeutic action and indicating the boundaries and methods within which it may advantageously be applied.

Now, the earliest results of this increase of knowledge have been twofold. Many well established prejudices have been overthrown; we have learnt how unstable was the foundation upon which some of our most cherished practices reposed. We have also learnt that most functional disorders have a very considerable tendency to spontaneous recovery. Many of the good results that were formerly attributed to the action of our remedies we now confess to have been really due to the natural course of the disease, whilst many of the bad effects that were attributed to the disease were actually referable to our remedies.

The consequence of these discoveries has been to raise up a number of sceptics within our own ranks. Many men have pushed the doctrine of expectancy beyond the limits justified by experience, and have imagined that the sole duty of the physician was to look on as an intelligent spectator at the struggle between the disease and the powers of the patient.

Now, for honest scepticism I must confess the greatest respect. Doubt has opened the door to knowledge. Had men at all times been content to accept the dicta of their forefathers unquestioned, not one of the great discoveries which have resulted from civilisation, and which are its index, would have been effected. The determination to verify every assertion, to submit every time-honoured statement to the test of experiment, to ascertain the limits of every fact and the applicability of every law, is the upheaving force that has removed mountains. But for that parody of scepticism which runs beyond just limits, which, because many old landmarks have been removed and much old rubbish consigned to oblivion, concludes that all knowledge is naught; that a reconstruction on a solid basis is impossible; that we can only fold our hands and look on—for that I must express the greatest contempt. Extremes meet. It is our old enemy superstition with a new face.

We may, then, regard the position of medicine as secure in two respects, namely, that it should direct as to the conservation of health, and as to the warding off of disease. Most will also admit the applicability of hygienic laws to the actual management of illness, that we may direct the course of such diseases as get well spontaneously so that it should be "citò, tutò et jucundè".

What of the value of drugs? We have already seen reason to understand that any decided advance in this department of medicine was necessarily dependent on the progress of the ancillary branches. But another cause has greatly tended to hold us back. In all ages, suffering humanity has cried out for help. Even in a rude state of society, it was early discovered that certain agents were endowed with what we may broadly call medicinal properties. Armed with these and generalising upon the scanty data accessible in their times, men rushed into the wildest theories and the most venturesome practice. Feeling the want of accurate information as to the laws of life, they imported into medicine the philosophies and speculations current in their age. Thus they blinded themselves and accumulated a farrago of nonsense that is only now being cleared away. Not that these men were utterly pernicious. They have left to us a legacy of many most valuable remedies; they were often accurate in their application of them; and they were most precise in the employment of the scanty means of diagnosis at their command. Above all, however misled they may have been, we must respect their honesty and sincerity of purpose. That they were no better depended upon the times in which they lived and the knowledge at their disposal. Let me, however, not be misunderstood as decrying all tendency to the formation of theories. On the contrary, the framing of hypotheses or suppositions commonly precedes the discovery of the laws governing phenomena. The best guide that we have in forming them is analogy or similitude. "No intelligence but that of Omniscience", says Professor Daniell, "can comprehend the plan, the theory of the Universe; but from the plan of such small portions as have been mastered, we are often enabled successfully to anticipate the order of other portions, and thus to obtain a guide to experiment, to which the ultimate appeal must always be made." Of such conditional speculations, Sir John Herschell says (*Discourse on Natural Philosophy*): "A facility in framing them, if attended by an equal facility in laying them aside when they have served their turn, is one of the most valuable qualities a philosopher can possess."

As regards the sources from which we derive our weapons, we gladly welcome them from any quarter. The traditions of savage races, the lore of an antiquated priestcraft, the experiences of shipwrecked crews, the products of the chemical laboratory, have all placed valuable experiences at our command. Medicine is catholic, and is ready to accept sound information from whatever quarter it may flow.

Therapeutics can only become exact if they are dealt with on the same principles that we apply to other natural sciences. There is no royal road, no all-embracing theory according to which we can predicate what will be the action of any given drug, still less which will permit us to infer that such and such medicines are and must be antidotal to any given diseased state. Such crude speculations are still too rife among us, and they are eagerly caught up by a certain section of the public. They are usually the results of hasty generalisations formed on a few physiological and pathological facts of doubtful value; they represent the desires rather than the acquisitions of mankind. Like every other science, therapeutics must be built up on observation, careful, accurate, and far-seeing, and on experiment defining the conditions within which the agent to be employed is to do its work. The careful physician, although confident in the results of precise experiment, will also strictly observe its limits. Should he feel himself called upon to apply them under new or ill-defined conditions, he will do so with the utmost caution, feeling his way step by step, as the additions to his knowledge may permit. Formerly, it was almost exclusively upon observation that men relied. It is indeed marvellous how rich is the harvest that it has already brought in. It would carry me beyond all reasonable limits were I even to give you an epitome of the results that have been already obtained. These the professors of Medicine, Surgery, Midwifery, and Materia Medica, will in due time lay before you.

But the importation of the *experimental method* into therapeutics demands a passing word. It has been said that the phenomena of life are so complex, so variable, so incapable of being estimated by any exact method, as to render the introduction of experiment nugatory. To this the answer is the present condition of physiology. The complexity of the medicinal agents at our command has also been made an element of objection. But chemistry is rapidly increasing the number of pure alkaloids and of substances of known composition, endowed with precise powers and affinities. It has also been affirmed that experimentation would discredit the results of experience and would check accurate clinical research. That it might upset some theories at present current as to the action of certain remedies of otherwise acknowledged usefulness is probable; but it would thereby increase the value of the remedy by circumscribing exactly its limits of action. In principle, then, we may anticipate much good from the experimental method. But who are to be its subjects?—our fellow-men? In former ages, they have already furnished too many holocausts of victims to the crude and ill-digested blunders of our ancestors. Besides, we cannot insist too earnestly on the sacredness of every human existence. It is, then, to the lower animals that we must turn; and how far can they help us? Now here we must discriminate. Remedies are now admitted to act in two chief directions: either they modify the functions of some part, system, or organ, increasing, diminishing, or extinguishing them for the time, or they act more directly upon the complex phenomena presented by the malady as such in a manner that at present escapes us, or as we are wont to say, specifically. The actions of medicines may then

be, as Sir R. Christison used to express it, "directly therapeutic or physiological". Of remedies of proved specificity in the old sense we possess but few, and increasing knowledge is showing that the action of some of these is rather by their interference with some physiological factor, some key-element in the nexus of the disease, rather than by any antidotal effect on the malady as a whole.

It is, then, with respect to the physiological action of remedies that we may learn so much from animals. It has, however, been averred that such experiments could yield no results of any value, because the formation of animals and their mode of life differed in so many material respects from our own. It is quite correct that the vital processes of many animals differ in numerous respects from our own. Some animals can feed upon substances that are poisonous to ourselves. Rabbits can eat belladonna with impunity; but this drug nevertheless exerts on them the same physiological action as it produces on man. Professor Ferrier has justly observed: "The equilibrium between the circulation and other vital functions in the rabbit is such that the disturbing influence which belladonna induces in man is relatively little felt." Again, goats and sheep can eat conium, but the similarity of the action of conium on man and animals has been clearly demonstrated by Kölliker and Gutmann. Frogs and birds (according to Weir-Mitchell) are thrown into convulsions by opium. Opium has a double action, convulsive as well as narcotic; the former is chiefly exercised on the spinal, the latter on the cerebral, system. Now, in frogs, the spinal system is highly differentiated. In man, the brain is highly developed, and hence the narcotic action of the drug is that most commonly observed. But in man, also, convulsions occasionally follow opium; and this apparent anomaly the action on the frog permits us to understand. But let us look rather at results. Has this field, upon which men have worked for a very few years, yielded any return worth having? Let me point to the discovery of the action of nitrite of amyl and of nitro-glycerine in the treatment of angina pectoris; to the actions of digitaline and atropia on the functions of the heart; to that of physostigmia and of pilocarpin, to hydrate of chloral, to the actions of euonymin, iridin, and podophyllin on the liver; and, lastly, to the wonderfully contrasting actions of the great tetanisers, strychnia, brucia, and thebaia, and their ethyl and methyl compounds respectively. These are but a few of the results obtained. The great doctrine of physiological antagonism has also been thus revealed to us. We have been taught to understand the term antidote in a new sense. Instead of looking simply for chemical neutralisation, we have learnt that drugs, by their opposite actions on the same functions, or by playing off one function against another, could antagonise each other's effects. Thus atropia is known to antagonise morphia, and this fact has already been employed more than once in saving life. The antagonising effects of Calabar bean and strychnia are another example. Above all, the great group of anæsthetics, the most important gift ever conferred on suffering humanity, is to be ascribed to experience on animals. It is in this fact that we find the true answer to that large class of objectors who denounce all experiments on animals on the score of cruelty. Our labour is essentially humane. To save suffering of every kind, to reduce it, where inevitable, to a minimum, is not only our office, but our pride. To imagine that we should inflict pain out of mere wantonness is simply monstrous. But, even in dealing with our patients, we are often obliged to inflict some suffering to avoid more, or to save life. We destroy animals for purposes of food; and the mere wantonness of sport inflicts a thousand times more pain on animals than they are ever likely to suffer at the hands of the biologist. Could the experience be gained in any other way, we would gladly dispense with animal experimentation; but the whole course of science shows that this is inevitable. That we will avoid the infliction of pain in every instance where it is possible the very history of anæsthetics proves clearly. Where its infliction is inevitable, you may be equally sure that we are too alive to the nature and keenness of suffering ever to inflict one particle of it without a reasonable anticipation of beneficial results. Of the application of the experimental method to pathological therapeutics, I can tell you but little. The subject is still in its infancy. But our increasing knowledge of the true character of antidotal action, and of the specific causation of many diseases, raises our hopes highly in this direction.

I have endeavoured briefly to summarise to you the position to which modern medicine pretends, and the methods by which she is endeavouring to make it good. We thus boldly hold up our heads, and look hopefully towards the future. Still we are bound to confess that in no one department have we attained to completeness; many of them, alas! are in the most rudimentary condition. But, imperfect as our knowledge of disease and of the means of preventing it still may be, they are nevertheless in advance of our actual practice. This is to be ascribed, not to ourselves, but to the apathy and prejudice of a large section of the public, and, consequently, to the feeble action of the executive. I say consequently. The position of the executive towards the removal of abuses has been well summed up by Buckle: "The first suggesters of such steps have invariably been bold and able thinkers, who discern the abuse, denounce it, and point out how it is to be remedied. Long after this is done, the most enlightened governments continue to uphold the abuse, and reject the remedy. At length the pressure from without becomes so strong, that the government is obliged to give way; the reform being accomplished, the people are expected to admire the wisdom of their rulers, by whom all this has been done" (vol. i, p. 273). That same public, which justly hears with horror of the slaughter of a battle-field, has its imagination scarcely, if at all, impressed when they read that, in the last ten years, 180,000 people died in the United Kingdom by continued fever alone. No doubt this depends rather on want of education than on want of benevolence. That benevolence is not lacking our splendid hospital sufficiently proves.

While alluding to our excellent patrons and friends, I may perhaps be excused if I endeavour to point out a few of the fallacies under which I believe that some of them labour respecting our functions in society. With a considerable section of the public I fear that medicine is still rather a matter of faith, or of its correlative scepticism, than one of knowledge. We find repeated among them dim and often distorted images of views and theories long since exploded amongst ourselves.

From the standpoint of the uneducated man, our position is very simple. He regards us as endowed with powers over his illness which are almost absolute; we are the depositories of great secrets which we can, if we choose, exercise for his advantage. To him we are the priests of a great mystery, and are to be propitiated; the more so as he has some uncomfortable notion that we may be evilly disposed, and utilise him as the subject of what he calls experiment.

How or whence our knowledge is obtained are also questions about which many think vaguely, if at all. Many seem to imagine that medical discoveries are showered down in an intermittent and irregular sort of way upon the world at large. Most of them possibly fall on the members of the medical profession, but they may equally tumble on blacksmiths or old women. Their idea is that a man may tumble on a medical discovery much as he may pick up an apple on a roadside. They entirely overlook the complexity and wonderful working of the animal economy, because they know so little about it. Were these same people told that an old woman had suddenly discovered a panacea for all defective steam-boilers, they would laugh the idea to scorn: "We know too much about boilers for that." But, if this same old woman pretend to have discovered a pill which shall cure every human ailment, she is at once regarded as having had a revelation from heaven. What is the actual history of the majority of these cure-alls? An individual with a little capital which he desires to utilise, or a "company limited" with a "cute" secretary, gets hold of a phamacopœia—British or foreign matters little. They extract therefrom some well-known aperients or sedative substances; these they herald to the world with a blast of trumpets and the prefix of some surname, Brown, Jones, or Robinson; or, better still, they dub their speculation with some title of barbarous etymology, supposed to convey to the public mind some idea of its virtues, such as ventosine or nauseaine. They extract some testimonials from a lot of credulous ignoramuses utterly incompetent to judge of the question; these, when worked up skilfully, are served hot in the daily press. An intelligent and a thrifty government casts the ægis of secresy over this wonderful discovery, on condition that a patent be taken out and a three-halfpenny stamp be fixed on the bottle. A good-natured public, seeing the stuff advertised right and left, thinks there must be what is called "something in it", and invests accordingly. If the something be a mild aperient, it probably, in the long run, does no great harm; if it be a drastic, or still more, if it be a narcotic, it helps to swell the bills of mortality.

There is one class of society, however, to whom this fancy pill-mongering is a decided blessing. I allude to our old friend the *malade imaginaire*, who expounds his "views" of his case till he almost drives one frantic. Let one of them speak for himself in the pages of a weekly contemporary (*Truth*). "I am myself a *malade imaginaire*. In fancy, I have had every disease to which flesh is heir. But I am one of those sufferers whose precise maladies are a mystery to the faculty; and, whenever I consult a doctor, he has the effrontery to tell me that there is nothing the matter with me. Being convinced, however, that my appearance is deceptive, and that I am but a whited sepulchre, I am perpetually engaged in physicking myself."

Ascending among our better informed friends, we find many impressed with the idea that disease is, for the most part, an entity derived from without—a parasite, as it were, growing at our expense. They fail to observe that it is the result of our habits and surroundings, the taint imported by hereditary predisposition, or the wearing out of

our tissues by actual or premature old age. Mistaking between the disease and its cause, they fail to observe that the former grows within us. As to drugs, the idea is very prevalent that their action represents something totally extraneous to the healthy body. We are applied to for cures, antidotes, which shall destroy and expel the intruder, exorcise the foul fiend.

A reproach constantly levelled at us is, that we possess no system. By this, I take it, the public mean some cut-and-dried series of formulæ, chiefly, if not exclusively, of theoretical origin. They seem to expect from us some thoroughgoing, all-including set of principles, elaborated in our studies, logically and harmoniously, out of our own inner consciousness. So impressed do many seem with the necessity of our fighting under some flag, that they have invented for us the term "allopathists, whatever that means. Our answer is, that we labour by the light of nature, and cannot go beyond the facts that have been discovered. Thank goodness, Medicine has done with these falsely called systems. She has suffered enough from them. Their vitality may be ascribed to two causes—the scantiness and tentative character of medical knowledge in times past, and the fact that they satisfy a craving not only in the popular, but in the medical mind itself. The strength of all depended on the tendency of most functional diseases to spontaneous recovery. Many failed to perceive this, and made the most violent and blundering assaults on their unhappy patients. Homœopathy, the "system" of the nineteenth century, is wiser in its generation; it is content to spin theories before the imagination of its believers, and to amuse the patient while the disease runs its own course. Allied to these are those waverers who have dismissed physic and its ways from their thoughts during the day of health, and who have neither firmness nor endurance to support them under suffering. They accept our services eagerly, but quickly become disheartened and wearied; they dismiss us, and run the gauntlet of the quackeries. These are the people who are said to "try" doctors and systems, who discard number one, about whom they know nothing, in favour of number two, about whom they know less.

But many men, seeing apparently the same diseases running the same course, whether under violent bleedings, heroic purgings, infinitesimal doses of nothing or coloured water, have fallen into scepticism. Nor is it to be wondered it. The answer to them is to look and inquire candidly what medicine has done and is actually doing; to put aside prejudice and weigh facts. We have no fear of the result.

Lastly, there is a large and growing section of the public who understand us, our methods, and our objects. To them we are often more than the mere administrators of medicines; we become the advisers, the comforters, the friends. They are content to accept medical science as it is, with all its shortcomings; for they know, as we know, that it is based upon truth.

ABSCESS COMMUNICATING WITH THE BLADDER AND RECTUM.—M. Duchaussay related the following interesting fact at the meeting of a medical society (*France Médicale*, No. 103). A gentleman aged 55 was suddenly taken ill during the night with excruciating pains in the abdomen, vomiting, and rigor. One physician diagnosed an attack of nephritic colic; another attributed it to gravel, but did not find any on passing a sound into the bladder. M. Duchaussay thought that there might be some obstruction in the intestine not far from the bladder, and attempted to remove it by an injection of water. Three days later, the patient passed pus with his urine and through the rectum. This showed that an abscess must have burst somewhere between the bladder and the rectum, communicating with both. Fæcal matter was passed through the bladder. Disinfecting injections of a solution of carbolic acid, etc., were daily used, and the patient bathed frequently. The inflammation was not considerable. There was myelitis, and gradually the fæces ceased to be passed through the bladder, except in particles not larger than grains of sand. The patient could take a little food, was sent to a watering-place, and soon recovered. This happened eighteen months before the case was reported. For the last three months, the communication between the bladder and rectum had been closed; the patient passed a little glairy matter from the bowels; and, two weeks ago, two pieces of fleshy matter escaped. On examining the intestines, it was found that there existed a contraction about five inches from the bladder; the mucous membrane was red and inflamed. The patient was taking twice a week an injection of two pints of water, and a small one daily. To prevent the intestine from being entirely closed, a bougie No. 30 had first been used, and afterwards an ordinary rectal bougie had been inserted into the intestine to keep it open. The cause of this affection is not clear; but in all probability it was due to some small foreign body which had in some way become imbedded into the mucous membrane, thereby causing an abscess.

REMARKS
ON
PROVINCIAL MEDICAL SCHOOLS.

BEING THE

Introductory Address delivered at the Opening of the Session 1879-80, at the Queen's College, Birmingham.

BY JAMES SAWYER, M.D.Lond., M.R.C.P.,
Physician to the Queen's Hospital; Professor of Materia Medica and Therapeutics in Queen's College, Birmingham; etc.

IT is my duty to-day, when we inaugurate the opening of another academical year, as the representative of the Council and Professors of the College, to address a few words to our old and new pupils in the faculty of medicine. My first words shall be words of welcome. In the name of those who have honoured me by their confidence and on whose behalf I am privileged to speak, I offer a cordial welcome to every student in this theatre. Some of you are here for the first time; perhaps some of you are proud to count the opening session as the last of your collegiate curriculum; most of you return to work in which you have already made considerable progress. I hope you all come with a due and deep sense of the responsibilities you are undertaking. I hope you are all filled with an earnest determination to avail yourselves to the utmost of the great opportunities which are given to you for learning the principles and practice of our profession—opportunities greater, perhaps, than you are able now to esteem them; greater certainly than many of your predecessors have enjoyed.

All of us may justly be proud of the prosperity and promise of the Birmingham Medical School. For many years, its progress has been steady and uninterrupted. Founded more than half a century ago by my late master, Mr. Sands Cox, whose name can never be mentioned within these walls, which he loved so well, without respect, who opened his lecture-rooms in Snow Hill in 1828, our school has had a memorable and chequered, and yet a honourable, history. Memorable is that history—in that its earlier records register the marvellous success attained by the devoted and unwearied enthusiasm of a very remarkable man. Chequered, alas! has that history been by petty jealousies and administrative disaster—blots which a later and enlightened harmony long since has swept away, I hope, for ever. But honourable withal does that history seem when we remember the self-sacrificing zeal of a goodly succession of teachers, not a few of whom have ranked with the brightest and best in our profession; and honourable, too, is our history when we recall a roll of students inscribed by some who have proudly borne the name of our school through the honours lists of colleges and universities, and won their way to the highest eminence in science and in medicine.

Since I first knew the Birmingham Medical School, some important and most beneficial changes have been made in its constitution. We no longer see the General Hospital with its little college and the Queen's College with its little hospital forming two distinct medical schools, weakening each other by their rivalry, and dividing the teachers of the town and the students they could attract in evervarying proportions. First, the two colleges became united. The Queen's College of to-day represents the rival Queen's and Sydenham Colleges of a dozen years ago, and still numbers, I rejoice to say, amongst its senior professors several of the teachers of the older schools. This happy fusion, which promises to be indissoluble, was followed by another, and, to my mind, more important, union. Seven years ago, the General and Queen's Hospitals, still competing clinical schools, although each was working in conjunction with the united college, became formally associated for the joint practical instruction of students. This co-operation of the two great hospitals of the town—the complement of the amalgamation of the colleges, and without which that amalgamation could scarcely be expected to be permanent—conceived and completed, not without some individual sacrifices, for the welfare of the pupils of the school, has more than realised the sanguine expectations of its promoters. I hope and believe this union will be lasting. You have now the privilege of watching and sharing in the practice of twenty-two hospital physicians and surgeons, who are responsible for the charge of nearly four hundred beds and the yearly care of four thousand in-patients and forty thousand out-patients. You have the advantages of the services of a staff of clinical teachers and the experience of a *clientèle* surpassed in number

and extent in only a small minority of the metropolitan schools, and unequalled elsewhere in England. To-day, then, we see the Birmingham Medical School firmly constituted by a happy union of the leading medical and teaching bodies of the town. The General and the Queen's Hospitals, formally sharing the clinical training of our pupils, are linked to the Queen's College to form one school. A liberal and enlightened policy has brought into harmonious association three great kindred institutions for a high and common object; and it has wisely so united them that they are associated only and not amalgamated, each maintaining its own administrative independence, each preserving full scope for the separate development of its own resources and work, and each reciprocally extending the influence and usefulness of the others. I hope this good genius of co-operation will one day consolidate together and bring into our school all the teaching strength and all the clinical material of this great town, so that your opportunities for obtaining a sound practical knowledge of your profession may be further extended in our Eye and Children's Hospitals, and in our important asylum for the insane.

To train medical students to become medical practitioners, and to pass certain examinations which are the legal tests of their fitness to practise, are the functions of a medical school. The former function, the higher of the two, although you may not now so estimate it, can be measured by no easily defined standard; but it embraces many subtle and most powerful agencies—what may be called the "tone" and "surroundings" of the school and the moral influence, example, and personal qualities of its teachers. But the way in which a medical school fulfils its second function, that of fitting students to pass the qualifying examinations, can be readily tested. The Royal College of Surgeons of England is the body from which most of the medical students of England obtain the right to practise as surgeons. The Council of that College has published some interesting and important statistics of its examinations. If we examine the last published of these statistics, showing the absolute and relative numbers of students who have passed or who have been rejected from each medical school, for the primary and pass examinations for the diploma of member of the College, during the academical year 1878-79, we shall see that the teachers and pupils of the Birmingham School have abundant reason to be proud of their work. Taking the primary examination, and comparing the results therein attained by our own school with those of the eleven schools of London, and also with those of the seven English provincial schools other than our own, I find that the highest metropolitan percentage of rejections is 48.5; the lowest, 18 per cent. The average of the rejections from the medical schools of London is 30.3 per cent. For the same examination, the percentage of rejections from the Birmingham School is only 15.7; less than a third of the largest and worst metropolitan percentage, a very little more than half the average of the London schools, and 2.3 per cent. lower and better than the lowest and best percentage attained by any London school. For this examination, too, the worst English provincial percentage of rejections is 48.75; the average is 32.3 per cent.; the best is that of the Birmingham School, namely, 15.7 per cent.; not half the average. An examination of the statistics of the pass examination is scarcely less satisfactory. The highest metropolitan percentage of rejections is 38.3; the lowest, 23 per cent. The average of the rejections from the schools of London is 31.3 per cent. For the same examination, the percentage of rejections from the Birmingham School is only 17.5 per cent.; 13.8 per cent. below the metropolitan average, and 5.5 per cent. lower and better than the lowest and best percentage attained by a London school. For this examination, the worst English provincial percentage of rejections is 53.3; the average is 35.6 per cent.; the best is that of the Birmingham School, namely, 17.5 per cent.; again, not half the average. Comment on these facts is unnecessary. They show, among other things, that excellency in these matters does not altogether depend, as some would seem to think, upon geographical conditions.

Now that I have given you some account of the position and progress of the Birmingham Medical School, I purpose to make a few brief suggestions to our students concerning the conduct and character of their studies. But before I pass on to the second part of my theme, I would notice, in passing, a question which for medical men and medical students is now a "burning question". Let us hope we are now on the eve of important changes in the method and management of the examinations of the licensing bodies, notwithstanding the lamentable indifference of the Government, the selfish and short-sighted opposition of the Scotch universities and colleges, and the amazing stupidity of the Medical Council. If I mistake not, the general voice of the profession demands that the constitution of the Medical Council be recast, that that august body develop into something more than a debating society, that its functions be forthwith quickened so that it may at last, after a hybernation of twenty-one years, do something to guard the rights and regulate the responsibilities of medical practitioners, and that what are called the "portals" of the profession be consolidated—we want fewer doors and more windows. The absurd multiplication of licensing bodies in the United Kingdom, and, in many of these the undue multiplication of licences, the great differences which have existed in the length and character of the curricula and in the number and stringency of the examinations of the various corporations, combined with the fussy inactivity of the Medical Council, have long afflicted medical students, and the profession generally, no less than the outside public, with evils whose harm it would be as difficult to measure as to exaggerate. There is not now before you, unfortunately, a definite set of examinations which you cannot shirk, if you would, if you would enter our profession, and in preparation for which you must regulate and direct your various studies in due order as to extent, proportion, and succession; but you are bewildered by the choice of "portals", which make unequal demands upon your time, your energies and your pockets, determine in varying degrees your subsequent professional status, fit or unfit you for the highest or lowest professional offices, and some of them so accommodating that you may look forward to entering them if in the end you should fail to pass or fear to approach their more exacting rivals. Can we wonder at the confused notions which possess the public as to what is connoted by a qualification to practise? At this moment, in the United Kingdom alone, without counting the newly-fledged Victoria University, which I understand has not yet formulated the arrangements of its medical faculty, there are no fewer than nineteen corporations chartered to confer medical degrees and diplomas. And such is the activity of these bodies that, exclusive of certificates in obstetrics, sanitary science, and dental surgery, in London there are given eleven, in the provinces of England ten, in Scotland nineteen, and in Ireland thirteen medical qualifications, a grand total of fifty-three licences to practise, the possession of any one of which entitles its holder to registration and the exercise of the privileges of a medical practitioner. Surely we have borne these evils long enough. Surely it is incumbent upon every member of our profession to do his best to secure their removal. All honour to those who have so long worked amongst us, in spite of official discountenance and delay, to effect a reform which cannot now be distant. Let us hope we shall soon see the Medical Council reconstituted with fuller powers upon a broader and a juster basis, including representatives of our medical schools and of the profession generally as well as of the corporations, framing rules for examinations, and enforcing punishment on those who practise without authority or unworthily, and the universities and colleges of the land—still preserving their powers for supplementary admission to the higher professional qualifications—united in a real conjoint scheme, providing a well-balanced minimum standard of examination for a licence to practise, uniform as to curricula, stringency and fees, in all divisions of the kingdom.

[Dr. Sawyer then spoke of the various subjects of the medical curriculum, of each of which he urged upon the students an earnest study and practice. Each of these subjects is a science, and has its cognate art. The relationships of medical science and its art were discussed; and the four methods of study, attendance upon lectures, and upon the demonstrations of tutors, the reading of systematic treatises, and the practical work in the dissecting-room, wards, and mortuaries, were enumerated. Above all, the study of anatomy, "the very corner-stone of the medical sciences", must be accomplished; whilst chemistry and physiology cannot be ignored. The students were to be diligent attendants upon hospital practice; and the time before them was all too short for its purpose. They had dresserships and clerkships to hold; they must teach their own fingers to feel, their own ears to hear, and their own eyes to see in their clinical work at the bedside of the sick and suffering. The lecturer then concluded as follows:—]

I hope a genuine and unalterable love of science, a humane and abiding enthusiasm, and an honest desire to earn your bread in the work of an honourable profession are chief among the feelings which have guided the choice that brings you here to-day. Remember, you have chosen a calling carrying with its practice responsibilities which are often more pressing, more personal, more direct, and more undivided than attach to the pursuit of any other profession. If you would duly fit yourselves now for these responsibilities, which must come upon you hereafter when you pass into practice, you will seriously and constantly strive to make the most of your educational opportunities for the acquirement of professional knowledge and professional skill. But howsoever extended your knowledge, howsoever great your skill, you cannot discharge these responsibilities aright unless you continue to train your hearts in courage and your minds to pure and lofty purpose. Bearing your responsibilities manfully, I would that you should pass from this school with a due sense of the dignity and worth of your calling; not

with a contracted and contemptible class conceit, but with broad human sympathies, tempered with that just professional pride which is one of the strongest incentives to sacrifice for any work which tends to foster professional unity or to raise our calling in public usefulness or esteem. Such a professional pride is the surest safeguard of professional probity.

NEW INVESTIGATIONS ON THE FURTHEST LIMITS OF COLOUR-PERCEPTION BY DIRECT SUNLIGHT AND BY ELECTRIC LIGHT.*

By Professor HERMANN COHN, Breslau.

THE distance at which the colours of different coloured papers can be recognised has not as yet been unanimously decided. Donders has said that, by good daylight, papers of 1 *millimètre* square in each colour can be recognised at 5 *mètres* distance. For 5 *mètres*, Dor and Weber found 2 *millimètres* for green, and 3 *millimètres* for red, as the diameter of the circle necessary for recognition of its colour. For yellow, Dor gives 2½ *millimètres;* Weber 5 *millimètres:* for blue, Dor 8 *millimètres;* Weber 5 *millimètres*.

In order to ascertain the extreme distances for perception of colour by the best illumination, I tested by the electric light the eyes of some physiologists who possessed normal acuteness of vision; and I found at my first experiments, by aid of Weber's chromoptometer, that many people recognised colours three or four times further off than Weber had calculated for daylight (see *Archiv für Augenheilkunde*, Band viii, Heft 3, p. 408).

What was my astonishment, however, when, with arrangements specially made for this purpose, I found that the largest room in the Physiological Laboratory was not long enough. The doors of a number of adjoining rooms had to be opened, in order to give a space of thirty *mètres* in length, to find the extreme boundaries for the recognition of coloured points of from one to two *millimètres* diameter upon a dark background.

I used the Heidelberg flower-paper which Weber employs in his chromoptometer, cut in bits of one *millimètre* square, and fastened each on a large surface of black velvet. The electric light was produced by a *gramme* machine of three-horse power and one hundred rotations in the minute, and was placed in front of the visual object at a distance of one *mètre*. The medical men and physiologists who were examined looked through a Weber's tube, in order to keep off all lateral light, which, however, was but weak, as the experiments used to be made from nine to eleven in the evening. The eyes examined were either emmetropic or slightly myopic (0.5 to 1.0), and in the latter case were corrected with concave glasses. Each eye was tested separately, and the following results were obtained with papers of one *millimètre* square.

1. *Red* appeared bright at from 16 to 17 *mètres* distance; distinctly red at from 11½ to 15 *mètres*.

2. *Green* appeared bright at from 20 to 24 *mètres;* distinctly green at from 8 to 14 *mètres*.

3. *Blue* appeared bright at from 8 to 10 *mètres;* but not distinctly blue beyond 2, 4, or 8 *mètres*.

4. *Yellow* appeared bright at from 15 to 20 *mètres;* but not distinctly yellow until at from 1 to 6 *mètres:* up to that point, there was always great hesitation as to whether the object was white or yellow.

5. *White* appeared bright at 20 *mètres*. At from 16 to 20 *mètres*, it was usually recognised as white; but yet often mistaken for yellow up to 6 *mètres* distance.

6. *Orange* appeared bright at 24 to 25 *mètres;* reddish at 13 to 15 *mètres;* reddish or yellowish at 8 or 9 *mètres;* not distinctly orange until from 3 to 7 *mètres*.

7. *Violet* caused the most difficulty. It appeared first as a bright point on a dark ground at from 11 to 13 *mètres*. Only at from 1 to 4 *mètres* was it seen as violet or blue.

It was now important to make similar tests with the same papers by direct sunlight in the open air. So far, such measurements are wholly wanting. In the garden, on sunny days, between 9 and 11 o'clock in the forenoon, eleven eyes were examined. The coloured papers, fastened on black velvet, were placed in the direct sunlight, while the individual under examination stood in shadow and looked through a Weber's tube.

1. *Red* was recognised certainly as red at from 10 to 17 *mètres;* exceptionally at 19 to 22 *mètres;* but was seen as a bright point at 20 to 22 *mètres*.

2. *Green* was seen certainly as green at 4 to 11 *mètres;* exceptionally at 21 *mètres;* at 22 to 32 *mètres*, it was seen as a bright point; at 12 to 18 *mètres*, usually as bluish or whitish.

3. *Blue* was seen certainly as blue at 4 to 9 *mètres;* exceptionally at 11 to 17 *mètres;* often mistaken for green at from 8 to 14 *mètres;* seen as a bright point at 14 to 22 *mètres*.

4. *Yellow* appeared at 35 to 40 *mètres* as a bright spot, but no one could say whether it was yellow or white. It was seen as yellow at 3 to 9 *mètres;* occasionally at 17 to 22 *mètres*.

5. *White* appeared as a bright spot at from 22 to 27 *mètres* distance; but here also it often could not be said with certainty whether it was white or yellow until the distance of 2 or 3 *mètres* had been reached.

6. *Orange* was seen at from 21 to 36 *mètres* as a bright point; at 17 to 20 *mètres*, usually as reddish; usually as orange at 5 to 8 *mètres;* often, however, not until 2 *mètres* was reached; and rarely at 16 to 22 *mètres*.

7. *Violet* was seen as a bright point at 19 to 22 *mètres;* then as grey-red, whitish, orange, sometimes white, and not certainly as violet until 1 to 3 *mètres* distance had been reached. One medical man recognised it as violet at 7 and 14 *mètres*.

These observations show that the boundaries for most colour-perceptions have hitherto been calculated too low. For the very variable diffused daylight, the numbers given by Donders, Dor, and Weber may perhaps be admitted.

On an average, colours of 1 *millimètre* in diameter will be seen—

	By Direct Sunlight.	By Electric Light.
Red....	At 14 *mètres*.	At 13 *mètres*.
Green ..	At 7 *mètres*, further off mistaken for blue.	At 11 *mètres*, further off mistaken for blue.
Blue ...	At 7 *mètres*, further off mistaken for green.	At 6 *mètres*, further off mistaken for green.
Yellow..	At 6 *mètres*, not distinguishable from white.	At 3 *mètres*, not distinguishable from white.
White ..	At 30 *mètres*, not distinguishable from yellow.	At 18 *mètres*, not distinguishable from yellow.
Orange .	At 5 *mètres*.	At 5 *mètres*.
Violet ..	At 2 *mètres*.	At 2 *mètres*.

I am now engaged in investigating the question of increase of the distance for recognition of a colour with increased diameter of the visual object.

* Read in the Subsection of Ophthalmology at the Annual Meeting of the British Medical Association in Cork, August 1879.

ON EXAMINATION FOR COLOUR-BLINDNESS.*

By H. R. SWANZY, F.R.C.S.I.,
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THE subject of congenital colour-blindness has for the last two years occupied much of the attention of ophthalmologists in Germany, in Norway and Sweden, and also in America. In Great Britain and Ireland, however, it has not been investigated with that thoroughness which its physiological interest and practical importance demand. It is true that to the writings of three Englishmen we are indebted for some of the earliest investigations concerning the chromatic sense and colour-blindness, namely, Young, Dalton, and Wilson of Edinburgh; but since their days the subject has not been cultivated by us. I desire briefly to bring under the notice of the Section some of the methods for examining the colour-sense which are now in use, and some of the observations which have been made as to the frequency of this anomaly.

Before doing so, permit me, sir, to refer to the two great rival theories of colour perception at present existing. The older of these is known by the names of two great men, as the Young-Helmholtz theory. It assumes three kinds of elements in the retina for perceiving respectively red, green, and blue (or violet). In accordance with this theory, three different kinds of colour-blindness are recognised, red-blindness, green-blindness, and blue-blindness. The Young-Helmholtz theory is still held by some as the true one; but a large proportion of those competent to form an opinion, and who have carefully investigated the question, have adopted the theory of the colour-sense as propounded by Professor Hering of Prague in his paper laid before the Vienna Academy on May 15th, 1874. According to Hering, there exist in the retina three kinds of perceptive substance: 1. The substance which perceives the

* Read in the Subsection of Ophthalmology at the Annual Meeting of the British Medical Association in Cork, August 1879.

white-black row of sensations; 2. That for the red-green row of sensations; 3. That for the blue-yellow row of sensations. We are here concerned with the two latter substances alone. In accordance with Hering's theory, there are but two kinds of colour-blindness, red-green colour-blindness and blue-yellow colour-blindness. Red-blindness involves also green-blindness, and *vice versâ;* while blue-blindness and yellow-blindness are also inseparable.

It would be outside the scope of this paper, and the discussion which it is to open, were I to follow Professor Hering into any of the manifold proofs upon which he founds his theory, or to consider the respective merits of these two theories; nor dare I occupy your time with details with which you are doubtless familiar.

A good test for the colour-sense must fulfil the following desiderata. 1. It must be capable of rapidly detecting the existence and nature of the anomaly. 2. It must make the least possible demand upon the intelligence of the patient. 3. It must render deception, whether intentional or unintentional, impossible; and, therefore, any method which depends on the correct name being given to the colour is bad. 4. The possibility of any interference of the judgment must be excluded, in order that the sensation to be tested may alone come into play. The spectroscope is naturally the first apparatus which suggests itself for the purpose in hand; but, employed alone, it answers none of the above requirements, and can only be employed as an adjunct to other methods.

A very beautiful method is that by means of coloured shadows which Dr. Stilling of Cassel was the first to employ for testing the colour-sense, although the experiment itself is not a new one. The experiment is made in a darkened room, by the help of a sheet of white paper fastened on the wall, a lighted lamp, and some pieces of coloured glass. A coloured glass is held between the lamp and sheet of white paper in such a way as to throw a coloured light upon the latter. Then a pencil or a penhandle is held before the paper. The shadow of this on the paper will be found to be coloured, and its colour will be seen to be complementary to that of the glass. If the glass be green, the colour of the shadow will be red; if the glass be blue, the shadow will be yellow. If the individual under examination see that the shadow is coloured, he must, of course, have the power of distinguishing both that colour and the colour of the glass; and if he be not able to see that the shadow has a colour, if it seem to him to be simply a dark shadow, he must be blind both for the colour of the shadow and for that of the glass, and practically such is found to be true. The experiment thus affords a very strong argument in favour of Hering's theory.

Dr Stilling has also introduced a method of his own by means of pseudo-isochromatic tables. The tables which I exhibit to you are for testing for red-green blindness. They consist in letters and figures in pink and red upon a brown background. Brown and red appear to the red-green blind as similar colours; consequently in such a case the letters and figures should not be distinguishable. These tables have not met with universal favour. My own experience with them is I confess small, but of a kind to make me doubt their utility. At least one person who was markedly red-green blind by Holmgren's test could readily decipher the figures and letters on these tables.

Dr. Daae of Kagerö has published a table with coloured wools arranged in ten rows. Each row contains seven colours. In two of the rows (the eighth and tenth) the colours red and green are of the same kind, but different in shade. The other rows contain colours of different kinds. Each row is pointed to in succession, and the individual asked if the colours of which each is composed are similar or different. If he answer correctly in every instance, his colour-sense is normal. Rows one and two are for the detection of blue-yellow blindness. Rows three, four, five, six, seven, and nine are for the detection of red-green blindness.

The method of Professor Holmgren of Upsala has received the greatest meed of popularity. It is conducted by means of coloured wools. In the first instance, a light green woollen skein is laid before the individual, and he is required to pick out from the others all skeins of the same colour as the pattern. If this test be passed, the individual's colour-sense is normal. If it be not passed, a purple wool is placed before him, and if he succeed in matching it his colour-sense is merely imperfect. If, in addition to purple skeins, he match the purple pattern with blue or violet, he is completely red-blind. If, in addition to purple, he add green or grey, he is green-blind. If, in addition to purple, he add red or orange, he is blue-blind. The examination may end with this second or purple test, or the third or red test may be proceeded with. A bright red wool is laid before the individual, and if he be red-blind he will match it with green and brown shades which are darker than the pattern, if he be green-blind he will match it with green and brown shades which are brighter than the pattern. By this means, the colour-sense of an individual may be tested in the space of a minute or a minute and a half, while no word need be uttered on either side, and a large roomful of other people about to be tested may look on without vitiating the test.

Finally, I must refer to a method which seems to be the one in use in these countries upon railways and other public services in which a colour-sense is essential for efficiency. It consists in such a card as this, with four coloured squares, red, green, yellow, and blue, each about an inch square. The person to be examined is simply asked to give its name to each colour. If he name them correctly, he is passed; if he give them the wrong names, he is not passed. Such a plan is full of fallacies. We know now very well that colour-blind people may be able to name colours correctly, but they do so, not by aid of their colour-sense, but by virtue of the brightness which one colour possesses as compared with another. Again, some uneducated people are not familiar with the names of colours, and in this way may seem with such a test to be colour-blind when not truly so.

Professor Cohn has employed in his investigations a modification of Holmgren's method by omitting altogether the first or light green test, and using only the second or purple test. It is a very suitable test from the point of view of the Young-Helmholtz theory, being a compound of the two extreme colours of the spectrum. It also is conformable to the theory of Hering, because, purple being a mixture of blue and red, it can detect every kind of colour-blindness. For red-green blind persons, it contains a colour they cannot see, namely, red; and for blue-yellow blind persons it contains a colour they cannot see, namely, blue. In using the test in this way, Cohn prefers rose-colour, which is a pale purple, to the dark purple recommended by Holmgren.

The principal observers of late as to the frequency of colour-blindness have been Holmgren, Cohn, and Magnus of Breslau, and Joy Jeffries of Boston. The latter distinguished oculist has personally tested the colour-sense of the enormous number of 18,329 individuals, and he gives the results of his labours in his book on *Colour-Blindness: its Dangers and Detection*, published two months ago. Donders, Fontenoy, and others have also examined large numbers with the same object. The percentage of colour-blind males found by these different observers varies from 2.87 by Dr. Fontenoy to 6.6 by Professor Donders and Dr. Minder of Berne. Amongst females colour-blindness is extremely rare. The highest percentage is given by Dr. Minder at 1.3. Cohn did not meet with a single colour-blind female in 1,061 whom he examined, and Magnus only one in 2,216. Joy Jeffries found four colour-blind females in the 7,942 who were examined by him, or an average of only .052 per cent.

I have myself examined 1,320 persons in respect of their colour-sense by aid of Holmgren's test. Of these, 90 were females, and none of them were colour-blind. Of the 1,230 males whom I examined, I found 82 more or less colour-blind, or a percentage of 6.6. I hope to add to these numbers and to make my investigations more complete in several particulars, especially as regards the search for blue-yellow blindness.

Most of the investigations of which I have briefly given the results were made with the object chiefly of ascertaining the prevalence of red-green blindness, for the practical reason that red and green are the colours employed for signals on railways and at sea. In the course of their investigations, the authors happened on some cases of blue-yellow blindness, but I think it is to be regretted that they did not keep it more specially before their eyes than they seem to have done. Cohn and Stilling alone have sought for it specially. Red-green blindness is, however, without doubt very much more frequent than blue-yellow blindness; Cohn met with only five cases of the latter, and Stilling with but seven. Cohn's investigations with regard to colour-blindness are by far the most valuable and complete which have as yet been made. He examined each of his one hundred colour-blind individuals by all the methods I have mentioned as well as by others. In this way, he has shown the very great probability of Hering's theory by demonstrating that everyone who is blind for red is also blind for green, and *vice versâ*.

The very great interest which attaches to congenital colour-blindness for physiological reasons is only exceeded by its practical importance. No one would desire to travel by a railway train, the engine-driver of which was red-green blind, nor to know that the helmsman or look-out of his steam-packet had the same defect. I believe that a few accidents have been ascertained to have occurred in consequence of colour-blindness. But it will never be known how many have occurred in consequence of it, especially at sea, but which have not been traced to it, because the profession and the public have been too little alive to its existence and unacquainted with the proper methods for its detection.

It would be most desirable that investigations such as those to which I have referred should be made in this country, and that the various railway companies and the Board of Trade should be induced to adopt

Holmgren's test. In the *Lancet* for January 13th, 1877, there is a communication "On the Prevalence of Colour-Blindness", by Mr. Herbert W. Page, Surgeon to the London and North-Western Railway Company. Mr. Page believes that this defect of vision is very uncommon. In eight hundred men employed by the Company, he did not find one instance of true colour-blindness. He quotes also the opinions of some other railway surgeons. Mr. Oliver Pemberton of Birmingham says: "My experience is that it is of excessive rareness, and I have examined many hundreds in the course of twenty-five years." Mr. Puzey of Liverpool says: "I have not found it common. Sometimes I have met with it; and sometimes when I have thought I had a case I have found that the fact was merely the man did not know the names of the colours." Mr. Page of Carlisle says: "I have met with only three cases of colour-blindness out of many hundreds whom I have examined.....I have supposed I had a case of colour-blindness before me, when in reality it was nothing more than ignorance of the names of the colours." Mr. Herbert Page does not specify the method he used in making his investigations, but it is evident from his general remarks that it is some plan by which the individual is called on to give the correct name to a colour placed before him, and I have shown how completely unreliable any such method must be.

It may be said that if a colour-blind railway official or sailor be able to distinguish the red from the green light, it matters little whether he does it by aid of his chromatic sense or by some appearance apart from the colours of the signals. I grant this freely, and I can readily understand a colour-blind engine-driver of many years' standing never being detected in a mistake. Let such a man, however, be driving of a foggy night, or when snow is falling, when even the man with normal colour-sense finds a difficulty in recognising a difference between the signals, and how apt will he be to confound them. It may also be said that the percentage of colour-blind persons is so small that the defect is hardly worth considering from a practical point of view. Fortunately, the percentage is small, but not so small as to be of no practical importance. Upon the Great Southern and Western Railway of Ireland there are about one hundred engine-drivers; and amongst these I venture to say there are three or four who are colour-blind. Surely every train to which these drivers are attached is exposed to a great, an unwarranted, and an unsuspected danger.

I am strongly inclined to suspect that the dangers from colour-blindness are greater at sea than on land. How frequent collisions at sea have become!

ON THE PREVENTION OF SUICIDE.*

By W. F. WADE, F.R.C.P.,
Physician to the General Hospital, Birmingham.

SELF-DESTRUCTION is of all modes of death that which leaves in the hearts of sorrowing survivors the most poignant and the most enduring sting.

From the evidence of Mr. James Wilkes before the Select Committee on Lunacy Law, it appears that, in 1875, one thousand six hundred persons committed suicide in England alone. In the opinion of this same witness, for many years a Commissioner in Lunacy and previously long the able head of a large county asylum, "the great majority of them were probably insane, and they committed suicide for want of proper care". This is a truly shocking statement; the more so, in that it is true. What medical man can carefully read in the daily papers the ever-recurring paragraph headed "Suicide", without acquiescing in Mr. Wilkes's view? Further than this, there can be no doubt that a large number were curable, and would have recovered but for "want of proper care".

In too many cases, there has been not merely a want of *proper* care, but an absence of any care whatever. A man sees his wife day after day moping, neglecting her household duties, formerly assiduously performed; careless of her person and attire, formerly cleanly and neat; muttering to herself in monotonous phrase; not eating, not sleeping. He keeps on going to his work as usual, and returns home one evening to find her drowned in the water-butt, and perhaps one or two of his children with their throats cut. Quite true, he did not expect such a catastrophe; if it could be proved that he had expected it, he would possibly be liable to an indictment for murder. But he erred through ignorance, and consequently receives the commiseration of the coroner and his jury, and perhaps even a small subscription.

But is such ignorance excusable? Day after day, the newspapers report such cases; and, if people who read them are too careless to draw the proper lesson from such reports, means ought to be taken to teach it to them.

In other cases, the culpability is of a graver type. A doctor has been called in, and, recognising the dangerous situation of the patient, has given wise and suitable advice. This, through prejudice, disbelief, or indifference, has been neglected. We must all of us have found how much of earnest and reiterated solicitation is often required to induce persons having charge of such poor creatures to submit them to proper control even at, but especially away from, home.

I fear it must be admitted that there is yet another class of cases in which we ourselves, and not the public, are to blame: cases in which we have either not recognised the disease with sufficient promptness, or have not insisted on the necessary treatment with adequate urgency. I believe that this class is a small one, and I hope that it is daily decreasing, and will decrease; but as yet we can scarcely with truth deny its existence.

We come now to consider whether their duties are adequately discharged by another class of persons. Do coroners make a sufficiently searching inquiry into cases of suicide in a state of insanity? I have no intention of considering whether or no the evidence in all cases justifies the verdict, but only whether, when this is undoubtedly justified, the investigation ought not to be pursued further than it habitually appears to be. The main object of an inquest is to ascertain whether death has been by fault of any person, either wilfully or maliciously or through negligence; and, if so, by whose fault. It is the duty of the coroner to see that this object is attained. Even in cases where no one is shown to be criminally liable, coroners are accustomed—and, in my judgment, it is a very salutary proceeding—to lecture with severity persons who may be morally, though not legally, guilty of neglect. For example, not long ago a man stood quietly on a canal-bridge and watched a boy drown without making even any pretence of assisting him. He was within his strict legal rights; but the coroner commented with becoming indignation on the fellow's gross and pitiless inhumanity. But, as regards the cases we are discussing, coroners do not, so far as I can see, take such a view of their duty as is likely to lead to any diminution of the lamentable neglect of proper precautions to prevent insane suicide. I say this after having long paid attention to the newspaper reports of such inquests. It is true that such reports are, for the most part, brief and condensed; and that a perusal of the depositions, which are not at our disposal, might show the matter in an entirely different light. On the other hand, newspaper reporters are exceedingly acute in seizing on any items likely to interest the public; and I cannot but think that, if coroners took the same view of their duties in these cases as I do, it would soon appear so plainly in their questions to witnesses and in their charges to juries, that the reporters would not leave it possible for any candid reader to entertain the opinion which I at present hold. A case happened not long ago which illustrates the frame of mind in which even experienced coroners seem to approach these cases. A gentleman either became giddy and fell, or else threw himself, under a locomotive engine. There did not appear to be the least reason for thinking that the engine-driver could by any possibility have averted the catastrophe. Nevertheless, the coroner "cautioned" him before giving his evidence. This was, no doubt, perfectly right and proper, because it might have turned out that the man was to blame. The victim had been for some time under medical treatment. His doctor was called as a witness, but was *not* "cautioned". Now, it is obvious that it might have turned out that he had been guilty of malapraxis in not having ascertained that his patient was suicidal, or, having ascertained that he was, in not having taken due precautions. No member of the family was called with a view of discovering whether he had manifested any suicidal tendency; yet, in the opinion of the engine-driver, who saw the whole transaction and who really had no motive for influencing the verdict, the man had jumped on the line. This case happened before a coroner of long and very large experience, and is mentioned as an example of a coroner failing to realise his public duty in regard to cases of this kind.

Is it too much to say, firstly, that in a large number of cases of insane suicide, somebody is to blame; and, secondly, that no one ever is blamed? It seems to me that the proper course to take, with a view of rectifying the inadequacy of these inquests as at present conducted, is to apply to the Home Secretary. We have not, but he has, access to the only reliable documents; viz., the depositions. We can carry the case no further; he can, and I have no doubt, on due cause shown, will. Let us respectfully request him to cause a careful investigation to be made of the depositions in every case where the verdict is one of "Suicide in a state of temporary insanity", with a view of determining whether due care has been taken to ascertain whether anyone, and, if so, who, has been guilty of negligence in the matter.

* Read in the Section of Psychology at the Annual Meeting of the British Medical Association in Cork, August 1879.

CLINICAL MEMORANDA.

ON THE CAUSE OF THE EVERSION OF THE LIMB AFTER FRACTURE OF THE NECK OF THE FEMUR.

I.

In the JOURNAL of August 30th, page 322, under the proceedings of the Surgical Section of the Association, there is an epitome of a paper by Mr. E. Owen of London, on the Eversion of the Limb in Fracture of the Neck of the Femur, in which he points out that the weight of the limb is the cause of eversion, independently of muscular action.

So far as I can judge from the report of the paper and the remarks made on it by Mr. Cooper Forster and the Chairman of the Section, it would seem that the view expressed was considered entirely new, and and also that the doctrine of Sir Astley Cooper in regard to eversion in fracture of the neck of the femur being caused by the external rotator muscles was that uniformly held and taught. For upwards of five-and-twenty years, I have taught that, independently of muscular action, the weight of the limb causes the eversion. Thus, in my published *Lectures on Surgery*, at page 292, 2nd ed., in speaking generally of the various causes of displacement in fracture, I say: "In fracture of the neck of the femur, after stating the usual explanation of the shortening and eversion, the foot has a tendency to fall outwards. This is not owing merely to muscular causes, but also to the normal condition; for, when a person is lying down, the limb falls to the outside naturally, and in cases of fracture, when the continuity of the bone is broken, the same tendency exists, though somewhat increased by certain muscular causes." Again, at page 340, when treating specially of fracture of the neck of the femur, I say: "But the weight of the limb causes eversion, as we see when there is no fracture; for, when a person is lying on his back, the limbs are naturally everted." In my clinical visits, I am in the habit of directing the attention of the student to the position of the lower limbs in patients comatose or insensible from head-injuries, as explaining the eversion in the fracture. Indeed, the fact is so obvious to any observer, that I think it scarcely required much experiment or argument to make it more so.

JAMES SPENCE, F.R.C.S.Edin., F.R.S.,
Professor of Surgery in the University of Edinburgh.

II.

In your report of a paper read at the late meeting by Mr. Owen, upon the cause of the eversion of the foot usually observed after fracture of the neck of the femur, it would appear that he demonstrated to the satisfaction of those present that this deformity is due to the weight of the limb, and not to muscular action. I shall be glad if you will allow me a short space in which I may give some reasons for not accepting this view in its entirety.

As I understand it, Mr. Owen's chief reason for denying that the deformity is due to muscular action is that the internal rotators are actually more powerful than the external, and that therefore the spasm which follows the injury should produce inversion rather than eversion. It seems to me that, in this inference, he leaves out of consideration a most important change which the fracture of the neck has effected in the condition of these two sets of muscles. While the tensor vaginæ femoris, and the anterior portions of the glutæus medius and minimus, which rotate the thigh inwards, have their fibres directed downwards as well as backwards to their insertion, those of some of the external rotators, *e.g.*, the quadratus femoris and its neighbours, are almost horizontal. Now, the first change that follows fracture of the neck is shortening of the limb, which is drawn up by the psoas, glutæus maximus, and other great muscles which descend from the pelvis to the thigh.

This drawing up of the femur will approximate the attachments of all the internal rotators, on account of their *downward* direction; and it will so relax them as to prevent their spasm from having any effect upon the position of the limb. At the same time, it is evident that these external rotators, which run *transversely* to the great trochanter, will have their attachments separated by the raising of this point of bone, even though it may be at the same time drawn slightly inwards. The result of this separation will be to tighten these external rotators, and to produce eversion. Moreover, the greater the shortening, so much the more marked will be the eversion—a fact of common observation in these cases.

That the weight of the limb is not the sole cause of the deformity is, I think, shown by the rigidity with which it is held in this position for some time after the injury. Otherwise, the support of a pillow should suffice to restore the limb to its normal position.

I may add that I have tried the experiment mentioned by Mr. Owen, and have divided the neck of the femur in the dead subject. Some eversion followed this procedure, and this was increased by cutting through the front of the capsule of the joint. But the eversion became still greater when I forced the limb upwards, so as to produce artificially that shortening which is ordinarily effected by muscular contraction.

In conclusion, I would add that a right knowledge of the causes of this deformity should have an important bearing upon our treatment of the injury. If Mr. Owen's explanation be true, it will be enough to support the limb when we wish to correct the eversion. If, on the other hand, as I contend, it is due to the effect which the shortening produces upon the transverse muscles of external rotation, it is evident that the eversion will not be removed, unless we use extension by weights or some other means to counteract this shortening.

N. DAVIES-COLLEY, M.S., F.R.C.S.,
Assistant-Surgeon to and Lecturer on Anatomy at Guy's Hospital.

ANASARCA: RECOVERY AFTER REPEATED TAPPING.

The following case appears to me so interesting in its progress, and so unusual and satisfactory in its result, that I forward it for publication. In a not limited experience of nearly sixty years, I have not met with a parallel one.

Robert Haley, aged 30, height about five feet eight inches, dark complexion, and slight figure, a coachman, was, in 1854, attacked by deep inflammation in the left hypochondrial region, terminating in abscess. The abscess was opened by Mr. Hancock at the Charing Cross Hospital. He soon, however, began to raise large quantities of pus by expectoration; by this, he was much reduced in health, and he went into the Brompton Hospital under the care of Dr. Quain. He had a tedious illness; but in 1858 he had recovered, and came to Tottenham, and entered the service of a friend of mine, since dead, as coachman. He afterwards lived in the same capacity with my friend's daughter.

He continued well until 1874, when his health failed, and he began to have dropsical symptoms. He went again into the hospital at Brompton, and continued there until the end of April. He was soon after in a very deplorable state from general dropsy. In June, his mistress asked me to see him, as she said she should not like him to die without his having been seen by me.

I found him laid up with general dropsy, unable to lie in bed, and suffering much. Acupuncture was used to the penis and scrotum, as there was difficult micturition from the swelling. He was directed to take one of the following pills three times a-day. ℞ Pilulæ hydrargyri gr. vj; pulveris scillæ gr. vj; pulveris digitalis gr. xij; made with conserve into six pills. These he continued to take, but without mercury when his gums became tender, until September 25th. He also took a mixture with copaiba, as advised by Dr. Wilks; but, although it appeared to have a good effect in keeping up the renal secretion, it nauseated, and was withdrawn. The anasarca had subsided in a great degree, but the ascites remained. He was tapped, and twenty-four pints of clear fluid were drawn off. The operation was repeated at intervals until he had been tapped eleven times, the quantity withdrawn varying from fourteen to twenty-four pints.

He is now in fair health, eats, drinks, and sleeps well, has not a vestige of dropsy, and can take a moderate amount of exercise. He fortunately was a member of the Ancient Order of Foresters, and received an allowance from that Society during his illness. He has not made application to them for two years.

FRANCIS TOULMIN, Upper Clapton.

THE PERIOD OF INCUBATION IN VARICELLA.

Case I.—Isabella H., seven months old, a suckling baby, with three good vaccination marks, was admitted with her mother (who was suffering from variola discreta) on March 19th, 1879. She came into contact the same day with a case of varicella, admitted through misadventure. She was taken ill on March 28th, refusing to take the breast; grew peevish and dull; the eyes lost their bright lustre; and the temperature rose to 101°. Eruption first appeared the following morning. She had two more crops the two successive days. She was revaccinated on admission, but did not take it. In her the period of incubation was nine days.

Cases II and III.—Alfred T., aged 7, with four indifferent marks of

vaccination, was admitted to this hospital, suffering from varicella, on April 26th, 1879, the second day of the eruption. His brother Thomas T., two years old, with traces of two vaccination marks, was indisposed on May 6th, and the eruption appeared on him on May 7th. He was removed to the hospital the following day, and was successfully revaccinated. His sister Emma T., aged 8, with four indifferent marks of vaccination, was admitted the same day (the first day of eruption in her) and was successfully revaccinated. None of them suffered from small-pox, although they were exposed to the infection, There is no history of the source of infection in Alfred T. They were living together, and Thomas and Emma took the disease from their brother Alfred. Counting the period of incubation from the day of the initiatory fever in Alfred, it was twelve days in Thomas and thirteen days in Emma. It is but fair to assume that an infectious disease commences to be infective with the manifestation of the symptoms. Dr. Murchison, in his paper on the Period of Incubation, published in the last *Transactions* of the Clinical Society of London, remarks: "So far as my knowledge extends, there are, as yet, no facts on record which prove that acute specific disease can be transmitted during the incubation stage, either by mere contact or through the atmosphere." I am, however, inclined to think that the infective stage begins with the first day of eruption.

Case IV.—Thomas B., five weeks old, unvaccinated, was admitted with his mother on May 8th, 1879. He was successfully vaccinated. He slept with his mother, the day of their admission, next bed to Thomas T., and probably came in his contact through the nurse or otherwise. Thomas and Emma T. were isolated the following morning. The spots first appeared on him on May 26th. There was no appreciable rise of temperature, but the baby was sick twice the day previous. In him the period of incubation was seventeen days.

M. D. MAKUNA, L.R.C.P.,
Medical Superintendent of the Fulham Hospital.

MEDICO-LEGAL MEMORANDA.

RUPTURE OF THE JEJUNUM, WITHOUT ABDOMINAL CONTUSION.

A CASE of considerable importance to medical jurists has recently come under my notice, in which a strong healthy man sustained a rupture of his jejunum by being thrown from, and trampled upon by, a horse; the horse, to use the man's own words, having "walked upon his side". I will briefly describe his *ante mortem* symptoms and *post mortem* appearances, and then direct attention to the points of peculiar interest in this case. The man was seen by me about six hours prior to his death, and eighteen hours after the receipt of his injury. He was then in a state of collapse, had vomiting of bilious matter, cold extremites, and a feeble pulse of 130 to the minute. His belly was distended with fluid and flatus. He had ridden two miles after the accident, and had taken a quantity of salt and water, which doubtless had aggravated the vomiting. There was no external mark of injury about any portion of the abdominal walls. *Post mortem* examination showed that the abdomen contained nearly two gallons of turbid fluid, mixed with portions of half-digested food. The intestines were matted together with recent lymph, and were much bruised in several parts. A rent, of the size of a hazel-nut, was found in the jejunum; and the apex of the right kidney was much bruised, but not ruptured. There was no trace of ulceration throughout the alimentary canal. I must not omit to state that careful inspection of the abdominal muscles failed to detect the slightest bruising. This case establishes the fact, that so serious a lesion as the rupture of an intestine may occur, as the result of violence, without any sign of injury to the abdominal walls being discovered, either before or after death; and it also shows, without doubt, that the injured person may walk or ride some considerable distance after the infliction of fatal mischief, such as that described above. These are the two points to which I wish to direct attention particularly, as they have most important significations in a medico-legal point of view. In Dr. Taylor's excellent work on *Medical Jurisprudence* (second edition, vol. i, p. 652), a case is reported by Mr. Newton, in which a coroner's jury and the coroner came to the conclusion that a kick on the abdomen could not have ruptured the ileum, "as there was no mark of contusion or ecchymosis on the abdomen". In my case, the man's belly was actually trampled upon by a horse, and no bruising or ecchymosis of the abdominal muscles was found. The jury returned a verdict in accordance with the medical evidence.

I express a hope that this case may meet Dr. Taylor's eye.

JAMES TOMPSETT, M.R.C.S., etc., Government Medical Officer, Spanish Town, Jamaica.

SURGICAL MEMORANDA.

DIPHTHERITIC OPHTHALMIA.

IN the BRITISH MEDICAL JOURNAL of August 30th, a short abstract of a very valuable paper on diphtheritic ophthalmia, by Mr. Edward Nettleship, is published. This paper could not be read at the meeting, therefore there was no opportunity of answering it. But I feel the duty of answering to my very dear and learned friend Mr. Nettleship, because "Amicus Plato, magis amica veritas". 1. We must distinguish in Germany between diphtheritic and membranous ophthalmia, because we have adopted the anatomical definition of diphtheria, being a necrotic inflammation of the mucous membrane. 2. I beg to refer to my paper on the Etiology of Conjunctival Diphtheria and its Combination with Diphtheria of the Throat (1869, *Berliner Klin. Wochenschrift*, No. 3). 3. I believe diphtheria of the conjunctiva is less frequent in Germany and more frequent in England than hitherto supposed. In seven years of my own practice (1870-77), I had, amongst about 22,000 new patients, forty-five cases of diphtheria, including the mild and partial ones, viz., 2 per mille of all my patients. Except the cases which ended fatally by complication or the throat, etc., I very seldom lost an eye by diphtheria, adopting (amongst children) a very simple and more expectative treatment. In the last two or three years, I remember only one eye of one child lost by diphtheria. (In the years 1866-68, there were some more dangerous little epidemics of conjunctival diphtheria in Berlin.)

That diphtheria of the conjunctiva occurs oftener in other countries than supposed, that is demonstrated by some papers of recent date, those of Dr. Adler of Vienna and of Mr. Nettleship himself. But I cannot agree with the statement of my friend, that blenorrhœa of the conjunctiva is also much more frequent in Germany than in England. Firstly, I refer to the classical monograph of William Lawrence (London, 1830); secondly, to my own comparative observation; thirdly, to the strongest and inexorable proof, statistical numbers. In Moorfields, they had (1875), amongst 20,000 new patients, 267 cases of purulent inflammation of the conjunctiva, viz., 13.3 per mille. Myself, I had, amongst 22,000 new patients, 325 cases of conjunctival blenorrhœa, viz., 15 per mille. The difference is trifling, considering that 314 of my 325 cases were new-born children, and we were accustomed to name also the milder cases of that kind blenorrhœa neonatorum. Finally, I cannot find that inoculation from one person to another prevails in causing diphtheria. Diphtheria of conjunctiva combined with that of throat is not caused by self-infection, as gonorrhœal ophthalmia. The latter is not frequent with us; in my practice, 1 per mille of all patients.

If I suppose that our poor classes stand the comparison with the English ones, concerning the distress, the carelessness, etc., I hope you will allow this statement, being not only a result of patriotism, but also an expression of direct comparative observation.

F. HIRSCHBERG, M.D.,
Lecturer on Ophthalmology in the University of Berlin.

OBTURATOR HERNIA: REDUCTION BY TAXIS: RECOVERY.

MRS. B., aged 75, often suffered during the last five years from attacks of colic, always relieved by opium and soda and ammonia. She was seized on June 15th with apparently one of her usual attacks, first seen then; she had had sickness from the evening of the 14th, and no action of bowels since the 13th. As the vomiting continued the next day (the 16th), I made a careful examination of the patient, and found an elastic swelling, resonant on percussion, oval in shape, about the size of a bantam's egg, deep in the upper part of Scarpa's triangle, on the inner side of the femoral artery, and close to the tendon of the adductor longus, on the right side. The femoral canal was quite clear. The whole contour of the upper part of the thigh on this side was altered, and, owing to the extreme emaciation of the patient, the exact situation of the tumour could be well defined, It was very tender, and the patient complained, when being examined: "Oh, that gives me such a pain in my knee." On consultation with my partners (Dr. Walters of Reigate and Mr. Beveridge), we all agreed that it was an obturator hernia; that chloroform should be given; and that we should be prepared to operate if necessary. When the patient was well under the anæsthetic, taxis was tried, and the hernia returned with a perceptible gurgle. A pad and bandage were then applied. The patient was at once relieved; but her recovery was delayed by a sharp attack of bronchitis. She is now quite well.

FRED. B. HALLOWES, M.R.C.S.E. and L.S.A., Redhill.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

WESTMINSTER HOSPITAL.

CASES OF EXCISION OF THE ELBOW.

(Under the care of Mr. COWELL.)

FOR the notes of these cases we are indebted to Mr. J. E. NEALE, Surgical Registrar.

CASE I.—M. B., a schoolmistress, aged 43, was admitted on December 22nd, 1877. She had always been very healthy and well, and had lived regularly. She had been married nineteen years, but had had no children. A year before admission to the hospital, the left elbow-joint became stiff and painful; no cause could be assigned for this; she had never, as far as she knew, received any injury to the joint. Six months later, it became inflamed and painful, especially at night; and six weeks before admission an incision was made over the olecranon process, and some pus was let out. The wound soon closed but other sinuses opened spontaneously and continued to discharge. When examined by Mr. Cowell during anæsthesia, three sinuses were found around the joint, communicating with one another and leading down to bone. A slough, when removed, denuded the ligamentous structures around the joint. The head of the radius was found diseased, as well as the olecranon process and the outer condyle of the humerus, and much grating was felt in the joint. It was at once clear that excision of the joint was necessary; but the operation was postponed, as the consent of the patient had not been obtained.

January 1st, 1878. The elbow-joint was excised, the whole of the articular surfaces being removed through a longitudinal incision. The edges of the wound were brought together by silver sutures, and a drainage-tube was placed along the bottom of the incision. The wound was dressed with strips of lint soaked in red wash, and covered with a pad of oakum. No splint was applied, but the arm was laid on a pillow in the flexed position. The tissues in and around the joint were thickened and indurated; the synovial membrane was thickened, gelatinous, and adherent over the ends of the bones, except where the articular cartilage was involved.

For the first two or three days after the operation, the patient complained of some pain, but after the fifth day she was able to bear passive motion. From this date, the patient had flexion, extension, pronation, and supination performed every morning. The latter movements were performed by fixing the ulna in one hand, while with the other the patient's hand was pronated and supinated.

On January 26th, the patient was allowed to get up, the arm being now for the first time placed on a rectangular splint. On this date, the patient could raise her hand to her lips. The temperature once rose to 102°, but after the sixth day remained almost normal. No splint was used, even when the patient was up, after February 1st.

The only difficulty in the case was with the lower part of the incision, which showed no signs of healing, and delayed the patient's admission into the Convalescent Home at Eastbourne, to which place she went on March 8th, 1878; passive motion in the manner described above being continued up to her discharge.

She remained at the seaside for a month, and on her return the arm was found to have greatly improved. She could manage to do her hair with it, and also to play a little on the harmonium—a feat she particularly wished not to have to give up, as it was part of her work in the school. Since then, the arm has gone on improving, and when last seen was very little the worse for having lost the elbow-joint.

CASE II.—H. H., aged 3, was admitted May 20th, 1878. Over the right olecranon process was a sinus leading down to necrosed bone. Some soft carious bone was removed on May 23rd, and the limb was placed on an L-shaped splint. The joint was not implicated.

May 25th. The arm and forearm became somewhat swollen, red, and painful. The temperature rose from 98.4° to 103°. The margin of the reddened patch was very well defined, though irregular. It was treated by the application of a linseed-meal poultice.

May 29th. The inflammation in the arm was almost entirely gone: the cutis was peeling: the patient did not complain at all. The limb was still on the splint: the wound was discharging freely. This soon closed up. On July 8th the right elbow-joint was uniformly enlarged. There was no tenderness: it was semiflexed, and the forearm was halfway between pronation and supination. Subsequent examination showed distinct grating in the joint, and about one inch below the tip of the olecranon was a sinus leading upwards to the bone, which was carious. The temperature had remained normal since June 22nd.

On July 23rd, the patient was placed under the influence of chloroform, when Mr. Cowell proceeded to excise the joint under carbolic spray. Only a straight incision, about four inches long, over the middle of the olecranon, was used. A few vessels required ligature (catgut). Hair-drainage and the usual gauze dressings were then applied. The limb was placed straight on a pillow after removing the patient to bed.

On August 6th, the stitches and horsehair-drainage were removed, and on August 8th, as the wound had almost healed, the antiseptic gauze dressings were discontinued and boracic dressings substituted. Passive motion was employed daily, and the patient was sent on September 8th to Eastbourne, with a very good and useful arm.

He was again seen two weeks after his return from the sea: the arm was improving. There were very fair motion, extension, flexion, supination, and pronation; no flail-like action. The wounds were quite healed up. The boy himself was looking very well.

State of Joint after Removal.—The whole of the olecranon process of the ulna, except the upper part of the great sigmoid notch, was diseased, and exceedingly offensive to the smell. The rest of the articular surfaces, except a small portion of the anterior surface of the condyles of the humerus, was covered over by soft gelatinous tissue firmly adherent to the underlying cartilage, which was thinner than usual. Around and in the joint there was more of this soft pulpy tissue.

CASE III.—C. H., aged 9, was admitted on May 30th, 1878. About twelve months ago, the patient noticed a soft lump on the left side of his back, which gradually became larger ever since; pain had never been a prominent symptom. About a month ago, an abscess broke on the inner side of the left elbow-joint, and a good deal of matter came away. It was not at all painful previously to this, but the boy had noticed a swelling here. There was no history of a blow or a fall. No previous treatment had been adopted.

On admission, the patient was a well nourished, slightly anæmic-looking lad. His features were oval, his head square, his eyelashes dark and long. The finger-ends were clubbed. On the left side of his back was a soft fluctuating swelling, about the size of an ordinary orange, and having the following limits: upwards, to three fingers' breadth below the angle of the scapula; downwards, to two inches from the iliac crest; inwards, to two fingers' breadth from the spinous processes; and outwards, to the mid-axillary line. Distinct fluctuation could be felt all over the tumour; it was not movable as a whole. On pressing the finger downwards through it, one impinged on the ribs; the proceeding, however, causing pain. The skin over the swelling was not reddened; the veins were slightly prominent. There was no angular or lateral curvature of the spine.

In the left elbow-joint, extension and flexion could be fully performed; there was no pain nor grating during movement. The outline of the joint was not altered, except internally to the olecranon process, when it was uniformly enlarged both above and below the internal condyle. There was no alteration in the appearance of the skin, except around a sinus situated just above the internal condyle, where it was inflamed. The sinus led to a cavity in the internal condyle of the humerus, at the bottom of which a piece of loose bone could be felt.

On June 4th, the abscess in the back was opened under the carbolic spray, and five ounces of curdy pus let out. A small drainage-tube was inserted, and the wound dressed in the ordinary Listerian manner. Some carious bone was also gouged out from the internal condyle of the humerus.

The back healed up under the antiseptic dressings in ten days. The arm did not go on so well. Another portion of bone was removed from the internal condyle; the cavity was well gouged out and plugged with oiled lint on July 9th. There was no grating in the joint, which was apparently not implicated. Two months later, there were no signs of improvement in the condition of the bone, and there was decided enlargement of the elbow, so Mr. Cowell determined on excising the elbow-joint. This he did on September 10th, under carbolic spray; a rectangular splint was put on over the dressings.

On September 28th, the antiseptic dressings were left off. The temperature since operation had become normal, instead of having an evening rise of three degrees. Granulations at several points in the line of incision were exuberant, and were touched with sulphate of copper, and then dressed with boracic lint and lotion. Since then, up to December 18th, the sinuses gradually closed up, and the patient

gained health. The arm, however, without some support to the elbow, was almost useless, nearly two inches separating the ends of the bones. With this support, however, the patient had a very good limb; the action of the fingers and hand was perfect. The arm has since greatly improved.

State of the Joint after Removal.—The lower two inches of the humerus, with the articular surface of the radius and ulna, were removed. The whole of the articular surfaces appeared healthy, as also were the ends of the radius and ulna. The lower end of the humerus was studded with several pale irregular patches, surrounded by hyperæmic areas. These proceeded right to the articular cartilage, which was becoming eroded on the attached surface in several places. There was a carious cavity in the internal condyle, the pale areas near here being greenish in colour. The other tissues around the joint and the ligaments were apparently not affected.

CASE IV.—This patient, a weak, sickly-looking lad, six years of age, was under Mr. Cowell's care in the Victoria Hospital for Children, Chelsea, in June 1878, where he had excision of the right elbow-joint performed for caries of the humerus and ulna. He was removed to Westminster when the Victoria Hospital was closed for repairs. The joint had been secondarily implicated. About two inches of the humerus, and nearly as much of the ulna and radius, had to be removed, so that there was a very large gap left. This arm was placed on a rectangular splint, and dressed with lint soaked in carbolic oil. The sinuses and wound gradually healed up; and, notwithstanding the amount of bone removed, the patient had, on December 18th, a very good arm; motion in the joint was not at all flail-like. Extension was slightly limited, but there was good flexion, and very fair pronation and supination. The general health of the boy had much improved since the operation.

CASE V.—This was a case of strumous disease of the right elbow-joint in a weak, miserable-looking boy three years old. His joint was excised on November 5th, 1878, under carbolic spray. Horsehair drainage was used. The arm was dressed every day up to November 14th, after which it only required dressing every three to four days, and on November 28th, the antiseptic dressings were discontinued, the state on this date being as follows. Only one or two small sinuses remained to heal up. There was very good movement in the fingers and arm; the joint was firm, slightly enlarged; extension was limited, but the patient could raise his arm so that the fingers could pull the hair on the top of his head. It was dressed with carbolic oiled lint and a pad of oakum.

Since then up the present date, the arm has been steadily improving. The patient's general state is much better. His arm seems to give him no trouble, for he plays all day, and would be out except for an attack of bronchitis.

LIVERPOOL NORTHERN HOSPITAL.

IMPACTION OF PORTION OF KNIFE IN PTERYGO-MAXILLARY REGION, WITH HARMLESS RESULT: REMOVAL SEVENTEEN DAYS AFTERWARDS.

(Under the care of Mr. CHAUNCY PUZEY.)

JOHN FINEGAN, aged 31, a sailor, was admitted into the Liverpool Northern Hospital on July 29th, 1879, with a partially healed incised wound over the left malar bone. He stated that he had been stabbed on July 13th, while on a passage from New York to Liverpool. The blow was a violent one, and inflicted with a sailor's knife. Three days after receipt of the injury, his jaws began to stiffen, so that he could not open his mouth wider than half an inch; but he had no pain, except when he moved the jaw. The upper molar teeth on the injured side felt loose. He continued on duty until the ship's arrival in port, although he felt sure that a piece of the knife remained in the wound.

Mr. Puzey saw him on July 30th, and found a small incised wound, nearly healed, just above the zygomatic process of the left malar bone; and a probe passed into the sinus remaining touched a rough piece of metal behind the zygoma. The patient was etherised, and, the wound having been enlarged, a pair of dressing-forceps was passed down behind the bone, and the piece of metal was seized; it was, however, so firmly impacted that it was found necessary to substitute strong curved sequestrum-forceps for the weaker instrument; and with these the foreign body was firmly seized, and with some force loosened; and then, after a little freer division of temporal fascia and muscle, it was extracted. The piece of knife measured two inches and three-eighths in length, by a little over three-quarters of an inch in width, and had apparently been driven by a downward stroke just above the zygomatic arch downwards and slightly backwards into the superior maxillary bone, probably about its tuberosity. Thus, being firmly wedged, the blade was snapped across in the attempt at withdrawal. The knife was very sharp, and the internal maxillary artery must have had a narrow escape.

There was very little bleeding after the extraction. The wound was filled with lint dipped in terebene and oil, and covered with dry oakum-dressing. The plug was removed next day, and the dressing of terebene-oil and dry oakum was continued. There was no constitutional disturbance, and the wound was almost healed by August 6th, when the patient left the hospital at his own wish. At this time, he could open his mouth to the extent of an inch without pain.

LIVERPOOL ROYAL INFIRMARY.

IMPACTION OF LARGE WOOD SPLINTER IN THE PTERYGO-MAXILLARY REGION, WITH HARMLESS RESULT.

(Under the care of Mr. RUSHTON PARKER.)

ABOUT February or March 1878, a man was struck in a Liverpool street by a bundle of joists or planks, which were being hoisted in some building operations. The heavy bundle (some hundredweights) struck him on the right cheek, laying it open at the outer corner of the eye. He went to the Royal Infirmary, where the wound was stitched and subsequently attended to by Mr. Knox, one of the house-surgeons; the patient being an out-patient throughout.

The wound healed, or nearly healed, when, on account of eversion of the lower eyelid, he visited the Eye and Ear Infirmary, where he was examined by Mr. J. Shadford Walker, senior surgeon to that institution. Through a sinus in the everted lower lid, Mr. Walker felt a hard roughness like exposed bone, and, thinking part of the maxilla was necrosed and exfoliating, he sent the patient back to the infirmary, that the case might be finished by those who began it. Mr. Parker examined him, and naturally took the view expressed by Mr. Walker, on feeling this apparently necrosed bone, by this time protruding the eyelid, which was everted to a conspicuous degree and puffed by chemosis. With the finger, it was felt that the foreign substance was exposed enough to permit withdrawal; and this was at once done by Mr. Knox with dressing-forceps; but, instead of bone, there appeared a piece of deal, over two inches and a half long, and nowhere less than a quarter of an inch and nowhere greater than half an inch thick: an irregular five-sided prism, with parallel sides.

No inconvenience had been felt in the possession of this now somewhat startling splinter, until the recent disturbance and stretching of the lower eyelid, under which the wood was in process of spontaneous extrusion. Careful examination showed that the maxilla was not perforated, nor even exposed; and it was pretty certain that the wood had been forced into the pterygo-maxillary region and there impacted, with its upper end broken off at the level of the lower eyelid and embedded beneath it. The eye was perfectly uninjured.

LAMBETH INFIRMARY.

GANGRENE OF FOOT: RECOVERY.

(Under the care of DR. HAMILTON.)

IN relating a case of such common occurrence as that of gangrene of the foot in an old woman, I must plead as my excuse the treatment being different from that ordinarily pursued, and that therefore it may be valuable to others who have similar cases to treat.

M. B., aged 72, a charwoman, was admitted to the Infirmary on February 24th, 1879, suffering with gangrene of all the toes of the left foot, said to be the result of frost-bite. She was ordered charcoal poultices to the foot, and opium to soothe the pain at night. The stench continued most offensive, despite the charcoal and carbolic acid, chlorinated lime, etc., used around the bed. On April 23rd, a distinct line of demarcation having formed, the gangrenous parts were removed; but the disease returned, and became as offensive as ever. I then ordered one of Mr. Soper's chlorine generators to be hung up inside the cradle, and no dressing whatever to be applied to the foot. The result was most satisfactory. The offensiveness was entirely removed; the discharges became more healthy; the sloughs separated, leaving a healthy surface; and in three weeks the foot was healed.

How far the local influence of the chlorine assisted in curing a disease which in this case was decidedly of constitutional origin—as shown by rigid arteries, a feebly acting heart, her advanced age, etc.—I will not pretend to say; but the relief afforded to the patient and others by the removal of the stench was most marked. I have also tried the same arrangement with cases of sloughing phagedæna, and with equally gratifying results, especially when the cradle was covered so as to limit to a certain extent the escape of the gas.

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS.

On OCTOBER 1st, 1879.

CHARING CROSS HOSPITAL.

THE session at the Charing Cross Hospital was opened by an address from Mr. HIRD, Surgeon to the Hospital and Dean of the Medical School.

After congratulating the students on the marked success which has been achieved by them during the past year at the several examining boards, the lecturer said that he could not permit the opportunity to pass without alluding specially to two old students, former resident surgical officers in the hospital—Mr. Jolly and Mr. Conolly—whom he was happy to see among them again on their return from South Africa, after having rendered distinguished services in the wars with the Zulus, and been honourably mentioned on several occasions in the despatches. They have done honour to themselves and to their Alma Mater; and, in the name of his colleagues and of the students, he begged to offer them their warmest thanks for their patriotism, and to wish them a brilliant career in their profession. He then alluded to the new era in the history of the hospital which will be commenced at the opening of the session next year. The new school-buildings will then be ready for occupation; and, by the generous support of the governors and the cordial co-operation of the Council with the medical staff, they will be on an extensive scale and fitted with all modern appliances.

In specially addressing those now entering the profession as students, Mr. Hird pointed out the necessity of comprehending what it is they propose to learn, its subject matter and its objects; and to consider the most effectual means of obtaining their purpose. Education, whether general or technical, he considers the most important subject which can occupy the human mind; it is the basis of individual happiness, and of the rank and usefulness of man in society; it develops and cultivates those powers which distinguish man from the brute; it refutes the doctrine of evolution as applied to man; it stamps the character of an age, and constitutes the chief distinction among men and among the nations of the earth. He recommended, in accordance with the curricula of the corporate institutions, that the course of study should be pursued with method and order. Anatomy and chemistry, which derive little aid from other branches of medicine, but throw the greatest light on most of the other departments, should occupy the student's chief attention during the first session, as the simplest operation in surgery can neither be comprehended when described, nor understood when seen, without a knowledge of the structure of the part. As a knowledge of the healthy structure of the frame is the basis of morbid anatomy and the keystone of surgery, so is chemistry an essential requisite to the study of physiology and therapeutics. Chemistry is no less satisfactory to the mind from the certainty of its evidence than gratifying by the beauty of its experiments. How different is the treatment of disease since we possess a more accurate knowledge of the processes of digestion, assimilation, and excretion. Without a careful study of chemistry, physiology and medicine will obtain no light to guide them in the investigation of the laws of life and the removal of abnormal states of the organism. Physiology, or the science of life, investigates the functions of plants and animals. It examines the processes by which the living body possesses the power of assimilating foreign matter introduced into its living laboratory to its own substance. The origin and nature of those changes of structure to which every organ is liable belong to the department of pathological anatomy, which tends to substitute demonstration for conjecture in the theory of disease, and to lay the foundation for rational practice. This science not merely points out to us the seat of disease and its effects upon certain organs, but it develops many of the laws of diseased action, and explains, in the history of the symptoms, many circumstances previously involved in obscurity. Without it, *post mortem* examinations would be little more than waste of time. It, moreover, is of the highest value to clinical medicine, by enabling us to appreciate the importance of symptoms, to trace the progress of diseased action, and to enlighten us on the value of therapeutical agents, and consequently to practise our profession with success. Therapeutics is that branch of the science of medicine which observes man in the state of disease, ascertains the laws to be followed in the employment of those methods of cure which have been by reason deduced from the principles of physiology and pathology, and sanctioned by well-trained experience. This knowledge of physiological therapeutics enables the scientific physician to determine the respective powers of Nature and of Art in promoting recovery from disease.

These studies, Mr. Hird said, should be considered as preparatory to clinical work in the wards, into which the student should bring an intelligent acquaintance with the fundamental principles which guide us in the scientific investigation of pathological processes. Work at the bedside teaches us to become correct observers; it quickens our perceptive faculties, and enables us to interpret the signs of disease, and readily to determine their causes, effects, and remedies. This power is not the work of genius or inspiration—physicians are not prophets—but the slow result of long and well-directed study. It is by work personally and honestly done in the wards, directed by the clinical teachers, whose duty it is to impress precept upon precept on those attending their *clinique*, that the student should qualify himself for the responsible duties of his profession. He should carefully observe the methods of investigation adopted, and follow strictly in the footsteps of the teacher in observing, testing, and recording facts, and marking the deductions drawn from them. His knowledge of disease should be learned from demonstration. It is the province of the medical man to discover the causes of the morbid processes which indicate disease, to foretell almost with certainty the course they will run, to arrest their progress, and to restore the sufferer to health.

The greatest revolution in surgical practice in modern times has been accomplished by the brilliant discovery of Professor Lister. By the antiseptic method of treatment, operative surgery has been "disarmed of its greatest terrors"; blood-poisoning after operations rare; and hundreds of lives have been rescued from death. We owe this great boon to humanity to the application of the teachings of abstruse science to the prevention of disease. This is a noble triumph of man's reason. In practical medicine, also, great advances have been made, and the impulse which for the last half-century has so signally extended the boundaries of knowledge in all directions still actuates the human mind. The opinions now formed will, for the most part, be the opinions upon which, in after-life, the student will be confidently and constantly acting; therefore it is that the teachers feel they are engaged in a very serious undertaking. Doctrines and maxims, good or bad, flow from a public teacher as from a fountain, and his lessons may become the indirect source of incalculable evil and sufferings to others. But, amidst all the responsibilities both of teacher and learner, the medical profession is one with which we may be well satisfied; it has its own peculiar privileges and advantages, and, if rightly pursued, may prove a lasting source of mental and moral profit. Our daily vocation tends also, by the constant exhibition of pain and weakness, to awaken the best emotions of our nature, and to promote the charities of social life. It is free from party turmoil and sectarian jealousies; pain and danger are the only passports to its good offices. It regards no political differences, and the poor no less than the rich are embraced in its ministrations. It offers its peculiar benefits to men of every religion and to men of no religion at all. Cultivated in a proper spirit, this noble profession is full of dignity and usefulness. If followed up in the same spirit as our illustrious countryman Newton pursued in regard to the physical sciences, wherein he delighted to deduce from the contemplation of the heavenly bodies the power of Him who made them and who alone sustains and directs their motions, we cannot but be impressed with the harmony which exists in all that relates to man's organisation, and the adaptation of all surrounding nature to his wants and necessities.

ST. GEORGE'S HOSPITAL.

THE Introductory Address was delivered by Mr. DALBY, Aural Surgeon to the Hospital.

The subject of the lecture was the Influence of the Study of Science upon the Mind. After a few preliminary remarks, education (said the lecturer), in its widest sense, embraces all those influences which, beginning with the first glimmering of reason, affect the development and growth of mind; and these processes continue until the functions of the brain decline or are suspended by death. Circumstances, the effects produced upon him by others, and his own acts, may be said, in one sense or another, to make the man what he is; and are the means of furnishing him with all the information and knowledge which he possesses. In all systems of education, where the natural sciences are not included, whatever information the student gains is acquired from what he reads, or from what he is told; and the truth of facts so presented to him he must take either upon trust, or, in so far as they can be demonstrated to his reason, by logic or mathematics. In the study of natural science, on the other hand, he sees, he feels, he hears the same

facts repeated again and again under the same conditions; and his informant is nature, who never errs.

The evidence of his own senses demonstrates what he learns. Facts thus acquired, or statements from others subjected to such tests, become real knowledge; whilst what is learned from books is merely information. In scientific investigation, books should only be employed for the purpose of directing attention to what is to be looked for, and as a means of comparing the observations of others with our own. The mental training which encourages the habit of careful observation, of accumulating facts the reality and truth of which are tested by experiment, which sweeps away opinions based upon imperfect premises, which succeeds in leaving upon its pupil a profound regard for truth and makes him accurate in all his work, must be a valuable addition to any course of education, although not a complete substitute for other branches of knowledge, except it be philosophy and metaphysics. Philosophy has been aptly termed the initiator of science. Having civilised and ennobled the better part of man, having given him the yearning for truth, it remains for science to supply such intellectual wants. Science begins her reign by refusing to accept authority or tradition in lieu of absolute truth, and is always prepared to abandon accepted facts when they can at any time be found incapable of proof. As scientific knowledge advances, so surely does superstition vanish. The teachers of superstition require of their pupils faith and credulity; whilst the teachers of science welcome incredulity and insist upon inquiry—the result in the one case being belief, in the other knowledge. The young man who has commenced the study of natural science soon learns from geologists that the history of the world includes a series of epochs, each epoch extending over periods so countless that we have no language in which to express their vastness; that it has been the scene of long histories of races bearing little resemblance to our own. From the physiologist he learns how all forms of animal life can be traced back to their original, the primæval cell; that, in the higher grades of organisation, what form of life individuals shall assume will depend absolutely upon the conditions under which they are forced to exist. The propagation of each species being by inheritance, the struggle for life effects the higher development of species, and the pairing of individuals the countless varieties of each. Whilst some forms of animal life appear in constant progress, others remain the same so long as the conditions under which they live do not change. A similar progress may be observed in vegetation, as it has existed from early periods up to the present. Side by side with the development of animal and vegetable life must be placed the development of mind. Beginning with the first exhibition of consciousness, in the lowest form of life in which it is conspicuous, a period elapses until the expiration of that in which we find an animal performing, in obedience to his previous experience, some act with a definite object: then the first ray of reason appears. Thus we find ourselves on the road which leads us gradually, but surely, to the development of the highest order of brain, whose habitat is man. Any attempt to examine beyond the points at which life begins, and where it terminates, would lead us outside the boundaries of science. The student will find that as the laws which regulate the development of body and mind are unchanging, so are those which determine their degeneration by age and by disease up to the time of their death. Every bodily and mental change having a definite cause, it will be his duty to discover it. He cannot fail to observe how indestructible is all matter; how undying even are our very deeds; in that it is impossible for anything to be done by one of us without a result, for good or bad, twofold in its nature: in the one case, upon those around us; in the other, upon ourselves. If this is properly appreciated, we shall be careful of the manner in which we spend the time we have to live, and anxious to do the most good we can whilst the opportunities are offered. Such opportunities are present in a large degree to members of the medical profession; but it is possible for the student to pursue his education in two ways: either so as merely to obtain a diploma to practise his profession, or to gain the best results from his studies. In the one case, he might become the modern counterpart of the apothecary of former days, whose first consideration takes the form of the question: What is a good medicine for this or that? and so he prescribes it; who, although constantly seeing patients, has never acquired the faculty in early life of accurately observing, and blunders on into old age in the vain attempt to cure disease. The physician, on the other hand, who intelligently studies physiology, who recognises in pathology an eccentric physiology (so to speak), does not attempt to cure disease; he places his patient under the conditions most favourable to recovery, and is often the means of averting death and conducting him to health. He thus having an intimate acquaintance with the morbid changes which produce the symptoms in his patient, has the power of successfully insisting upon the requisite conditions for treatment, and this often with little assistance from drugs. As might be expected, those who have spent a portion of their lives in scientific pursuits cannot fail to have their minds influenced by their work. An absence of all prejudice, a readiness to confess their ignorance, a complete freedom from all superstition, and a tolerance of all religious opinions, characterise the truly scientific man. Although belonging to no party, he exercises a silent and unobtrusive influence in State matters; for the solution of the many social problems which press upon us with increasing urgency is largely in the hands of scientific men, who are often in a great measure the directors, though not the exponents, of public opinion. However necessary any special branch of knowledge may be for a profession, the true value of all education exists not in the power which it gives of achieving what is commonly called success, but in the influence which it lends to any sort of work a man may do; by its secondary influence upon all with whom he may be brought in contact; lastly and chiefly, by its effects upon his thoughts and happiness; for on such things, more often than on circumstances, depends the amount of satisfaction which can be extracted from life.

ST. THOMAS'S HOSPITAL.

THE Inaugural Address of the Session was delivered by Dr. ROBERT CORY, Assistant Obstetric Physician to the Hospital.

The Lecturer remarked that there were two opportunities offered in these annual addresses, both of which he proposed to take: first, that of saying a few words to those about to commence their studies at the Hospital; and secondly, that of considering some more general subject connected with medical education. Few studies were so interesting as those which his hearers would meet with at the outset of their course—viz., chemistry, physics, botany, physiology, and anatomy. From the study of these, they would learn how the more simple laws of inorganic matter are involved in the more complex ones of organic life, and how great are the works of "Him who maketh all things".

The spirit in which the student commenced work was the one which gradually grew upon him; so that he should be careful to commence it with the best motives. These should not merely be to attain high places in examinations or fortunes; but they should also labour to advance the knowledge of the profession. In saying this, he did not wish to be thought to condemn examinations: after all had been said that could be urged against them, they still remained the only means of distinguishing the industrious from the lazy, the clever from the stupid; moreover, the present was the time for preparing for those degrees which, if neglected, may in after years be much regretted. The desire for what was fast becoming the empty title of Doctor was so great among many who neglected the opportunity of acquiring it in their younger days, that the Brussels M.D. was eagerly sought for. If, then, the title was likely to be of real service to them in after life, they should seek the honour now from an university whose degree carried with it something more than the two letters, and meant what it implied—extra time and labour spent in education.

Were all, then, to aim at the advancement of their profession? Why not? for all could do so. But to do this, they must make the spirit of inquiry one of their leading principles. One force that moved them to work must be inquisitiveness. They would then seek to satisfy their curiosity by study, by observation, and by experiment. Besides this spirit of inquisitiveness, there was another which they must make their own—that of truthfulness. By nothing else probably would they be so forcibly impressed with the importance of cultivating these two spirits of inquisitiveness and truthfulness as by noticing how strongly they had been displayed in the characters of all the men who had left their mark upon the history of science, of surgery, and of medicine. Galileo, Harvey, Newton, and Hunter might be mentioned as notable examples. Harvey, by means of experiments on animals, discovered the circulation of the blood; while Hunter's inquisitiveness led him, among many other things, to experiment on the antlers of deer. (The antlers, as some of his hearers might know, were processes of bone which grew from the frontal bone, and the periosteum was the source from which the new bone was secreted. The antlers necessarily remain covered with this as long as they increased in size. Besides this covering, they had also that of the integument, which was carried outwards as they grew. As soon as they had attained their full development, the covering of periosteum and skin dried up and was rubbed off; the antlers then consisted of bare bone. The covering on the growing antler was called the velvet, and was largely supplied with blood.) Hunter, knowing the source of the blood-supply to the velvet, was curious to know what would be the effect on a growing antler if he ligatured the artery which supplied blood to it. He tried the experiment, and was surprised to find that, in three weeks after the operation, there was as much blood going to the velvet as before. To ascertain how this could be, he had the animal killed and sent up to him; and, on dissecting the

part, he was astonished to find that small branches had become enlarged, so as to permit as much blood to pass through them as passed formerly through the main artery. Hunter was not long before he turned his newly acquired knowledge to an useful purpose. He had at that time a man under him, at St. George's Hospital, suffering from popliteal aneurism; the treatment for which, in those days, was either the laying open of the aneurism and the tying of the artery at both extremities of the sac—an operation from which only about 5 per cent. recovered—or amputation of the limb. Hunter, remembering his experiments on the deer, thought that if he tied the artery of this man in the thigh, he would divert the blood from the aneurism, and the man's leg would still be supplied with blood by the enlargement of collateral branches. He performed the operation and succeeded, and thereby one of the greatest advances in the surgery of those days was made. It might be asked, Are we to set no bounds to this inquisitiveness? It was hard, indeed, to conceive any subject upon which it would be wrong to indulge our curiosity; but, although all knowledge came within our legitimate aspirations, it obviously did not follow that all means to attain that knowledge were also legitimate. Much had lately been said about the rightfulness of experiments on animals. They had seen how the popular sentiment on this subject had been fanned into flame by gross exaggeration, by careless, sometimes wilful, misstatements, by pictorial caricatures placarded about the streets; and the result of this had been the passing of an Act of Parliament which had practically put a stop to the attainment of knowledge through the means of such experiments. There had not been wanting those who, for reasons other than the love of the brute creation, had joined in the battle against science, and had rejoiced at its discomfiture. Surely, it would have been more reasonable to have passed a law against fox-hunting, or some other kinds of sport, rather than against vivisection! What torture could be greater than that of the poor hunted animal straining its last breath for life? and for what object? Merely to give zest to a ride across country. But, although fox-hunting were attended with much distress to the hunted animal, yet it did not kindle the ire of many of the opponents of vivisection. Let us not, however, rail against our adversaries without considering their objections. It was stated by them that we had no right to torture or even to take the life of an animal for our own benefit. This statement, however, was variously qualified. Some would say that we might not kill animals except for the purposes of food; others would allow noxious animals to be killed. As one reasoned upon these statements, the fact soon became apparent that the more one tried to defend such a principle, the greater were the extravagances into which he was led; so that one was ultimately bound to admit that animals had not the same rights as man, and that he was justified in making use of them for his advantage, but to what extent still remained to be reasoned upon. That there was a limit, no man possessing the natural attributes of his nature would deny. That this limit was exceeded when one desired to extend his knowledge by experiments upon them could only be maintained by showing that the knowledge so obtained had previously been of no service or of comparatively little service to him. Was this true? As had been already seen, Harvey vivisected for the purpose of establishing his discovery of the circulation of the blood; Hunter did the like. Sir Charles Bell was another vivisector; and to him mankind was mainly indebted for the discovery of the different functions of the anterior and posterior roots of the spinal nerves. Sir Astley Cooper also could be named in the same category, besides many others. A clear instance of useful knowledge resulting from such experiments was furnished by Galvani. From his experiments on frogs and other animals came the knowledge of the galvanic battery. The telegraph and other applications of galvanic electricity needed no comment. Another instance of the value of vivisection was seen in the present knowledge of the transfusion of blood.

They might ask, perhaps, why had he troubled them with these remarks on vivisection? Because they would, at some future time, be entrusted by the State with many responsible duties; but though the State would expect those responsibilities to be adequately discharged, she had lately taken from them one of the best means of advancing the knowledge she required at their hands. It was true, the present law was not prohibitive; but its provisions were such as to almost extinguish the study of practical physiology in this country. The large deputation which waited on the Home Secretary three years ago, to protest against the passing of this law, was sufficient evidence of the feeling of the profession on the matter. If they could be trusted by the State with the almost irresponsible treatment of disease, surely it was not too much to ask her to trust them in the matter of vivisection. It was their duty to obey the law, but they could at the same time urge for the repeal of an unjust one, and had good reason to expect they would do so with success when the ignorant clamour that called for it had abated.

WESTMINSTER HOSPITAL.

THE Introductory Address was delivered by Dr. DUPRÉ, F.R.S., Lecturer on Chemistry and Forensic Medicine at the Hospital.

After some preliminary remarks, in the course of which he referred with deep regret to the death of Mr. Charles Brooke, the late honorary surgeon to the hospital, Dr. Dupré said that the subject which he had chosen as the basis of his address was one which, though perhaps not usually selected on these occasions, was, in his opinion, of the greatest present importance and interest: the question of education in general, and the relation this bore to medical education in particular. As a German by birth and earlier education, and an Englishman by adoption, inclination, and later education—for he considered education to be progressive with our lives—he could speak with some knowledge of the methods of teaching prevalent among two of the best educated nations in the world. Looking back to his school days, he could remember the enthusiasm with which the advantages of a so-called technical education, as opposed to the old classical training, was supported by many great scientific men of the day, and, foremost among these, by Baron Liebig. The effect of this movement was such that, for a time at least, classics were considered only secondary in importance as a factor in education. But a reaction took place; and Liebig himself admitted in after years that, among his own students, those who had enjoyed a classical education were superior to the rest. By education in its highest and widest sense, he meant the equal expansion of all the faculties of man, moral and intellectual. The time when men might spend their lives in calm mental contemplation was unhappily, or perhaps happily, past; and the stern and increasing duties of daily life now claimed their energies. From this latter point of view, the education of a people might be divided into two categories; firstly, the education of those whose after-life would be spent in manual labour; secondly, those whose activity is destined to be more or less of an intellectual nature. It was this last category which claimed their attention to-night.

If, then, education be primarily the cultivation of the intellect, and not the exclusive teaching of some special branch of knowledge, how could its object be best accomplished? Which of the two opposing schools, the technical or the classical, was the right one? No more momentous question could possibly be raised; for the future of generations unborn depended upon the answer. In England, the advocates of a technical education were gaining ground. In Germany, as already stated, the victory was more or less with the classical school. Without for a moment denying the educational advantages of science, and believing that no education was complete without a knowledge of science, he could not but express a hope that a similar victory might be gained here. Education to be complete should, however, in his opinion, include both studies. In the first instance classical, the nature of the after-training would depend upon the special trade or profession the student intended to follow. The advantage of the study of languages was that it enabled men to express their thoughts. The fact that Shakespeare and Goethe used more words than any writer of the respective nations was full of the utmost significance, and illustrated particularly well this advantage. But, on the other hand, he would point out the corresponding advantages of a scientific training. In the study of natural science men were brought face to face with the immutable laws of nature. The student of science must therefore be ready to submit his opinion to the proof of experiment, and to abandon his opinion if the verdict go against him in this appeal. Moreover, he must submit to the opinions of others when these were based on experiment. What valuable lessons were here learned! Absolute adherence to truth and a just appreciation of the opinions of other men. There was one point connected with education which he felt bound to allude to; and that was tolerance in religion. Germany had set us a worthy example in respecting the religious opinions of parents, and providing religious teaching for all sects in schools. Was not this an example which might be perhaps pursued with profit by England, instead of the present omission of all religious teaching? An omission which we all knew did not proceed from the absence of feeling on the matter.

Having thus considered the subject of primary education, he would revert to those students who had commenced, or who were about to commence, their secondary or professional education.

Assuming, then, that such a student had arrived, say, at the age of eighteen, having at that age finished his primary education, how should he proceed in order to qualify himself for the medical profession? The training he will have received, while it has developed his intellect, has imparted but little knowledge which will be directly useful to him in his profession. Good results could only be looked for if good use were made of the time at his disposal. Unfortunately, the student is compelled to adapt the arrangement of his studies to the course laid down

by the various examining boards. In the case of Westminster Hospital, the course of study as laid down by the Dean of the School in the report was as follows. During the first two years, anatomy, dissections, physiology, chemistry, histology, botany, surgical out-patients' practice, demonstrations in the *post mortem* room, etc. At the end of these two years, an examination was to be passed. Though to a great extent an outsider, he would suggest an alteration in the above course of study. He would suggest that, during the first year, or even two, all their attention should be devoted to the acquisition of the more strictly scientific portion of their education, leaving the practical application, such as examination of patients, etc., to a later period. Their first chief objects of study would be anatomy, dissection, physiology and histology, botany, chemistry, and natural philosophy. The latter sciences he would particularly like to see occupying a more important place in their studies than at present. All manifestations of life were more or less governed by either physical or chemical laws. Thus the motion of walking, vision, hearing, and the circulation of the blood were all governed by physical laws; while respiration and its concomitant production of heat, digestion, the building up and disintegration of the various tissues, and the action of medicines, were all to a greater or less extent chemical phenomena. Though it was possible for a man to be a good physician without a knowledge of chemistry and natural philosophy, still the knowledge of these sciences could not fail to be of the utmost value; and their application to medicine, which is often so entirely empirical, must ultimately raise it to a great science. In excluding from their first year or two attendance in the out-patients' room, etc., the course of studies they would then have passed would supplement the more purely classical education he had assumed them to possess, and their general education might then be considered complete. All the subjects, as would be readily understood, might be studied in schools or colleges unconnected with any hospital; and our hospital schools might then be devoted to the more strictly medical and surgical part of their education. In thus separating more completely than is done at present the scientific from the practical, the student would, on the one hand, gain time for the more minute study of the natural sciences, to the great advantage of his intellectual training; and, on the other hand, when once he began his real professional work, his time would be no longer taken up with what are after all auxiliary subjects. The establishment of such separate scientific colleges would have, no doubt, other considerable advantages.

After dwelling on this subject some little time, Dr. Dupré proceeded to compare the medical education in the German Universities with such a scheme as he had proposed, and also with the system at present adopted. He pointed out that, while the English schools were endeavouring to do more justice to the theoretical education of the medical student, the German schools were attempting to improve the practical training of their students. He took this opportunity of giving them a short *résumé* of the German medical examinations as at present adopted. He considered that the perfection of medical education would be reached when both these main factors received their due share of attention. But, having brought them to the end of their second year or so, by which time they would have finished the scientific portion of their training, he would not venture to lead them any further, or into the more strictly professional portion of their studies. He left them in better hands. In conclusion, he advised them to study with a view to the acquisition of knowledge, and not merely to the passing of examinations; and wished them all success in the noble profession they had chosen.

UNIVERSITY COLLEGE HOSPITAL.

THE Introductory Address was delivered by Mr. G. D. THANE, Professor of Anatomy.

The lecturer expressed his intention of devoting his address to a review of the work that had been accomplished by the Medical Faculty of University College; the occasion being especially appropriate, as the institution had lately completed the first half-century of its existence. When it was resolved to establish an University in London (the present University College), a prominent place was given to the necessity that existed for elevating the character of medical education, and for providing, side by side with an university training in Arts and Law, a professional course of study in Medicine far more complete than any to be obtained at the time in the country. The subject had been entirely neglected by the English Universities; professional education was not to be obtained at Oxford or Cambridge, and those who graduated there were compelled to pursue their studies elsewhere. In Scotland and Ireland, medicine had always found a home at the Universities; and Edinburgh in particular was the great medical school at the time. The requirements of the examining corporations, which have always regulated the course of medical education, were not of a very exhaustive, or indeed efficient, nature. The student served a long apprenticeship, and then acquired as much scientific and practical knowledge as he could from the lectures and hospital during the one or at most two years of his attendance. In place of this imperfect and unsatisfactory training, the new University afforded to its students a complete course, extending over four years, and including all the subjects which at the present day are considered essential parts of a medical education. The subjects were taught by professors each distinguished in his own branch, and no professor was to teach more than one subject. The courses were long, and the lectures supplemented by frequent examinations. The opening took place on October 1st, 1828. Mr. (afterwards Sir) Charles Bell delivered the first lecture; and the classes were immediately well attended—in the first year by a hundred and sixty-five, in the second by three hundred students.

As was only to be expected, some preliminary difficulties arose; but these were surmounted, and University College was soon raised to the first rank among the metropolitan schools by the great superiority of its plan of instruction and the eminent ability of its teachers. Among the most distinguished of these have been Jones and Richard Quain and Ellis, professors of anatomy; Charles Bell and Sharpey, of physiology; Turner and Graham, of chemistry; Lindley, of botany; Conolly and Elliston, of medicine; Samuel Cooper, of surgery; Anthony Todd Thomson, of materia medica. The chairs of comparative anatomy and pathology were the first in the United Kingdom, and were occupied by R. Grant and Sir R. Carswell respectively.

The want of a hospital was at first severely felt, and steps were soon taken to establish one that should be expressly devoted to the purposes of clinical instruction. Before this time, regular courses of clinical instruction and clinical lectures were practically unknown in London. Here it was that for the first time professors of clinical medicine and surgery were appointed, with the special duty of training the students in the observation and study of disease; and the renowned Robert Liston was the first professor of clinical surgery. Another weighty reform was introduced at the same time: the offices of dresser, clinical clerk, and house-surgeon were thrown open to the students, to be gained by merit, and not by fees; it being the universal custom elsewhere to require the payment of large sums for these offices.

The public advantages which were anticipated from the establishment of this medical school have been realised. The character of medical education has been elevated, its range extended; preliminary general education is now insisted upon; the fundamental sciences receive due recognition, and their study, both theoretical and practical, is enforced; while clinical teaching has been made a reality. This has been in a very great degree the result of the example set by University College, and the influence thus brought to bear upon other places. The four years' course which is now required of every student is in principle the course planned and recommended here in 1828; whilst the additions to and alterations that have been made from time to time in the curriculum have always been forestalled. Other schools have adopted the methods pursued here. In short, the system of medical education which is universal in London now is the system which was organised and carried into execution here for the first time, on those liberal principles to which University College has been and ever will be faithful.

MIDDLESEX HOSPITAL.

THE Introductory Address was given by Dr. SIDNEY COUPLAND, Senior Assistant Physician and Pathologist to the Hospital.

After having welcomed those who that day entered on the arduous but pleasant study of medicine, and having congratulated them upon their choice of a profession, the lecturer proceeded to point out the principles which should guide them in their studies. To many, the career that was opening was wholly novel, and it differed from their previous scholastic training in that they would now be their own masters in the pursuit of knowledge. It should be their aim so to dispose of their time as to acquire the requisite amount of knowledge within the limited period of their study. The sense of bewilderment arising out of the novelty and multiplicity of subjects was met by the recollection that others had accomplished what they were about to do, and the spirit of emulation would incite them to do what others had done, and if possible to do it better. The prevalent idea, that a first year's student need not work hard, was based on false doctrine and embodied pernicious advice. In reality, the first was the "test year" and not the last; for if no work were done then, it would not be easy to take to it later when forced by necessity. A definite work had to be done within a definite time, and if not commenced forthwith, it would be crowded into a few months, and the system of "cramming" thereby fostered. If they lost sight of the consideration that the study of medicine was their main object, and

let the days pass idly and vainly, they had better seek for some more congenial and less exacting vocation than this. In speaking of the kind of work that lay before them, he first urged diligent attendance upon lectures, which it was a mistake to suppose had been wholly supplanted by text-books. Lectures were useful for explanatory purposes, for the solution of difficulties in the correct understanding of subjects, and for the systematising of reading. Attendance at the periodical class examinations was equally important, serving to test what had been learnt, and valuable as a training in the clear expression of ideas in writing. Lectures and books did not exhaust their means of education. The most valuable was that, afforded by so many branches of their study, of personally acquiring a knowledge of facts. Anatomy could only be learnt in the dissecting-room; and rightly pursued its study was full of attraction and interest. The practical study of anatomy was but the foreshadowing of that ceaseless observation of phenomena in the future to be their pursuit. He therefore urged close attention to this subject, and repeated the advice given by Mr. Hensman, two years ago, as to the value of drawing in helping to fix facts in the memory. Anatomy—and to a less degree histology—served to train the mind to observe rigidly and closely. The importance of physiology was fully as great, and he thought the examining boards were to blame for allowing students to neglect it too much; for it claimed attention both from its importance and interest; and he particularly insisted on a mastery of its elementary questions before broaching its abstruser problems. Chemistry, like anatomy, was valuable as a mental training, and it was woven into every branch of our art and could not be neglected by the clinical observer any more than by the medical jurist and the sanitarian. He had singled out these three subjects of systematic study from the many in the curriculum because a knowledge of them underlies all future work, and chiefly because if the habit of study were formed in the first year, it would hold throughout. He warned his hearers against imagining that to them one subject was more important than another; they were to study all with equal zeal, and not to allow themselves to be drawn prematurely into specialism. Then they had the great advantage of being able to work in concert, and he believed it well for two to study together. The recluse was not to be imitated. Close attention was to be paid to the daily tutorial questionings, which he advised them never to miss, owing to the great good they did in making a student know his own ignorance and thus the better learn the extent of his powers. In introducing the subject of hospital work, he took occasion to remark that if it were only thoroughly understood that in providing the means of medical education a hospital performed as sacred a duty as in giving shelter and relief to the sick poor, such institutions would no longer need to ask for support. As to the student's work, he had first to acquire dexterity, which could not be commenced too early nor practised too often. Slowly and imperceptibly hand and eye would be taught that which they would never lose; and many cases of injury and disease required little else than the educated eye and the educated hand for their diagnosis. Then, when later they passed to the investigation of more complex problems, they should especially study the physical signs of disease. Gradually coming to appreciate niceties in diagnosis, training their judgment in the balance of evidence, and learning how far it is possible to restore healthy action by means of remedies, they would indeed learn to *observe*. They were also to learn to *record*, and he emphatically urged them to cultivate the habit of note-taking in all they heard and saw; not simply for the purpose of laying up a store of facts with which the memory could not be charged, but because that habit might afterwards be turned to good account in advancing the progress of medicine, and would thus be of great service to the profession at large. Briefly urging them to attend the special departments and not to omit to study the effects of disease in the *post mortem* room, he concluded by pointing out that the hospital affords opportunities for acquiring a knowledge of disease which cannot recur to them again.

Passing to the subject of examinations and examining boards—most important to pupils and to teachers, for their influence was paramount—he commenced his remarks on this head by defending the University of London from the charge that its examinations were too stringent and unpractical. He pointed out that practical medicine was bound up with science; that questions were constantly arising in the prevention and treatment of disease for which a knowledge of science was essential; and he was the most practical who could apply his knowledge. The examinations of the University of London for medical and surgical degrees were eminently practical. To be sure, time was necessary for their preparation; but, seeing that many entered now so early that they had to wait four or five years for the diploma of the College of Surgeons, the time was at their disposal. But to ensure success, he strongly advised that both the matriculation and preliminary scientific examinations be passed before the intending graduate entered as a medical student. Speaking of the other metropolitan licensing bodies, and deprecating the continued existence of many doors of entrance into the profession, he was surprised that more students did not seek the licence of the College of Physicians. He had heard reasons assigned for this, such as that its licence was thought less of than that of the Apothecaries' Society by vestry boards and the like, in whose gift lay the dispensation of many medical appointments; that its examinations were too seldom held, and that they were more difficult than those of the sister body. The chief drawback to his eyes (and this was true of the other body also) was the postponement of examination in purely scientific subjects until a considerable time after the student had attended his courses in these subjects. He suggested that, pending the relegation of these subjects to compulsory preliminary study, the examinations in them should be held at the end of the first year's studentship. As to the College of Surgeons, he remarked upon its laudable desire to increase the efficiency of its examinations as practical tests, and upon the change which had been wrought in the spirit and conduct of its examinations within living memory. He believed that the proposed change in the primary examination would be a gain to the student, and would, moreover, impress him with the value of physiology. As to preparation for examinations, they must get rid of the idea that any special training was requisite over and above the diligent pursuit of their studies. Still, it was well to draw up tables for themselves, containing points of special importance available for ready reference; and he again enforced on them the value of practice in the composition of papers, believing that many failed through lack of this. Then, when these trials were over, they were not to seek too soon to throw off the student life. Now was the time to study special subjects more fully, to follow the practice of hospitals at home or abroad, to hold resident appointments; and then, having completed their education, they would really be qualified for the cares and responsibilities of practice.

He urged the importance of recreation to all who like them were engaged in hard work; but it must be of the right and healthy sort. No one would gainsay them the occasional indulgence in cricket and football, and there were many pleasant country spots at hand where they could get fresh air and healthful exercise. It was also well daily to withdraw their minds for a short space from the engrossing subjects of study, to follow some other pursuit in harmony with their life. He felt bound to mention two errors into which students of all kinds were apt to fall; the one being neglect and ill-regulation of diet, and the other the habit of late working at night. He characterised the traditional "midnight oil" as a delusion. The ideal plan of study was steady persistence as opposed to spasmodic vigorous efforts; and the knowledge gained by the steady plodder was more sound, deep, and enduring than that of the brilliant prize-winner who seemed to lead without an effort.

The Address concluded by an exhortation to earnestly devote themselves to their profession. They had many examples before them; and he mentioned that of Dr. Murchison, who for many years had laboured within these walls. In spite of drawbacks and difficulties, it was well to belong to the profession of medicine; for although it brought with it great responsibilities and all that they entailed, it brought also much that compensated for them to those who followed it with their whole heart.

ST. MARY'S HOSPITAL.

THE Introductory Lecture was delivered by Professor ST. GEORGE MIVART, F.R.S., the Lecturer on Comparative Anatomy.

Mr. Mivart, alluding to a tradition of the school, that good impulses abounded among its students, might say he had never personally known a student he did not esteem. If they would succeed in any profession, three things were necessary: first, a certain amount of good health; secondly, a sound judgment; and, thirdly, energetic will. A sound judgment was to be gained by the accumulation of a rich store of knowledge, and by avoiding the danger—and it was a besetting one—of concluding too hastily and from insufficient data. He said they were now called upon to treat as open questions the first principles of all reasoning and fundamental truths. The change had advantages, but it also had disadvantages. It was not to be expected that the majority of uneducated men, young or old, should take up philosophy; yet, with or without knowing it, all men were philosophers. No mistake could be greater than that of regarding philosophical scepticism as a special intellectual state of mind. The lecturer concluded an exhaustive address saying that, secure in the possession and clear apprehension of first principles, they might advance steadily in the knowledge of those arts and sciences which would enable them to adorn the profession on which they were now entering; and that success might attend them was his hearty wish.

REVIEWS AND NOTICES.

THE ANATOMY OF THE JOINTS OF MAN. By HENRY MORRIS, M.A., M.B.Lond., F.R.C.S., Surgeon to, and Lecturer on Anatomy and Demonstrator of Operative Surgery at, the Middlesex Hospital. London: J. and A. Churchill. 1879.

MR. MORRIS has collected into one very compact volume a concise description of the diarthrodial and amphiarthrodial articulations in the human body. Every joint is described with great minuteness, each component part in the order usually adopted in text-books, and many pages are devoted to the discussion of the action of muscles on the joints which they or their tendons surround. The entire work is printed in uniform large type, not interspersed with remarks or quotations in small print. One of the peculiarities of this book is an almost total absence of the words of any other author: indeed, its four hundred and fifty pages contain little over half-a-dozen references.

The perusal of any one chapter will satisfy the reader that the author must have based his observations, or rather his descriptions, on the most minute researches into careful dissections. Mr. Morris's style is almost photographic, as may be well seen, for example, in the account of the acetabulum. As a book of reference for practical details, it cannot fail to prove most useful, and it certainly supplies a great want, its precision rendering it thoroughly trustworthy. On the other hand, it must not be forgotten that, all-important as is a correct representation in print of structures as they exist, the knowledge of the sources of authority constitutes an element of precision not to be found in these pages. It is doubtless highly original to write a work on articulations, wherein the ligamentum teres of the hip-joint is described, and its use discussed, without a word about the theories of Cruveilhier, Henle, Savory, or Weber. But a surgeon desirous of gaining a complete knowledge of any particular joint may wish to hear more than one opinion on the use of its ligaments and the action of the muscles surrounding it. For the operator, seeking in these pages an account of the relations of a joint he intends to excise, or treat in any other manner, Mr. Morris's work will prove a most useful guide, since quotations and philosophical digressions are out of place under such circumstances.

Mr. Morris, in a business-like manner, spends hardly a page on introductory remarks. The first chapter, on "Parts entering into the Construction of Joints", includes important observations on the muscles. "A wise economy", says the author, "is seen in the mode of attachment of muscles to bones near a joint. They are so disposed as never to strain the ligaments of a joint by tending to pull one bone from the other with which it articulates, but, on the contrary, add strength to the joint, sometimes by decussating with the fibres of muscles of the opposite side, sometimes by the same muscle pulling tighter together the two bones of an articulation". This is a fair sample of what may be called the aphorisms of the author, and the remainder exhibits equal facility of expression. The second chapter, on the "Varieties of Joints", reminds us that Mr. Morris's work is free from the evil of new technical terms. We are glad to find that he uses the word "trochoides", found in Hyrtl's text-book and elsewhere, instead of the clumsy term "ginglymus rotatorius" of most English writers. He does not even mention that term, for he discards synonyms almost as much as references.

In the description of the temporo-maxillary articulation, the internal lateral ligaments are given, as in Professor Humphry's work, and with the same distinctive terms of "long" and "short". Mr. Morris states that the influence of the long internal lateral ligament "on the movement of the joints must be very slight, and can only act in assisting to limit the opening of the mouth". In this, the author differs slightly from Cruveilhier, who believes that, when the lower jaw is depressed, the "long portion of the internal lateral ligament", as he terms it, "reste indifférente à ce mouvement et n'est ni tendue ni relâchée".

Similar shades of distinction from previous authorities are scattered throughout the pages of Mr. Morris's work, and deeply buried in the chapters on individual joints. Following most English writers, the author describes the ulna as "excluded from the wrist-joint by the triangular fibro-cartilage". Surely such a structure rather proves that the ulna does enter into the composition of that articulation. Cruveilhier's and Holden's statement that the lower end of the ulna articulates with the cuneiform bone through the medium of a cartilage, is the most satisfactory way of settling the disputed point. The presence of a ligament (the *ligament antérieur cubito-carpien* of Cruveilhier), the fibres of which actually pass from the lower end of the ulna to the cuneiform bone, must not be forgotten; nor is the case altered by Mr. Morris's manner of representing the same fact, namely, by asserting that part of the anterior radio-carpal ligament is attached "to the anterior margin of the triangular fibro-cartilage, where it is blended with some of the fibres of the capsule of the inferior radio-ulnar joint". Mr. Morris's chapter on the hip-joint will probably be the most attractive to general readers, since the author has already made known his opinions on dislocations of that joint, in a communication to the forty-second volume of the present series of the *Medico-Chirurgical Transactions*. As this work is purely anatomical, and almost free from surgical observations, the chapter on the hip-joint includes further views of the author concerning its mechanism in health, but we search in vain for any repetition of several important points recorded in the above-quoted monograph, to which the author, with a modesty only too rare in modern writers, never once refers. The significance of the obliquity of the head of the femur is very clearly explained in this chapter.

This publication is adorned by forty-four plates, including the frontispiece. As a plain engraving, plate I is very well executed, and plate II must be reckoned as a fine chromo-lithograph, Mr. Hensman having imitated the colour of bone with great success, and Messrs. West and Newman have not spoilt the tint in the process of printing. In most of the other chromo-lithographs, the colours are far too brilliant. The muscular fibres of the supraspinatus never naturally assume that shade of red represented in plate XX. Although Monro is indeed an "old master", anatomically speaking, it is hardly necessary to reproduce some of his coarsely executed, old-fashioned drawings, such as plates XXI and XXXI.

In conclusion, we can safely recommend Mr. Morris's new work as a valuable acquisition to medical literature, doing its author great credit for clearness of style and for a methodical arrangement of details. The addition of copious references, and a careful revision of the illustrations, will greatly increase the value of a future new edition.

GRUNDRISS DER ANATOMIE DES MENSCHEN. (A FIRST SKETCH OF HUMAN ANATOMY.) Von A. PANSCH, Professor an der Universität Kiel. I Abtheilung, I Heft, Osteologie. Berlin: R. Oppenheim. 1879.

THIS is a very useful book, not only to the beginner, but also to the more advanced student, who, while time fails him to peruse more voluminous books on anatomy, feels the want of a smaller compendium by means of which he may keep up his knowledge of the science. The author has resisted the temptation of making too great a display of his own knowledge, and burdening his readers' memory with a string of names and synonymous appellations, apt to be forgotten in a short time. The book begins by a short exposition of the object of anatomy and its kindred sciences, which is followed by a concise and very clear definition of topographical terms. The next chapter contains a general description of the bones in man, their structure, development, and their connection. Then comes a description of the different osseous structures of the body, beginning with the vertebral column and the parts connected with it. The osteology of the skull occupies one-half of the book; and we cannot but express our satisfaction at the very clear and thoroughly scientific way in which the author has dealt with this part of his work. The bones of the skull are described individually, and in their relative position to each other. No student will rise from an attentive perusal of this interesting chapter without feeling that he has gained something, and that his knowledge does not consist merely in a series of names which are in some way or other connected with the skull, but that he has obtained a clear and thorough idea of its structure. The remainder of the book is devoted to the description of the foot, hand, and pelvis. We look forward with much interest to the publication of the remaining parts. The work is profusely illustrated, and the woodcuts are all good. They are partly taken from Henle's *Anatomy*, and partly drawn by the author himself.

NOTES ON BOOKS.

Atlas of Histology. By Dr. KLEIN, F.R.S. and Mr. NOBLE SMITH. (Smith, Elder, and Co. Parts V, VI, and VII.) This admirably executed atlas is rapidly progressing to a conclusion, the parts being issued with much promptitude. It has throughout maintained the high promise with which it started, and fulfils all that could be expected from the joint work of our best histologist and the most accomplished of British medical draughtsmen. The illustrations of the last two parts, especially devoted to the display and brief description of the intimate structure of the nervous centres and nerve ganglia, are admirable for the perfection

and beauty of the sections and the choice of specimens, as they are for the delicate skill and intimate knowledge of the draughtsman: the text is only too short, for it is full of accurate, recent, and lucid information. It is long since any work of more entirely satisfactory conception and execution has issued from the English medical press. This is very high praise; but the rare merits of this standard production deserve no less.

In its own way, we may say, however, almost as much of Bentley and Trimen's *Medicinal Plants* (Churchill), of which Parts xxx-xxxviii are before us. It is pleasant to see that we have still in this country the power to produce and the will to absorb books of this important character to an extent encouraging to a publisher. The book is one of wide range; and the multiplicity of its coloured engravings makes it somewhat costly as a whole, although the price of the individual parts is moderate. Professors Bentley and Trimen are accomplished botanists, and the plates are excellent; while the letter-press is clear, careful, and complete.

Godlee's *Anatomical Plates* (Churchill) are pursuing their course to completion, and, although falling short of the highest standard, whether of artistic finish or of anatomical merit, are yet very creditable to their author, and, by the variety of views given of anatomical regions not always dissected, will prove useful. We shall recur to them again when the series is concluded. We hope to hear that this series of plates has found favour with teachers and advanced students.

We notice, merely for the sake of noting without further delay, the publication of a most valuable treatise, which does honour to English clinical medicine—Dr. W. R. Gowers's *Manual and Atlas of Medical Ophthalmoscopy* (Churchill). We hope to be able to return to this book and to give it the critical dissection which its contents deserve. Meanwhile, we may say that, although at a later period we shall have to suggest some doubts as to the interpretation given to some of the appearances so admirably delineated, this manual is one which was urgently needed, and that the difficult task involved in its execution has been performed with singular skill, both technical and clinical, by its accomplished author. Dr. Gowers has the advantage of being armed at all points for an investigation of this kind, being, as this book abundantly proves, at once a highly informed physician, laboriously instructed by his own bedside investigations, and well informed of the progress of contemporary medical literature abroad. He is at the same time skilled in instruments of exact observation, a good histologist, and an artist of no small power. Thus favourably endowed, and profiting by large experience and continuous labours, he has succeeded in producing a treatise which cannot fail to secure an European reputation, and will be of great service to all physicians.

Mr. Heath's little *Manual on Surgical Diagnosis* (Churchill) follows on the path which physicians have some time since opened out for the instruction of medical students in hospital wards. The aim of the author has been to group surgical affections anatomically, and to arrange the symptoms of each in the order in which they would strike a painstaking observer. He points out at the same time the differential diagnosis of affections likely to be confounded, and gives a few useful tables where the differential diagnosis is somewhat complicated. Mr. Christopher Heath is so well known as a good anatomist and a clear-headed and well-informed surgeon, whose ideas on all the subjects with which he is familiar are precise and well defined, that he is particularly well qualified to write a manual of the kind; and there is little doubt that, for students desiring to pursue a rapid and easy course through the wards to the College, such a manual will be acceptable. We do not, however, feel perfectly sure that the more laborious method of carefully studying the case with the aid of a more complete and less sketchy treatise would not prove to be a sounder, although a slower, mode of progress. The hand-book may be useful, but it is not of the kind to advance the standard of learning amongst students or surgeons, and we hope that in future editions it will be less meagre and bare of reference, more helpful to students desirous of reaching the scientific standpoints of surgery, as well as the more off-hand diagnosis and nomenclature of a case.

Manual of Midwifery for Midwives. By Dr. Fancourt Barnes. (Smith, Elder and Co.) A book produced under such favourable auspices as this affords beforehand guarantees of success. This manual sets forth in plain language, and with a full appreciation of the wants of students beginning the study of the principles and practice of midwifery, all that is essential to know in respect to the management of labours which do not require operative interference. Such labours are interesting alike to the midwife and to the medical student; and we can recommend this handy manual as a first text-book for students, as well as for those for whom it is more especially indicated. The anatomical accounts of the pelvis, normal and pathological; of the female genital organs; of the ovum, placenta, umbilical cord, and fœtus are given with commendable brevity and clearness. The indications of pregnancy, the symptoms and treatment of the more frequent disorders of pregnancy, are discussed in subsequent chapters; and then follow a series of chapters, in which the mechanism, stages, and management of natural labour are described with considerable didactic power, and according to the latest views of obstetric science. The chapter on the management of the lying-in is well worth the attention of the most experienced practitioners; and the chapters on placenta prævia and hæmorrhage, during and after delivery, are full of good sense, and evidence the habit of sound practice. This little book is admirably illustrated by fifty figures, and its value is still further enhanced by a collection of examination questions relating to the subject of which it treats. It is likely to be as popular with students as with midwives.

Professor Henry Veale's *Notation Case-Book* (Smith, Elder, and Co.) sets forth a method of case-taking which has been already explained by the accomplished Netley professor in our pages, and which consists first in the use of symbols and abbreviations instead of words at full length for expressing certain of the symptoms of disease; secondly, in the assignment of a numerical value to the conditions which admit of this mode of expression; and thirdly, in the registration of the phenomena afforded by the different systems of the body in the tabular form as far as possible. The advantages of the method are great: economy of time and labour, simplicity and portability of the notes, uniformity and method; and the assurance that when it has been carefully followed out, the condition of every important part of the body must have been investigated. The importance of a system of note-taking which ensures something like uniformity and completeness is especially evident in respect to hospital records and the records of large bodies of men, as in the army and navy. If physicians or surgeons at our hospitals were to make it a rule that clinical clerks should take their notes on this system, following the prescribed order of examination, which those must do who use this note-book, and filling in the columns, according to the printed directions, the result would be that the note-books of successive clerks, instead of being a crude and undigested heap of unsystematic notes, full of omissions and redundancies, and in no way comparable with each other, they would be systematic, simple, uniform, and complete records, ready for comparison, tabulation, and differential discussion. The note-book before us is intended for private use, or for the individual work of clinical practitioners and students; but for hospitals it would be, of course, easy to supply loose numbered sheets, or books of the required size for ward use. It would be an incalculable benefit to medicine in all countries if the use of such an uniform, complete, and accurate system of case-taking could be generalised. If it were to be made universal, the dream of international uniformity in medical records would be on the eve of realisation, and with it an immense impulse would be given to the cultivation of medical science.

Maisch and Stillé's *National Dispensatory* (Philadelphia: Lea; London: Churchill) is a very important and comprehensive book, of indeed encyclopædic character. It is admirable from a pharmaceutical point of view, and as a guide to the botanical, physical, and chemical character of the substances treated. As a physiological and therapeutical text-book, it is less remarkable; being loose and unsatisfactory in many parts, and yet throughout very positive in style. Its predecessor, "Wood and Bache", enjoyed a classic reputation in America, and was well known here; and no doubt the present work will fill its place.

Vaginismus treated by Ointments of Iodoform and Belladonna.—M. Gallard says, in the *Annales de Gynécologie*, that he treats this affection by gradually dilating the vagina with plugs of different size. These are re-covered with different ointments, according to the condition of the vagina, such as iodoform-powder and belladonna; the former having often proved very successful in the treatment of vaginismus and anal fissures. In cases of redness or excoriation of the mucous membrane, M. Gallard uses the following prescription: Iodoform in powder, cocoa-butter, of each 2 *grammes;* lard, 15 *grammes*. In cases where there is only pain, without any apparent alteration of the mucous membrane, the prescription is as follows: Extract of belladonna, 2 *grammes;* lard, 15 *grammes*. In both cases, the plug may at first be of the smallest size, and gradually made larger; and M. Gallard generally lets the patient make them herself and count the number of threads she uses, and then put on the ointment. In cases where the iodoform ointment was first used, it may be replaced by the belladonna ointment after the redness and excoriation or the eruptions of the vulva have disappeared; but the number of threads used for making the plugs must be daily increased by ten, twelve, or fifteen. Thus, in the course of time, the plug will grow till it has reached the size of the male organ, when sexual connection will no longer be attended by spasms.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 4TH, 1879.

THE SPIRIT OF MODERN MEDICINE.

THE Introductory Addresses which we publish to-day do not present any unusual features of interest, or disclose any striking novelties either in science, in educational method, or in the treatment of the well-worn themes with which, with little exception, they deal. Dr. Duffin's address, which we have selected for textual reproduction, is a very good example of intelligent discussion of the present status of professional study, and represents pretty accurately the accepted views of most thoughtful men upon the methods by which adequate professional knowledge may be obtained, the lines upon which the study should be followed, and the direction in which advance could be expected.

The time has gone by when it was the fashion to sneer at the demand upon the student for carefully studying and learning to apply the instruments of precision in physiological and clinical investigation. How many a sneer does one remember in pages of journals which used to assume to utter words of wisdom to the incoming students of the profession against the stethoscope, the ophthalmoscope, the laryngoscope, the sphygmograph, the microscope, and the clinical thermometer, and how many a taunt that the refinements of anatomy and physiology formed no necessary part of the study of the medical student. Against this shallow and superficial Philistinism we have made it our business for many years to carry on war, and it is with no small satisfaction that we see that this Philistine spirit has now died out alike in the writings of medical journalists and in the utterances of medical lecturers. No trace of it can be found in any of the addresses which we publish to-day, and we make little doubt that any comments which may be found in the columns of any of our contemporaries will be conceived in a more modern spirit.

The fact is that it is becoming, theoretically at least, a matter of universal recognition, that the medicine and surgery of to-day are undergoing a slow but profound change, and are being entirely recast upon a sounder, safer, and more durable model by the labours of the physicist and of the physiologist. The basic sciences upon which the art of diagnosis, the theory of interpretation, and the laws of treatment are built have, in the hands of the experimental physiologist, the histologist, the physicist, and the medical chemist, undergone a completely destructive and partially reconstructive change. We are acquainted within the last twenty years with tissue elements, of which before we had no knowledge, with proximate principles of which we had no suggestion, with modes of cellular life and of plastic evolution, which had defied observation and were altogether beyond our ken until the man of science in his laboratory had perfected the instruments of investigation and had enabled us to carry the bases of medicine deeper and wider than they had hitherto been laid.

The physicians and surgeons of the older generation are for a large part awakening to the sense of the vital importance to science and to progress of complete instruction of the students of to-day in the new physiology, the new chemistry, the new histology, and the minute pathology, which have been created as parts of medical knowledge long after their collegiate course had ceased. It is hard for a practically skilled clinician, well accustomed to hear his diagnostic power and his therapeutic skill admired, habituated to confide in them by comparing them with the less perfect achievements of others of his own standing, or for the surgeon, proud of a certain dexterity in the handling of the knife and of a sound knowledge of surgical anatomy, to realise the fact that his knowledge is part of an imperfect system, and that his methods are not those by which the progress of the future is to be wrought out. He justly points to the practical success of his career, to the stores of accumulated experience, and to the well-equipped and well-appointed powers of observation which enable him confidently to approach the bedside, assured that he brings to his patient a high degree of skill and accepted success in treatment. The success of to-day is, however, the failure of to-morrow; and it behoves every teacher, however senior in standing and however little skilled in delicate clinical investigations or in the use of instruments of precision, to reflect how much greater his power might be had he early in life been accustomed to that rigid system of the interrogation of the vital processes and vital tissues which is now within the reach of every practitioner and of every student, and which it behoves all those who now begin their career to learn to use with the facility begot by every-day familiarity. The sphygmographic investigation of the indications afforded by the pulse, the exact results achieved by the globulometer and the hæmachrometer, the facilities with which the quantitative examination of secretions such as the urine may be in daily routine carried out, are only a few familiar examples of the means of accurate investigation which it is now at once the privilege of the medical student to enjoy, and therefore his duty to use.

Medicine is entering upon a new phase—a phase marked by exact physiological investigation, and by the reference of pathological phenomena to a physiological knowledge, which is daily widening, deepening, and becoming more minute. That which has to be taught in the schools is a new physiology, a new pathology, and an improved method of clinical research. The records of medicine are beginning to cease to be vague expressions of a mental estimate of rough phenomena, and to assume the character of uniform, comparable, and correct notation of conditions capable of precise estimation and accurate comparison. The day is already at hand when the physician or the surgeon will be self-condemned to whom the ophthalmoscopic investigation of the eye, the sphygmographic record of the abnormal pulse, the laryngoscopic observation of the air-passages, the quantitative analysis of the urine, the optical investigation of defects of vision, and the record of limitations of the field of vision, or the measurement of the irregularities in the muscles of the eye, the utilisation of the physiological action of drugs, not roughly upon the system as a whole, but accurately upon each of its parts, are not as familiar as any other proceeding of medical practice. We must not conceal from ourselves, however, that the trained skill necessary to employ with ease, accuracy, and usefulness the new instruments of precision implies a larger amount of preliminary scientific education than is yet common amongst our medical students. We hope that those who are to-day entering their medical career have come to their schools well furnished with such knowledge of the physical sciences and such training in the art of learning, of thinking, and of reasoning, as befit men who are to enter upon a profession which every day acquires greater claims to be considered as the learned profession.

It is to be feared that our higher schools have not yet appreciated the necessity of altering their subjects of education, and to some extent also their methods of teaching, in such a way as to furnish to the medical schools young men capable of entering at once with advantage upon the study of the biological sciences which are the necessary antecedents of technical medical study. Even amongst our own body there is a large number, perhaps the majority, of men who are not yet awake to the change which is passing over medical science and medical practice, and who have not yet persuaded themselves that it is approaching to the conditions of an exact science in some of its parts, and that further progress is urgently required in that direction, and can only be attained by a generation of scientifically educated and well trained students accustomed to exact methods of investigation.

It is possible that a good many well placed and well satisfied practitioners will differ from us as to the importance of such methods of investigation, and of what it has been a past fashion to call over-refinement of education. The fact is, however, that those who do so, ought to ask themselves whether they have read aright the signs of the times, and whether these things, once called over-refinements, are not now the alphabet of the language of medicine, without which no intelligible text can be put together which will stand the critical tests of time. The period has gone by when a student should look with fear upon a mathematical formula, with trembling at tabulated figures, and with apprehension and disgust at pages of geometric schemata, noting with accuracy the phenomena of life and disease. This is the necessary language of exact record and of intelligent investigation; and, until the rudiments of science have been thoroughly mastered, there is little hope that the student or the practitioner can rise to the responsibility which the near future will impose upon him.

It may be hoped that, as universities like Cambridge, Edinburgh, Glasgow, and Dublin, extend their influence over successive generations of medical students, and when perhaps Oxford shall place its now lamentably wasted resources at the disposal of that profession which has so strong a claim upon them, the medical student will no longer approach the physiological or clinical laboratory with the undisguised repugnance and apprehension with which illtrained and ignorant men regard them. It may be expected then, too, that the public schools will see the necessity of sending to us students already capable of entering at once upon the biological work. Meantime, we cannot too strongly impress upon students and teachers alike, that the scientific period of medicine has now fully set in, and that in surgery, as in medicine, the scorn of refinements and the neglect of minute accuracy in inquiry and record, and in methods of treatment, are becoming daily more and more out of time and out of place.

THE DOCTOR IN THE KITCHEN.

THE mass of correspondence which has followed the publication of last week's notes on this subject indicates the wide-spread interest which is felt in the subject, and at the same time entails the duty of answering some of the more practical queries, and following out in some further detail some of the points as to which so many correspondents ask for further information. If it become necessary to enter into some rather familiar and culinary details, the examples of many eminent professors, from Dr. Kitchener down to Professor Sydney Ringer, may be pleaded as precedents for doffing the *calotte* and assuming the apron. Without pretending to the chemical research of a Pavy or the literary skill which Dumas combined with his culinary pretensions, it may perhaps be possible and pardonable to attempt to solve, in plain words, some very common doubts and difficulties under which some of the most sympathetic readers of these notes appear to suffer.

In the first place, as to the cooking of vegetables, and the popular opinion in England that they are, as a rule, wholesome, but rather unsubstantial, and relatively tasteless additions to a meal, incapable of playing a major part in nutrition, and unsuited to form a course by themselves, or to be anything else than a mere adjunct to a solid mass of meat. This popular prejudice (which many of the letters received express more or less openly) is due probably to two causes: first, the undue predominance which has been accorded in Great Britain to the potato as the one vegetable which is the essential representative of its class at the dinner-table; and, secondly, to the exclusive practice of boiling vegetables in water, and serving them straight from the boiling pot, without any intervening process of preparation for the table. The popularity of the potato has been due to causes connected with the great facility with which it is grown, the little attention required for its culture, and the relatively large produce of small plots of ground. Its value as a farinaceous and starchy food, and the readiness with which it is made eatable by the simple processes of either boiling or baking, achieved for it a conquest of the affections of the cooks and consumers of Great Britain and Ireland which has amounted almost to a monopoly. The instinct, however, which rebels against potatoes as a sole article, or even as a main constituent, where any substitute can be found, is a sound one. Potatoes are so little nutritious in proportion to their bulk, that it has been calculated on excellent authority, that an average Irishman adopting a potato-diet consumes and needs to consume about twenty-four pounds weight daily in order to get out of them the necessary material for the day's nourishment of the body. The weight of food necessary in a well considered dietary for a hearty man does not and need not exceed four pounds. As a starchy accessory to fatty and nitrogenous food, the potato has its merits; it is in its place when served with meat or fish; and the British way of either steaming (not boiling) or baking the potato is well suited to bring out its qualities. Frying in fat, oil, or butter, is a very pleasant way of cooking potatoes and much to be commended as a variety, and especially when the meat is served cold or very plainly cooked, and the potato is used to give the desirable element of heat and flavour to the meat. The potato becomes indigestible chiefly by reason of the amount of water imprisoned and organised in its tissues; to make it more digestible for weak brethren, the steamer of cooked potatoes should be removed from the top of the boiling pot and set on the hob to dry for a short time, and the potatoes then rubbed through a hair sieve, and the floury heap served hot and eaten with plenty of salt; the same object of driving off the water, and the further desideratum of adding flavour to it, is achieved by selecting small specimens and cooking them in the catchpan beneath a roasting joint before the fire, or similarly placed in the baking-dish. The finest kind of potato baked in their "jackets" is one of the few specialities of the English *cuisine* which is worthy of perpetuation; and a potato so cooked almost deserves the honour of occasionally constituting what a French cook trying to write English has called "a course by himself".

But the universal error of the British cook in dealing with vegetables —cabbage, peas, French beans, cauliflowers, Brussels sprouts—is the practice of serving them "plain boiled", which means straight out of a potful of hot water. This barbarous habit makes the foreigner and everyone accustomed to a foreign *cuisine* shudder with repugnance and contempt. It lies at the bottom of our national objection to vegetables except as an adjunct to a plate of meat with sauces, and as something to be eaten with a more savoury meat, and generally dusted with pepper. No other course is possible with vegetables so cooked. The remedy is a very simple one; but, if adopted, it would, perhaps, tend more than anything else to revolutionise our habit of neglecting vegetables as a main part of every dinner, deserving to form a separate course. After any of the vegetables named have been sufficiently boiled thoroughly to soften and half to cook them, they should be taken out of the boiling pot and put into a stewing pot (smaller and shallower), or, if left in the same pot, the water is drained off them, and a piece of butter is thrown in with them, with a little salt (or white sugar, especially with peas), and their cooking is completed by the aid of the melting butter; in *les bonnes maisons*, enough butter for the purpose is used, in more economic households a little butter suffices, and the rest is made up by powdering them with flour, and adding milk to complete the liquor; the quantity required is not great, as they are not to float, but only to be softened and "slowly" cooked. This inexpensive mode of cooking vegetables, universal throughout the Continent, is magical in its effect in rendering the dish of "legumes" palatable and savoury, while it adds much to its nutritive value; and any of the finer kinds of vegetables so cooked become at once worthy of separate eating.

Those who complain of the hardness of haricot beans omit the necessary preliminary of soaking them for twelve hours. Asparagus or seakale are as good cold on the second day with a little oil or vinegar as eaten hot on the first day. Boiled artichokes are by many people preferred when eaten cold with oil and vinegar and salt. Celery and beans of all sorts are best stewed with stock-gravy. Cauliflowers and broccoli may with advantage be served reheated and powdered with a little grated cheese and browned in the oven, or on the hob, or on a hot plate.

All kinds of vegetables are most easily made savoury when cooked in

the pot with the meat; and this brings us to the mystery of the *pot au feu*, the central point about which economic *bourgeois* cookery should revolve. Is there any mystery about it? If there be, it has been created by the glamour of fine writing. We may pass over gastronomic romances, and the pet recipes of *gourmets*. We are not writing recipes for epicures, or setting pitfalls for the unwary, but evoking reminiscences of the student-days of the Quartier Latin, which are as true to-day as they were twenty years ago. We went back, a few days ago, to Rue de la Sorbonne; and there flourishes the *pot au feu*, as it has from time immemorial, in the modest and pleasant apartments dear to student memories, and conservative of economic traditions. The *pot au feu* constituted the staple of the dinner at the pleasant little *pension* under the shadow of the Sorbonne and the Collége de France. This was the dinner. Soup, a *bouillon gras*, with the vegetables from the *pot au feu* served with it, handed on a plate; they were very tender, full of flavour, and nicer than you ever get them in an English middle-class house or ordinary inn; then came a few young radishes, served with water in the dish to keep them cool and fresh, and a sardine; then the meat from the *pot au feu*, and some boiled potatoes; and then—this was a little addition in honour of our visit—some partridges served in dish with quarters of stewed white cabbage—fine-phrased cooks would call it a *chartreuse* of partridges—a bit of Roquefort cheese, with a crust and butter; and a dessert. If hard details must be given to justify what we have said of the economy of good cooking, even where the price of food is much higher than in London, the regulated price of the dinner, to which we sat down a pleasant family party, was 17½d., and off this a modest profit is made—not, perhaps, if partridges were served every day. How is it done? In the first place, the marketing is done by the *femme de ménage*, or by one of the ladies of the house, attended or unattended by her, carrying a great basket, and buying in the markets. Thus the advantage is secured of selecting what is that day abundant and relatively cheap. What is bought is paid for in cash, and carried away in the basket. French women are not too proud to market, and their servants are not too proud to carry the market-basket; and it may be noted, also, that they do not think it necessary to make a *toilette* when they go out into the street in the morning; but put on a shawl, and go out in their work-a-day dress, with the cap for all head-covering; and, if their sweetheart should meet them, he does not think they have "demeaned" themselves by such unsophisticated work-a-day habits. Thus the materials of the *pot au feu* are secured on advantageous terms. What are they? A few turnips, a few carrots, perhaps a cabbage (which is cut into pieces), and two or three leeks,—"Oh, the leeks, that is essential", says my good hostess. "You cannot have a *pot au feu* without leeks, *ça relève le goût*"—and a piece of meat. What meat? Any piece of meat may be chosen, according to the pocket, according to the number, according to the taste. Not the best pieces; a piece of shin of beef or neck of veal. The beef and vegetables are put into water in the famous pot, which must be deep and not wide-mouthed, to avoid excessive evaporation, a large pipkin is excellent; a handful of charcoal or a very small fire will suffice; some salt is thrown in, and the pot is boiled briskly, when the water boils up. The scum which rises is skimmed, and the pot is then put aside on the hob to simmer slowly for several hours. Dinner at six means putting the pot *au feu* at about one o'clock. If a good deal of soup is wanted, a good supply of bones is added to the meat in the pot. The vegetables are now taken out and served with the soup set aside from yesterday's *pot au feu*, and the meat is eaten separately. The liquor of the pot makes to-morrow's soup, either warmed with vegetables added, or with some vermicelli, or with a *purée* of yesterday's cold vegetables, or indeed curried in a hundred ways. It is a French superstition that, if the soup of the *pot au feu* take the form of a plain *bouillon*, it must have the little "eyes" of fat left floating on it. There is indeed a tradition that, at Belleville, where the most incongruous materials of mysterious origin are reported to be employed for making cheap *bouillon* for the "*proletariat*", there is a special industry in which an urchin is employed, who is trained to blow oil through a long straw into the depths of the soup-pot, that it may rise to the top duly heated, and that it may present the traditional "eyes". The fable illustrates the fact that a good *bouillon* must, to suit the French *bourgeois* taste, present these palpable indications of "richness". But the whole tradition is a bad one, and *bouillon*, like every other soup, should be skimmed. Here, however, is the whole mystery of the *pot au feu;* it combines the soup, vegetables, and meat—which constitute the indispensable elements of the simplest and most economic French dinner—in such a manner that each is savoury, that each is presentable separately, that the whole is capable of economic preparation from the simplest and cheapest materials, and that the remains of the dinner of one day helps to furnish the elements of next day's repast; for the soup of to-day comes from yesterday's *pot au feu;* the meat left over is more palatable cold, with a salad, or with mustard and oil in a cream, or *sauté* in butter with stewed vegetables, than on the first day. To popularise the *pot au feu* in Great Britain would be to render a great service to the smaller households of our middle and working classes.

This answers some of the numerous queries before us, and, of the rest, some deserve a further and separate discussion.

THE DENTISTS' REGISTER.

On the 1st of August last, the *Dentists' Register* was for ever closed to all persons whose only claim to registration rests upon their having been in practice before July 22nd, 1878; and the results of registration are now before the public in the volume published last week by the General Medical Council. The registrar has spared no pains in rendering the *Register* very complete, not only in respect to the list of registered persons, but by inserting therein very full information respecting registration, including all the forms used, and a reprint of the Dentists' Act.

From the table showing the number of persons registered under the several qualifications, we learn that there are 483 registered licentiates in dental surgery; 50 persons registered as in practice with a medical, but no dental, qualification; 2,707 persons who, without a recognised qualification, save that of custom, are, on their own declaration, registered as having been in practice before July 22nd, 1858; and 2,047 persons who, without dental or medical qualifications, are also, on their own declaration, registered as having been engaged in the practice of dentistry, in conjunction with pharmacy, before July 22nd, 1878. This, including two foreigners, makes the large total of 5,292. But it is small as compared with the return of dentists in the last census taken in the United States, where, with a population of about four millions in excess of our own, the dentists nearly reach 14,000.

Of the right to be placed on the *Register*, an absolute certainty exists as to those who hold registrable dental or medical qualifications; and, no doubt, an equal right is held by the majority of those whose claim is based upon the ground of previous practice. But with others who have no claim, or at most a mere colourable claim, the temptation to gain a place in the *Register* by an incorrect declaration has, it is to be feared, proved too strong, and especially to some who have come in under the wing of pharmacy. That this abuse would occur might be inferred from the questionable course taken by many persons during the early days of the Pharmacy Act of 1868. By this measure, the registration of all the then existing chemists and druggists was made compulsory. Persons so occupied were placed on the *Chemists' and Druggists' Register* upon their own declaration of having been engaged in business before the passing of the Act; and the truth of the declaration was in each case attested by a magistrate or a registered medical practitioner. Yet, upon subsequent investigation, it was found that, notwithstanding the confirmatory attestation, many persons had caused their names to be placed on the *Register* by means of incorrect, not to say false or fraudulent, representations. A considerable number of these have been struck off the *Chemists' and Druggists' Register*. The registration fee has in no case been returned, nor has an erased name in a single instance been restored to the *Register*.

The Dentists' Act, with the view of correcting unavoidable errors in

registration, provides for the appointment and maintenance of a Committee, consisting of five members of the Medical Council, for the sole purpose of investigating cases of alleged incorrect or fraudulent registration; and the finding of the Committee upon the facts of a case is conclusive. The question naturally arises, how, or by what means, can the Council know who has or has not been wrongly placed upon the *Dentists' Register?* In March last, we reported the proceedings of a public meeting of dentists, called on the 3rd of that month by the Dental Reform Committee. Then and there was formed the British Dental Association, an avowed purpose of which was to render assistance in carrying out the spirit of the Dentists' Act. The following by-law of the Association answers the question as to provision of an effective channel through which cases of incorrect registration may reach the Medical Council:

"19. The representative board shall receive and investigate, by the help of professional assistance or otherwise, charges of offences alleged to have been committed against the Dentists' Act; and, if such charges are found to be supported by sufficient grounds, each case, with the supporting evidence, shall, if not otherwise disposed of, be brought before the General Medical Council."

The representative board of the Association is composed of the members of the Dental Reform Committee, strengthened by a few additional names; and it cannot be doubted that those who originated and carried to a successful issue the Dentists' Act will be equal to the far less difficult task of rendering effective assistance in correcting the *Dentists' Register*.

There is, however, one form of error which, in the opinion of a competent legal practitioner, can be readily dealt with. No person can legally practise pharmacy, or use the name of pharmacist, until he is registered in the *Chemists' and Druggists' Register*, or is a registered medical practitioner. Hence, if persons have declared themselves to have been, before July 22nd, 1878, engaged in the practice of dentistry, in conjunction with pharmacy, and not been registered in either of the above-mentioned registers, their names may be at once erased from the *Dentists' Register*. Others may be similarly dealt with who have declared themselves to have been engaged in the practice of dentistry separately, when, at the same time, they have been pursuing some other calling not recognised in the Dentists' Act.

The first issue of the *Dentists' Register*, complete though it be, and correct so far as the circumstances of the case will admit of correctness, must yet be considered as tentative or provisional. It will be authoritative until a new edition deprives it of all authority whatever. Publication is a necessary precedent of correction; for an error cannot be corrected until it is known to exist; and we know now for the first time who are registered as dentists. A new edition of the *Register* will be issued with the advent of the new year; and, no doubt, the *bonâ-fide* dentists will in the interval be very busy in putting their new house in order.

CHOLERA is decreasing in the 9th Regiment. The fact that cholera had broken out in the Khyber column is confirmed. The column has in consequence been removed from Jumrood towards Bara. From Allahabad we are told that General Roberts and his party were fired upon, and Dr. Townshend was severely wounded.

FURTHER discoveries have been made in regard to the baby-farm at Tranmere, near Birkenhead. A child, sub-farmed by the prisoners to some persons in Cheshire in 1873, is stated to have died from starvation. In the frock of the child at the workhouse were found concealed a number of letters addressed to the prisoners, and for the most part referring to children proposed to be handed over to them.

THE members of the Wanderers' Club are going to invite the defenders of Rorke's Drift, who are decorated with the Victoria Cross, to a dinner on October 9th. The chair will be taken by Lord Headley. Major Chard and Surgeon-Major Reynolds (who is a member of the club) are expected to arrive at Plymouth in the *Teuton* on Thursday; and Major Bromhead comes home in the *Egypt*, due at Portsmouth on Saturday.

SURGEON-MAJOR WILTON EVERET, of the Army Medical Department, died at the barracks, Chichester, on Saturday last, in his forty-fourth year. The deceased became assistant-surgeon in November 1858, and served in New Zealand from 1861 to 1863, for which he received a medal. He subsequently served with the 39th and 57th Regiments, and attained the rank of surgeon-major in November 1873.

THE autumn Congress and Exhibition of the Sanitary Institute will be held at Croydon from October 21st to November 8th inclusive. The proceedings will include an address by Dr. Richardson; an address by Dr. Carpenter of Croydon, on Sanitary Science; by Captain Galton, on Engineering and Sanitary Instruction; and a lecture by Professor Corfield and an address by Mr. J. Simmonds on Meteorology and Geology; together with papers and discussions each day on subjects correlative with those dealt with by the respective lecturers in their addresses on that morning in the sections.

THE Chemists and Druggists' Association summoned Messrs. R. R. Minton and Co., at Liverpool, on Saturday last, for contravening the Pharmacy Act of 1868, which provides that none but registered chemists shall keep open a shop for the sale of poison. Witnesses proved that a packet containing a pennyworth of oxalic acid had been sold at the defendants' premises. It was explained that the defendants' shopman had bought the poison on his own account for the accommodation of a few customers, and that the members of the firm were not aware that it was in stock. The magistrates imposed a mitigated penalty of ten shillings and costs.

TRICHINOSIS IN BERLIN.

IT is announced from Berlin that, in consequence of the numerous cases of trichinosis recently observed, the authorities of that city have taken very severe steps concerning the execution of the measures for the inspection of pork exposed for sale. This inspection is carried out with the aid of a microscope; and the following are the measures now adopted in Berlin. Whoever slaughters a pig or has one slaughtered, with the intention of selling its meat or of making any kind of sausage with the meat, is bound to have it examined after slaughter by an inspector of meat, who with the aid of a microscope assures himself of the presence or absence of trichinæ. The meat cannot be cut up, except after the certificate of the inspector has been given, affirming that it is exempt from trichina, and after the inspector's seal has been put upon the slaughtered animal. Any contravention of this order is punished by a fine of from three to thirty *marks*, or imprisonment.

SCURVY AND ITS CAUSES.

THE history of an outbreak of scurvy in the gaol at Akola in India, which attacked one hundred and three persons and caused twenty deaths, is instructive as combating the generally received opinion that the essential cause of this disease is privation of vegetable food. At the time of the outbreak, the convicts were getting four ounces of vegetables daily, which were subsequently increased to eight ounces; the vegetables issued being potatoes, onions, carrots, and yams. The cause of the epidemic is considered by Dr. Little, the officiating Sanitary Commissioner of the Hyderabad assigned districts, not to be attributable to any local insanitary condition of the gaol or deficiencies in diet, for many were admitted with the disease fully developed. The surrounding population also suffered severely, and many well-to-do natives who could afford to live well were affected. The detachment of infantry stationed at Akola suffered to such an extent that there was scarcely a man fit for duty, and it had to be relieved by a new detachment. Scurvy is believed to be endemic over the greater part of the assigned districts, but chiefly in those tracts of country where the soil is impregnated with saline matter. It is only, however, after seasons of drought, followed by rainfall, that the disease manifests itself in great intensity. The hot weather of 1877 was characterised not only by a scarcity of water, but also of food. The consequence of this scarcity was increase of crime, and the gaols were filled with men in whom a previous course of bad food and bad water had engendered a habit of body predisposing them to scurvy

and its allied diseases. The rainfall of 1878 was unusually heavy, so that the subsoil was saturated with water, and the level of the wells rose to within a few feet of the surface. The salt present in the soil being dissolved by the subsoil water, would naturally find its way to the wells. The injurious effects of cold and moisture in the production of scurvy are generally admitted; but, in addition, Dr. Little believes that large quantities of salt in the soil is an important factor in its production. This view is borne out by the civil surgeon of Akola, who arrived independently at the same conclusion after investigating another epidemic of the same disease. It may be observed that Niemeyer has pointed out that scurvy does not depend entirely upon the want of fresh vegetables, for it appears amongst people whose diet is almost entirely vegetable, but who suffer from destitution and live in cold damp dwellings, as is the case in the northern countries of Europe, especially Russia.

LONGEVITY IN EUROPE.

THE Director of Administrative Statistics in Vienna has recently published an interesting study on longevity among European populations. It appears from his researches that of 102,831 individuals who have exceeded the age of ninety, and whose existence has been ascertained in the last censuses in the great European states, there were 60,303 women and 42,528 men. The great longevity of women is observed still more perceptibly by comparing the number of human beings reported in the census as having reached or even passed the age of one hundred years. In Italy, for example, were found 241 female centenarians against 141 males; in Austria, 229 women against 183 men; in Hungary, 526 women against 524 men. In Austria, the number of sexagenarians is stated at 1,508,359, that is to say, 7.5 of the whole population.

ENORMOUS MORTALITY FROM CHOLERA IN BERAT.

THE year 1878 was one of lamentable and appalling mortality in the province of Berat, the British "assigned districts" to the north of the dominions of the Nizam. No fewer than 178,404 persons died, or 116,945 more than in the previous year; and the death-rate was 81.5 per 1000, against 32.1 the year before, and a mean rate of 30.2 in the last five years. One district (Basim) was more than decimated, the death-rate being 106.4. The causes which led to these terrible figures are stated to be (1) the general unhealthiness of the year; (2) high prices, scarcity, and consequent depressed vitality of the population; (3) an outbreak of cholera rendered intense by the foregoing causes; and (4) the abnormal prevalence of malarious fever. To the death-rate, cholera contributed 19.2 per cent., small-pox 3.3, "fevers" 47.8, and bowel-complaints 15.5 per cent. Of the total deaths, no fewer than 89,549, or more than a half, were in children under six years. Deaths amongst the aged were also very numerous. The total number of fatal cases of cholera was 34,306. The epidemic commenced in April at four widely distant points of the province, after having been raging all along the southern border: it then spread throughout the district, culminating in September, and eventually dying out in December. Its intensity varied greatly in different districts: in one (Basim) 11,698 persons fell victims; in another (Ellichpur) 1,136 died. The villages in which it occurred are, as a general rule, in a most insanitary state, and contain every factor necessary for the localisation and propagation of cholera. Their outskirts and approaches, as well as the streets, are foul-smelling and dirty; and there is, as a rule, no attempt at surface-drainage. The houses are, for the most part, mere hovels, crowded together and ill ventilated, with a cow-shed attached, and a cesspit or a foul water-hole in the yard. The epidemic followed the usual course of cholera epidemics in a sudden rise and slow decline; and the high mortality is attributed (*a*) to the insanitary state of the villages, (*b*) to an unusually unhealthy year, and (*c*) to the unfavourable condition of the people, brought about by scarcity of food and scarcity of water, rendering them more liable to disease in any form. The disease increased after the first fall of rain; but as the rains became heavier and more continuous, so was there a corresponding diminution in the mortality. Every means seems to have been taken to afford aid to the people and check the ravages of the epidemic. Cholera medicines and disinfectants, with printed Marathi directions for their use, were distributed to police-stations and outposts. The services of the vaccination establishment were utilised for the purpose of distributing medicines, and urging upon the local authorities the necessity of keeping their villages clean; and in the district which suffered most, a special officer was told off to assist the civil surgeon.

EDUCATION OF MIDWIVES.

A MINISTERIAL decree, dated 12th August, 1879, requires that aspirants for the title of pupil midwives of the first-class in Paris shall undergo a preliminary examination in—first, reading; second, orthography and dictation; third, elementary arithmetic, including the first four fundamental operations of arithmetic and arithmetical operations founded on them; fourth, the elements of the metric system of calculation. This decree came into operation on the 1st October.

THE ABUSE OF THE WORD "FEVER".

IN his last annual report on the health of Birmingham, Dr. Alfred Hill draws attention to a subject of considerable importance with regard to the certification of deaths from "fever". Cases have been repeatedly brought under our notice in which the sanitary state of a place has been unjustifiably impugned because deaths have been ascribed in medical certificates to typhus or typhoid fever, which, on inquiry, have been admitted to be not deaths from the true disease at all, but from a low fever *like* typhus or typhoid. It is with the view of calling the attention of the profession to the importance of accurate certification of the cause of such deaths, that we reproduce Dr. Hill's interesting remarks. Speaking of the number of deaths from typhoid fever in the borough during 1878, he observes:

"The steady diminution of typhoid fever during the last few years has this year apparently ceased, the proportion of deaths returned as resulting from that disease being exactly the same as last year. There is, however, good reason to believe that this arrest in the decrease of typhoid fatality is apparent rather than real. My own observation leads me to the conclusion that much carelessness is exhibited in both diagnosing and naming several forms of disease. I have reason to know that cases of scarlet fever first seen by the attendant towards their termination, and after all the more characteristic signs and symptoms had disappeared, are hastily and thoughtlessly set down as typhoid; that cases of simple fever, occurring in feeble subjects, and therefore characterised by a low type, are at once, without any careful examination for, or any discovery of the distinguishing signs of true typhoid, designated and certified as typhoid. On putting the matter to medical men, in some cases where, from the unexceptionably satisfactory state of the premises, there was reason to believe the cause of death could not be typhoid, they have frankly admitted that by typhoid they did not mean true typhoid, but simply *low* fever, which, however, is not typhoid at all. But the abuse of nomenclature does not stop here. A case that occurred recently was certified and registered as typhus. I visited the premises with a view to discover the conditions which are so well understood to be associated with this dreadfully infectious and fatal disease, but found them all absent. Convinced that typhus, which is so rare a disease in Birmingham, could not be the cause of death, I waited upon the medical man, who candidly, in reply to my questions, said he did not mean typhus, nor yet typhoid, but simply *low* fever—a fever, in fact, *low like* typhoid or typhus. Of course it is quite time, now that the distinctions between different kinds of fever are so well made out, that this vitiation of the registration of disease returns by means of loose nomenclature should cease. They are a reproach to professional prestige, and are injurious to the excellent object of disease registration."

SIGNS OF DEATH BY DROWNING.

MM. BERGERON AND MONTANO (*Annal. d'Hygiene,*) have arrived at the following conclusions on the subject of death by drowning: 1. The presence of frothy foam, not only in the pharynx and the larynx, but also in the bronchi, is the constant sign of death by submersion, whether syncope or asphyxia predominated in the mode of death, and whether the individual was free in his movements or was thrown into the water after having been made insensible by opium or chloroform, or was partly suffocated, or was fettered in his action. This absolute constancy of the presence of foam, whatever the special condition in which the submersion occurred, is, in the opinion of the authors, the single sure uniform sign proving death by drowning. 2. There is always a certain degree

of congestion, and sometimes subpleural ecchymoses are seen; but these ecchymoses, which give the lungs a spotted or speckled look, are unlike the punctate ecchymoses of suffocation. 3. The intensity of the hyperæmia, and the extent of the ecchymoses, are always in proportion to the efforts of the animal while struggling against submersion. It is the same also with the human subject, as has been verified in all necropsies made by the authors at the morgue in Paris during the last ten years. This fact permits one at a necropsy to learn concerning what passed in the last moments of life, to know whether or not the individual struggled long and vigorously during the act of drowning.

SYPHILITIC AFFECTION OF THE PLACENTA.

A VERY interesting observation of placental syphilis was presented at a recent meeting of the Académie de Médecine by M. Hervieux. A young girl of twenty-two years of age, five months pregnant, had contracted well-characterised syphilis. She, however, was confined at the full period of a well-shaped child in good health, but there existed in the placenta from fifteen to eighteen mammillated tumours, which Dr. Hervieux considered to be gummæ. His opinion was contested by Dr. de Paul and Dr. Larnier; but, whatever may be the true nature of the lesions, the case is one of a very interesting character.

BARBER AND DOCTOR.

A CORRESPONDENT writes to us:—"The following illustrates the value of the services put upon *the two professions* by country guardians. The barber at Barnsley Workhouse receives about £32 *per annum* for shaving and hair-cutting, and attends twice-a-week. The doctor receives £70 *per annum*, and attends every day and throws in all medicine. The other day, he asked for an increase of salary on account of the large increase of work (amounting to one hundred and fifty sick daily), and was told by the guardians that his application 'was inopportune'."

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

THE fourth annual meeting will be held on Thursday, October 16th, at the Town Hall, Bradford. The programme includes the following items:—At 11 A.M., to meet at the Town Hall, and proceed by 11.45 train to Frizinghall to examine sewage works. At 1.15 P.M., to meet at the Town Hall, and proceed to Fever Hospital, where a Ransom's Disinfecting Stove will be seen in operation. At 2.30 P.M., the meeting of the Committee will take place at the Town Hall. At 3 P.M., the meeting for Association business, including the election of new members, the reception of the report of the Committee for 1878-79, the election of officers and Committee for 1879-80, and to fix the place of next meeting. At 3.30 P.M., at the general meeting, the President's address will be given, followed by a paper by Harris Butterfield, Esq., on "Infantile Diarrhœa", and a paper by Thomas Britton, M.D., on "A Difficulty in Water-Supply". At 6 P.M., there will be a dinner at the Talbot Hotel.

THE TREATMENT OF SPINAL DISEASE.

A BRIGHTON correspondent writes:—"On Tuesday, Dr. Sayre, accompanied by his son, visited the Sussex County Hospital, and demonstrated his application of the plaster-of-Paris jacket. The first patient selected was a frail-looking boy aged 6, with angular curvature in the mid-dorsal region, under Mr. Couling's care. On his being suspended by head and arm-pits, by means of the tripod and pulleys, until his flat feet only just touched the floor, the little fellow declared that it made his back easy, and at the same time the dorsal projection was a little diminished. Whilst the child was retained in this posture, the wet plaster-of-Paris bandage was bound around him in repeated turns from arm-pits to trochanters, a good-sized pad of cotton-wool (enclosed in a cloth) having previously been laid on the pit of the stomach under a closely fitting jersey next the skin. The bandage became dry and stiff in about a quarter of an hour, and then the pad of cotton and its envelope were pulled out from beneath the jersey, the Doctor explaining that it was temporarily placed there to secure room for breathing and the reception of food in the stomach. The child was then placed in bed, and seemed very comfortable and happy. The next day he was to get up and about.—The second case, a patient of Mr. Humphry, was a stout and fresh-coloured girl aged 18, with a psoas abscess presenting in the right groin, which she described as having been coming three months; but she could give no history of its probable cause, though, after much cross-questioning, she admitted that she had fallen down a whole flight of stairs two years ago. Her back presented no deformity; but pressure on the lumbar spine caused her to flinch. This girl was directed to get out of bed and stand under the tripod; and, on the apparatus being put in force until the soles of her feet only just touched the floor, she expressed a decided relief from the aching in her back and groin. On the suspension being heightened until the right limb dragged on the psoas muscle, the aching came on again. On being let down to the first position, she again said she was easy; and then, on being rather suddenly let down with her full weight on to her feet, the pain was considerable. Dr. Sayre expressed an opinion that this patient would be likely to derive much comfort from the plaister jacket. The Doctor also illustrated his mode of supporting the walls of an opened abscess by the plaster apparatus."

DRUNK OR APOPLECTIC.

THE police in this country from time to time make some rather awkward mistakes in arresting, as drunk, persons who are really suffering from sudden attacks of brain-disease. We may, however, perhaps be thankful that this is the worst that happens. Elsewhere, it appears that they manufacture pathological puzzles of the kind for themselves, as follows. "An engineer," says an American medical contemporary, "quite advanced in life, was arrested one evening for some supposed offence of a trifling nature, and was so severely clubbed by the officer who made the arrest that the next morning, when the latter was about to take him to court, he was so frightened at the bloody appearance of the prisoner that he took him to Bellevue Hospital instead, and left him, no doubt concluding that it was the most prudent course for himself not to appear against him. But this is not all. The next morning, when the old man was on his way to the hospital to have his wounds dressed again, he sat down on a doorstep to rest (his head being dizzy from loss of blood and the effects of the beating which he had received); he was arrested by another officer on the charge of drunkenness, in consequence of which he was sent to jail for five days, and his wounds allowed to take care of themselves."

BRITISH AND AMERICAN SOLIDARITY.

IN an interesting leader on the community of scientific interests and social sympathy of the American and British branches of the medical profession, we are pleased to observe that the *Boston Medical and Surgical Journal*, the oldest and still the leading medical journal of that part of the American continent, says: "By the British journals which we now so frequently see in the hands of our practitioners; by the works on medical subjects by British authors which are constantly being welcomed by us and added to those standard treatises which have long had a recognised place upon our shelves; by the warm reception on the other side of the water of many of the writings of our American authors, one is always more or less impressed with the community of medical and scientific interests and developments between the two countries using the same language, and having in some respects, if not in all, similar habits of life and of constitution. And this is brought home to us with more than usual force at the present time, just as the accounts of the late meeting of the British Medical Association at Cork are reaching us, an abstract of which we lay before our readers. At this meeting, a number of well-known Americans were present, several of whom had been asked to prepare papers for the occasion." It continues: "Their achievements may be ours; their obstacles and difficulties, with some changes of circumstances and surroundings, are pretty sure to be ours. Good work cannot be done there and we not profit by it; the British standard of medical education, of professional attainment and accomplishments, cannot be elevated and we not be drawn up by it; nor can they make mistakes or encounter and overcome difficulties and

we not learn by them if we will. Of all this the converse is also true. In the scientific and practical branches of our profession there is already mutual respect and confidence and co-operation between the two countries; perhaps it is not too much to hope that the time may come, and that not at a too distant day, when this co-operation may be extended advantageously, if only in a limited way, to the mutual minimum educational standards and guarantees." This opens up a very satisfactory prospect; which is, however, we fear, not yet realisable.

A LIVELY CITY.

THE editor of the *Louisville Medical News* says they have in that city, now, five medical journals and four medical colleges, and intimates that there are yet from ten to twenty members of the profession who are still without professorships. It is evident that there is both room and material for one more medical school in Louisville.

EFFECT OF ANIMAL CHARCOAL ON SALTS.

LEO LIEBERMANN *(Zeitsch. f. Analyt. Chem.)* has shown that animal charcoal not only retains many salts when their solutions are filtered through it, but that not a few of the salts are actually decomposed, the charcoal retaining generally the base with a portion only of the acid.

YELLOW FEVER AT MEMPHIS.

ACCORDING to latest advices, there were about 225 people sick with yellow fever in and adjacent to Memphis. Nearly all of them were being attended and cared for by the Howards. The physicians and visitors were daily abroad. There were 180 nurses on duty, worked at an expense of about seven hundred dollars *per diem*. The daily expenses had been reduced three hundred dollars by the closing of their supply store. The Masons, the Odd Fellows, the Knights of Honour, and other benevolent associations, were labouring hand in hand with the Howards in the work of relieving the sick and distressed. The administrators of the law at Memphis appear to have abandoned their posts and left the city.

THE MUSEUM OF ST. BARTHOLOMEW'S HOSPITAL.

THE annual exhibition of specimens recently added to museums is a custom, as we may term it, originally carried out at the Middlesex Hospital by Professor W. H. Flower, and steadily continued by him at the Royal College of Surgeons ever since he has held the appointment of Conservator to the Museum. It saves hundreds of specimens from oblivion and perpetual sepulture in inaccessible store-rooms. It is fair and gratifying to the donors, and most valuable to all interested in the progress of pathological and other sciences. With regard to a specimen of tubo-ovarian cyst, described by Mr. Spencer Wells, we find in his work the reproachful remark of the donor, Mr. Anderson, that "the parts were sent to the College of Surgeons, and now lie hidden and undiscoverable among the mass of accumulated specimens". Such an abuse could not occur since the annual show was brought into practice nearly twenty years ago, as the system effectually prevents such an accumulation. From a circular forwarded to us by Mr. Eve, Curator of the Museum of St. Bartholomew's Hospital, we find that the new specimens added since October 1878, have been on view at that hospital during the past week. Of these, 125 are pathological, with 4 calculi; 17 are physiological, teratological, and comparative-anatomical, with 6 dissections for the use of students, 6 casts, and 1 model, making in all 159. Among the most remarkable pathological additions are a preparation from Mr. Langton's case of gastrostomy for malignant stricture of the œsophagus, recorded in the BRITISH MEDICAL JOURNAL, vol. i, 1879, p. 310; a dislocation of the first phalanx of the thumb forwards; a subcoracoid dislocation of the humerus without laceration of the capsule; a dislocation of the femur on to the tuber ischii, and another on to the great sciatic notch (in both cases the margin of the acetabulum is fractured); a preparation showing ulceration of a bubo into the femoral artery and vein, with ligature of the external iliac; an abscess ulcerated into the internal jugular vein; an aorta, obliterated at the point of junction of the ductus arteriosus, with ruptured dissecting aneurism; an ear affected with aneurism by anastomosis; and a fine dissection showing congenital hernia and undescended testis. A stomach, with punctiform hæmorrhage into its mucous membrane, from a case of diabetes, is mounted in glycerine-jelly, according to Mr. Miall's process. The morbid changes in the membrane at present show very well, in striking contrast to the appearance of similar specimens preserved in spirit—a medium ever unsatisfactory for the preservation of portions of alimentary canal, mucous membrane, or any healthy or diseased structure where preservation of colour is important. Whether the specimen referred to will retain for long its fresh appearance remains to be seen: it will be doubtless watched with interest, and in itself illustrates the utility of annual shows in the promotion and testing of new discoveries. It is much to be desired that the yearly exhibition be not only continued at St. Bartholomew's, but also introduced at all large hospital-museums.

ICE CREAM AND BEEF JUICE.

As an excellent dietary article, this is praised by Dr. J. J. Tucker, in the Chicago *Journal*. His formula is: ℞ Cream, 120 grams; sugar, 30 grams; extract of vanilla, 8 grams; beef juice, 8 grams. Any confectioner can make it, or it may readily be prepared at home, with a freezer. Its uses are obvious.

HYDROPHOBIA REMEDY.

UPON the island of Salamis, there is a monastery called "Panagia Phaneromene", which has from olden times been in possession of a remedy against the effects of the bite of rabid dogs or poisonous snakes. Professor Landerer writes to *New Remedies* that this remedy is in high repute and universally believed to be effective. Indeed, he himself appears to have some faith in its efficacy. In his commentary on the Greek *Pharmacopœia*, he describes it under the name: "Pulvis antilyssicus monasterii insulæ Salamis", and states that it consists of the powdered root-bark of *Marsdenia erecta* R. Br. (= *Cynanchum erectum* L.) 10 grains, and powdered oriental cantharides, ½ to 1 grain. The monks apply also a cautery, namely, a moxa composed of wool and mastic, and keep up the suppuration for a long time.

VICTIMS OF TYPHUS.

WE have had from time to time to record the deaths of numerous members of the profession from typhus fever caught during attendance on patients suffering from that disease. A melancholy case of this kind is reported by the medical officer of health for Merthyr Tydvil in his last annual report. Mr. Dyke, in summarising the effects of an outbreak of typhus at Dowlais, chronicles, with sorrow, the deaths of the nurse at the infectious hospital, and of the assistant-surgeon of the Dowlais Iron Company, Mr. John Job, who both fell victims to typhus whilst attending upon patients suffering from it. Mr. Dyke adds that Mr. Job was only one of the young professional men engaged by the company who have fallen during their warfare with disease at Dowlais. It may be worth while, therefore, to consider for a moment why it is that typhus fever should be thus murderous on those who minister to the wants of the sick struck down by it. The late Dr. Murchison, who himself suffered twice from typhus—once in 1847, when prosecuting his studies at Edinburgh, and again, ten years later, in London, in consequence of visiting the Fever Hospital—says, in his classic work on *Continued Fevers*, that typhus, in London at least, is almost unknown among the middle and upper classes, save in a few isolated instances, where there has been direct intercourse with the sick. Murchison's experience confirmed that of Tweedie and Jenner, that a case of typhus is scarcely ever met with among the better classes, except in the case of medical practitioners and students. The explanation of the mortality amongst these classes, and also among nurses, is to be found in the fact that the poison of the disease is contained in the cutaneous and pulmonary exhalations of the sick; that it is conveyed through the air by fomites; that it is then inhaled, or perhaps swallowed, with the saliva, and so finds admission into the blood of the healthy. Every physician who has had any experience of typhus must be familiar with the strong ammoniacal odour of the breath, and still more with that which escapes on

turning down the bed-clothes of the patient. It has been found that those patients are most apt to communicate the disease in whom this odour is strongest; and there are innumerable instances of persons being attacked with typhus a few hours or immediately after close communication with a typhus patient, during which they have been strongly impressed with this pungent odour. One of the most remarkable illustrations of the contagiousness of the disease may be found in an official return, which showed that, during two months and a half of 1856, no fewer than six hundred of the attendants in the French hospitals at Constantinople were seized with typhus, which was not prevalent in the town itself. In point of fact, nurses in hospitals, when many cases of typhus are received, invariably get typhus, no matter under what sanitary circumstances they are placed. There appears to be no exception to this rule, unless, indeed, it be that the nurse is personally insusceptible of the disease from a previous attack of it. Medical men and clergymen in attendance upon numerous typhus cases are also almost sure, sooner or later, to get the fever; and that they do not fall ill with so much certainty or rapidity as the nurses appears due only to their contact with the sick being less constant and intimate.

THE FATE OF YAKOOB BEG'S DESCENDANTS.

THE letters from the Shanghai correspondent of the *Times*, drawing attention to the fate reserved for the surviving male descendants of Yakoob Beg, the famous Central Asian chief and Chinese rebel, will doubtless excite much indignation in England, and may be the subject of remonstrance by our diplomatic authorities. It appears that when, in the winter of 1877, Turkestan passed once more into Chinese hands, there were taken prisoners a number of Yakoob Beg's family, some of whom were executed, and others have died. At the present time, there remain in prison four boys, three of them sons and one a grandson of the rebel leader. These wretched little boys have been treated like State criminals, and have now been sentenced for the awful crime of being sons of their father. This sentence is to the effect that they are to be delivered into the hands of the Imperial household to be made eunuchs of, and to be afterwards forwarded to Turkestan and given over as slaves to the soldiery. This sentence, ghastly as it is, is the penalty awarded by the Chinese laws in all cases of sedition in which the children or grandchildren of rebels are not themselves privy to the treasonable designs of their parents. If beneath the age of ten, they are confined in prison until they have reached the age of eleven, whereupon the sentence is carried into effect. So late as the end of 1877, it was inflicted upon a son of a rebel named Li Liu, who was only six years old when his father was apprehended in 1872; and in 1856, a number of boys who were with some rebels when captured, were subjected to it, their elders being beheaded. The operation of castration is mentioned in native histories as early as 1100 B.C., when it was by edict constituted one of the recognised modes of punishment for certain grave offences. Its object, when performed in pursuance of a sentence, appears always to have been purely punitive, not preventive on any theory such as has more than once been broached in England, that criminals of the worst sort should be prevented from founding or increasing criminal families. In China, however, as elsewhere, eunuchs are in general made in order to qualify themselves to act as palace-servants. They may be kept only by certain members of the Imperial family and in the palaces of the eight hereditary princes whose ancestors assisted in establishing the present dynasty. The Emperor has three thousand in his service; each prince of the blood and imperial princess is obliged to maintain thirty, and so on throughout the different grades. The operation is performed at an establishment maintained for the purpose immediately outside one of the palace-gates. For each castration and subsequent care of the case the operators receive the equivalent of £1 16s. sterling. The operation has been thus described by Mr. Stent of the Chinese Customs Service. "The patient is placed in a semi-supine position on a broad bench. One man squatting behind him grasps his waist, and one man is told off to each of his legs. Bandages are fastened tightly round the hypogastric and inguinal regions, the penis and scrotum are three times bathed in a hot decoction of pepper-pods, and the patient (if an adult) is solemnly asked whether he repents, or will ever repent, his decision. If he appear doubtful, he is unbound and dismissed; but if his courage have held out, as it usually does, all the parts are swiftly swept away by one stroke of a sickle-shaped knife. A pewter plug is inserted into the urethra, and the wound is covered with paper soaked in cold water, and is firmly bandaged. The patient, supported by two men, is then walked about the room for two or three hours, after which he is permitted to lie down. For three days he gets nothing to drink, nor is the plug removed from the urethra. At the end of this period the dressings are changed, and the accumulated urine is allowed to escape. The parts generally heal in about one hundred days, when the patient is inspected by an old experienced eunuch, in order to make sure that the mutilation is complete." For a long time after the operation there is incontinence of urine. About two per cent. of all cases prove fatal—some by hæmorrhage, some by extravasation, and some doubtless by irritative fever. Mr. Stent says nothing about obliteration or contraction of the canal of the urethra, although one would expect that the process of cicatrisation would frequently produce this accident. The organs removed are embalmed and sealed up in a vessel, which must be produced for inspection by the proper authority whenever an eunuch is nominated for appointment to any post. When he dies, his organs are buried with him.

TETANUS FROM A BEE-STING.

A DEATH from tetanus, apparently the result of a bee-sting, occurred in Boston not long since. John B., thirty-four years of age, was brought to Pennsylvania Hospital with the complaint that he could not move his jaw when he tried to eat his dinner on the day of admission, and that on his way to the institution he had had several convulsions in the street. Upon examination, a small spot covered by dried pus and surrounded by a small area of inflammation was found on his forearm, where, he said, he had received a sting from a bee a couple of weeks before. After admission, he had well-marked tetanic convulsions, particularly affecting the respiratory muscles. He died of exhaustion within a few hours after reaching the hospital. At the *post mortem* examination, no other cause for death was detected; and, as the coroner's physician pronounced it a case of tetanus from a bee-sting, a verdict was rendered accordingly.

PHYSIOLOGICAL EFFECTS OF ARTIFICIAL ISCHÆMIA.

THE effects, on the functions of the part, of the application of Esmarch's bandage to the upper limb have been investigated by S. Fubini, who has published the result of his researches in Moleschott's *Untersuchungen zur Naturlehre*, Band xii. He has arrived at the following conclusions, derived from observations made on a strong young man aged 20. 1. When the hand and forearm are brought into a state of bloodlessness by the application of Esmarch's bandage, the limb undergoes a diminution of volume, which, in the subject of the experiment, amounted to 62 cubic *centimètres* of water, at the temperature of 86° to 95° Fahr. 2. The ischæmia may last from 30 to 35 minutes, and exceptionally as long as 45 minutes. 3. The average loss of heat in the ischæmic part (hand and forearm) may be estimated at about 7 degrees Fahrenheit. 4. With the duration of the ischæmia, the temperature of the limb continues to fall; so that, at the end of twenty-five minutes, the reduction may be as much as 12.5° Fahr. On the other hand, there is a rise of about 2° and 3.5° Fahr. in the corresponding limb of the opposite side. After the cessation of the ischæmia, there is a fall of about 5.5° to 7° Fahr. in the temperature of the unbandaged arm; while the temperature of the limb that has been rendered ischæmic increases, and in about fifty minutes regains its original height. 5. The ischæmic limb rapidly loses its tactile sensibility and sensibility to pain. The power of perceiving differences of temperature disappears more slowly; indeed, the ischæmia cannot be continued long enough to produce complete insensibility to thermic irritants. 6. Tactile anæsthesia and analgesia appear more quickly in the peripheral than in the central parts of the ischæmic limb. 7. The muscular power, when tested by Regnier's

dynamometer after the ischæmia had lasted twenty minutes, was found to be reduced to nearly one-half of its original value. 8. During ischæmia, the hand and forearm excrete less carbonic acid than under normal conditions, the proportion being 100 to 148.

SCOTLAND.

EDINBURGH ROYAL INFIRMARY.

THE managers of the Royal Infirmary, having failed to secure the presence of the Prince of Wales or Duke of Edinburgh at the opening of the new Infirmary, have resolved, as the time is now so short, to abstain from any further attempts to secure the presence of Royalty, and have asked Lord Provost Boyd to preside at the opening ceremony. No one will grudge the Lord Provost this honour, as it has been largely owing to his perseverance and enthusiasm that the new buildings are so advanced and so admirable. In connection with the proposed Fever Hospital, it has been resolved to wait until the present old Infirmary buildings have been valued, as it is likely the Fever Hospital will occupy a portion of them.

POISONING OF CHILDREN AT AYR.

A MOST serious case of poisoning of a whole family, and from which four deaths have occurred, has taken place at Ayr. Briefly stated, the case, so far as known, is that on Saturday night the family had potatoes and herrings for supper, and a few hours later Matthew, aged three, was violently purged and vomiting, and died on Tuesday. On Monday night, John, aged five, was taken ill and died on Tuesday. On Wednesday, a third boy (William), aged seven, was ill and died on Thursday; while early on Saturday morning, May, aged nine, died—leaving only one child of the family, aged thirteen months. It would seem that the fish had some connection with the poisoning, as the mother, who had partaken, was also very ill with vomiting; while the father, who had not eaten any herrings, escaped. This conclusion is supported by the fact that a neighbour, who had bought fish from the same hawker as supplied the other fish, was also seized with vomiting. There is no suspicion of foul play. Arsenical poisoning has been suggested; but as the affair is being investigated by the police and medical authorities, it will, in a few days, we hope, be satisfactorily reported.

FORFAR INFIRMARY.

AT the annual meeting of the subscribers of the Forfar Infirmary, held on Monday, the report submitted showed that, during the year, there had been ninety patients treated; of whom seventy-seven had been dismissed cured or relieved, five had died, and eight remained under treatment. The income for the year, including balance and subscriptions, was £651, and the expenditure £508.

HEALTH OF GLASGOW AND EDINBURGH.

IN Glasgow, the mortality last week was 16 per 1,000; a state of matters evidently displeasing to one or two town councillors, who, at a recent meeting, alleged it must be 20 per 1,000. In Edinburgh, the mortality was 14 per 1,000. There were five deaths from zymotic diseases, of which four occurred in the Old Town, three of them being from scarlet fever.

ILLNESS OF DR. J. G. FLEMING OF GLASGOW.

WE regret to have to announce the very serious illness of this well known practitioner. He is suffering from an attack of typhoid fever, and his condition is causing great anxiety to his numerous friends. The latest accounts of his state are not very favourable, and his age renders his case one of more than ordinary gravity.

HEALTH OF GLASGOW.

AT the meeting of the Sanitary Department of the Glasgow Town Council, held on September 29th, it was reported that the death-rate of the city during the past fortnight was 17.5 per 1000, in place of 16 during the preceding fortnight. From the report of the medical officer of health, we find that scarlet fever has of late made considerable increase, and was still most prevalent in the northern districts. Dr. Russell alludes also to a subject of no small importance in connection with the spread of disease: the occurrence of infectious diseases in families who live in rooms connected with shops. Several instances were adduced of this state of matters.

CHARITABLE BEQUESTS.

WE understand that the late Mr. Russell of Easterton has made the following liberal bequests: The Glasgow Royal Infirmary, £1000; and the Scottish National Institution for Imbecile Children, £500.

ANDERSON'S COLLEGE, GLASGOW.

AT the quarterly meeting of the trustees of Anderson's College, held last week, the managers were entrusted with the making of arrangements for an Aural Lectureship. Mr. A. S. Wilson was appointed to the Chair of Botany, previously held by Professor Patterson, who has been appointed to a Chair in Australia.

GLASGOW ROYAL INFIRMARY.

THE late Mr. A. T. Russell of Milngavie has left, by deed of settlement, among other charitable bequests, £1,000 to the Glasgow Royal Infirmary.

CHILD POISONED AT GLASGOW.

A CURIOUS case of poisoning with laudanum in Glasgow occurred on Saturday night. A man named McCauchey had taken pity on a destitute woman by giving her employment in his house, his wife having been confined about a month ago. On his going home on Saturday night, he found his child seriously ill and the woman somewhat inebriated. He went to a neighbouring surgery for assistance. The shopman came to the conclusion that the child must have been poisoned; he then remembered having been applied to by a woman for laudanum for a child, which he refused. The same woman afterwards came for one pennyworth of laudanum, stating it was for a woman in pain; this she procured. It turned out she was identical with the woman living in McCauchey's house. The shopman recommended the father to go to Dr. Robert Chalmers, police-surgeon, which he did. When Dr. Chalmers went, he found the child hopelessly ill, and, notwithstanding every effort, it died on Sunday afternoon. On a shelf in the room, Dr. Chalmers found a phial containing twenty-two drops of laudanum, leaving fifty-three drops unaccounted for. He taxed the woman with the act, when she admitted having given the child three drops. She was handed over to the Police, and, at the Police Court, was remitted to the Sheriff.

IRELAND.

THE QUEEN'S UNIVERSITY.

THE usual September and October Pass and Honour Examinations in the Faculty of Medicine of this University, commenced in Dublin last week. An unusually large number of students presented themselves. The meeting of Convocation will be held on the 10th instant, and the degrees conferred on the 15th instant.

THE KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE proposed amendments to the by-laws relating to the Fellowship, and the new grade of members instituted under the supplemental charter recently granted to this College, having been in the main approved of by the Crown, will forthwith come into force. Under these by-laws, all persons who have been admitted Licentiates of the College before December 12th, 1878, shall be entitled to be admitted members of the College without payment or examination, or giving due notice. Other candidates for the grade of Membership must, in addition to fulfilling certain conditions which will shortly be published, pass

(unless in the case of an University graduate) an Arts Examination as well as a professional examination in pathology, medical anatomy, histology, medical chemistry, public health and meteorology, psychology, forensic medicine, midwifery, and clinical medicine. The examination for membership is to be held quarterly, and the fee for the grade is twenty guineas. Members of the College alone are now eligible to the Fellowship.

DUBLIN ROYAL SANITARY COMMISSION.

THE inquiry opened last Tuesday in the City Hall. We are pleased to notice that the Chairman, Mr. Rawlinson, in his preliminary observations, remarked that the Commissioners were not debarred from taking into consideration other causes which might affect the public health besides the sewerage and drainage of the city. In his, Mr. Rawlinson's, opinion, the prime causes of an excessive mortality, not only in Dublin, but in many other places he had had cognisance of, were to be attributed to some form of neglect in the construction and management of the houses in which the people dwelt. Mr. R. O'Brien Furlong, barrister-at-law, one of the joint authors of the *Manual of Public Health for Ireland*, and an active member of the Dublin Sanitary Association, attended the inquiry on the part of that body. The first witnesses examined were the town clerk and the city architect.

THE LATE DR. MAUNSELL.

ONE of the now few remaining links which connects the existing members of our profession in Dublin with their honoured predecessors, was severed last Saturday by the death, in his seventy-fourth year, of Henry Maunsell, M.D. Although probably unknown as a medical man to many of our readers, he occupied, at one period of his career, a foremost position in medical circles; and his name is still associated with at least two well known works which have done credit to the Dublin School. Dr. Maunsell graduated in the University of Glasgow in 1831, and took the Fellowship of the Irish Royal College of Surgeons the following year. He was for many years connected with the Institution for Diseases of Children in Dublin, and, in conjunction with the late Dr. Evanson, published, in 1836, *A Practical Treatise on the Management and Diseases of Children*. This work, which was one of the first of its kind in British medical literature, ran through several editions, and was translated into German, as well as republished in America. Its recognition as a standard work, even up to the present time, is acknowledged by the references of recent authors to its pages. As well as having filled the office of Secretary of the Council of the Royal College of Surgeons, Dr. Maunsell occupied, at different periods, two chairs in that College, viz., the Professorship of Political Medicine (of which the lately established chair of Hygiene is the present representative), and the Professorship of Midwifery. He was the author of the *Dublin Practice of Midwifery*, a book which did much at the time to advance the *prestige* of the Dublin School of Midwifery and his own reputation. He was for some years editor of the Dublin *Medical Press*, and it may probably have been in consequence of the taste thus acquired for literary work, that he eventually gave up all active connection with the profession he had so distinguished himself in, and devoted the remainder of his life to journalism. For the last twenty years, Dr. Maunsell was editor and proprietor of the *Mail*, a leading Conservative Dublin newspaper, and in this position devoted himself characteristically to the principles he had adopted. As the late President of the Dublin Branch of the Association (Mr. Porter), in his presidential address last January, observed, Dr. Maunsell was the pioneer in this country of what is now called State Medicine. And not the least able of his numerous articles in the columns of the *Mail*, were those bearing on sanitary questions. We can but briefly allude here to his eminent social and personal qualities. Never improvident, his hospitality was open-handed. Quick-tempered in disposition, he was second to none as a true friend. He was a most brilliant conversationalist and accomplished speaker; and though he never flinched inflicting chastisement where he thought it due, he has died regretted by troops of friends.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

CONGRESS AT MONTPELLIER: EIGHTH SESSION.

II.—*Conclusion.*

The Surgical Treatment of Epispadias and Hypospadias. — At the meeting on August 30th, M. Duplay read a paper on this subject. He reminded his audience that he had written frequently on the subject, and said that he intended this time to speak of the modifications which he had introduced in performing the operation.

In operating for hypospadias, he always had three objects in view, viz.: 1. The straightening of the male organ; 2. The formation of a new duct from the meatus to the hypospadic opening. This part of the operation had been the special object of M. Duplay's modifications; 3. The making of both parts of the duct meet.

M. Duplay has performed this operation a considerable number of times, and has always obtained very favourable results, both as far as the restoration of form and function were concerned. Encouraged by this success, he had adopted a similar method in the treatment of epispadias. This operation also consisted of three parts: 1. The straightening of the organ; 2. The formation of a new duct from the glans to the epispadic opening; 3. The anastomosis of the new duct with the urethral duct.

The method was the same as in the preceding operation, and the modifications which took place were suggested by the anatomical difference between both malformations.

M. Duplay had not performed this operation as often as the other, neither were the results as satisfactory, although they were superior to those obtained by the other methods of operation for epispadias.

Capillary Punctures in Ascites.—M. HEMOT (of Reims) read an interesting communication on this subject. After having drawn attention to the danger which attends the practice of evacuating suddenly in a case of ascites a large quantity of liquid, and to the accidents to which this apparently mild operation frequently gives rise, he pointed out how little harm could result in such cases from capillary punctures. He quoted several cases in which five or six punctures, made at certain intervals from each other, gave the desired result. The operation is extremely simple; the instruments used are merely a small trocar, such as every surgeon carries in his pocket-book, to which a rubber tube is adapted. Another important point in this method is that the abdominal walls do not lose their elasticity, which would be the case if the fluid were allowed to escape rapidly. In this way, the rapid reproduction of the liquid is prevented.

Intermittent Hæmorrhages caused by Malaria.—M. MASSART (Honfleur) spoke on this topic. He quoted a curious case that had recently come under his observation. A lady who had had a tooth extracted by him told him, two days after the operation, that she had lost a great quantity of blood by hæmorrhage soon after. Two days later, she had another hæmorrhage, and, in spite of all his efforts to arrest it, another very considerable hæmorrhage took place after an interval of two days more. Struck by the periodical recurrence of these hæmorrhages, M. Massart prescribed sulphate of quinine, and the phenomenon ceased.

During the discussion which followed, M. Castan observ . that similar cases occurred very frequently in Montpellier.

M. Baréty said that he had frequently observed pulmonary and uterine hæmorrhages of miasmatic origin. The pulmonary hæmorrhages differed from hæmorrhages that were determined by some other cause, both at their onset and end. The blood began to flow suddenly, without any premonitory blood-spitting or taste of blood in the mouth, which symptoms always as a rule preceded or followed pulmonary hæmorrhages in tuberculosis. He added that, in all such cases, there were more or less slight symptoms of affection of the apices in the lungs.

A Pelvis which had undergone a Peculiar Deformation.—M. DUMAS (Montpellier) presented this specimen. The woman to whom it had belonged had had her thigh amputated at the age of four or five. She had died of puerperal peritonitis at the age of nineteen. The deformity consisted in the atrophy of that portion of the pelvis which corresponded to the amputated thigh. In shape it resembled much the obliquely distorted pelvis which was produced by the congenital luxation of one femur, except that in this case the distortion corresponded to the side of the healthy articulation.

The Relations between Bronchial Hæmorrhages and Pulmonary Phthisis.—M. TEISSIER, senior (Lyons) read a paper on this subject. He had observed several cases where the patients, who had hitherto enjoyed good health, suddenly revealed symptoms of tuberculosis and

hæmoptysis after a traumatic lesion of the thorax. He thought that bronchial hæmorrhages, even when determined by traumatic lesions, might, in exceptional cases, produce tuberculosis in individuals whose respiratory organs did not possess a normal power of resistance, *e.g.*, in persons with scrofulous or tuberculous diathesis, drunkards, or individuals suffering from some constitutional debility. He concluded from this that we were not justified in assuming that bronchial hæmorrhage is followed by pulmonary phthisis only in individuals who already have tuberculous granulations.

M. Potain mentioned a case showing that pulmonary congestion may precede the formation of tuberculous granulations. The patient was a young man with tuberculous meningitis. He thought he had found all the symptoms of consolidation of the pulmonary tissue, and was sure that tubercles had formed in the apex. The *post mortem* revealed a considerable congestion of the apex of the lung.

The Dangers of Anæsthesia in the Treatment of Fractures.—M. PONCET (Lyons) observed that anæsthesia was invariably preceded by a period of more or less intense excitement. During his struggles, the patient often injured himself very seriously, and a simple fracture frequently thereby became compound. The speaker had tried to suppress this stage of excitement by giving the patient first a subcutaneous injection of 0.01 to 0.03 of chlorhydrate of morphia, and then putting him to sleep with inhalations of ether or chloroform.

Ignipuncture in the Treatment of Fungous Arthritis.—M. CHALOT read a paper on this subject. The following were the conclusions he arrived at. The great advantage of the thermocautery is, that it enables the practitioner to graduate the temperature, and that it is easily applied. The thermocautery acts in the depth of the diseased tissues to which it has been applied.

The author distinguishes between intracapsular and intraosseous ignipuncture, according to whether the cauterisation penetrates only into the fibro-serous capsula of an articulation or into the osseous extremities of the joint.

If a limb with fungous arthritis be maintained in a state of methodic immobilisation before suppuration and ulceration have set in, and thermocautery is applied at the same time, good results may be confidently expected, as it modifies the nutrition of the diseased tissues and produces sclerosis of the fungosities.

Relations between Tuberculous Lepra and Scleroderma.—M. GRASSET (Montpellier), in a paper on this subject, endeavoured to show that both affections are closely allied, and may be designated under the common name of tuberculous scleroderma.

Myopia in Schools.—M. NICATI (Marseilles) read a paper on the occurrence of myopia in the schools at Marseilles. Among other interesting facts, he affirms that myopia occurs more frequently in Jewish than in Christian schools, and that it appears to affect individuals with blue or grey eyes more frequently than others who have dark eyes.

The Cardiac Level in Animals.—M. PARROT has given this name to the space which in certain animals is situated between the right sigmoid valve and the intraventricular wall. The author asserts that this space is found principally in animals who make great muscular efforts, such as the horse. Under those conditions, the blood-wave, after each systole, sends off a secondary wave which breaks on this level. The same fact has been observed in human individuals in certain pathological conditions, *e.g.*, in cases of aortic insufficiency.

Heart-Disease following Gastro-Hepatic Troubles.—M. TEISSIER, junior, said he had met with about a dozen cases of heart-disease that could be traced back to the said cause. The affection was developed very slowly and gradually. One of its first symptoms was the abnormal loudness of the second sound of the heart; later on, the same sound became double, and finally was transformed into a blowing murmur, connected with insufficiency of the tricuspid valve and a venous pulse. M. Teissier attributed the origin of this secondary affection to a peculiar condition of irritation of the sensory fibres of the abdominal sympathetic nerve, which is transmitted to the pneumogastric nerve, and gives rise to a spasmodic contraction of the pulmonary vessels. This tends to increase the blood-pressure within the pulmonary circulation; the right heart is forced to overwork, and finally undergoes very serious structural alterations (dilatation, hypertrophy, and relative valvular insufficiency). In the discussion which followed, M. François-Franck remarked that the disturbances might perhaps rather be accounted for as caused by the cervico-thoracic portion of the sympathetic nerve. Subsequently, he communicated the results of his researches on the course of the accelerating nerves of the heart that come from the nervous centres and go to the cardiac plexus. In a recent communication to the Académie, the author dwelt upon the fact that Schiff's theory respecting the passage of the accelerating cardiac nerves into the superior laryngeal nerve is not quite correct. All the fibres of the superior laryngeal nerve are sensory fibres. It has been proved, and the speaker had convinced himself from his own experiments, that the accelerating nerves of the heart pass through the sympathetic fibres which spring from the cervico-dorsal part of the spinal marrow. He had also been able to verify the fact that the pneumogastric nerve, which belongs to the inhibitory nerves of the heart, contains a certain number of accelerating fibres. This becomes especially manifest when the preponderating action of the inhibitory fibres has been eliminated by means of certain experimental proceedings.

Hepatic Cysts Terminating in a Novel Way.—M. ARLES (Montpellier) communicated this case. An elderly woman had a voluminous tumour in the right hypochondriac region. After exhibiting all the symptoms of a slight attack of peritonitis, she passed *per anum* a sac resembling a hydatic cyst. It contained neither hooks nor any membranes, only a small quantity of fluid not unlike bile. The microscopic examination revealed the existence of an acephalocyst.

Contractility of the Capillaries.—M. ROUGET (Montpellier) read this paper. He said that Stricker of Vienna was the first who observed the contractions of the capillaries. In 1873, M. Rouget performed a series of experiments with the view of ascertaining the fact. He also succeeded in seeing the contractions of the capillary walls, and distinguished within the latter a particular membrane which he regarded as the contractile membrane. When tadpoles are put under the influence of an anæsthetic, the ramifications of the caudal arterial trunk are seen to contract until their lumen has almost entirely disappeared. If these vessels are stimulated directly, annular contractions are seen to form at the places that have been stimulated. He believes in the existence of nervous fibres which run into the contractile membrane of the vessels, but he has been unable to show that they really exist.

The Migration of Needles that have Penetrated Accidentally into the Human Body, and their Extraction.—M. Milliot (Nice) read a paper on this subject. He suggests that the best method for discovering the exact seat of these foreign bodies, and the direction they are taking, would be the combined use of a galvanometer and a magnet. The latter is to transform the needle into an artificial magnet which may act upon the compass of the galvanometer. After the locality has once been determined, it is easy enough to extract the needle.

Resection of the Elbow-joint.—M. OLLIER (Lyons) in a paper on this procedure gave the following as the indications for the operation. In young children, the operation must be performed only in exceptional cases, because at their age nature possesses exceptional resources, and a case of arthritis in a child is almost always successfully treated by maintaining the limb in an immovable posture, cauterising it, improving the hygienic surroundings, and regulating the diet. In older children and in adults who are not yet twenty-five years old, it is advisable to perform the operation at once, for the following reasons. 1. The articulation as a rule forms again. 2. The patient in most cases gains a strong and healthy member instead of the diseased one, especially if the olecranon afterwards grow. 3. Speedy recovery. When the patients are older than twenty-five, it is better not to act rashly, as there is reason to fear that the new articulation may be weak and consequently useless.

A peculiar diathesis does not necessarily constitute a counterindication to the operation, unless the patient's health has been seriously affected by it. M. Ollier has performed resection of the elbow-joint on a tuberculous woman who had cavities in the lungs, but this is an exceptional fact. It seems, however, as if in a tuberculous patient the resection of the elbow seemed temporarily to arrest the progress of the pulmonary affection. He held that the operation ought to be performed in all cases of suppurative arthritis. In cases of fungous arthritis, he thought it better not to operate as long as one might hope to preserve the diseased articulation; if this hope failed, he allowed himself to be guided by the patient's age.

Perforation of the Bones of the Skull in Cases of Pericranial Tumours.—M. L. H. PETIT, in this paper, said that sometimes the perforation extended over a considerable space without causing any particular brain symptoms that might attract the attention of the physician. He then proceeded to give the history of several cases that had come under his own observation. He had arrived at the conclusion that a persistent fixed headache might up to a certain point reveal the existence of a perforation, especially if it coincided with other cerebral symptoms. But it was not a pathognomonic symptom, and besides cerebral symptoms had often been observed when there was no perforation at all. In cases which ended fatally after the ablation of the tumour, death was either caused by syncope following the operation, or by meningitis, which is apt to set in in the course of a few days.

The Relations between Diabetes and Lesions of the Pancreas.—M. LANCEREAUX remarked in this communication that the onset of diabetes insipidus differs from that of glycosuria in that it is sudden, and complicated with polydipsia, polyuria, and polyphagia. Later on,

the teeth begin to fall out, and prostration and impotence set in. The affection progresses continually but does not last very long (from two to six years), the patients almost invariably succumb to pulmonary complications (phthisis). As almost invariably atrophy of the pancreas is revealed at the necropsy, M. Lancereaux is inclined to suppose that the pancreatic lesion and the aforesaid form of diabetes are intimately connected.

The Effect of Movement on the Articulations.—M. MASSE (Bordeaux) read this paper in which he showed that the conformation of the joints depended in great part on the movements performed by the muscles. The latter also under normal conditions prevent the articular surfaces from separating too far. That is the reason why the articular movements are more extensive in the dead body than in the living man, and why they become still more so when the muscles have been cut, leaving the ligaments intact.

The Relations between Menstruation and Ovulation.—M. QUEREL (Marseilles) read a paper on this subject in which he asserted that both these physiological acts were independent of each other, and that menstruation could exist without ovulation. In the subsequent discussion, his views were opposed by Messrs. Eustache Chalot and Mendot.

The Physiological Effects of Opium.—M. PECHOLIER (Montpellier) read this communication. He said that opium was a powerful sedative, but that if it were given in large doses it had an exciting effect on all the other functions, which was soon followed by profound depression. Opium is not a direct hypnotic, but according to the author's expression, it produces catalepsy, *i.e.*, an arrest in nutrition.

The Diuretic Effects of Nitrate of Potash.—M. MAIRES ascribed the diuretic action of the drug to its action on the blood-corpuscles, which become irregular in shape and lose their faculty of forming *rouleaux*.

The different kinds of Metritis and the Histological Alterations which they are apt to cause in the Uterus.—M. COURTY read a very interesting paper on this subject. He pointed out that chronic and acute metritis both correspond to a particular histological alteration in the organ. He added that a thorough knowledge of the relations which exist between a set of symptoms and the corresponding histological lesion could alone enable the physician to form an exact prognosis, and give him the best therapeutic indications.

Calorimetry.—M. CLÉMENT (Lyons) read this paper. He exhibited the refrigerating apparatus which he had described last year at the Congress in Paris. This contrivance consists of a belt, to which rubber tubes are attached, so as to keep up a system of continuous irrigation.

Growths of the Urethra in Women considered as a Symptom of Tuberculosis of the Genito-urinary Organs.—M. TERILLON read this paper. He had found, in three cases that had come under his notice, that such growths are not idiopathic, as is generally believed, but that they become developed under the influence of genito-urinary tuberculosis. The prognosis is naturally very serious.

Hyaloid Detachment.—M. ANGIER, in this paper, remarked that this is rarely a primary lesion; it is in almost every case caused by the escape of a portion of the vitreous body in operations on the eyeball. He divided the affection into four classes, according to their etiology: detachment owing to ablation, compression, dilatation, and retraction.

The Congress will meet again in Rheims in 1880.

THE CONGRESS AT BADEN.

THE presence of the Empress of Germany, and of her daughter the Grand Duchess of Baden, at one of the general meetings of the fifty-second anniversary of the Association of German Naturalists and Physicians, has been one of many reasons why the Baden meeting has been a brilliant success. Baden is so beautifully situated, the excursions in the neighbourhood are so delightful, the hotel accommodation is so excellent, and the assembly-rooms are so admirably fitted for a great meeting; that theatre, bands, fireworks, illuminations, and a grand ball, only contributed to the completion of an unusually successful anniversary. This *Versammlung Deutschen Naturforschen und Aerzte* combines most of the essentials of our own British Medical Association, of the British Association for the Advancement of Science, and of the Social Science Congress. There are seventeen sections: 1. Mathematics and Astronomy; 2. Physics and Meteorology; 3. Chemistry; 4. Mineralogy, Geology, and Palæontology; 5. Anthropology and Prehistorical Investigation; 6. Geography and Ethnology; 7. Botany; 8. Zoology and Comparative Anatomy; 9. Entomology; 10. Agriculture; 11. Veterinary Art; 12. Education in Natural Science; 13. Anatomy and Physiology; 14. Pathological Anatomy and General Pathology; 15. Internal Medicine and Skin-Diseases; 16. Surgery; 17. Gynæcology; 18. Psychology and Neurology; 19. Orthopædics; 20. Ophthalmology; 21. Diseases of Larynx, Ears, and Nose; 22. Medical Jurisprudence; 23. Military Hygiene.

So many Sections attract a great number of members, and nearly 2,000 attended the Baden meeting—mostly Germans, very few French, a few Russians, and from ourselves Mr. Spencer Wells was the only representative of British surgery, Mr. Squire of the chemists, and Mr. Mavor of the veterinarians. Mr. Spencer Wells must have been more than pleased by the hearty reception he met with from his German brethren. His health, proposed at the medical dinner by Kussmaul, and at the surgical dinner by Langenbeck, and his cordial welcome by the leading gynæcologists, Schroeder, Hegar, Hildebrandt, Freund, Czerny, Müller, and Martin, must have been as gratifying to the surgeon as a special reception by the Empress and the Grand Duchess were socially regarded by his colleagues as a merited distinction. At the meeting next year at Dantzig, we trust British medicine will be more numerously represented. If not in so accessible a position as Baden, yet it will form a very convenient and interesting concluding visit to those who, after our own August meeting at Cambridge, may like to visit Norway, Sweden, and Denmark, and return by Dantzig, or who may be content with a visit to Northern Germany.

On a future occasion, we may give a detailed report of the work of the Sections most interesting to our readers, and of the general addresses. Of these, Kussmaul's memorial of Stilling was most interesting, and was admirably delivered. Hermann, on the Progress of Physiology in the last Forty Years, was a masterly review, which we hope to give in a full translation; while Dr. Treichler's address, on the Production of Short-sightedness in Schools, is a subject which, already discussed by Liebreich, must command still greater attention.

We cannot now even give the titles of the principal papers in the different medical Sections; but we cannot refrain from giving expression to the general feeling of congratulation felt by the whole Association at the rapid advances our German brethren are making in gynæcology. The papers of Freund on Entire Excision of the Uterus, and on Hydatids in the Female Pelvis; of Hegar on the Castration of Women; and of Schroeder and Czerny on Hysterotomy (or as Schroeder calls it more accurately fibro-myotomy), mark a great advance in the healing art.

We cannot conclude without a word as to the advantages of Baden as a health-resort. Now that the gambling tables are abolished, there is no possible objection as regards the character of visitors. The air and surroundings are admirably suited to those invalids who, on account of nervous diseases, or affections of heart or lungs, require sedative influence; and the bathing establishment, Friederichsbad, is perhaps the most perfect in Europe. Marble swimming baths at various temperatures of running water from thermal springs, vapour baths, and douches of all kinds, and the most scrupulous cleanliness, unite to make the establishment as great a luxury as it is useful in a sanitary point of view.

WESTMINSTER HOSPITAL.

AT the conclusion of Dr. Dupré's address, the prizes were distributed to the successful candidates by Canon Duckworth, who then made the following remarks.

GENTLEMEN,—Having discharged the agreeable duty confided to my unworthy hands, I shall detain you but a very few minutes with any remarks which might impair the impression left on your minds by the masterly address to which we have listened to-day. I venture to express my humble opinion that you have done well not to follow the example of those two great metropolitan schools which a few years ago abolished the customary inaugural oration. No doubt, those who were responsible for that abolition had weighty reasons to offer for the change; but it seems to me that every medical school, on entering on a new term of its labours, must derive salutary inspiration and stimulus from such a ceremonial as the present; and a survey of the actual state of medical science or some one of its numerous departments is not only a fitting commencement of a session of study, but it conveys lessons which live in a young student's memory and often colour his whole career; and, moreover, it is in many cases—I am sure it has been to-day—a contribution of permanent value towards the progress of medical education and practice. You are to be congratulated, gentlemen, on having the key-note of a new term of work struck for you by so skilful and experienced a hand. Dr. Dupré is honourably known beyond these walls in connection with modern scientific research. In one region of inquiry, which is of world-wide interest and importance—I mean inquiry into the physiological action of alcohol—I believe that he has rendered eminent service. His name is associated with that of one who cannot yet be referred to here without reviving the bitter sense of irreparable loss, and who will be held in reverent honour so long as your school exists, one of the most gifted and beloved members of the medical profession in our generation—the lamented Dr. Anstie. It was, if I mistake not, at the instigation of this accomplished worker, that Dr. Dupré

undertook those special researches into the effects of alcohol on the human body which have paved the way for its legitimate use in health and in disease. May I say, gentlemen, that the example of such a man as Dr. Anstie is the most precious endowment which a medical school can boast? May I point him out as embodying for you an almost perfect ideal after which you will do well, God helping you, to model yourselves? I shall never forget the widespread thrill of regret at the abrupt close of that noble career, rich already in performance, and richer still in promise.

There was one point in Dr. Dupré's address to which it will hardly be wondered that I should revert—I mean his allusion to the religious element in education. I most fully agree with him that there is a fatal defect in every scheme of education from which religion is omitted; but I am not quite prepared thus to characterise that undenominational system now established in our State schools. I do not say that the religious education given in them is adequate, and I believe that its deficiencies must be supplemented, as indeed they are, by the zeal of the Church and of the other religious bodies in the nation. But, so far as it goes, I am thankful for it; and in the present divided state of religious opinion, I cannot see any other solution of an enormous difficulty.

To return to your special interests. If I am rightly informed, one of the subjects which is most exercising the minds of those engaged in medical education is the present extraordinary multiplicity of entrances to your profession. It certainly does strike an outsider as a strange and unsatisfactory thing that there should be no fewer than nineteen examining bodies, universities, and corporations in the three kingdoms, each with its own standard, and each granting licence to practise. And we cannot be surprised that, in consequence, State interference should have been called for, and that the House of Commons should be taking evidence as to the working of the present system, with a view to simplification of it, and to the adoption of what has been called the "one-portal system". I cannot but think that it would be far more satisfactory to the public, and for the good of the profession, that some approach should be made to an uniform standard of qualification. It is at present quite hopeless for the uninitiated to form any estimate of the relative value of medical degrees and qualifications; and, under veil of this general ignorance it is that the half-educated practitioner often thrives, while the well-trained often goes to the wall. And yet, gentlemen, I have been assured that, even under the present system, with all its inequalities of standard and licence, a better grade of practitioners is secured than is to be found in any other country in the world. Even the laxest examination by which your profession is entered in England gives us a type which cannot be surpassed. It is no insular vanity—it is the sober truth—that the British practitioner, take him all round, is unsurpassed. I have seen it stated by one who ought to know—for he has witnessed with an experienced eye the working of your profession in both hemispheres—that in no hands is the treatment of the sick so thorough and so humane as in those of the Anglo-Saxon. That "xenomania" which Dr. Hillebrand has recently imputed to us, that passion for foreign ways and ideas, has invaded the department of physic; and it has been the fashion to extol everything German, and to depreciate everything English by comparison. But this passion or craze is apparently on the wane; and we are beginning to realise that we have merits of our own, and ideas worthy of export. It was only the other day that Donders, in his great address at Amsterdam, said of us; "England pays but little attention to theories; she continues to educate her practitioners; but the practitioners are consummate, and worthy of the great English philosophers." And if we are not in the van in scientific speculation and philosophic research, is it not true that we are foremost in our hospital practice; that nowhere does a patient find so much done for him, nowhere such unwearied personal attention and effort to restore to him what he has lost, as in this country? I believe that the British hospital physicians and surgeons are the best on the face of the earth. They are not only a long way the cleanest, which is worth noting, but they are the most upright and the most humane. And here, gentlemen, may I make bold to say a word in defence of the humanity of the whole profession, in answer to those unjust aspersions which have lately been cast upon it? To read some of the fanatical vapourings of people who are agitating for the total abolition of vivisection, one might imagine that the sole object of most youths who embrace your profession is to find indulgence for the most inhuman passions that can degrade our nature. I resent such an imputation on your behalf as a shameful libel; and I have never failed, when opportunity has been given to me, to state my firm belief that no stricter regulations than those which exist are needed to protect the lower animals from wanton cruelty at your hands. It is to me inconceivable that, from among a public which is daily enjoying the benefit of your gentleness and sympathy, daily taking advantage of your ill-remunerated and self-denying labours, there should be formed a party so unjust to you, so ignorant of your proverbial character, and so blind to facts of every-day experience.

May I, before I close, say one word to those who resume their studies to-day? I need hardly remind you, gentlemen, of that famous apophthegm of one of the most ancient and illustrious physicians, "Science is long, and opportunity is short". If that saying were true when uttered more than two thousand years ago, how much more apposite it is to-day when heard by you, the heirs of all the intervening ages. I can well understand that it is the instinctive thought of your hearts when you contemplate the vast growth of that knowledge which you have set yourselves to master—"Science is long, and opportunity is short". How is it possible within the limits of a brief curriculum to make any impression upon this huge aggregate of facts and theories? I know that many a student's heart sinks within him at the contemplation of the vast and varied labour that awaits him. And yet, gentlemen, I venture to bid you all be of good cheer. Your toil has its overwhelming compensation in the present, and still more in the future for which you are preparing. It is true that your profession does not hold out to you the shining rewards which crown the labours of successful workers in others. But I do not think that there is any reward more solid or more truly enviable than that of the practitioner who, having qualified himself for his life's task by honest work, never remitted so long as the power to learn survives, goes about daily doing good, ministering to the thousand ills that flesh is heir to, and accumulating that imperishable fortune which every good physician carries away when he dies—the love and benediction of his fellow-men.

THE OPENING OF THE SESSION AT THE MEDICAL SCHOOLS.

WITH Wednesday, the 1st instant, the commencement of the session 1879-80 occurred; and at most of the schools introductory addresses to the students were delivered. At three schools, however, St. Bartholomew's, Guy's, and the London Hospital, there was no address; but a dinner or *conversazione*, to which old students and their friends were invited, took its place. The following is an account of the inaugural proceedings at the various metropolitan schools.

ST. BARTHOLOMEW'S HOSPITAL.

The largest number ever yet assembled at the annual dinner of old students met in the great hall of St. Bartholomew's Hospital on the evening of the 1st inst. Professor Turner of Edinburgh occupied the chair; and amongst those present we noticed Sir James Paget, Sir Sydney Waterlow, Sir William Smart, Professors Owen, Rolleston, Humphry, Able, Dr. Carpenter (London University), etc. After the usual toasts of the Queen, and Prince of Wales (President), the Army, Navy, and Reserve Forces, were given by the chairman, who referred to the good work done in the last campaigns by members of the profession, to more than one of whom the Victoria Cross had been presented. Sir William Smart, Inspector-General of the Navy Medical Department, in reply, said that many medical officers had deserved the Cross besides those who had received it, not only for performing their duties under the fire of the enemy, but for actual military services rendered in the field. The chairman proposed "St. Bartholomew's Hospital", referring to it as the largest charitable institution of the metropolis. He drew attention to the changes which had taken place since he had entered it as a student twenty-five years ago, first in the staff, not one of the present acting staff belonging to the staff of that day; then in the area of selection of the staff, the members of which are now chosen on their merits alone and not because they were pupils of one of the surgeons of the hospital or members of one of the two older universities; in the opening of special wards for diseases of women and diseases of the eye; improvements in the nursing department, and the gradual substitution of younger, more attractive, and more refined women for the frowsy old nurses of the Sairey Gamp and Betsy Prig style; in alterations in the sanitary arrangements; improvement in the appearance of the hospital square; and last, but not least, in the building of new museum, library, class-rooms, and theatres, for the use of the school. With this toast he coupled the name of Sir Sydney Waterlow, who had done so much during the last few years in effecting the most important of these improvements. Responding to this toast, Sir S. Waterlow said that he quite understood that a flourishing condition of the medical school was of the greatest importance to the hospital, and that it would be his care to advise the governors, so long as he was treasurer of the hospital, to favour every improvement which was deemed necessary to the interests of the school.

In proposing success to the Medical School, Professor Turner pointed out, that however brilliant the past history of a school, no school can

live upon its history; that St. Bartholomew's was giving ample evidence that its intention was to provide for the present and the future by supplying space and material for the study of the exact sciences, without which medicine was of no effect. It was a great mistake to suppose that a medical school should be attached to every hospital. A large number of students was necessary to the success of a school, since a large number of students could alone pay for the requisite appliances and the best teachers. He would recommend that the teaching of such subjects as anatomy and physiology, etc., be carried on in one or two large central schools, from which men should afterwards be drafted off to the various hospitals to learn their clinical work. Mr. Holden responded.

The "Visitors" was given by Dr. Andrew, who coupled with it the names of Professor Rolleston and Professor Humphry. Professor Rolleston compared the system of management of the English hospitals with the Government control of the Continental hospitals, much to the advantage of the former, and stated his belief that the competition between two large schools, such as St. Bartholomew's and Guy's, was good for both. Professor Humphry, whilst admitting that the teaching of many subjects at St. Bartholomew's was admirable, confessed that his experience as an examiner and a member of the General Medical Council had led him to feel that, at St. Bartholomew's and many other hospitals, the teaching of clinical surgery and medicine was not nearly so well performed as was desirable; that the staff was too small for the duties required of it; and that it would be greatly to the advantage of students and patients if opportunities were given to the younger men of teaching small numbers of students at the bedside.

The health of the Chairman was proposed by Sir James Paget; and that of Dr. Church, secretary of the dinner, by Dr. F. Farr; after which the proceedings terminated.

The new buildings, of which we have already given a short notice in our columns, are almost ready for occupation. The books have already been transported to the library, and the specimens are on their way to the museum. It is hoped that all the arrangements will be completed in less than a fortnight from the present date. In the old museum, the Curator has placed on view the specimens added to the museum during the past year—a goodly show, affording evidence of the skill of the Curator in preparing and mounting anatomical and pathological treasures.

CHARING CROSS HOSPITAL.

A *conversazione* was held at Charing Cross Hospital in lieu of the giving of the usual address in the Theatre. Surgical instruments were exhibited by several well-known makers; also there was shown a collection of plaster casts. Mr. Hird gave a short address, which we publish at page 538. His mention of the names of Messrs. Conolly and Jolly, former Charing Cross students, who have lately distinguished themselves in Zululand, called forth loud applause.

The students presented a handsome piece of plate to Dr. Green on the occasion of his marriage, which was acknowledged by Dr. Green in a few fitting remarks. Amongst the changes which have been introduced during the past year may be mentioned the increased accommodation for the teaching of practical anatomy. Special classes also have been instituted for the London University; and new school buildings are now in course of construction. The Duke of Edinburgh has consented to act as President of the Hospital, in the place of Lord Overstone, who has resigned.

ST. GEORGE'S HOSPITAL.

The opening address was given by Mr. Dalby to a large audience, and was much applauded. It dealt especially with the advantages, for mental training, of the study of natural science. At the meeting of the Weekly Board, the portrait of Mr. Prescott Hewett, by Mr. Ouless, which has been subscribed for by his professional friends and pupils, was presented to the governors of the hospital, by whom it was gratefully accepted, and who decided that it should be hung in the Board Room with the portraits of Hunter, Sir E. Home, Mr. Young, Keete, and others. Improvements in the accommodation for the nurses are being made in the hospital building, as part of a scheme for improving the nursing of the hospital. There are no material changes in the school arrangements.

The annual dinner was held in the evening at Willis's Rooms. The chair was taken by Dr. Wadham, the Dean of the School, and exactly one hundred guests were present. The principal speakers were, the Chairman, who proposed the usual loyal toasts; success to the Medical School; and the health of Mr. Dalby, who, in the morning, had, at the hospital, delivered the introductory address, a *précis* of which will be found in our columns; Mr. Holmes, who returned thanks for the School; Dr. Barclay, Mr. Prescott Hewett, and Mr. Henry Lee. The toast of the old students and visitors was responded to by Surgeon-Major Penny, a distinguished member of the Indian Medical Service; and that of the resident officers and present students of the hospital by the senior house-surgeon, in a humorous and well delivered speech, in which the unwarrantable attack of Mr. Gilbert upon the medical students of London was neither forgotten nor forgiven. One feature of the meeting was, that the chair occupied by the Chairman had been provided expressly for him by Mr. Frank Buckland, who had it constructed from the posts of the bedstead upon which John Hunter was placed when brought home dead from St. George's. The bed was given to Mr. Buckland by Professor Owen, who married a granddaughter of Hunter. It constitutes a genuine relic, which Mr. Buckland, who has, as is well known, an almost superstitious veneration for everything connected with John Hunter, intends, we believe, to present to the governors of St. George's Hospital. The band of the 1st Life Guards was in attendance during the whole of the evening.

GUY'S HOSPITAL.

The annual *conversazione* in lieu of the introductory lecture was held on Wednesday in the Astley Cooper Ward at Guy's Hospital. Among the artistic objects of special interest to old Guy's men, were oil portraits of Dr. Wilks and Mr. Thomas Turner, the late Treasurer of the hospital. Dr. Braxton Hicks exhibited some specimens of old Berlin cast-steel ornaments, and some medallions by Tassie. The oxyhydrogen light was exhibited downstairs, and the new form of Mr. Edison's telephone. The prizes for the past session were distributed during the course of the evening by Mr. Lushington, the Treasurer, to the successful students. Much interest was taken by the numerous visitors in the practical illustrations of the manufacture of the now celebrated Doulton ware. Mr. Ernest Hart, Dr. Sayre, and Mr. Edgar Horne were among the visitors.

LONDON HOSPITAL.

For some years past, the introductory address at this hospital has been discontinued. This year, the biennial festival was celebrated by a dinner at Crosby Hall, under the presidency of Mr. Jonathan Hutchinson, the senior surgeon to the hospital. The dinner was largely attended, and was a pleasant reunion of members of the staff and past students. The number of entries promises to be very good. Important additions to the college buildings are being carried on. The dissecting-room is being greatly increased, to provide for the large accession of students the past few years have brought. The chemical laboratory and physiological theatre are being enlarged, in order to allow of increased facilities for teaching in accordance with new requirements. The reading-room accommodation is also being considerably increased for the comfort of the students.

ST. MARY'S HOSPITAL.

The introductory lecture by Mr. St. George Mivart, F.R.S., Lecturer on Comparative Anatomy, was attended by a very large number of past and present students and others. The address was a brilliant epitome of the speaker's views on the philosophy enunciated by J. Stuart Mill, Bain, H. Spencer, and other eminent thinkers. A vote of thanks, proposed by Dr. Handfield Jones, F.R.S., and seconded by Mr. Haynes Walton, was heartily responded to. A larger number than usual of entries, both for the entrance scholarships and otherwise, has been recorded. In the evening, the annual dinner of past and present students was held at the Inns of Court Hotel. There was a large gathering; Mr. Haynes Walton was in the chair. The toasts of the evening were interspersed with solos and part songs by Messrs. Mivart, Havell, Lane, and Vivian, which rendered the meeting most enjoyable.

MIDDLESEX HOSPITAL.

The annual dinner of the old students and friends of the Middlesex Hospital was held on Wednesday evening, October 1st, at St. James's Hall. The chair was taken by Dr. Temple Frere. A most lively and pleasant evening was passed. The "Middlesex Minstrels", led by Mr. Anderson Critchett, contributed largely to the success of the evening. The music included selections from *The Sorcerer*, and excited much satisfaction and applause. The toasts of the "Chairman" and the "Middlesex Hospital Medical School" were replied to by Mr. Oscar Clayton and Dr. Headlam Greenhow respectively.

ST. THOMAS'S HOSPITAL.

About ninety of the old students and staff sat down together on Wednesday evening in the Governors' Hall at St. Thomas's Hospital. The chair was taken by Mr. Sydney Jones. This was the first occasion on which the old students have dined together within the walls of their Alma Mater, and this was the subject of much congratulation among them. The toasts of the "Old Students" and the "Chairman" were proposed by Mr. John Croft and Dr. Alfred Carpenter.

UNIVERSITY COLLEGE.

The *conversazione* with which the session opened on Wednesday night at University College was no exception to the rule that the entertainments given by that institution are among the most enjoyable of their kind in London. This idea of bringing together at the commencement of a new year of professional work all the human elements of which a great educational establishment is made up appears to be a very happy one. Such a gathering, for pleasant social intercourse between the teachers, the students of different years, and their friends, is likely to promote much good in many ways besides merely fostering, as it undoubtedly does, that sympathy in hard work for a common aim which is one of the strongest of all motive powers. To the student newly joining, it may be of almost incalculable value as making him feel from the first that he is in the midst of, and belongs henceforth to, a body of intelligent men of about his own age, amongst whom he is sure to find congenial society, and that he is not cast adrift at the outset to fight the difficulties of London student life quite alone. And when he meets with his teachers unofficially in the same social gathering, ready to converse with him on any subject that may interest him, or to help him, if need be, with the usual hints necessary for beginners, the feeling of being *at home* in his school is soon experienced, and in the most wholesome way. This feeling was very strongly promoted, too, by the character of the address delivered earlier in the day by Professor Thane. In introducing his audience to the history of the medical school to which they belonged from its foundation fifty years or so ago, he naturally aroused their interest in the fullest manner. But when he reminded them that, if the school had had a very brilliant past and an immense influence for good on medical education generally throughout the country, it now rested with them to secure that its lustre should be still farther increased, he touched a spring calculated to awake the loftiest kind of *esprit de corps*. The newcomers were stimulated further to put forth their best powers by being reminded that they were afforded far greater facilities for mastering their work than the students of a few years or even of a few sessions ago. An improved and enlarged dissecting-room, an enlarged zootomical museum, new and greatly extended physical and physiological laboratories—which, as the speaker pointedly remarked, were being dealt with in such a liberal spirit as to satisfy probably *even* the professors of those subjects themselves; these increased and increasing advantages, with those derived from an hospital enlarged from 160 to 200 beds, it was hoped would call forth on the part of those now commencing life at University College an equivalent of zeal and energy which should make the future of the institution worthy of or greater even than its past.

We have heard that, in addition to the above improvements mentioned by the lecturer, in some matters simply bearing on the student's comfort much advance has taken place. Thus the luncheon-rooms connected with the college have been placed under the management of one of the best *restaurateurs* in London, thus ensuring proper attention to a very important matter. This arrangement has already given every satisfaction.

WESTMINSTER HOSPITAL.

Dr. Dupré's introductory address was considered to be one of the best that has ever been given at the hospital, and it will, we hear, be published *in extenso*. The lecturer treated principally the question of classical *versus* technical education, and maintained the superiority of the former. The Rev. Canon Duckworth then distributed the prizes, and made a forcible address to the students, which we publish in full at page 556. It condemned, we are pleased to observe, the anti-vivisection movement. The dinner of the hospital staff and old students took place in the evening at the Westminster Palace Hotel, and over forty sat down. Canon Duckworth was a guest. Lord Campbell presided, and dwelt upon the superiority of general over special hospitals. The dinner passed off very well; and Dr. Allchin, the Dean, made a powerful speech in favour of the conjoint scheme of medical examination.

THE STOCKER TESTIMONIAL.—From a statement of the account of this testimonial, which is published in the *Guy's Hospital Gazette* for September, it appears that the balance in hand after the payment of all expenses was £388 15s. 10½d. Of this, a cheque for £50 was on June 5th forwarded for Mrs. Stocker's immediate use, whilst the remainder is to be placed in the hands of Mr. Stocker's executors, to be invested for Mrs. Stocker's use during her lifetime, and afterwards to be divided equally for the benefit of the Misses Stocker and Mr. Henry Stocker, who is an invalid. The names of all the subscribers are printed in this number of the *Gazette*.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 15th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 15th, 1879.

EAST YORK AND NORTH LINCOLN BRANCH.

A CONJOINT meeting with the Yorkshire Branch will be held at York, on Wednesday, October 8th.

Gentlemen who intend to read papers are requested to inform the Secretary of the titles before the 27th instant.

E. P. HARDEY, *Honorary Secretary.*

35, Regent Terrace, Anlaby Road, Hull, Sept. 18th, 1879.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting of this district will be held at the White Hart Hotel, Reigate, on October 9th, 1879, at 4 P.M.: F. B. HALLOWES, Esq., in the Chair.

The following papers are promised.

1. Dr. D. W. Chas. Hood: On Croup and Diphtheria.
2. Mr. Hallowes: A Clinical Report upon an Outbreak of Enteric Fever at Redhill in the early part of 1879.
3. Dr. John Walters: The Treatment of *Post Partum* Hæmorrhage by Injections of Hot Water.

The dinner will take place at 6 P.M. Tickets, 6s. a head, exclusive of wine.

JOHN H. GALTON, M.D.Lond., *Honorary Secretary.*

Woodside, Anerley Road, S.E., September 15th, 1879.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE first meeting of the Session 1879-80 will be held in the Examination Hall of the Queen's College, on Thursday, October 9th, 1879. The Chair will be taken by the President, Dr. JOHNSTON, at Three o'clock P.M.

Business.—The following member of the Association will be proposed as a member of the Branch: Dr. F. Fitch, Chaddesley.

Papers.—Mr. Furneaux Jordan: A Method of performing Lithotomy.

Dr. Sawyer: Therapeutic Notes.

Mr. Bartleet: Notes of a Case of Femoral Aneurism in which the Common Femoral was ligatured, subsequently the External Iliac for secondary hæmorrhage.

Members are invited to exhibit patients, pathological specimens, new drugs, instruments or appliances, at the commencement of the meeting.

E. MALINS, M.D., }
E. RICKARDS, M.B., } *Honorary Secretaries.*

October 1st, 1879.

YORKSHIRE AND EAST YORK AND NORTH LINCOLN BRANCH.

A CONJOINT meeting of these Branches will be held in the Museum of the Yorkshire Philosophical Society, York, on Wednesday, the 22nd October, 1879, at 3 P.M.

Members intending to read papers are requested to forward the titles to either of the Secretaries.

After the meeting, the members will dine at 5 P.M. at the Station Hotel. Tickets (exclusive of wine), 6s. 6d. each.

W. PROCTER, M.D., York, }
E. P. HARDEY, Hull, } *Honorary Secretaries.*

WEST SURREY DISTRICT.

THE next meeting of this district will be held at Guildford, on Friday, October 24th, 1879.

Gentlemen desirous of reading papers or cases are requested to communicate at once with the Secretary.

A. ARTHUR NAPPER, *Honorary Secretary.*

Broad Oak, Cranleigh, September 22nd, 1879.

CORRESPONDENCE.

THE VICTORIA UNIVERSITY.

SIR,—I read the letter of "Quoits" upon the "Victoria University" with very great regret. I was one of the first to sign the protest against the establishment of another licensing body. It was against the addition of a twentieth licensing power, and not against the Manchester school, that the protest was directed. I object to the terms in which the writer has thought proper to stigmatise the distinguished men who signed the protest, and which protest was signed by a large portion of the leaders of the profession all over the kingdom. The Liverpool men can afford to ignore the attack thus made upon them; but I feel that it is unjust, and ought not to have been made anonymously. I ask, therefore, for the insertion of this reply.

Allow me one word regarding the University of London. It used to be considered the Medical University. I am sorry to find that, to some extent, it is abdicating its functions; and, by striving to be beyond the reach of the many, is driving Englishmen across the borders and over the Irish seas for a degree. I would not have it supposed that I wish to lessen the *prestige* of my own University; but I feel that it is not the liberal University that it ought to be; and that, by making the examination for a degree in medicine unattainable except by the few, the Senate are falling into a serious mistake. The degree in medicine of the University of London ought to be sought for by the majority of English medical students.

There is something wrong in this which requires consideration and amendment. It cannot be a fair reason why a new University should be required for the purpose of granting degrees in medicine, when the University of London exists, which can grant degrees to men who are educated in Manchester or elsewhere.

Perhaps some of our associates will ventilate this question, and inform us why men go to Edinburgh, Aberdeen, Dublin, and other Universities out of the kingdom, instead of taking the London degree.—I am, sir, your obedient servant,

ALFRED CARPENTER, M.D.Lond.

Croydon, September 22nd, 1879.

SIR,—It is much to be regretted that your correspondent "Quoits" does not divulge his name, and—what is all-important in a controversy like the present—the place from whence he writes. If he, as he implies, has not before heard of the Liverpool School of Medicine, the sooner he pays it a visit, and makes himself acquainted with its varied resources and extensive teaching power, the better. Far be it from my intention to underrate the splendid roll of Professors attached to the Owens College; but I for one have yet to learn that such enviable and brilliant distinctions, as those enumerated in your correspondent's letter, are altogether essential to good teaching capacity and success in a school of medicine.

My object in writing, however, is to say that our opposition to the granting of medical degrees to the new Northern University was chiefly due to the absence of any generous recognition of our school amongst others on the part of the promoters of the scheme. The proposal contained in the draft charter has, I think, never appeared in the JOURNAL in its entirety: viz., that, for the new degree in medicine, attendance upon lectures and hospital practice at other schools of medicine approved by the University, should be recognised, *provided that candidates should have studied Arts and Sciences in a College affiliated to the University*. Now, as no other College, so far as I know—not excepting our own flourishing Yorkshire College—is likely to be able to comply with the terms of affiliation for at least some years to come, this simply meant that students who intended to take the new degree *must* go to Owens for certain classes. The effect this would have had must be obvious. Most men who wished for the degree would naturally drift to the University itself (whether they would otherwise have selected it as a medical school or not), simply because it was a *sine quâ non* that certain *elementary* studies should be undertaken there.

As to whether an English popular degree in medicine is or is not desirable is a point I do not intend to discuss, now that the Privy Council has decided against it. The facility with which the Liverpool petition was got up, at such short notice, proved how wide-spread was the feeling against the granting of such an additional degree, at all events at the present time. We believed that the efforts of those who favoured the scheme were at least peculiarly ill-timed, pending possible legislation; and while a Select Committee of the House of Commons was considering the question of medical degrees generally, at the very time the application on behalf of the Victoria University was made.

Whether, sir, under the above circumstances, our motives and course of action have merited the remarks which have been lavished upon them in the JOURNAL, we may leave for others to judge. We feel that, for many years, our school, like others in the North, has done good honest work—long, in fact, before Owens College itself was founded or thought of—and we felt that we had, therefore, a right to expect to be placed, so far as was practicable, upon an equal footing with our more wealthy and fortunate neighbour, whose claims, however, seem not so paramount as to entitle it to the monopoly it sought to obtain,

I am, sir, yours obediently, CHARLES J. WRIGHT,
Registrar and Lecturer on Physiology,
Leeds, Sept. 22nd, 1879. Leeds School of Medicine.

DR. CRAWFORD AND COMPETITIVE ARMY MEDICAL EXAMINATION.

SIR,—Dr. Crawford seems to think he has shown that competitive examinations for the Army Medical Service are wrong, because there are no such examinations for civil hospital appointments. If, he asks, open competitive examinations are good for military medical services, why are they not equally so for civil hospital, etc., appointments? But the fact of there being no similar examinations for civil hospital appointments can by no kind of logic be converted into a proof that they are not good for military services. The reverse of the proposition, viz., that there ought to be examinations for civil hospital appointments because there are such tests for military services (for anything Dr. Crawford shows to the contrary), follows equally as well from his premises. But the truth is, his inference is plainly fallacious. Candidates for civil hospital appointments are, in fact, subjected to severe public competitive examination. Let me ask Dr. Crawford, is it not a fact (nowadays, at all events) that men elected to hospital appointments in this metropolis are men who have *proved* their capacity for the work they undertake? The tests by which they have been tried were not by pen and paper at Burlington House, nor by bedside reviewings. Nevertheless, they were to all intents and purposes a severe competitive examination. I do not think Dr. Crawford will, on consideration, deny this. He knows well the sort of men who fill hospital appointments, and that their antecedents justify their election.

The exact views, however, which Dr. Crawford holds as to military competitive examination are only obscurely indicated. He clearly regards them as obstructions in his way. He objects to that which is, but does not say what it should be. He "concurs" in the opinion (I suppose of his department) that it "deters competent men from offering themselves as candidates for the army". But here I may fairly ask, How was such opinion arrived at? It assumes that Dr. Crawford knows, antecedent to examination, what a competent man is; or, that he has examined and found competent rejected candidates, or medical men who have not had courage to face the competitive examination. Now, I venture to think that Dr. Crawford should have told us what he proposes to substitute for the present system of examination; what is his standard of a competent man; and should also have told us how he comes to know that competent men have been rejected, or dared not face the examiners. Dr. Crawford refers to the words of Dr. Parkes, that the examination in question surpasses all others in severity, except that of the University of London. But surely Dr. Parkes said this to show that thereby competent men were obtained; he never meant them to be used by Dr. Crawford as a proof of the examinations being wrong because too severe. Of course Dr. Crawford does not mean this either; but some readers may suppose, from the way the words are placed, that Dr. Parkes thought on this point as Dr. Crawford does.

But then, again, as it seems to me, Dr. Crawford contradicts himself. He says: "I do not think the present high standard of professional qualification required from those who desire to enter the public services should be lowered." But how, without lowering it in some directions, can you remove those stumbling-blocks, which, as he says, "deter competent candidates"? Dr. Crawford can only explain this apparent contradiction by telling us plainly what those stumbling-blocks are, and what he means—the "*quid novi rectius illis*"—when he says: "I think there is a method other than public competition as now conducted by which this undesirable result" (lowering the standard) "may be avoided." To this I say, "*candidus imperti*". And, until he does this, I think your readers will conclude with me that his "method" *must* be a lowering of the standard; and probably will also believe that the lowering is desired, not because it is really too high, but because candidates are too few. Dr. Parkes knew well what he was about in demanding a high degree of knowledge from army medical officers. On them fall duties and responsibilities which do not come to civil medical men. In civil life, medical men have medical neighbours to

help and back them. They may decline responsibilities and burthens which they feel too heavy for them. But it is not so with our army medical officers. We throw on their unaided hands and heads hundreds of most valuable lives. And they must act one way or the other—kill or cure; in the Khyber Pass, in Zululand, all over the world. What is the plain inference? Why, that our army should be supplied with medical officers who can stand the test of the severest examination—with young medical men not below, but above, the average of those who pass into civil life.

Moreover, Dr. Crawford must permit me to say that he has left a great blank in his argument. He has put forward competitive examination as if it were the cause of a deficiency in candidates; but has made no allusion to the burning questions, and the very different reasons which your pages have so often given, touching this deficiency of candidates. Until, however, he has reasoned these other causes down, he must not be surprised if the profession refuse to accept his explanation. Dr. Crawford refers to the London University; but he knows that, despite its searching examinations, there are abundant candidates for the honour of passing them. And I certainly must have good proof before I can believe that young medical men shun the army competitive examination because it is too severe.—Yours obediently,

London, September 23rd, 1879. W. O. MARKHAM, M.D.

THE ARMY MEDICAL SERVICE: OPEN COMPETITION.

SIR,—I think that Surgeon-General Crawford's letter ought not to be passed over without remark. I do not think he has at all answered the objections to the comparison between civil institutions in this country and the Army Medical Department, as regards mode of entry. It is impossible to compare them, as they have so little in common, either with that department, or even with each other. Some are purely private benefactions, and their government and administration vary greatly. At the same time, if it were the practice in this country to have a *concours* for such appointments, I do not believe that even the best men would feel themselves humiliated thereby. But such a comparison rather tends to draw away attention from the real question at issue; for it is obvious that, to apply the principle of public competition to civil hospitals, as they are constituted in this country, so as to be in any way fair, such changes would be necessary in their government and arrangement as would almost amount to a revolution.

The two points to be considered with reference to the Army Medical Department are these:

1. What is best for the service?
2. What is fairest for the medical profession?

As regards the first, I do not desire to uphold competitive examination as a perfect system, nor do I wish to say that good men did not come in under nomination; but I do not, on the other hand, think there is a shadow of proof that *better* men came in under that system than have entered since under the competitive system. If, then, the system of nomination have no claim to better results than competition, the question comes to be decided with reference to the rights of the profession. It may fairly be claimed that every qualified practitioner has a right to get into the public service, if he can, on equal terms with his brethren. I see no grounds on which any prescriptive claim can be based, or indeed any ground except superior efficiency. Dr. Crawford complains that the present system does not secure that; and specifies general education as a qualification essential for a good military medical officer, but one which the competitive examination does not profess to touch. There I am perfectly at one with him; and we have had only too much experience of this at Netley, where we have often had to lament (less often, I think, as years have gone on) serious deficiencies shown by successful candidates in their preliminary education. But I do not draw the same conclusions as Dr. Crawford. The old system of nomination provided the service with men quite as deficient—indeed I might almost say more so—without furnishing a guarantee (as the competitive system does) that, at least in professional qualifications, the candidate is fairly well-grounded. Of course, we may presume that the last point will be attended to in the proposed new system of nomination. But, so far from admitting Dr. Crawford's objection as telling against competition, I should make it a reason for extending the powers of the Examiners, so as to include general education—at least so long as the civil colleges permit men to pass who cannot write intelligible English, or even spell their own language. As to the question of good men being deterred by competitive examination, I have never known a particle of proof of their being so ever brought forward, much as it has been talked about. It is idle to expect that the *very best* men will enter the public service, as a rule; and nomination in that respect will be no more successful than competition, nor do I believe that the offer of commissions without examination would, for many years back, have induced any better men to enter the service than have already done so during that period. But it will always be in the power of the Government to secure *good* men, and plenty of them, if the inducements held out are sufficient—the number of competitors for the Indian Medical Service is proof enough of that. The argument, that competition has failed to obtain men enough for the service, is surely as transparent a fallacy as ever was put forward. The failure has been, not in the principle of competition, but in the fact that the thing to be gained by competition was apparently not considered by the profession as worth the trouble of competing for. Fifteen years ago, a similarly fallacious view was put forward with reference to the Indian Medical Service. After 1860, no appointments were offered for competition for several years; and in 1864, Sir Charles Wood announced to the House of Commons that the competitive system had entirely failed, and proposed to revert to the system of nomination. The House did not view it in the same light; and it certainly seemed a curious argument that, because no appointments had been offered and no opportunity for competing had been afforded, *therefore* competition had been a failure! The proposed abolition was negatived, and, in 1865, the system of competition for the Indian Medical Service was recommenced; and it has been continued to the present day with the most marked success, both as to the numbers and the quality of the men competing.

I am, your obedient servant, F. DE CHAUMONT.

MEDICAL NEWS.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

*BELGRAVE HOSPITAL FOR CHILDREN, Pimlico—Resident House-Surgeons. Board and lodging. No salary. Applications to the Honorary Secretary at the Hospital on or before October 4th.

*BROMPTON HOSPITAL FOR CONSUMPTION—Resident Medical Officer. Salary, £200 per annum, with board and residence. Applications on or before October 8th.

*GENERAL LYING-IN HOSPITAL, York Road, Lambeth—House-Physician. Applications on or before October 15th.

HARTLEPOOL FRIENDLY SOCIETIES' MEDICAL INSTITUTION—Two Resident Medical Officers. Salary, £150 per annum, a proportion of accouchement fees, free residence, coal, and gas; rates and taxes (except income-tax) paid by institution. Applications not later than October 7th.

*HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST—Resident Clinical Assistants. Applications, with testimonials, on or before October 11th.

*LEICESTER INFIRMARY AND FEVER HOUSE—Honorary Physician. Applications on or before October 4th.

RADCLIFFE INFIRMARY, Oxford—House-Surgeon. Salary, £105 per annum, with board, lodging, and washing. Double qualification and registration as a medical practitioner requisite. Application on printed form, to be obtained of Secretary, to be returned, with testimonials, on or before October 4th.

*TIVERTON INFIRMARY AND DISPENSARY—House-Surgeon and Dispenser. Salary, £100 per annum, with furnished apartments, coals, gas, and attendance.

TRURO UNION, District of St. Agnes—Medical Officer and Public Vaccinator. Salary, £45 per annum, and £16 as Medical Officer of Health. Applications by October 14th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—House-Surgeon. Salary, £80 per annum, with board, lodgings, and washing. Applications on or before the 25th instant.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

*STARTIN.—On September 30th, the wife of James Startin, M.R.C.S., of 17, Sackville Street, Piccadilly, of a son.

MARRIAGES.

HAYWARD—BURDEN.—On June 26th, at St. Mary's Caulfield, Victoria, William Thornborough Hayward, M.R.C.S., Riverton, South Australia, to Florence, youngest daughter of the late P. H. Burden, Esq., of Adelaide, South Australia.

HORNSBY—FOWLER.—On September 25th, at the Parish Church, Edgbaston, by the Rev. T. Roper, Vicar of Trinity Church, Smethwick, assisted by the Rev. H. Aldham, Vicar of Stoke Prior, George H. Hornsby, Esq., M.R.C.S., of Bromsgrove, to Ellen, eldest daughter of Edmund Fowler, Abberley, Edgbaston.—No cards.

GUY'S HOSPITAL.—An open Scholarship in Arts for a prize of one hundred and twenty-five guineas was competed for last week, and gained by Mr. George E. Halstead of Newark.—The open Scholarship of one hundred and twenty-five guineas in Science was gained at the same time by Mr. W. Fowler of London.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

FRIDAY.—Clinical Society of London, 8.30 P.M. Report of the Committee on Dr. Douglas Powell's Case of Leprosy with Enlarged Glands; Dr. Dyce Duckworth, "A Case of Myxœdema"; Dr. Ord, "Notes on some Cases of Myxœdema"; Dr. F. Taylor and Mr. Howse, "A Case of Empyema in which portions of Ribs were Excised".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE MEDICAL ALLIANCE ASSOCIATION AND FOREIGN DEGREES.

SIR,—On observing the sweeping statements of Mr. R. H. S. Carpenter, Secretary to the Medical Alliance Association, in your issue of the 20th instant, respecting the Universities of Brussels, Giessen, and Jena, I immediately communicated with that gentleman, requesting him to furnish me, as President of the Foreign Graduates Association for the current year, with further particulars regarding the "facts" in the possession of the Medical Alliance Association as to the manner in which degrees are granted at these Universities, leading him at the same time to infer that, on producing names, addresses, etc., I would institute inquiries in the proper quarters in order to test the veracity of the statements in question. These so-called "facts" he has been unable or unwilling to produce, and, for the present, I can only infer that they do not exist. Nothing is easier than for an unprincipled person to affirm that he is a graduate of this or that University; and this is probably what has misled Mr. Carpenter and his coadjutors, but it is quite a different matter when his case is put to the test.

Before Mr. Carpenter's assertions can have any force, he must produce his men and acknowledgments from the Universities whose titles these men assume, that they are actual graduates of such Universities. It has been proved over and over again that Continental degrees cannot be procured unless the candidate has produced evidence of having gone through a regular medical curriculum, and of having passed an examination in the ordinary subjects of medical education. Any one who may think otherwise should just try, and no doubt the medical world will be glad to have the result. A case in point—and in this I think I am fairer than Mr. Carpenter, who declines to give data—will be found reported in the *Lancet* of May 2nd, 1874, page 642, where an advertiser of foreign diplomas was neatly checkmated by a gentleman who pretended he wished to purchase a German degree, but who found that such was "impossible either for love or money". In this instance, the individuals can be traced by any one who takes the trouble to do so, and where the helplessness of the advertiser was made quite clear on being put to the test. In the meantime, therefore, I would strongly advise those who may think with Mr. Carpenter to be prepared with their "facts" before entering into a controversy out of which there may be a possibility of their coming second best, and, above all, to be wary of contrasting British and foreign graduates, the issue of which may also be doubtful. Most intelligent men will be loth to believe that there is no honour amongst scientific bodies out of the United Kingdom; and certainly before such a belief can gain much ground, better evidence must be adduced than the bare assertions of spasmodic reformers.—I am, sir, your obedient servant,

K. H. MACDONALD, M.D.Erlang., F.R.C.P.Edin., etc.,
President Foreign Graduates' Association.

Gowan Park, Cupar Fife, September 27th, 1879.

FOREIGN DEGREES.

SIR,—I have read with surprise and indignation Mr. R. H. S. Carpenter's sweeping denunciation against Continental Universities, and think that before making such an unwarranted attack he should have been in a position to prove the charges he made in his letter of August 30th.

1 The charge he makes against the University of Brussels for admitting a candidate to the M.D. examination who only held a medical diploma is perfectly absurd. I find, on referring to the Regulations of the Durham University for medical practitioners of fifteen years' standing, that the only qualification required is, that the candidate be first registered. Whatever "A. B.'s" qualification may have been before admission, I know for a positive fact that to obtain the Brussels degree he must have proved himself thoroughly acquainted with every department of medical and surgical science; and to denounce an University because one of its graduate's antecedents will not bear investigation is preposterous. What University or College have we in England where some member has not disgraced himself and the profession? When I graduated in Brussels, four years ago, there was a gentleman admittted with only a medical licence, who made an excellent examination during the first two days on every subject; but on the third day, when he was brought to the operating table, he was at once rejected, because he was not expert in applying a ligature to the posterior tibial artery. All his protestations were of no avail. When he told the examiner he only practised as a physician, the reply was, that if he came there he must undergo every part of the examination.

2. As to the case of "C. D., who has not had one hour's medical education", any man of the world could at once have seen that he was trading on a forged document.

In conclusion, I cannot imagine why these charges should have been made at all, except it was through some petty jealousy.—I am, sir, your obedient servant,

September 27th, 1879. A PROVINCIAL MEMBER.

SIR,—In my letter last week, I stated that the next examination for the degree of M.D. at Brusssels would take place on Tuesday, Oct. 7th. I have to-day received the new Regulations from the Secretary to the University, and I find there will be no examination until the first Tuesday in November, instead of October. By inserting this you will oblige, sir, your obedient servant,

20, Golborne Road, W., Sept. 30th, 1879. J. ERNEST POCOCK, M.D.Brux.

SIR,—Will you kindly insert this in an early number of the JOURNAL as a further reply to Mr. R. H. S. Carpenter? The University of Giessen, according to its regulations, which are always strictly enforced, requires, before admitting candidates for examination for the medical degree, besides other things, a certificate of at least three years' medical and surgical study at an University or medical institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country; and if unable to do this, must undergo an examination in extra-medical subjects. The medical examination takes place in the University before the Faculty of Medicine, and embraces all branches of medical study. After the examination is concluded, a report of it must be drawn up by the president of the examination and signed by the examiners, upon which report depends the fate of the candidate. The examination cannot be passed if two or more members of the Faculty declare the result of the examination to be unsatisfactory. Promotions to the M.D. do not take place *in absentiâ*, or without full compliance with all the regulations, except in the case of M.D. *honoris causâ*, by the unanimous decision of the Faculty, granted to men who have rendered some

great service to the science of medicine. The University of Jena, amongst other things, requires that a certificate be handed in, showing the extent of medical studies and the time that has elapsed since their completion (at least six terms). The examination takes place before the Faculty of Medicine in the University, and embraces all medical subjects. The degree of M.D. will only be conferred by the Faculty upon fulfilment of all the regulations.

Any one may obtain the regulations from either of these Universities upon application. I leave your readers to judge for themselves how far these regulations correspond with the state of things sketched by Mr. Carpenter in his letter to the JOURNAL of September 20th, 1879, and remain, sir, yours, etc.,

Sheffield, Sept. 29th, 1879. H. J. HARDWICKE, M.D.

A REPUDIATION.

SIR,—An untrue report that I profess homœopathy having repeatedly come to my hearing, I should feel obliged if you would allow me, through the columns of the BRITISH MEDICAL JOURNAL, to repeat the denials made in private. Ever since studying medicine, I have regarded homœopathy, as a system or separate mode of practice, as a mistake and an anachronism, and this conviction has only been deepened by time. It is not the place here to enter into the question whether homœopathy may not have important legacies for medicine as other erroneous systems have had, but I would distinctly repudiate any connection with a sectarian medical position.—I am, sir, yours obediently, W. WILBERFORCE SMITH.

London, September 22nd, 1879.

ANTI-FAT.

SIR,—I cannot help thinking that Mr. J. Higham Hill and others who have recommended a trial of the fucus vesiculosus to their patients have wandered after strange gods. At the same time, I feel sure I am only re-echoing their sentiments when I say that a return to a more physiological basis of treatment is very likely to result in a reduction of weight. Such remedies as fucus vesiculosus, iodide of potassium, liquor potassæ, etc., taken in large doses, are likely to produce, by over-stimulation, temporary congestion of kidneys, and probably sow the seeds of future renal mischief; while profuse perspirations, brought on by healthy walking exercise, and aided by true temperance in eating and drinking, and a limited supply (at least for a time) of the more highly nitrogenous principles of food, is much more likely to lead to that consummation so devoutly to be wished for. The trainer is careful to prepare his horse, when necessary, for his engagements by continuously administered exercise, sweatings, and breathings, extending over a considerable space of time, so as to deliver him at the post in hardy muscular condition. The jockey riding the animal has to subject himself not unfrequently to the same ordeal; and the preparation that Tilbury Nogo had to undergo at the hands of Joe Bagshot before he could ride for the Hurricane Handicap, so graphically described by Whyte Melville, would not be inappropriate to some of our patients, due allowance being made for their suffering from attacks of faintness, cardiac dyspnœa, etc. The remedy, to a great extent, lies in their own hands; and if, in spite of remonstrance, they will eat, drink, and sleep without taking exercise, physical or mental, they must expect, and certainly deserve, to grow fat.

If Mr. Hill will act upon those principles with which he is so well acquainted, I am sure he will be enabled to scale eight stones eight pounds, and, as in the days of yore, to finish in the first flight.—I am, sir, your obedient servant,

Brierley Hill, Sept. 1879. GEORGE ASHMEAD, L.R.C.P.Edin., etc.

SIR,—Many cases of asthenic corpulency have come under my observation and care during an experience of twenty-three years. The treatment becomes difficult and anxious, for the decrease of the weight must harmonise with increase of strength. A generous diet of animal food and supporting drinks have produced a good effect, combined with tonics and ferruginous compounds. These patients of mine are using and speaking well of the Fer Bravais.—I remain, your obedient servant,

2, Bessborough Street, Sept. 20th, 1879. A. W. MOORE.

SIR,—Having treated two cases of obesity with the extract of fucus vesiculosus, I beg to send a short account of them. In each case, four grains of the extract were administered in pill three times a day for a period of five weeks. No change whatever was made in the diet or habits, and in neither case were there any disturbing influences.

A., female, aged 19, weight 185¾ lbs., began to take the anti-fat on August 2nd. On August 16th, her weight was 184¾ lbs.; on August 23rd, 192½ lbs.; and on September 6th, she weighed 191¾ lbs, Result, a gain of 6 lbs. There was marked diuresis at first, but this effect ceased after the first three weeks.

B., middle-aged female, weight 234 lbs., took the drug regularly for five weeks, and at the end of that time weighed exactly the same as at the beginning. In this case there was no diuresis observed.

In two other cases in which the drug was taken for shorter periods, an increase in the quantity of urine was the only effect produced.—I am, sir, your obedient servant. WILLIAM WHITE, M.D.

Hollingworth, Manchester, September 22nd, 1879.

SIR,—I have not observed in the correspondence in your JOURNAL about anti-fat that the *modus operandi* of the fucus vesiculosus, which is put forward as a remedy for excess of adipose matter, has been indicated. Is it not the contained iodine which stimulates the absorbents to take up the objectionable or unwelcome deposit? Some years ago, when employed on a vaccinating tour amongst the Bhootiyeles—a hill people living in the Himalayas on the borders of Thibet—I ascertained that an itinerant native medical practitioner had a remedy for the goitre (so prevalent in those regions), which was held in great repute, but which, from being very dear, was beyond the reach of all but the well-to-do. As offered for sale, it was a tough, somewhat wrinkled, piece of leathery, though fragile, substance. On putting a bit in water, it swelled into an evident fucus, containing the iodine that, in some cases, acted beneficially upon the enlarged thyroid gland. The dried seaweed was obtained originally from Surat, on the western coast of India, and found its way, in the course of trade, into the Himalayas. "Burnt sponge and the ashes of a seaweed (the fucus vesiculosus), both of which contain iodine, have been used in scrofula" (says Headland) "from very early times." He adds that; "So vigorously was this medicine (iodine) used by the Swiss practitioners after its first discovery, that serious consequences, as the absorption of the mammæ or testes of healthy individuals are said (though this is denied by Magendie, Lugol, and others) to have ensued in several cases."

Iodine, we know, has been used in simple enlargement of various organs; but this is probably the first time that, embodied in a seaweed, it has been commercially advocated for obesity.—Faithfully yours, C. R. FRANCIS, M.B.

Malvern, September 25th, 1879.

SIR,—The interest excited by a remedy which promises to reduce corpulency seems to indicate that the effect of well known physiological means is not appreciated so well as it deserves. The "Banting" diet is known well enough; but, to adopt an admirable phrase, it is a matter of "fine adjustment" to get its proper results. From experience in a considerable number of cases, I am quite sure of the following conclusions.

1. The diet must be adopted absolutely. Small transgressions in persons prone to corpulency defeat the object. A small bit of butter probably yields more than its own weight in fat.

2. By being absolute, the weight can be steadily reduced every week, and the reduction continued to almost any extent, I believe, without fail. I have yet to see the case which points to any other conclusion.

3. The reduction of undue corpulency is commonly accompanied by marked gain of health and comfort, provided the essential condition is observed of taking an increased quantity of lean animal food, fish, fowl, butcher's meat, etc., as well as fruit and green vegetables. The eager relish for fattening articles of diet usually experienced by corpulent persons gradually diminishes.

4. The omission of fattening articles of diet without a corresponding increase of those allowed is seriously dangerous to health.

Whilst cutting off the material from which undue fat is formed, one should not forget that deficient oxidation is doubtless an essential cause of undue corpulency. I observe almost constantly in corpulent persons a purplish red tint in skin and mucous membrane.—Yours obediently, W. WILBERFORCE SMITH.

London, September 26th, 1879.

THE HOSPITAL FOR DISEASES OF THE HEART, SOHO SQUARE.

SIR,—Last evening, a poor but respectfully conducted man called on me, in my official capacity as the senior churchwarden, to ask my advice as to how he should act. It would appear that his wife had been ill some time, and for the first part of her illness had been attended by Mr. Clarke of Gerrard Street. The man's circumstances, however, were such that he felt he could not continue to pay Mr. Clarke for his services, whereupon he applied to the Hospital for Diseases of the Heart in Soho Square for medical aid. His wife was seen by Dr. Vincent Ambler, one of the medical officers of that institution, who prescribed for her. Subsequently she was visited by an unqualified person connected with the hospital. On Sunday last she died. Yesterday, the husband went to the hospital and asked for a certificate. He was referred to Dr. Ambler, who said he must go and see the body, and after that he would give a certificate, on payment of the fee of a guinea. On hearing this, the poor fellow told him that he had not the means to pay such a sum; but the doctor was inexorable, and he left.

I am not and never have been connected with a voluntary medical charity, and therefore cannot tell whether it is customary for physicians and surgeons of such institutions to get fees from persons in humble circumstances in this way, and possibly there may be some inaccuracy in this statement, which I am anxious to give Dr. Ambler an opportunity of explaining.—I am, sir, yours obediently,

33, Dean Street, Soho Square, Sept. 27th, 1879. JOSEPH ROGERS.

PROFESSIONAL LONGEVITY.

A CORRESPONDENT draws attention to a notice in the obituary of the *Times* of Sept. 24th, stating that Mr. Edward Wickham, just deceased, was the oldest member of the Royal College of Surgeons. Such, however, is very far from being the fact, as there are just half a hundred in the first three letters of the alphabet in the Calendar of the College his senior, and about half-a-dozen old enough to be his father, having been admitted members in 1799; and if 22, the then required age, would now be just 102 years old. See Messrs. Jas. Williamson, 1799; Cundale, Haughton, Ashton, and Ayton, 1801; Bromfield, 1802; Boyce and Banks, 1803; Beresford and Dean, 1804; Blackwell Brown, Day, and Muscraft, 1805, etc., amongst the Fellows and Members of the College.

JUNIUS wishes to know (*a*) if Indian medical officers, when stationed in India, are allowed private practice; (*b*) what book or books would give him better knowledge of the appointments obtainable by them, their duties, and more general information of the service, than contained in the "Copies of Regulations" sent from the India Office.

EXCESSIVE BUCCO-PHARYNGEAL SECRETION.

SIR,—About the years 1853 or 1854, my aunt (the wife of Captain E. Austin, then residing at Scarborough) was attacked by this somewhat uncommon disease, and, notwithstanding all care and medical treatment, succumbed to the exhaustion arising from it. She was attended by Dr. Smart, then in practice in Scarborough, now I believe residing at Tunbridge Wells. Perhaps he may recollect the case, and have taken notes of the treatment adopted.—Yours truly,

September 1879. V. POULAIN, M.D., M.R.C.S.

THE TITLE OF DOCTOR.

SIR,—The marrow of this bone of contention is simply vanity. The L.R.C.P. wishing to be accepted as the social and professional equal of a graduate of an university, assumes a title accorded to the latter by right of his degree and the *mos et usus* of centuries.

Surely it is time the controversy should cease, and that the general practitioner should be content with his condition, and not try to appear bigger than he is by parading in borrowed plumes. The successful practitioner, of whatever titular grade, is quite satisfied to let every tub stand on its own bottom.—I am, etc.,

September 25th, 1879. G. J. H.

ALLEGED CONSULTATION BY MEDICAL MEN WITH QUACKS.

SIR,—Will you kindly allow the following to appear in the columns of the JOURNAL, having bought this practice about five years ago—a rough country, and, on the whole, a very poor class of patients? In addition to the preceding disadvantages, the neighbourhood is infested with quacks, and these quacks call into consultation the most eminent medical gentlemen in both counties—Flint and Denbigh—though I have more than once made a personal request to these to discontinue the practice, but to no effect. They meet within a few hundred yards of my house. These gentlemen are members of the British Medical Association, which, if I understood right, was formed to maintain and uphold the honour of the profession, but it must be that I am mistaken. Now, sir, I should like to have your opinion on such practice, and if there be no remedy for it.—Yours, etc., DAVID GRIFFITHS.

Gronant, Rhyl, September 29th, 1879.

*** The course which Mr. Griffiths describes is contrary to medical etiquette, as it is to the public interests, which demand that a sharp line shall be drawn between qualified and unqualified practitioners; and *à fortiori*, that eminent consulting practitioners should not, by accepting professional consultations with unqualified and irregular practitioners, confer upon them, in the eyes of their clients, a profes-

sional status to which they have only a spurious claim. If our correspondent's statements are supported by adducible testimony, he would do well to give due and courteous notice to any gentleman whose conduct he proposes to impugn, in order to afford ample opportunity for personal explanation; and subsequently, if necessary, to bring the matter under the notice of the Council of that Branch of the British Medical Association within whose district the parties may reside. Even when such matters are not capable of preliminary adjustment, a gentle remonstrance, which does not assume impropriety of conduct when often none is intended, is frequently not less effective than public complaint. It is of course a much more desirable mode of proceeding; and possibly even this publication of our correspondent's letter will lead to the desired result. He may be advised, therefore, to look to the future rather than to the past.

The Dental Hospital of London.

SIR,—By a mischance the advertisement of this hospital was headed "Medical School"; it should have been "London School of Dental Surgery". May I ask you kindly to insert this letter in your next issue?—I am, yours faithfully,

T. FRANCIS KER UNDERWOOD, Dean of the School.

Leicester Square, W.C., Sept. 29th, 1879.

A CORRESPONDENT suggests that it would be desirable to exclude from the College of Surgeons' *Calendar* the names of all members admitted up to, say, 1810, and place them, as formerly, in a supplementary list for two or three years, as persons supposed to be dead, and then exclude them altogether.

How to Form a Meteorological Station.

SIR,—I should be much obliged if you would kindly inform me in your JOURNAL on the following points.

1. The best works on meteorology, more especially in relation to medicine, including explanation of principles and practical directions for use of meteorological instruments.

2. Directions for taking temperature of sea, if not given in above.

3. As to where I might procure the most reliable instruments—barometer, wet and dry bulb thermometer, maximum and minimum ditto, etc.

I am a country practitioner and removed from sources of information, and I should be much indebted to you for your help in this matter. I wish to set up a small meteorological station this winter, and it is with this view I ask this favour.—I am, etc.,

A. J. U.

*** 1. The best of the late observations on diseases and variations in the meteorological elements are said in Parkes' *Practical Hygiene* (p. 468) to be those by Guy, Ransome, Vernon, Moffat, Tripe, Scoresby Jackson, and Ballard: most of these, cannot, however, be separately procured. There are two good chapters on Climate and Meteorology in Parkes' *Hygiene*, 5th edit., pp. 429-468. Buchan's *Text-Book of Meteorology*, or *Modern Meteorology*, consisting of six lectures by Fellows of the Meteorological Society, will either of them be suitable, especially the latter, for obtaining a knowledge of the principles of meteorology. Short directions for the reading of meteorological instruments will be found in Parkes' *Hygiene*, pp. 445-446; but the best book on the subject is *Instructions on the Use of Meteorological Instruments*, by R. H. Scott, M.A., F.R.S., which is used by the Army Medical Department.

2. The best method of taking sea-temperatures is not yet settled. It would suffice for medical purposes that the bulb of the thermometer be immersed for five minutes at least one foot below the surface of the water, and that a self-registering thermometer be used. If a boat be procurable, twenty or thirty feet from the shore would be a sufficient distance, but this is not absolutely necessary. Reliable sea-temperature observations are much required.

3. The instruments can be procured from any good instrument-maker, and must have been tested at Kew, and the certificate ought to be sent with them. Negretti and Zambra's and Cassella's instruments are largely used at the Meteorological Society's stations. The rain gauge should be of Symons' pattern for rain and snow, and should be placed four inches above ground, and as far as possible from trees and buildings. Stevenson's screen should be employed for the thermometers. Negretti's pattern of maximum thermometer should be obtained, and a mercurial in preference to a spirit minimum, unless great care be used to protect it from the direct rays of the sun; but it must be admitted that the spirit minimum thermometers are ordinarily employed.

Cider and Rheumatism.

SIR,—I observed it stated in one of the public papers, a short time ago, "that cider should not be used as a beverage by any person having a predisposition to rheumatism". I would feel obliged by some of your numerous readers (who have had experience) giving me their opinion regarding the above matter, and oblige

Belfast, September 22nd, 1879. A MEMBER.

The Orthopædic Hospital, Dublin.

IT may well be doubted whether it is desirable to multiply orthopædic institutions. The treatment of deformities is only a part of general surgery, and the number of orthopædic cases is not so great as to call for the establishment of many special hospitals for their reception; but there can be no doubt that, if they are established, they should not be advertised by means of fulsome articles in the newspapers. We have lately received articles printed in the *Dublin Evening Mail* and the *Irish Times*, which have not for the first time drawn attention to the Orthopædic Hospital, Usher's Island, in a way which may interest their readers, but is not calculated to raise the position of the hospital. Ordinary cases, such as are successfully treated in every general hospital, are magnified into marvels; and the care which poor sick persons everywhere receive is spoken of as if it were peculiar to this institution. We would advise the committee of the Dublin Orthopædic Hospital to put a stop to these flattering communications. In the long run they will do the institution more harm than good.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

Payment of Members of the Council of the Royal College of Surgeons of England.

SIR,—I presume that Mr. Postgate, in publishing in the JOURNAL a letter written by him to the Council of the Royal College of Surgeons, desires to invite approval and to submit to criticism. On this supposition I desire to enter my humble protest against his principles and to question the reality of his facts. He states (and on this the whole letter is founded) that "the great habit of working for nothing in our profession affects injuriously the workers"; of course, implying that the injury is moral. I am much astonished that a distinguished member of our profession should so seriously make this statement. No doubt it is a question of great nicety what work should and what should not be done for nothing; but I submit that it is very much by gratuitous work properly undertaken, prompted by benevolence or by public spirit, that our profession has earned the title of "noble", and its members an elevation of mind which helps them to bear the numerous petty troubles with which we are peculiarly beset.

Mr. Postgate (writing from Birmingham) conceives that this action "has lowered the profession in the estimation of the commercial classes of the country". I entirely disbelieve this, all my experience being against it. I fear, however, if we were to adopt Mr. Postgate's principle, we should lose our own respect and cease to deserve that of the public.—I am, sir, yours, etc.,

Ramsgate, Sept. 22nd, 1879. JAS. WOODMAN, F.R.C.S.

MEDICAL CARDS.—The *Dundee Advertiser* tells us in its advertising columns, that "Dr. George Duncan has commenced practice at 47, South Tay Street". This is very interesting to the public, and we trust they will take due notice of the fact; but there are many other and better ways in which a medical man may put himself forward. To publish "cards" of this kind is, we believe, an American custom; but on this side of the Atlantic it has always been thought unworthy of a learned profession, and unsuited to the position which physicians and surgeons desire to hold.

Hydrastin.

SIR,—Can any of your readers inform me concerning the virtues of hydrastin? It is an American remedy, and is mentioned by Squire in his *Companion to the British Pharmacopœia*; but I wish to obtain more information than he gives, and should be glad to know where I can find it, or if some of your readers would kindly give the JOURNAL the benefit of their experience.—Yours truly, HYDRASTIN.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. T. Spencer Wells, London; Dr. Alfred Carpenter, Croydon; Dr. Ringrose Atkins, Waterford; Dr. A. B. Duffin, London; Dr. James Sawyer, Birmingham; Dr. Saundby, Birmingham; M.; Mr. W. B. Dalby, London; Dr. Alfred Sheen, Cardiff; Dr. O. F. Wyer, Leamington; Mr. T. M. Stone, London; Inquirens; Mr. T. P. Harvey, Hastings; Dr. A. B. Greatrex, Lawton; Mr. G. J. Hinnell, Bury St. Edmunds; Dr. W. Wilberforce Smith, London; The Secretaries of the Medical Society of London; The Dean of Guy's Hospital; The Dean of the Medical Faculty of King's College; Mr. Talfourd Ely, London; Mr. W. H. Cripps, London; Dr. S. Coupland, London; Mr. S. Snell, Sheffield; Dr. Dupré, London; Mr. Francis Hird, London; Mr. Alban Doran, London; Mr. W. T. Hayward, Riverton, South Australia; The Secretary of Apothecaries' Hall; Dr. F. Barnes, London; The Registrar-General of England; Mr. G. Eastes, London; The Registrar-General of Ireland; Dr. J. G. Sinclair Coghill, Ventnor; Dr. K. N. Macdonald, Cupar-Fife; Dr. C. E. Underhill, Edinburgh; Dr. Robert Sinclair, Dundee; The Secretary of the Clinical Society of London; Dr. W. O. Sinclair, Manchester; Dr. Barraclough, London; Mr. J. Walker, Blackburn; Mr. J. A. E. Stuart, Dunse; A Member; Medicus; Dr. F. W. Barry, Bradford; Mr. F. E. Pocock, London; Dr. Frazer, Bournemouth; Dr. F. A. de Chaumont, Southampton; Mr. W. Knight Treves, Margate; Mr. Golding-Bird, London; Dr. C. R. Francis, Malvern; Dr. Neudorfer, Vienna: Mr. T. Jones, Brecon; Dr. K. H. Macdonald, Edinburgh; Dr. R. de la Cour Corbett, Cork; Dr. Griffiths, Rhyl; Our Scotch Correspondents; Dr. W. H. Spedding, Belfast; Dr. Roberts, Manchester; Dr. Lowndes, Liverpool; Dr. A. J. Urquhart, Kirkcudbrightshire; Dr. Bond, Gloucester; Dr. Batten, Gloucester; Our Indian Correspondent; Dr. J. Graham Brown, Edinburgh; Professor Rutherford, Edinburgh; Dr. Hirschberg, Berlin; Mr. Tomes, Caterham Valley; Dr. Rabagliati, Bradford; Dr. Sayre, Bedford Hotel, Brighton; Dr. Sheen, Cardiff; Dr. Wolfe, Glasgow; Mr. John S. Murphy, London; Dr. Liveing, London: Dr. Hardwicke, Sheffield; Dr. Cory, London; Professor Charles, Cork; Mr. Vines, Littlehampton; Mr. J. B. Pitt, Norwich; Dr. R. Renfrew, Glasgow; Dr. Percy Boulton, London; Mr. R H. S Carpenter, London; "Follicle"; Dr. R. Ryder, Nailsworth; Mr. W. E. C. Nourse, Exeter; A Member, Boston; Mr. T. F. Ken Underwood, London; Mr. T. R. Jessop, Leeds; Dr. Duir, Cape of Good Hope; etc.

BOOKS, ETC., RECEIVED.

Homes for Convalescents from Acute Infective Diseases. By John William Moore, M.D., M.C. Dublin: John Falconer. 1879.

INTRODUCTORY ADDRESS

ON

THE CONNECTION BETWEEN HOSPITALS AND MEDICAL SCHOOLS.

Delivered at the opening of the Liverpool Royal Infirmary School of Medicine, Session 1879-80.

By J. WALLACE, M. D. Edin.,
Lecturer on Midwifery and Diseases of Women; Physician to the Thornton Wards, Royal Infirmary; etc.

Mr. Chairman and Gentlemen,—The commencement of the winter session of the Royal Infirmary School of Medicine is year by year inaugurated by a formal introductory address. It has devolved upon me to perform this duty. Much may be and has been said for and against this custom. I can only aver that upon such an occasion as the present, surrounded as I am by such a learned and distinguished audience, I feel very much my shortcomings and inability to do full justice to what I have undertaken, and begin to wish most heartily that introductory addresses had been abrogated before my accession to the Chair of Midwifery and Diseases of Women in this school. However, I have discovered on my journey so far through life that the most effectual way to overcome a difficulty is to face it boldly, and to get speedily engaged *in medias res*.

In the first place, then, I bid you all welcome on my own behalf, and on behalf of my colleagues, on this the opening day of the session of 1879-80. We feel ourselves under a great obligation and owe a deep debt of gratitude to Professor Lister for having honoured this school by coming specially from London to take the chair. We also feel much honoured by the presence here to-day of Professor Sayre, of New York; Professor Turner, from Edinburgh; Dr. Matthews Duncan, from London; Professor Ferrier, from King's College; Dr. F. Roberts, of University College, one of our late lecturers; Dr. Clifford Allbutt, Dr. Wright and Mr. Wheelhouse, from the Leeds School; Mr. Baker, from the Birmingham School; and of the numerous fellow-practitioners we now see around us, who all take a kindly interest in the prosperity and reputation of the Royal Infirmary School of Medicine. We are all pretty well agreed that the higher the standing of the school, the more elevated will become the position of the medical profession in this great town of Liverpool. To the old students of the school, returning to resume the arduous work of preparation for the after-business of life, we bid a hearty welcome, because your return seems to us a vote of confidence in the ability and teaching power of the Alma Mater you have chosen. Imbued with this feeling, we shall be animated by a stronger resolution, and endowed with a greater energy to work still harder on your behalf. This, we trust, will stir your enthusiasm, and bring forth a corresponding response on your part. To the freshmen, we hold out a helping hand in the most cordial manner. I say helping, because you will require encouragement and aid in surmounting the difficulties which chiefly beset the commencement of the study of medicine. By our guidance and a fair amount of steady industrious application on your part, "*nullâ die sine labore*", let me assure you you will have nothing to fear in the way of success. It is often the habit in such addresses as this to hold up the finger of warning to those in your position, and to draw a picture of the difficulties to be surmounted before a licence to practise can be obtained, and that, even then, the battle of life has to be begun for a living, and nothing more is to be expected, for fortunes are only for those who spend their lives on 'Change. Well, there may be some truth in all that; but it is the dark side of the question. I am inclined to look upon the other—the bright side; and I advise you to do likewise. If money-making alone be your object, then turn away at once; but, in so doing, recollect there are prizes, even in the medical profession, for those who can win them, and that every merchant down town does not make a fortune. It is not all gold that glitters. Look around the Exchange; notice how many heads are prematurely grey, how many faces deeply lined with care, and ask yourselves, "Is there nothing in life to struggle for but to obtain the means of existence, or to make money for the mere love of it?" It is true, that habit becomes second nature; but a miserable old age is laid up for the man who has nothing else to fall back upon.

"It's no in titles nor in rank,
It's no in wealth like Lon'on bank,
To make us truly blest."

But, gentlemen, there is a heartfelt satisfaction and pleasure in the study and practice of medicine. It has been called noble, and justly so, for what nobler mission in life can be imagined than that of subduing pain, curing disease, and often warding off the attacks of the last enemy, or at least depriving him of his terrors. Your interest in your studies will increase with your knowledge, and the enthusiasm—the "*perfervidum ingenium*"—begotten of science and applied in art, will, I trust, animate your whole soul, and lead you on to success. Cultivate this enthusiasm, and your course of study will become easy and pleasant. You will continue to be students throughout your whole lives. You may not all become eminent, but you may all become useful practitioners; and, depend upon it, in ours, as in other professions, the rule prevails that the degree of eminence to which a man attains is the degree also of his worth.

And now let me say a few words with reference to the Royal Infirmary and School of Medicine, and particularly to the close relationship which exists between them, and the influence this confers upon both for their mutual advantage. The Royal Infirmary was founded in 1745, opened for patients in 1749, and its objects were clearly stated in the following quotation from the first annual report, as having "not any partial view in serving the town, for which a very small building would have been sufficient, but to make provision for the many objects that appeared in distress from all parts of this nation and Ireland". The School of Medicine was founded, in 1834, by a grand old band of workers, whose memory will ever be held green in its annals. The names of Formby, Dawson, Batty, and Long were, and are still, household words in this town; and the latter we gladly welcome amongst us still at our yearly gatherings. It is not my purpose to dwell upon the history and development of the school at present. It is sufficient to know that it is prosperous, and year by year attracting an increased number of students. I would rather wish to point out this prominent fact—that its success, nay perhaps at one time its preservation and very existence, have all been largely due to the fostering care of the Committee—I might say a succession of Committees—of the Royal Infirmary. In the report for 1844, from which I make the following quotation, we find evidence of this. "Although the direct object of this institution (the Royal Infirmary) is the relief of the disabled poor, there are other advantages accruing to the public which meet consideration. Viewed as an extensive school for the practice of medicine and surgery, the Infirmary has an additional claim to support; and it is a satisfaction to the Committee to inform the trustees and subscribers of a fund raised by the liberality of a few individuals, that the erection of a new medical school has been commenced, and that it is already partially available for the education of the medical and surgical student. When finished, it is hoped that such an opportunity for education will be afforded as will render it unnecessary for the resident student to incur the expense of resorting to similar but distant institutions." Again, in the report for 1846, we find another statement to this effect: "It is necessary also to speak of the Medical School, for which a sum of £500 was voted by the trustees at a special meeting in 1846. One part of the building, having been finished in 1844, has been occupied by the Professor of Anatomy, and it is expected that the remaining part will be completed early in the present year, so that the whole course of lectures may be delivered within its walls. To this school the Committee will render every assistance in their power, as it will afford those means of education which other towns of less importance have long possessed, and supply, it is hoped, a succession of men fully instructed for the important duties of their profession."

Thirty years afterwards, in the Report for 1874, we have the atest evidence of the interest taken by the Committee of the Royal Infirmary in the advancement of the School of Medicine. "The Committee cannot conclude this report without calling the attention of the trustees and subscribers to the list of liberal donations for the enlargement of the school of medicine, amounting to a sum (nearly £6,000) which enabled the Council to carry out those extensive and important additions to the building which they felt to be necessary for the promotion of the best interests of the school." It will thus be seen that the prosperity of the school has largely depended upon the patronage and practical aid of the Committee of the Royal Infirmary, from the time they granted the site upon which it is built until the present day, when it is now well equipped with all the departments of theoretical and practical teaching required by the examining bodies. Some gentlemen may be inclined to ask, Have you been able to give to the Infirmary any return for the benefits so freely conferred upon you? This important question can be answered in the affirmative in a very decided manner by referring to the replies to a series of inquiries which I entered upon some time ago, and which I sent to nearly all the metropolitan and provincial hospitals in England and Scotland. The following were the questions.

1. Do you find it advantageous or otherwise to have a medical school attached to your hospital?

2. Under existing conditions, do you think the work of the hospital could be done as effectually without the aid of the students and school generally, and with as little expense?

3. With reference to the patients, do you think their diseases are more minutely inquired into, and treatment better carried out by clinical teaching, and under the observation of many, than could obtain under other conditions, namely, where there is no medical school?

4. Does teaching necessarily demand a higher class of physicians and surgeons; and, if so, what is the effect upon the reputation of the hospital?

5. State any disadvantages arising from the connection of a medical school and hospital, so far as the welfare of the latter is concerned.

I received replies from thirteen hospitals. They are all in favour of association with medical schools, for mutual help and benefit. So decided was this opinion in Glasgow, that when the University School of Medicine was removed from the Royal Infirmary to the Western Hospital, the authorities of the Royal Infirmary at once set about the establishment of another school of medicine, which they have now completed. A few examples will suffice.

"St. Mary's Hospital Medical School, London, W., August 25th, 1879. Dear Sir,—In the absence of Dr. Shepherd, I venture to answer the questions in your note received this morning. (1) I find it a decided advantage to have a medical school attached to the hospital; for (2) Without such association the work of the hospital, both as regards the in-patients and out-patients, could not be done so effectually, nor, I imagine, could so much be done at so little expense. (3) I am of opinion that in-patients do derive a definite advantage from clinical teaching, so does the medical attendant himself, and so, indirectly, does humanity at large. (4) By a process of selection or development, a hospital with a school attached secures, as a rule, a higher standard of efficiency in its staff, so the reputation of the hospital is increased. (5) This may be considered a disadvantage—that the quiet of the wards during certain hours is broken by the students taking notes and making examinations, but this is a matter of *comparatively* little importance.—I am, yours truly, EDMUND OWEN, Acting Dean."

"135, Gower Street, London, W.C., August 28th, 1879. Dear Sir,—I herewith send my answers to your questions. (1) Decidedly advantageous. (2) No. (3) Decidedly. (4) Better men compete for the post where there are students, and if they are good men and teach the students well, when the latter become practitioners they will send them patients. To teach well a man must keep himself well abreast of the knowledge of the day, and it is, therefore, an incentive to work. The effect on the reputation of the hospital is decidedly good. (5) Where the number of students is very large in proportion to the number of beds, occasionally the patients get examined rather more frequently than is pleasant, but the resident and visiting staff take care that no real injury is done to a patient.—I am, dear Sir, yours faithfully, H. RADCLIFFE CROCKER, M.D.Lond., M.R.C.P., etc., Physician to the Skin-Department of University College Hospital."

"Royal Infirmary, Glasgow, September 4th, 1879. Dear Sir,—I found your letter of the 20th August waiting on my return from my holidays. In reply to the queries contained in it, I would answer,—(1) That it is advantageous to have a medical school attached to the hospital. (2.) I do not think the work could be done so effectually without the students. It might be done at less expense, but their fees help to balance the additional expenditure incurred. (3) I think the patients are better treated, and are likely to be better treated, where there is a school. (4) Teaching does demand a high class of physicians and surgeons, and the reputation of the hospital increases in consequence. (5) I know of no disadvantage.—Yours truly, M. THOMAS, M.D., Superintendent."

"Westminster Hospital, 19, George Street, Hanover Square, August 27th, 1879. DEAR SIR,—I have only just returned from abroad, and found your letter yesterday at the hospital. I may briefly refer to your questions as follows—(1) It *is* advantageous to have a medical school attached to a large hospital. (2) It is impossible to keep up the supply of dressers without, and an increased number of house surgeons would be required, who, in addition, must be paid. These house surgeons are honorary appointments with a school. (3) I do not know that the patients are directly better off with a school, except in such cases as aneurism and serious operations, where relays of students are invaluable in many ways. (4) I think that a school compels the staff to keep up with the modern improvements and discoveries of science, and attracts and retains the services of good men, whereby the reputation of the hospital undoubtedly benefits. (5) There are no disadvantages, except the trouble of ordering a body of students, and this, nowadays, is very slight.—Yours faithfully, GEORGE COWELL."

"London Hospital, Whitechapel Road, E., September 3rd, 1879. Dear Sir,—I am directed by the House Committee to return the following answers to your queries of August 20th—(1) It is considered here *advantageous* to have a medical school attached to the hospital (2) No. (3) Yes. (4) Yes; and the general reputation of the hospital is raised. (5) No disadvantages are known to arise from the connection.—I am, dear Sir, faithfully yours, A. G. SNELGROVE, Secretary.'

From this evidence it will be observed that the question of advantage or disadvantage of the association of hospitals and schools has passed out of the region of controversy, the whole weight of opinion being overwhelmingly in favour of the former, so much so as to place it beyond the reach of any reactionary endeavours. We of the Royal Infirmary and School of Medicine are therefore at one on this matter with the great centres of medical education elsewhere, and we trust the process of evolution and growth has not yet come to a standstill, but, on the contrary, that it has just begun to advance even to a greater development. This we hope to see in the near future, when our coming University College of Liverpool has seen the light. What has become of its committee? *Parturiunt montes*. The process seems tedious and slow. Does the twin brother, the Bishopric, block the way. If so, some form of interference must be demanded, and the attention of the town called to a difficulty of such pressing importance. Is it not sufficiently known that, even in our own case, there are over a hundred students attending lectures at the Royal Infirmary School of Medicine every year, not one of whom, from the want of opportunity for scientific training, can completely qualify here for the matriculation examination of the University of London. May not the finger of scorn be justly pointed at the greatest and wealthiest seaport in the world, and the question be asked, what of your enormous commerce and immense riches, if you close your eyes and ears against knowledge, against that science and art which have been and are still at the foundation of all your prosperity? I, for my part, can hardly think that the people of Liverpool are solely given over to the grosser pleasures of life; but they seem to have forgotten that knowledge ought to be placed within the reach of all. A grand opportunity now exists for a wealthy citizen to make his name here immortal. Owens College in Manchester is a fitting example. But we do not need to travel so far from home. Is there no one who has the ambition, the courage, the self-sacrifice, the scorn and disregard of Mammon to imitate the noble example of Sir William Brown, who built our Free Library, or of Sir A. B. Walker, who has but just recently finished that splendid pile the Art Gallery? If there be, then we shall hope soon to see the University College, a stately building, spring up, it may be adjacent to the School of Medicine. The institution that stands there now is an anachronism. It was once in the country—where it ought to be—but the town has grown around it. It ought again to be removed to the country, where it would become a source of profit to the Royal Infirmary, supply a need much wanted, and so be a real boon to the public.

Dr. Wallace then proceeded to the consideration of some of the recent advances in our knowledge of the diseases of women, first pointing out that in the Royal Infirmary there are peculiar advantages for the study of these subjects, for in 1862 the late Mrs. Thornton left £10,000 to build and endow two wards, called the Thornton, for the sole treatment of diseases peculiar to women. There is in Liverpool no Royal Infirmary Maternity, but arrangements have been made by which the practice of the Ladies' Charity and Lying-in Hospital has now become available, and as 2,500 cases are attended yearly, it will be unnecessary for students to go to Dublin, London, or elsewhere for midwifery practice as they have hitherto, to a great extent, been obliged to do. There will thus be enough practical work and to spare.

TRURO.—Last year the death-rate was 26.79 per 1,000, no fewer than 92 of the 296 deaths occurring from zymotic diseases. Moreover, 150, or more than half the deaths, were those of children under five years of age. All these facts point in the direction of bad sanitary conditions, and the prevalence of typhoid fever is even more conclusive. During the year, 9 deaths from this disease were reported, and 50 cases came to the knowledge of Mr. Sharp. The chief incidence of the epidemic fell, as might be expected, on localities having imperfect systems of excrement removal. Whooping-cough was terribly fatal, carrying off fifty children under five years and two above that age. We believe the Local Government Board are in correspondence with the Town Council on the subject of the sanitary state of the city; and it certainly seems extremely important that defective sewerage, suspicious water-supplies from wells, and a system of excrement-disposal, allowing soakage into the soil, should not be permitted any longer to foster disease in the place and poison its inhabitants.

ON THE MODE OF PROPAGATION OF NERVOUS IMPULSES.*

By J. J. CHARLES, M.A., M.D.,
Professor of Anatomy and Physiology, Queen's College, Cork.

DIFFERENT hypotheses have been propounded at different times to explain the mode of propagation of nervous impulses. Those which meet with most acceptance at the present day are two in number. First, the *vibratory hypothesis*, as it may be called, according to which the impulse depends on the displacement or vibration of the nerve particles; second, the *chemical hypothesis*, by which the impulse is represented as the result of a series of chemical changes in the nerve particles. Professor Huxley holds the first view, and in an article "On Sensation and Sensiferous Organs", which appeared in the April number of the *Nineteenth Century*, he quotes a passage from Hartley's *Observations on Man* as containing a concise exposition of this view. The passage is as follows: "External objects impressed upon the senses occasion, first on the nerves on which they are impressed, and then on the brain, vibrations of the small, and, as we may say, infinitesimal medullary particles. These vibrations are motion backwards and forwards of the small particles; of the same kind with the oscillations of pendulums and the tremblings of the particles of sounding bodies. They must be conceived to be exceeding short and small, so as not to have the least efficacy to disturb or move the whole bodies of the nerve or brain." Further on, in this article, Professor Huxley says: "It is quite possible that the particular mode of motion of the object is reproduced in the sensorium, exactly as the diaphragm of the telephone reproduces the mode of motion taken up at its receiving end."—This hypothesis, it must be admitted, is at first sight plausible, and without doubt serves to explain several phenomena observed during the active condition of the nervous system. But, notwithstanding the support it has received, I am disposed to believe that the weight of evidence is decidedly in favour of the other—the chemical hypothesis; and I shall take the liberty of directing attention to a number of facts, which, when considered with reference to the cumulative evidence they afford, go far, in my opinion, to disprove the vibratory, and at the same time confirm the chemical hypothesis. What is meant by the latter hypothesis I shall forthwith proceed to explain, and shall subsequently state the facts which make for and against the respective hypotheses.

By the chemical hypothesis, it is assumed that the stimulus, whether mechanical, thermal, or electrical, when applied to a nerve, excites a chemical change in its molecules or elementary particles, and that this change travels along the nerve like fire along a piece of wood or a train of gunpowder. The nervous impulse or force is supposed to be produced by the chemical reaction between the nerve particles and the blood, just as heat is generated by the chemical reaction between the particles of wood and the oxygen of the atmospheric air; and the nervous impulse may be considered an expression of the chemical change in the nerve, somewhat in the same manner as heat is an expression of the chemical change in the case of the wood or gunpowder. But let us see to what extent this hypothesis is supported by facts.

1. A slight elevation of the temperature of the nerve occurs during the conduction of an artificial stimulus. Schiff† and Oehl,‡ by means of the thermo-electric apparatus, noticed this increase of temperature in large nerves like the sciatic.§ Now, it is difficult to account for a rise of temperature that could be detected on the vibratory hypothesis, or on the supposition that nerves are nothing more than mere conductors, like the wires of the electric telegraph.

2. Chemical changes take place in nerves when in a state of activity; these are probably of the same nature as those that have been discovered in muscle, but are much less in amount. It can be readily understood that it is very difficult to make satisfactory analyses of the nerves on account of their small size—hence, no doubt, the discordant results arrived at by different chemists. But the white substance of the brain, which is composed essentially of nervous filaments, has been carefully analysed, and has yielded tangible results. Ranke showed that if the brains of pigeons were deprived of blood, they absorbed oxygen and gave out carbonic acid. Nerves, after prolonged action, are acid in reaction (the acid is lactic according to Ranke); whereas nerves in a state of repose possess a neutral reaction. Urea and cholesterin also are said to appear in nerves after action. On the other hand, it must be acknowledged that some chemists have not found the chemical changes I have indicated; and Dr. M. Foster, adopting their view, states that the chemical changes in nerve are insignificant, or have not been satisfactorily made out.* Now, on the vibratory hypothesis, it may be urged that these changes, comparatively small in amount according to some chemists, result from the waste of the nervous tissue consequent on the vibration of the nerve particles. But it is scarcely possible that the mere vibration of particles, either in nerve-cells or in the nerves themselves, should give rise to so much waste as is indicated by the chemical products formed; or that the brain should receive nearly one-sixth, by weight, of the entire blood of the body, and should cease to perform its functions the moment its vascular supply is cut off, if, as on this hypothesis, blood were only required by it to supply the deficiency created by the "wear and tear". Even Foster appears to take this view; for he says "the actual amount of energy developed by a most powerful nervous impulse is exceedingly slight, and hence chemical changes insignificant in amount may be the cause of all the phenomena and yet remain too slight to be readily recognised".† Moreover, we can scarcely imagine that the potential part of a nerve should be constituted by so highly vitalised a product as protoplasm, which exhibits so great a readiness to undergo chemical change, if its sole function be merely to serve a mechanical purpose, such as the transmission of vibrations; for any other tissue might have been as suitably employed for such a purpose, since it has been shown that nerves are but indifferent conductors of electricity, and furthermore have not a greater conducting power than other moist animal textures.‡ Besides the fact that the chemical constituents of nerves and nerve-cells are qualitatively almost the same, renders it more than probable that the nerves play some part in the generation of impulses.

3. The phenomena of electrotonus appear to favour the vibratory hypothesis. Cyon's law to explain the anelectrotonic and cathelectrotonic zones of Pflüger is based, indeed, on the assumption that the nerve molecules may exist in three states; first, a neutral state, their ordinary condition; second, a state of increased mobility (cathelectrotonus); and third, a state of diminished mobility (anelectrotonus). But Matteucci, Hermann, Onimus, Radcliffe, and others have shown by experiments, which I need not describe, that all the phenomena of electrotonus may be explained on purely physical principles by considering the nerves merely as conductors of electricity; and that the changes in conductivity and excitability which occur in a nerve in this condition depend either on the electrolytic action of the electric current on the nerve [in which case acid would be formed at the positive pole, where it would lower the excitability, and alkali at the negative pole, where it would raise the excitability (Onimus)], or on "an internal polarisation which appears at the border between the sheath and the contents of the nerve-tube" (Hermann).§

4. It has been ascertained that the excitability of a nerve when exhausted by a direct current can be restored more promptly by stimulation with the inverse current than by absolute repose, and *vice versâ*. In the second place, it has been demonstrated that any nerve when exhausted by a direct current is still sensitive to the inverse one. The explanation of these phenomena, in terms of the vibratory hypothesis, is that the molecules are assisted in returning to their original or ordinary position by the action of the inverse current; but the supposition that the acid and alkali generated at the positive and negative poles, by the electrolytic action of the direct current, are neutralised respectively by the alkali and acid formed on a reversal of the current would seem to afford a more satisfactory explanation.

5. Marked changes in the chemical composition of the nerves destroy their excitability. Strong alkalies and acids, etc., abolish the excitability of a nerve, whilst dilute solution of chloride of sodium increases it. The chloride of sodium may possibly act by dissolving the albuminous product allied to myosin, which is formed in the nerve during its active condition, and so help to prepare it for undergoing chemical changes anew.

6. The excitability of nerves is increased by heat, and diminished by

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* Read in the Section of Physiology at the Annual Meeting of the British Medical Association in Cork, August 1879.

† *Archives de Physiologie*, vol. iii, p. 75. Paris: 1870.

‡ Quoted in Carpenter's *Physiology*, p. 612. 1876.

§ Helmholtz and Heidenhaim, however, it is but just to mention, were unable to detect it.

* *Text-Book of Physiology*, p. 48. 1878.

† *Op. cit.*, p. 79.

‡ Müller's *Physiology*, translated by Baily, vol. i, p. 684. 1840.

§ *Human Physiology*, translated by Gamgee, p. 346. 1878.

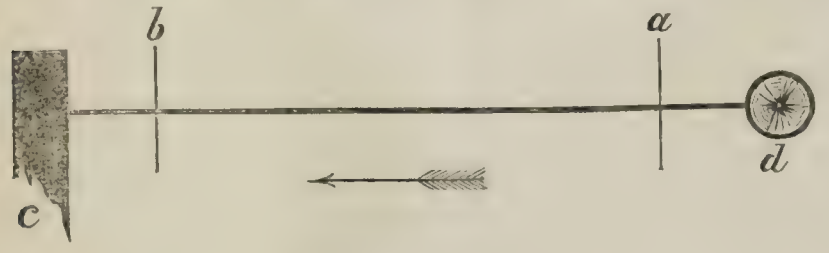
cold. This is explicable on the chemical hypothesis, for heat promotes combustion; but herein is the vibratory hypothesis at fault, since heat diminishes, whilst cold increases the conductivity of metals.

7. Fatigue renders nerves less excitable, exhaustion being usually accompanied by a retardation of the impulse-wave. The excitability of nerves depends on the state of their nutrition; and this, again, on not only the quantity but the quality of the blood. These facts are more easily interpreted by the chemical than by the vibratory hypothesis.

8. All varieties of stimuli—mechanical, thermal, electrical—give rise to the *same kind* of nervous impulse. This fact alone renders it, on the one hand, highly improbable that the impulse is caused by the vibration of the particles, and on the other hand, probable that it originates in chemical action.

9. Chemical combination can take place with sufficient celerity to account for the rate with which a nervous impulse travels along a nerve. The velocity of propagation of chemical action depends to a considerable extent, as Bunsen showed in the case of gases, on whether the combustible substances are pure or are mixed with less combustible bodies; for, by judiciously combining them in different proportions in a series of experiments, Bunsen was able to reduce by degrees the rate with which ignition was propagated until he could follow it with the naked eye. He further, by means of a most ingenious method, determined the velocity with which the ignition of gases travelled.* He found that this velocity for pure hydrogen and oxygen was 34 *mètres* (111 feet) per second—a velocity, it should be remarked, identical with the average velocity of the nervous impulse in the motor and sensory nerves of man as determined by Helmholtz. The analogy between the two modes of propagation is certainly striking; but, of course, I do not intend to suggest that the chemical change in nerve is nothing more than an union of hydrogen and oxygen. I merely take it as an instance of the rapid propagation of chemical action; and I would call attention to the whole series of Bunsen's experiments as tending undoubtedly to throw considerable light on the manner in which chemical action may take place in nerve.

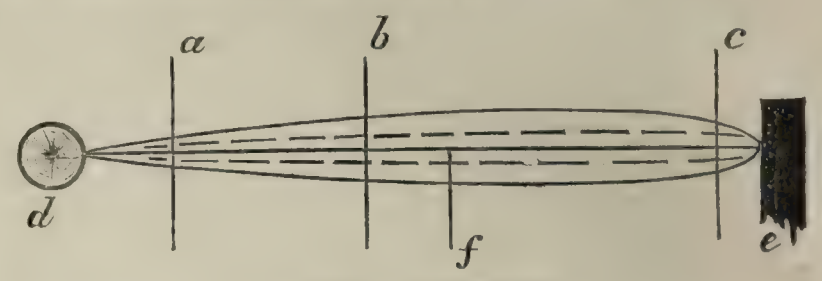
10. Lastly, a nervous impulse presents the essential character of increasing in intensity, in a motor nerve, in proportion to its progress along it. Thus, if a stimulus be applied to the nerve at the point *a*, and again at the point *b*, the contraction of the muscle will be much greater in the former case than in the latter; in fact, the maximum of



c. Muscle. *d*. Spinal cord.

contraction, as Pflüger pointed out, corresponds to the maximum of distance from the muscle.† These results are observed as well in a nerve in connection with the spinal cord as in one whose connection with it has been severed; they cannot, therefore, be due to the mere section of the nerve.

Heidenhaim, too, has shown that, in a nerve in connection with the spinal cord, "the amount of contraction of the muscle is at first large, then becomes smaller, and finally increases somewhat again, as the stimulation is carried from the roots of the nerves to the muscular periphery".‡ To explain this phenomenon on the vibratory hypothesis seems to be impossible; for, if a nerve were merely a conductor, like an iron wire, the impulse propagated along it should, owing to the resistance, which is of a frictional character, gradually diminish from its origin. Two views, however, have been advanced to account for this peculiar phenomenon. The first is, that a greater impulse is produced on stimulation of the proximal than of the distal portions of a nerve, because the former are the more excitable. The cause of this increased excitability is believed by some physiologists to be "the proximity of the central organ with which the nerve is connected";§ by others, that "the structure of the nerve, and especially of its sheath, may be more delicate in those parts which are more protected, and that it consequently there more readily responds to impressions".‖ But the results in question do not follow stimulation of the proximal end only, so that the proximity of the central organ cannot be the true cause; and, though the structure of a nerve is most delicate at its origin and its termination, I think it has yet to be shown that nerves in their course become gradually less delicate or their sheaths gradually thicker; yet this ought necessarily to be the case, else the cause assigned for the increased excitability cannot be the true one. Thus, in order that the latter explanation hold good, it would be requisite that the sheath of the nerve should, as shown in the diagram, increase in thickness from *a* to *c*; but if it do not, then, *cæteris paribus*, a stimulus applied at *c* should give a greater result than when applied at *b*.



c. Muscle. *d*. Spinal cord.

The second view regarding this phenomenon was given by Pflüger: it assumes that the impulse gains force in its descent along the nerve like an avalanche. This, however, is rather an illustration of the phenomenon than an explanation of its cause. The only objection to it appears to be that the "negative variation" probably diminishes its intensity as it passes along the nerve (Du Bois-Reymond); but the observations on this point have not been sufficiently numerous to entitle us to draw a general conclusion from them. It occurs to me that the explanation which is on the whole the most satisfactory is afforded by a consideration of the mode of propagation of the nervous impulse as assumed by the chemical hypothesis. We can imagine a nervous impulse, generated as the result of chemical change in the particles or in the cross-section of a nerve at the seat of stimulation; and, as it passes towards the muscle, becoming slightly increased at each cross-section of the nerve, owing to chemical action, the total addition made to the original impulse being in some degree proportional to the distance it has travelled along the nerve. We might illustrate this hypothesis by a chain of Daniell's cells or a thermo-pile, in which the cells and the junctions would each of them respectively correspond to a cross-section of a nerve undergoing chemical change; and as in this illustration the amount of electricity produced is, within certain limits, proportional to the number of cells or metallic combinations, so is the nervous impulse increased by an addition at each cross-section as it proceeds onwards.

Another illustration is presented by the burning of a piece of wood. The heat developed by the combustion of the first portion raises the temperature of the succeeding portions, so that they burn more rapidly—more vigorously; that is, they give out more energy when the fire reaches them.

Whether the nervous impulse is a force in some respects resembling electricity, generated by, but distinct from, chemical action, or whether it is merely altered chemical force, possessing no separate and independent existence, I do not pretend to say, though I am disposed to take the first view; but either conception may be held consistently with the chemical hypothesis of the propagation of nervous impulses.

Note.—Herbert Spencer, I may add, holds the chemical hypothesis in a somewhat modified form. He believes the chemical change in a nerve-cell to be of the nature of *decomposition*, and the chemical change in a nerve to be of the nature of *isomeric transformation*. The first change—that of decomposition—he says, is "usually accompanied by a great dissipation of motion, whereas the motion given out or taken up along with the other (the isomeric transformation) is relatively insignificant". (*Principles of Psychology*, vol. i, p. 21; 1870.) To this view—at least in so far as the motion of molecules is made to depend on chemical change—I do not think any serious objection can be raised; however, granting the existence of isomeric transformation as a factor in the production of nervous impulses, it seems highly probable, from what I stated above, that chemical decomposition takes place in nerves as well as in nerve-cells. Chemical change in nervous matter will no doubt give rise to more or less molecular or vibratory movement of the nerve-particles; accordingly, to a certain extent, the *chemical* hypothesis may be regarded as including the *vibratory* hypothesis. But this is far from being equivalent to affirming that a nervous impulse is propagated solely by vibration of molecules irrespective of chemical change except as the result of waste of nervous tissue.

* *Philosophical Magazine*, vol. xxxiv, p. 492. 1867.

† Marey, as the result of his experiments, arrived at a different conclusion from Pflüger; but most physiologists are now convinced of the accuracy of Pflüger's experiments.

‡ Foster's *Physiology*, p. 71.

§ Hermann's *Physiology*, p. 344. 1878.

‖ Carpenter's *Physiology*, p. 612. 1876.

ON THE

DIAGNOSIS AND TREATMENT OF JOINT-DISEASES IN THEIR VARIOUS STAGES.

Being an Address delivered on the opening of the discussion on the subject in the Surgical Section at the Annual Meeting of the British Medical Association in Cork, August 1879.

By LEWIS A. SAYRE, M.D., New York.

Mr. President and Members of the British Medical Association: Gentlemen,—I thank you most sincerely for the great honour you have conferred upon my country, and particularly upon myself, by inviting me to open the discussion upon the "Diagnosis and Treatment of Joint-Diseases in their various Stages". I am personally grateful for this distinguished honour, as it will enable me to clearly define my position in regard to the subject under consideration, which I am anxious to do, inasmuch as some of the views I entertain are at variance with those usually accepted. These views are the outgrowth of personal observation, extending over many years, of numerous cases of joint-diseases which have come under my care. Believing them to be correct, if I am so fortunate as to state them so as to carry conviction to your minds of their accuracy, and thus ensure an application of these principles of treatment at your hands in similar cases, I shall have accomplished my mission.

The time allowed for the discussion of this subject will prevent the consideration of the minute anatomy of the various joints; but in order to understand the general principles of treatment involved in the diseases which we shall discuss, it will be necessary to give a general outline of the structures embraced in the pathological changes. And first, what are the component parts of a perfect joint? They are bone, cartilage, fibro-cartilage, ligaments, and synovial membrane. Some of the joints of which we shall speak, as, for instance, the articulations between the bodies of the vertebræ, have no synovial membrane. The varieties of synarthrosis are not included in this discussion. The ends of bones composing joints have a thin shell of dense tissue overlying a mass of cancellated structure which is exceedingly vascular; and it is owing to this anatomical structure that extravasation of blood in the extremities of bones can readily occur from concussions. The cartilages covering the ends of bones have neither blood-vessels nor nerves that have yet been discovered, and live simply by imbibition or absorption of their nourishment from the rich supply of blood-vessels in the cancellated structures beneath; having, therefore, so little vitality, they easily undergo necrosis or degeneration. The synovial membrane is highly vascular, and hence easily excited to inflammatory action from various causes, particularly by sudden changes of temperature after excessive motion. The ligaments which hold the bones together are of a firm fibrous texture closely attached to the periosteum, and are supplied with blood-vessels, and are liable to be torn, more or less extensively, from their attachments, or severed in their fibres, by severe wrenching or straining; the same as the hawser of a ship, when severely strained, may not break entirely, but a few fibres will be torn, and if only so few as not to be detected, makes the hawser more dangerous than if it had been completely broken, for then it would have been laid aside as useless.

Before proceeding to the subject of etiology, I wish to state that in my remarks I shall make no reference to syphilitic, rheumatic, or gouty arthritis, but shall confine myself to those diseases of the joints which have been generally called chronic, strumous, tuberculous, fungus articuli, exudation and gelatiniform softening, commonly called scrofulous diseases of the joints. This latter class of diseases is illustrated by the so-called strumous disease of the ankle-joint, white swelling of the knee-joint, hip-joint disease, and Pott's disease of the spine. All of these diseases have generally been considered to be dependent upon and caused by a constitutional dyscrasia. In proof of this, I would quote one of the most distinguished surgical authors of my own country, who says, in speaking of the etiology of morbus coxarius: "It cannot arise in persons healthy in other respects, there must be a constitutional vice as a predisposing cause. The body must be in a state of debility or feebleness. This is my belief, nay, my solemn conviction."....."In the great majority of instances, the affection is of spontaneous origin, and it is not necessary for a blow, or a fall, or any injury, to produce the disease." Further along in the discussion, he goes on to state: "The difference between Dr. Sayre and myself seems to be simply this: he says that hip-disease is almost always of traumatic origin, and not necessarily connected with a vitiated constitution; I, and those who think with me, do not deny that injury may excite the disease; on the contrary, we confess that it frequently does so, but we maintain that the disease is always necessarily connected with a vitiated condition of the system." (*Transactions of the International Medical Congress, Philadelphia*, September 1876.) If this doctrine be true and the theory correct, I would simply ask why it is that so many patients, having recovered from hip-joint disease, are ever afterwards perfectly well and sound. Why is it, that simply having had hip-disease cures this constitutional taint? That this doctrine is not true I am positive, and I base my opinion upon facts obtained from the study of many cases where there was unquestionably disease of the hip-joint, some of them resulting in caries requiring exsection for the removal of the disease, after which the general health has been thoroughly restored and many of them have become vigorous and robust, showing no taint of scrofula, struma, or any other constitutional vice. Many of the cases can be traced in their family history for generations back, without a single taint of struma, scrofula, or any other debilitating affection. A case of this kind, most marked, was placed under my treatment by Mr. William Adams, with undoubted disease of the hip-joint of many months' standing. The case had also been seen by Sir James Paget, who confirmed the diagnosis. The patient has now recovered without deformity and with perfect motion. In this particular case, the family history, for several generations, is remarkable for the longevity and robustness of its members. In no branch of the family is there a trace of consumption, except by intermarriage. Many of these facts are obtained from Burke's *Landed Gentry*, and hence are reliable. One positively ascertained fact of this kind must necessarily be accepted as a successful refutation of any or all theories in opposition to it. I have the records of many cases precisely similar to the one just referred to, but the accuracy of their family history for so many generations cannot be vouched for, as in the case referred to, because, in my country, the genealogical record of families is not so accurately preserved.

Struma, scrofula, or a vitiated condition of the general system, from whatever cause, is the modifying influence of the disease in the joint, but not the cause of the disease. The disease itself is the result of traumatism, generally so slight as to be unobserved at the time the injury is received. If the traumatism be a concussion, an extravasation of blood occurs, which, not being observed, undergoes degenerative changes, and thus becomes a foreign body; or the cartilage may be slightly loosened from its attachment, and having naturally but feeble vitality, becomes necrotic, and it again is a foreign body; or a severe wrench, tearing from their attachment some of the fibrous tissues, causing an exudation of serum or blood, which not being absorbed for want of sufficiently long rest, undergoes degenerative changes, and thus becomes a foreign body; or the synovial membrane being irritated or inflamed from whatever cause, produces an abnormal secretion, and thus makes a deviation from the perfectly normal state.

In either of the instances of traumatism we have just described, we have the nidus, or the starting-point of a chronic inflammation. This is particularly the case if the injury be very slight, so slight in fact as not to attract observation, because then the proper treatment for restoration is not applied at the time the injury is received; if it were, in the great majority of instances, these cases would result in a speedy recovery. If the accident were more severe, sufficient to excite an acute inflammation, it would attract attention, and, by proper treatment, would probably result in an early recovery; but being so slight as not to be noticed, motion and exercise are continued until serious damaging changes have taken place.

Now, if the individual thus injured be in a robust vigorous condition and of healthy parentage, he may have recuperative power sufficient, with proper treatment, to restore him to health without suffering any constitutional disturbance. But even this person in robust health, if the injury be so slight as not to attract attention, his usual avocations and exercise being continued, instead of repair taking place, degenerative changes are instituted, and chronicity of the disease is the consequence. The degenerative processes going on in and about the joint thus slightly injured produce constitutional disturbances before the local manifestations are such as to attract attention; so that, when the medical attendant detects the local trouble, he finds it also connected with a constitutional dyscrasia, and the local manifestations are, to his mind, the result of this constitutional condition; instead of which, the constitutional condition observed by him is the result of long-continued disease which had been unsuspected, and hence neglected.

Take, for instance, diseases of the spine; long before there is any deformity that attracts attention, the patient has suffered from neuralgic pains in different parts of the body distant from the spine, and generally are not brought for treatment until the deformity is conspicuous, which

could not possibly occur until absorption of the bodies of the vertebræ had taken place—an evidence that the disease had existed a long time before medical advice was sought. So, too, with disease of the hip-joint; months or even years elapse before medical advice is sought for the treatment of the hip-disease, attention having been paid even by medical attendants to the knee, which they have covered with iodine and narcotic poultices. This serves as an illustration of the principle which I wish to inculcate.

Now, if the person thus slightly injured be of a strumous diathesis, either inherited or acquired, or if his system be vitiated, enfeebled, or broken down from any cause, the degenerative changes in the joint involved will go on with more rapidity and lead to more disastrous results, than if he had been in a healthy condition at the time of the accident. But even the most decidedly strumous, or scrofulous, must receive some local injury to the joint where these destructive changes manifest themselves; for the scrofula or struma, the constitutional dyscrasia, by whatever name you may call it, involves the entire system—muscular, vascular, nervous, and osseous; and that there should be degenerative changes taking place in one or other particular joint of the body must necessarily be the result of some exciting cause impinged upon the point involved. If scrofula were the essential cause of this disease, as stated by the author above quoted, and almost all of our surgical authors, why is it that so many millions of children with scrofula die from other causes without developing any joint-disease?

No man admits more fully than myself the modifying influence of the strumous or scrofulous diathesis; but that this condition does not produce disease of any joint *spontaneously*, or without some exciting cause, is my firm conviction. It requires the exciting cause of traumatism to give rise to the local manifestations of this dyscrasia. By traumatism, I do not mean the necessity of a rail-road accident or a fall from St. Paul's church; but any accident, no matter how slight, that can produce a rupture of tissues—whether from falling over a footstool, or even a door-sill. Even these slight accidents in enfeebled children often terminate in most serious destructive changes.

Before proceeding further, let us try and come to some understanding as to what is meant by the term "scrofula". If the question were asked this learned body, probably there would be as many answers as there are members present. There is a peculiar condition of the system, with enlarged glands, weak muscular fibre, sore eyes, thick lips, chronic suppuration from the ears, all the evidences of *malnutrition*, which, by common consent, we all include under the term scrofula. Some assert that this ill-defined condition must necessarily be inherited; that it is impossible for it to be acquired. If this doctrine were true, it would necessarily involve the tracing back of the scrofulous constitution through the generations of the past ages to Adam, the founder of the human race; and consequently every human being, both male and female, would necessarily be tainted with this inherited condition. The probability of this state of affairs is too absurd for belief; and hence I maintain that this general constitutional dyscrasia, which we have by common consent called scrofula for want of a better term, can be, and frequently is, acquired by persons of a healthy ancestry, by living in violation of hygienic laws. Bad air, bad food, insufficient amount of nutrition and clothing, sleeping in damp badly-ventilated rooms, want of cleanliness, and the frequent intermarriage of persons living under these deteriorating influences, will produce a condition which cannot be in any way distinguished from that which has generally been recognised as inherited scrofula. It will, therefore, be seen that this condition of the system, which has by common consent been termed "scrofulous", can be created by living in violation of the laws of health. That this condition, no matter how produced, whether inherited or acquired, necessarily modifies any disease or accident from which the patient may be suffering, all must, I think, admit.

Take the athlete or pugilist, who is, as you call it in this country, in the condition of "perfect form". He receives injuries, severe blows, wrenches, strains, or contusions, frequently with but slight extravasations of blood, or none at all, his tissues being in such a condition that the vessels do not rupture; but if the vessels do rupture and blood be extravasated, it is absorbed in a short space of time before degenerative changes have taken place. In this condition of maximum health, the reparative processes take place instead of the degenerative. Now, this same athlete or pugilist, by leading a different mode of life—frequent debauches, imprudent diet, want of his accustomed exercise, and a vicious mode of life—may bring his previously splendid constitution into exactly that condition which has generally been understood as scrofulous. When in this latter condition, the same blows or contusions which he could before resist without difficulty now terminate in serious constitutional disturbances.

Some authors have attempted to describe these diseases as chronic, as if the simple element of time had anything to do with the nature of the disease. Most of these cases are chronic, owing to the simple reason of their feeble origin; the traumatism being so slight as to excite but very feeble disturbed action. Had a more severe injury been sustained, the whole trouble would have been rapidly developed, and thus gone through its various stages with greater rapidity, because a larger number of elements would have been engaged in the destructive processes. In either case, it is simply irritation producing inflammation and its necessary consequences, only differing in degree.

Take the poor man unaided and alone, with his wheelbarrow and shovel, who digs out the cellar, lays the foundation, and constructs his humble dwelling without assistance. He would certainly be a long time in doing it. If as many workmen as could advantageously have been employed had aided him in digging his cellar and constructing his house, the work would have been accomplished in a much shorter period of time. The rapidity of the construction of the house would depend upon the amount of force occupied in the work. So with these diseases; if but few elements are involved in the structural changes, more time will elapse before they will have accomplished their ultimate destructive metamorphoses than if a greater injury had been sustained; showing, therefore, that chronicity has nothing to do with the character of the disease.

Whenever these injuries occur, they produce an abnormal condition of the system which we term "irritation", which gives rise to muscular contractions, thereby limiting the movements of the joints and parts involved, and causing characteristic changes in the form and position of the body, or the joint, or the limb involved. This peculiar muscular rigidity, which has been called reflex muscular contraction, persists and continues until the termination of the disease. It is one of the essential elements which aggravates the difficulty by causing undue pressure upon the parts inflamed, and leading to interstitial absorption and necrotic changes from diminution of the normal blood-supply. The bed-sore on the heel, on the sacrum, and on the scapula is the result of pressure interfering with the nutrition of the part. So this reflex muscular contraction creates undue pressure upon parts brought in contact, and produces the same result.

We hence see the absolute necessity of extension and counter-extension to overcome these reflex muscular contractions in the treatment of all chronic joint-diseases. Great errors have been made in the application of this principle by making the extension beyond the point required, for then tension or traction is made upon the ligamentous structures that hold the bones together, and one of the most essential principles in the treatment of these cases becomes one of the most destructive agents. Consequently extension and counter-extension should only be carried to the point of relieving the diseased parts from pressure, which is to be decided by the *comfort* of the patient; and when this point is reached the parts should be there secured, and maintained in this position of perfect comfort.

Rest, as perfect and complete as can be given to the parts involved in the disease, is the next most essential element of treatment. As the diseases of which we are speaking run a chronic course, and therefore a long time must elapse before recovery can take place, the rest obtained to the part involved, by the confinement of the whole body to the bed for months or years, as the case may be, is detrimental to the general health of the patient. If, therefore, we can by any mechanical contrivance or artificial means secure this perfect and complete rest to the involved joint or parts involved in the disease, and at the same time allow the patient to take free exercise in the open air, we have put him in the best condition to overcome the constitutional dyscrasia from which he is suffering, whether this constitutional condition was a scrofulous diathesis existing previous to the disease, or whether this similar condition had been caused by the disease. For by exercise the appetite is improved, the fresh air begets a healthy action in the system, which, together with a generous and nutritious diet, does more to eradicate the so-called scrofulous diathesis than any course of medication yet devised.

If, as has been stated, it has been proved by the microscope, that minute doses of mercury add to the number of the red blood corpuscles, and then in these minute doses, it may be considered a most valuable tonic. Iron, cod-liver oil, and quinine may also be added frequently with advantage. In some of the joints we have a capsular ligament, and in these there is a period in their treatment when motion becomes as essential an element of treatment as rest in the earlier stages of the disease. If this fact be disregarded in their treatment, the result will be ankylosis. In the majority of cases of diseases of the joints, if detected in their earlier stages, by carrying out the general principles of treatment above described, they will generally recover with little or no deformity and motion more or less complete.

If the effusion be very great, in addition to rest, extension and counterextension, blisters, counterirritation, and the internal administration of such remedies as will promote the absorption of the effused

fluid, are requisite. Friction and elastic compression are also essential elements in the treatment of these diseases in certain stages. If the effused fluid have undergone degenerative metamorphosis, it should be evacuated by means of the aspirator, if possible. If, however, the contents cannot escape by the aspirator, then the joint should be freely incised under the antiseptic spray, and carefully washed out and dressed according to the principles so admirably described by Mr. Lister.

If the disease have progressed to caries or necrosis before it comes under observation, it is frequently accompanied with one or more tortuous sinuses which afford but an insufficient exit to the morbid materials, and hence it is possible, by means of a free incision in the right direction, to facilitate the exit of the discharges, and then by following out the general instructions above given, repair may take place with more or less deformity and partial or complete ankylosis. But in this latter condition of caries or necrosis, after having given the patient the benefit of the treatment just recommended, and the disease still goes on progressively, showing the extent of disease to be so great, or, that the constitution of the patient is so bad that he will probably succumb before the escape of the diseased bone could be effected by the slow process of exfoliation; then, exsection and complete removal of the diseased parts is our only remedy. This, when done properly, and with proper after-treatment, will frequently yield the most satisfactory results. In the knee, we have a splendid limb with ankylosis; in the ankle, hip, elbow, and wrist, we frequently have fine results with but slight deformity and very nearly complete motion.

SHORT NOTES ON THE USE OF SAYRE'S SWING AND PLASTER JACKET IN SPINAL DISEASE.

By C. H. GOLDING-BIRD, F.R.C.S.Eng.,
Assistant-Surgeon to Guy's Hospital.

AFTER a somewhat extensive employment of Sayre's plan of treating spinal disease, the following points in connection with it, in addition to those recorded in my lecture upon the subject, published in this JOURNAL for September 21st, 1878, may be worth recording.

The plaster jacket must in all cases be made to reach one inch to one inch and a half below the anterior iliac spines, or the patient will be unable to wear it; a too short jacket is the commonest failure. The anterior iliac spine must be protected with a pad of cotton-wool; and one should be placed over every bony prominence, natural or acquired; the ensiform cartilage often has to be thus protected. All the permanent pads used—the dinner and breast pads are only temporary—are best placed *outside* the merino vest; they do not in this position become so readily hardened and clogged by the perspiration.

If the plaster bandage be put on in a spiral fashion, there is less chance of its "giving" in the loins—the weakest place in the jacket; if attention be paid to this, tin strips may be dispensed with. The strain on the jacket being less in a case of caries than of general curvature—in which the tendency to "telescope" is great the moment the patient is removed from the swing—more care must be given to the strength of the jacket and the setting of the plaster in the latter than in the former. A case of caries may walk away in an hour or two; but one of general curvature is best kept lying till the next day.

The bandages can scarcely be too thickly spread with plaster-of-Paris; the after smearing on of a layer of plaster outside all looks well at the time, but is useless in point of strength; it soon cracks, and is the cause of the "crumbs", by which an improperly put up "Sayre" can be tracked from room to room.

In employing the jury-mast, a thin jacket should be first put on, of two to three bandages, while the patient is in the swing; when it has set, the patient should stand, and the jury-mast can be fitted with more bandages, and the jacket brought to the required thickness.

In spinal caries, fixation of the jacket—physiological rest—is of primary importance; the extension is secondary. Yet the maximum amount of good to the patient will not be obtained without the employment of the latter. It not only opens the chest (retaining it in its most capacious form), but it each time helps to decrease deformity; and those who employ the jacket without extension treat the disease, but miss the full benefit of the treatment in regard to the distortion. A variable amount of straightening is obtained as ankylosis progresses; once in a favourable condition, Nature tends to bring back the body to the normal standard; but the great gain is each time the patient is swung for the jacket to be applied. Repeated extension is not advisable; it interferes with "physiological rest".

In lateral (general) curvature, extension is of primary importance; fixation is secondary. Mild cases may be cured by daily extension alone without the jacket. Great straightening and diminution of rotation are obtained in the swing at the putting on of the jacket; but the same exercise—extension from the head, as described by Professor Sayre—must be continued twice daily; first, with the intention of keeping the spine straightened, and in very bad cases of opening up the chest more and more; and, secondly, to act as dumb-bells to the dorsal muscles which invariably waste from want of use under the jacket. In spinal caries, this is unimportant; for, ankylosis being completed before the jacket is discontinued, the spine is rigidly fixed and able to hold its own from the first; but in general curvature, there being no ankylosis, the muscles are called upon the moment the jacket comes off, so that if they are wasted the patient will be often utterly unable to keep himself erect on the removal of the jacket till his muscles are again in "working order".

General curvature or caries of the cervical spine must be treated with the jury-mast. In the former, the daily exercise must be employed in addition. In a case of caries, a girl aged 14, with fifteen months' history, and pharyngeal abscess, all her pain, inability to support the head, posterior cervical thickening, with much deformity, entirely disappeared after one year's wearing the jury-mast. No visible deformity remained; but deep pressure with the fingers at the back of the neck could detect an unnatural fulness. The same jacket was worn the whole time—an exceptional circumstance.

Upper dorsal caries ought to be treated with a jury-mast; yet the jacket alone, by fixing the ribs, as Sayre has described, will suffice to give physiological rest to a boss that itself lies above the level of the jacket.

Upper dorsal general curvature must have a jury-mast, if any apparatus at all, and the daily exercise. Below these points, both forms of disease are alike treated with the jacket; the general curvature requiring the exercise as well.

Where spinal caries is complicated with abscess, especially if already open, above the level of the iliac spines, the case is difficult to treat, even in the way that Sayre has indicated; but where the abscess exists, or is open below that level, treatment is easy. If already a sinus, it requires only some ordinary dressing; if still an unopened abscess, it should never be opened; but, by supporting the patient in a jacket and enabling him to walk about, the pus gravitates downwards, points more rapidly below the jacket, the abscess will open of its own accord, and discharge thoroughly, though gradually, without rise of temperature, or interference, as a rule, with the patient's getting about. It is a mistake to keep a case of psoas abscess lying down where by any means it can be got into the erect position; it is a still greater mistake to "aspirate" it; for, unless with the desire to make it point more rapidly, there is no one sound reason for touching it at all. Open an acute abscess, and the temperature falls; open a chronic one, and the temperature rises to fever point; let Nature open the latter at the right time, and there is scarcely any constitutional disturbance.

To say that "Sayre's treatment" is as sound in principle as it is effective in practice, is only now to utter a truism; but every fact, I believe, that he has advanced in connection with it my cases fully and repeatedly verify.

IRRITABLE SPINE AS AN IDIOPATHIC AFFECTION.*

By J. G. SINCLAIR COGHILL, M.D., F.R.C.P.Edin.,
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THE terms irritable spine, rhachalgia, spinal irritation, notalgia, neuralgia spinalis, etc., are used indifferently in the text-books, with reference apparently, for the most part, to a secondary affection of somewhat vague pathological identity, of which the characteristic symptom is tenderness on pressure over the spinous processes of one or more of the vertebræ. It is described as being met with more frequently in women than in men; associated with pains in the mammæ and other parts of the thorax; or in the ovaries, uterus, and other abdominal viscera. By others, it is viewed as a combination of myalgia and hysteria dependent on general debility. It has even been described as seated entirely in the ligaments of the vertebral column. By all it is regarded as essentially dependent on reflex action, having its original source in some peripheral irritation.

I have, of course, in common with my professional brethren, from time to time been consulted by patients in whom certainly localised tenderness in the spinal region, especially its lower segments, was present as an incidental condition accompanying uterine disorder, and, in a milder form, symptomatic of gastric ulcer; but, at the same time, I have occasionally met with cases in which I am quite sure this associa-

* Read before the Southern Branch of the British Medical Association.

tion did not obtain, and which presented all the characters of an idiopathic affection well defined, both as regards etiology, symptoms, and amenability to a particular form of treatment, based upon this theory of their pathogeny.

Lately I have had under my care no fewer than four cases in which vertebral tenderness or hyperæsthesia was the principal essential feature, and in which I could not ascertain that the local phenomena resulted from any exciting cause at the periphery. A comparative study of these cases will, I think, help to place the pathological identity of one form at least of this affection upon a more satisfactory basis. I believe it will demonstrate that there occurs not infrequently a form of irritable spine which must be regarded as a primary disease, and not dependent upon any sympathetic, referred, or reflected irritation. The following details are necessarily brief, but I believe they include all the essential points. The cases are reported in order of occurrence.

CASE I.—Miss M. G., aged 24, of sanguineo-lymphatic temperament, auburn hair, blue eyes, and ruddy complexion, was perfectly well until a year previous to consulting me, when a shock to the nervous system from a fall in a ball-room, which caused a fractured collar-bone, produced the following train of symptoms: gradual loss of appetite, feeling of languor and debility, with some loss of flesh, and sleeplessness. As it was feared she was becoming consumptive, she was sent to Ventnor. I found, on examination, all the organs perfectly healthy, and the functions regular. There was no pyrexia. She complained, however, of great tenderness on pressure, aggravated by movement, or the upright posture, diminishing in intensity from the fifth dorsal vertebra to the lumbar region. Suspecting renal trouble, I examined the urine, and found it showing an excessive acid reaction; and, to my surprise, loaded with phosphates to the extent of one-fourth, on settling in the test-tube.

The patient had been taking the hypophosphites of lime and soda for some time—indeed, a large variety of tonics had been tried; so I placed her on a mixture containing liquor strychniæ, citrate of iron and quinine, with syrup of lemons in effervescence, three times a day. The general health improved steadily, and the quantity of the phosphates lessened gradually; but, as the local pain was only alleviated by the sedative liniments and embrocations ordered, I applied Corrigan's hammer or *bouton*, at the temperature of boiling water, briskly over the painful area, producing rapidly deep purple redness, but without vesication. The effect of this treatment was most satisfactory, both on the general and local conditions. I had to repeat the counterirritation with the *bouton* four times in all before the spinal hyperæsthesia had entirely disappeared. The phosphates disappeared from the urine entirely. The diet in this and the other cases was simple and non-stimulating; milk, farinaceous and egg puddings, fish or meat once a day. No stimulants, except a glass of port wine in a breakfast-cup of arrowroot at bedtime.

CASE II.—Miss S. E., aged 17, sanguineo-lymphatic temperament, tall, well-formed, with fair hair, large blue eyes, and high colour, enjoyed excellent health in every respect, until about six months previously to my being consulted, when hard study for the Oxford Local Examination gradually developed loss of appetite, sleeplessness, debility, and "pain in the back", from which no position gave relief. I found the organs and functions healthy and regular; but the action of the heart was extremely feeble, and the pulse 90, small, and compressible in character. There was also a feeling of chilliness in the morning, when the body-temperature registered on several occasions 97°, but never rose in the evening above 99°. There was also great intolerance of noise or mental application. In addition to a constant pain, there was extreme tenderness on the slightest pressure, the skin itself being excessively sensitive, from the seventh cervical to the last dorsal vertebra. The urine was copious, of low specific gravity, and loaded with phosphates.

I prescribed a pill containing pulveris opii gr. ¼; pulveris digitalis gr. ss; pulveris capsici gr. ss; and quinæ gr. ijss; to be taken every four hours, and thirty grains of bromide of potassium each night at bedtime. When the temperature steadied, the chilliness disappeared, and the pulse filled, I substituted Kirby's pilula phosphori composita, three times a day with food. At the same time, after reducing the cutaneous hyperæsthesia by turpentine stupes, alternated with a liniment of aconite, belladonna, and chloroform, applied on spongio-piline, I used Corrigan's *bouton* at 212°, and repeated it three times at intervals of a week. The recovery of this patient was rapid and complete.

CASE III.—Miss C. J., aged 32, of dark sallow complexion, very tall, spare figure, with dark hair and eyes (a type of the olive-complexioned struma of Laycock), began to feel weakness, with pain and tenderness in the back, accompanied with loss of appetite and insomnia, about two years ago, when she had great mental exertion and anxiety in connection with a scholastic undertaking. She complained to me only of a great feeling of languor, with extreme pain, aggravated on pressure, from the occiput almost to the last lumbar vertebra, but most intense between the shoulders. The health otherwise was good. The only relief had been obtained during sleep from narcotics, or while walking briskly, which, however, was always followed by aggravation of the pain. There was slight double curvature, only apparent in the erect position, for which a Sayre's jacket had been recommended; but I believed it resulted from an instinctive effort to relieve pressure by posture. I found in this case, also, a large quantity of phosphates in the urine, a weak quick pulse, but no pyrexia.

Taking the suggestion of the diathesis for the general treatment, I gave the patient syrup of the lactophosphates of lime and iron, with cod-liver oil. I twice applied, at intervals of four days, Corrigan's *bouton*, heated in the spirit-lamp flame to a blue heat, so as to slightly singe the skin on the second application. The patient was suddenly summoned home before I considered her sufficiently recovered; but I have heard that she is continuing to improve.

CASE IV.—Miss B., aged 17, of sanguineo-lymphatic temperament, very abundant fair hair, blue eyes, very deeply tinted cheeks, and stout, well formed and fully developed figure, enjoyed robust health until midsummer of last year (1878), when she was sent, for the first time, from home to a fashionable boarding-school, where she was very much overworked, and very much underfed, the mental *cram* being in the inverse ratio of the physical. There followed a rapid deterioration of health, which culminated by the end of October in a sudden accession of pain from the occiput inclusive to the last dorsal vertebra, with paroxysmal exacerbations so intense as to resemble the effects of sunstroke—at least they were so described by her parents. I have not been able to ascertain the details of treatment, beyond that tonics and general and local sedatives were freely employed, so as to permit removal home, where considerable but far from complete improvement followed. A premature attempt to renew her studies at home brought back the symptoms in a less alarming, but still severe, form; and she was removed to her seaside home, where I first saw her on the 5th of May of this year. The headache was less intense than in the beginning of her attack, but there were almost daily paroxysms of increased severity, and the spinal tenderness was extreme, comparative relief being only obtained by lying on a hot water rubber-bag, or from an occasional sinapism. The slightest noise, strong light, or an attempt to read, greatly aggravated the suffering. The appearance of the patient was striking. Her conjunctivæ were injected, and two large defined circles of deep purple colour on her cheeks contrasted strongly with the pallor of the rest of her face. The hands and feet were quite cold, though the temperature of the room was high. The pulse was quite thready in character, and the apex-beat could hardly be felt. Otherwise, however, the general health was good, the tongue clean, appetite fair, and no pyrexia. A careful and repeated examination revealed nothing further than a phosphatic condition of the urine, but not to a greater extent than one-sixth on deposit.

The treatment consisted of a mixture of liquor strychniæ, tincture of digitalis, quinine, dilute phosphoric acid, with syrup of orange, and bromide of potassium at bedtime. After hesitating on account of the evident congestive conditions present, as to dry cupping to the nape, I applied the *bouton* at a blue heat to the seat of pain, and repeated it again twice at intervals of five and six days, a spongio-piline pad, soaked in belladonna liniment, being kept applied to the skin, previously well oiled, in the intervals. The improvement was very rapid. The change in the state of the vascular system was most interesting. The deep hue of the cheeks became diffused, the eyes clear, the pulse filled, while the surface and extremities resumed their normal warmth. The patient is now in perfect health.

What I would now especially draw attention to in connection with the cases just described is the remarkable identity exhibited: 1. In the predisposing temperamental or diathetic conditions; 2. In the exciting cause, pointing to exhaustion of nerve-force; 3. In the general symptoms, including the entire absence of all hysterical phenomena; 4. In the seat and character of the local morbid manifestations; 5. In the absence of febrile movement; 6. In the invariable phosphatic condition of the urinary secretion; 7. In the condition of the vascular system, indicating local plethora or passive venous congestion in the seat of pain; 8. In the absence of any evidence of peripheral irritation sufficient to set up a reflex pathological action or process in the spinal cord; 9. In the rapid and regular resolution of the morbid phenomena, under treatment based on the indications as above stated, and mainly directed in an active form to the central seat of their manifestation.

I venture to deduce from the observations thus formulated: (1) that we may have cases of so-called irritable spine (which term I prefer) present as a primary or idiopathic morbid condition entirely independent, so far as reflex nervous action is concerned, of peripheral excitation;

(2) that the sanguineo-lymphatic temperament is the usual predisposing diathetic cause; (3) that exhaustion of nerve-force, especially through the brain, is the common exciting cause; (4) that it is not inflammatory in nature, nor accompanied by pyrexia; (5) that the vascular system, probably through the vaso-motor nerves, is principally involved in the production of the objective phenomena; and (6) that the affection or disease itself consists essentially of a passive congestion of the venous plexuses within the vertebral canal, which induces pressure on the nervous structures to which they correspond, either directly from increase of calibre from dilatation, or indirectly from inducing a certain amount of local œdema in the spinal membranes. This theory of the pathological anatomy of one form at least of irritable spine is, of course, in the absence of any opportunity of *post mortem* examination, based entirely on a study of the symptomatology of the affection, and as such only it is brought forward on this occasion.

MOUNTAIN AIR IN THE TREATMENT OF PHTHISIS.

By ROBERT SINCLAIR, M.D.,
Physician to the Dundee Royal Infirmary.

It has occurred to me to send the following note as a small contribution to the discussion.

R. H., aged 21, consulted me for the first time on April 21st, 1879. He then complained of weakness, loss of flesh, irritating cough, and occasional night perspirations. His previous health had been exceptionally good, and his family history was satisfactory. His illness was attributed to overwork during the winter session at the University of Edinburgh. He admitted that he had been in the habit of reading, for hours on a stretch, in a very stooping position. Examination of the chest was satisfactory, except that the expansion was slightly impaired, and the respiratory murmur exaggerated at the left apex.

He was advised to live as much as possible in the open air; to give up study; to live well; to take cod-liver oil and the hypophosphite of lime; and to apply iodine to the upper part of the left chest.

A month later (May 19th), his general health was much worse, and his appearance extremely wretched. His weight was one hundred and fifty-two pounds, which indicated a loss of fourteen pounds in three months. He had become feverish towards the end of each day. His cough had become more troublesome; and the perspirations had occurred nightly and more copiously of late. The expectoration consisted of tenacious muco-pus. Expansion and elevation were deficient at the left apex, where the percussion-note was decidedly dull; the expiration prolonged and blowing; vesicular respiration and vocal fremitus had increased, with an occasional friction and moist *râle*. These signs extended more or less to the level of the nipple in front and the apex of the scapula behind. In the extreme right apex, the respiratory murmur was rough, with prolonged expiration. He was advised to go at once to Switzerland, staying at first at Engelberg, and in the beginning of July to go on to Campfer, near St. Moritz; to live as much as possible an out-door life; to continue the cod-liver oil and hypophosphite of lime; and to take one-eightieth of a grain of sulphate of atropia in pill every night.

About the end of July, I received the following report from Dr. Biermann, to whom I had sent an account of the patient's state when he left Dundee.

"The health of Mr. H. has improved very much since his stay in the Engadine. His appetite is good; also sleep. He has gained in nutrition. He has no fever or perspiration, much less cough. Percussion shows that the disease does not extend any further. The occasional friction and moist *râle* are much less. Vocal fremitus on the left side is not so pronounced."

A few days ago, I received a letter from Mr. H.; and I shall transcribe the portions that bear on the case. It is dated August 29th.

"The weather is still very fine, but the air is becoming colder; and many people are going away. We intend staying here till probably the 10th proximo; and then we go on to Italy. We are going to Monticello, a small village on a height about twenty miles from Milan. Dr. Biermann has advised me to do the whole journey in one day (twelve hours). In a little time, we shall go to Genoa, and then to San Remo for the winter. Was anything said at Cork about going down to lower heights? Some people here say that the descent from the Engadine should be very gradual. Others say it does not matter much. I have enjoyed the Engadine very much. I am much stronger than when I came here. My appetite is very good indeed. I sleep well, and do not perspire at night. My cough and expectoration are much less; but, unfortunately, they are still present. The worst of the Engadine is, I think, that the temperature often changes, both greatly and suddenly. If the sun goes under a cloud, even on a very fine day, the air becomes at once very cold. Here I always carry a light shawl to put on on such occasions."

Remarks.—This case, from the rapidity of the changes, was, to begin with, a very unpromising one. Between April 21st, when the physical signs were far from being decided, and May 19th, when they had made terrible progress for the worse, the patient was under the best hygienic conditions that could be procured at home. On the other hand, any one who knows the usual course of such cases in this part of the country must admit that the improvement already gained, in the Upper Engadine, is very considerable; and justifies a more hopeful outlook than could possibly have been entertained three months ago. I am well aware of the difficulty of estimating the value of any particular line of treatment in a single case, or even in a number of cases. But, it appears to me, the case which I have recorded does not belong to the category of hopeful cases; and in view of the fact that the patient was going rapidly downhill, at home, under the same treatment that was continued with success on a high mountain elevation, the change of climate must be credited with the chief share of the result. I should add that Mr. H. did not find his circulation embarrassed by the mountain air to the extent I feared and warned him of before he left home. Perhaps some one of the members who took part in the discussion at Cork, or who have had special opportunities of judging, will kindly answer the question my patient asks, concerning the best mode of leaving an elevated situation, in an early number of the Journal. It will be observed that the temperature—this summer at all events—has not been so equable as Dr. Clifford Allbutt told us at the meeting we might expect. At least, I presume that he did not confine the application of his remarks on this subject to Davos.

A SIMPLE METHOD OF DELIVERY IN DIFFICULT BREECH CASES.

By Dr. CHARLES E. UNDERHILL, Edinburgh.

Obstetricians not unfrequently meet with cases where the presenting breech is fixed either at the brim or low down in the pelvis, and where the natural forces are unable to finish the labour. Almost all writers on the subject recommend either to bring down one foot, or, failing that, to insert one or more fingers in the groin and employ traction. Should this not succeed, the use of the blunt hook, or of a handkerchief passed over the fold of the groin, or some such device, is resorted to before delivery can be effected. These manœuvres are generally difficult, and sometimes dangerous to the child.

In the following case, I adopted a method which is very simple, and proved easy of application and rapidly successful. It consisted essentially in making traction with the fingers fixed upon the child's pelvis *from behind*, instead of hooking them in the fold of the groin; additional purchase is obtained by placing the thumb and fourth finger in the groins.

On the 25th of February last, I was called by a friend to assist him in delivering a case in which the breech presented and had stuck at the outlet of the pelvis. He had tried with much perseverance, but without success, to pull down the breech by the use of his fingers in the groins, and pressure upon the uterus from above, etc. On reaching the house, I found the patient, a vigorous healthy woman, in labour with her second child; labour had made good progress until the breech reached the outlet of the pelvis, where it had remained without advance for three or four hours, in spite of the attempts to deliver spoken of above. Protruding from the vagina was the scrotum of the child, greatly swollen and nearly black. The vagina was large, and the pelvis apparently of full size. The child's sacrum was opposite to the right sacro-iliac synchondrosis of the mother, the child's legs being bent upon the belly opposite the mother's left groin. After chloroform had been given, I passed my left hand up behind the child's sacrum until I was able to hook the index and second fingers over the crests of the ilium from behind, one on each side of the lumbar vertebræ; this gave me a strong and firm hold, and enabled me to use a little steady traction, and to deliver in a few minutes. The child was alive and survived, the swelling of the scrotum subsiding in a few days. The mother made a good recovery.

I believe this method of delivery will be found applicable to many cases of impacted breech; and it has the advantages of being easy to execute, rapidly accomplished, and free from danger. I do not know whether this mode of delivery has been practised before; but it is certainly worth a trial in such cases as the foregoing, before recourse is had to instrumental or other more serious procedures.

SURGICAL MEMORANDA.

TREATMENT OF SPINAL CURVATURE BY THE PLASTER-OF-PARIS JACKET.

UNDER the above heading, I see a notice, in last week's JOURNAL, of Dr. Sayre's demonstrations at the International Congress, Amsterdam, and also in Paris. While not wishing in any way to rob Dr. Sayre of his belief in the utility of such a method, nor yet of the power he may have of convincing others of the "brilliancy" of his plan, I think it only fair to add that I have witnessed his practical demonstration, and I have with my own hands faithfully practised his method and rules in the treatment of spinal curvature, and in no case have the results been of that brilliant and marvellous character so commonly alleged in all Professor Sayre's cases. I have treated over a hundred patients with this method; and, from such an experience, I am led to believe that the suspension *alone*, without the plaster, is the only important part of his suggestions. Even this means should be most guardedly applied in the case of structures ankylosed from previous or progressing disease, as the strain will probably render the patient liable to a fresh attack of inflammation and its consequences.

The plaster-of-Paris jacket is a dirty, unyielding, and uncomfortable case, likely to produce pressure sores, and it has a great tendency to induce the generation of vermin when kept on for any time. I should not have felt myself bound to write this letter, but by the article before alluded to, it would appear that all English and Irish surgeons are united in lauding the efficacy of such a line of treatment. For myself, and for some others who have devoted much time to the subject, we believe the method of Sayre has very little to recommend it, and those attempting to cure spinal curvature by this treatment must be ready to expect serious and at times alarming consequences, besides numerous disappointments.

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THE DIAGNOSIS AND TREATMENT OF COLLES'S FRACTURE OF THE RADIUS.

THE valuable paper on this subject, by Dr. MacLeod, which appeared a few weeks back in the JOURNAL, is one worthy of careful study by all those who are frequently brought into contact with injuries of this nature; and there can be no doubt that those who will make use of the suggestions therein given will experience greater ease in diagnosis, and greater success in treatment, than hitherto. After reading the paper, I had frequent opportunities in the Surgery at Guy's Hospital, whilst recently filling the post of House-Surgeon, of testing these suggestions; and, as more cases are seen there in a few weeks than are seen in private practice in many months, I trust I shall not be considered presumptuous if I offer some remarks on a few points in that paper, illustrated by cases.

First, as regards *diagnosis*. I would lay special stress on the value of the hollow perceived by the finger at the point of fracture, when the wrist is hyperextended, and the severe tenderness at that point. This formed a ready mode of confirmatory diagnosis in all cases where the fracture was suspected by the well-known deformity, and a much less painful one than the usual rotation of the wrist, and the attempts to get crepitus, which as often fail as not. But, in doubtful cases, its value was still more apparent: for instance, a woman about middle-age had injured her arm a day or two before by a fall on the hand. She had been to a private practitioner, who said she had sprained her wrist. She came complaining of much pain about the wrist, which, however, was not much swollen, and there was scarcely any deformity; the pain was most severe about the lower end of the radius and the styloid process of the ulna. The dresser could find no crepitus, and was inclined to agree with the doctor who first saw the case; but, on hyperextension of the wrist, a most evident hollow was apparent to the finger, and the pain at that point very severe. Without the assistance of this method, a right diagnosis would probably not have been made.

Second. Should an anæsthetic always be given when the fracture is reduced and the splints first applied, as Dr. MacLeod recommends? Its universal adoption in private practice would certainly be inconvenient, and in many cases impracticable; and, as far as my experience goes, I should say that, however advisable its use may be, it is not necessary in most cases. But I have found it necessary in some cases, and these have been those in which the fingers have been very stiff and contracted and the pain severe. On what this stiffness depends I do not know; but in my cases it certainly has not been commensurate with the amount of deformity. In one, a man of middle age, the fracture was put up in splints, after being carefully and, as I thought, effectually reduced; but the fingers remained stiff, and he had no relief from pain, which prevented his sleeping. The arm was a second time put up, and with much care; but still the severe pain was not relieved, and I therefore resolved to apply the splint under chloroform. The result was most satisfactory; for he complained afterwards of but little pain, the stiffness of the fingers in great part disappeared, and the case went on well to recovery. The other was a very similar case, in a woman about the same age. Pain and stiffness continued, and no union took place for three weeks. I then put up the arm under chloroform, and the case went on well to recovery. But, though an anæsthetic may not always be necessary, it is certainly advisable to use it when we wish as much as possible to avoid deformity. As to the splint recommended by Dr. MacLeod, its neatness, its lightness, and the admirable way in which it meets the necessary requirements, must commend it to all.

JOHN C. UHTHOFF, M.B., London.

CASE OF TETANUS: RECOVERY.

C. L., A VIGOROUS and ruddy-faced young man aged twenty-one years, came to my surgery on March 11th, 1879, having caught his hand in a hay-chopper. The ring and middle fingers of the right hand were severely lacerated; the end of the middle finger being cut away, along with the tip of the bone. Though the soft parts were much jagged, I determined to save all the tissue possible; so dressed the wound accordingly; using a little thymol ointment on lint dressing. He came a few times afterwards to have the parts dressed. But, on the 26th (fifteen days from the date of accident), I was requested to visit him at his own home. I found him suffering from partial trismus, being only able to half open his mouth; pains in the cervical spine, accompanied by occasional shooting pains down the right arm, which affected chiefly the middle finger. He could swallow comfortably, and was able to walk about much as usual; except that the muscles of his neck were somewhat rigid, causing his head to be slightly thrown back; tongue a little furred; pulse 80; respirations 20; temperature 100° Fahr.; urine free from albumen and sugar; specific gravity 1020. On further examination, I found the ring finger almost healed, but the other was actively suppurating, and I could just see the tip of the injured bone. His mother said that on the 23rd (Sunday), he was constantly gasping, and, on Monday and Tuesday, he complained of some stiffness about the jaws; but they had not thought these symptoms of any importance. I explained to them the gravity of the case, and proposed cutting away the jagged end of the middle finger and removing the injured bone. The father, however, refused to have it done forthwith, and proposed waiting until the following day. In the meantime, I got him comfortably placed in bed; the room made warm and darkened; and ordered him to be kept quiet. I also gave a brisk saline purgative, followed by scruple-doses of bromide of potassium; put a blister on the nape of his neck, and a bran-poultice on his hand. The following morning (27th), I was told he had slept irregularly. His pulse was 84; respirations 22; temperature 101.5°; trismus a little increased; head held rather more backward, indicating incipient opisthotonos. He still complained of pain in the cervical spine and down the arm on the side of the injury. Without further loss of time, I cut off the jagged end of the middle finger and the bone as far as half the middle phalanx, finding the injured phalanx split to the joint. On visiting him late at night, he said the pain had been much less both in the hand, arm, and neck, and he seemed more comfortable. He partook of milk freely, as he had done from the commencement. His mind seemed quite clear and all the senses normal. The bowels had acted freely; perspiration was profuse; the risus sardonicus was partially developed. 28th. The muscles of the trunk were becoming rigid; he had occasional spasms, producing slight opisthotonos; he perspired freely; the bowels had again operated; he urinated freely; there was some difficulty in swallowing, and he seemed to gulp liquids in a manner reminding one of the mode of swallowing in the early stage of hydrophobia. A rope was fixed to the ceiling, by which he could help himself considerably with his left hand. Both arms remained free from spasm. 29th. The trismus had increased, so that the tip of the tongue only could be protruded. He was taking milk and beef-tea well; had slept at intervals; but awoke with a sudden exclamation and spasm. The bromide was discontinued, and twenty-five minims of tincture of opium, with ten minims of chlorodyne, ordered to be given at night. I determined to give as little medicine as I could, consistently with the alleviating of the pain. Pulse 78; respirations 24; temperature 101°. 30th. The trismus was about the same; the muscles of the trunk were very rigid, and the rigidity extended to the right leg; exacerbations of spasm came on frequently, with corresponding remissions, like waves of energy; and, if his body were touched, a spasm would be excited. The condition of the trunk re-

minded one of the fixed stiffness of a corpse. He could take milk and beef-tea moderately well, but had difficulty in swallowing. Pulse 80; respirations 25; temperature 100.6°.

31st. He had experienced a restless night. The trismus was about the same; the rigidity of the trunk and right leg was complete; the leg was a little bent at the knee, but was otherwise of one uniform stiffness with the body. To-day, one of the spasms, stronger than usual, raised him off his back and threw him over on his left side, from which painful position he had to be assisted and placed on his back again. Pulse 84; respirations 24; temperature 102°; the urine was free from albumen and sugar; specific gravity 1029. I ordered a dose of the sedative every four hours until sleep should be induced. He took milk well, and occasionally a cup of beef-tea. April 1st. He had had a better night. Pulse 80; respirations 24; temperature 101°. The trismus and general rigidity were about the same. The left leg was movable and free from spasm, which had been the case from the commencement. I dressed the hand, and found the wound healthy and healing. The bowels were constipated; so I ordered a full dose of castor-oil. April 2nd. He expressed himself as much easier; partook of egg and milk freely. The paroxysmal spasms had occasionally forced urine from the bladder. He was ordered to take the sedative twice a day. April 3rd. From this date until the 10th, he continued much the same in every respect; at which time he began to open his mouth a little more, and the periodic spasms became less frequent. He now began to take one egg in a glass of good port daily, in addition to his milk. On the 15th, he ate some fried fish with a relish; had two eggs during the day, and as much milk as he wanted. April 16th. The jaws were relaxing a little more. He could eat fish with buttered bread. His condition was otherwise about the same. April 17th. He had taken more bread and butter and a boiled egg, together with an ample quantity of milk. Pulse 84; temperature 100.2°; respirations 22. April 18th. The risus sardonicus had almost disappeared; pulse 78; temperature 99°; respirations 20; and he continued to take a little solid food, and drank freely of milk. April 19th. The muscles of the abdomen were not quite so rigid, and he perspired less, but was much as usual in other respects.

April 22nd. He continued to improve in all respects; ate and masticated his food better. Temperature normal. April 23rd. For the first time since the right leg became rigid with the body, a little relaxation occurred, so that the patient could move the leg a little at the hip-joint, and he could also masticate his food better. He had been without medicine for several days; and said he had no pain, except a little aching in the right leg. April 24th. On dressing the hand to-day, I found the ring finger quite, and the other almost, healed. April 25th. He was still progressing favourably, and, for the first time since the attack, could straighten the right leg, bending both knee- and hip-joints. In the evening, a severe aching began in the right ear, and continued with slight intermissions during several hours. A little cotton-wool, steeped in tincture of opium, and placed in the meatus, gave speedy relief.

April 27th. He managed to get up and walk across the room. He continued to improve; when, on the 30th (the last day I visited him), he could walk about the house comfortably.

WILLIAM HORROCKS, M.R.C.S., Edgeworth.

A CASE OF IMPERFORATE ANUS.

THE following may be interesting, inasmuch as it bears evidence of the success attending the early treatment of cases of recto-vaginal abnormalities. On July 31st, I was called to attend Mrs. B. in her second confinement. The infant was a female. On the left of the raphé, between it and the pubic arch, was an outgrowth of a peculiar kind; it had the appearance of a knuckle of intestine covered with skin, beyond which was a small curved fleshy body, firm in texture, and in shape resembling an infantile penis. Between the two was a shallow sulcus. On further scrutiny, it was evident that the anus was absent, but a slight depression marked the spot where it should have existed. The following day it was reported that the child had been vomiting, and, though strong and healthy-looking at birth, she now looked wan and had an expression of distress. There had been much straining without relief. On examination, a small quantity of meconium was seen issuing from the posterior part of the vagina. The next day, August 2nd, Dr. Joyce of Cranbrook visited the case with me, and we conjointly agreed to the course pursued.

The child being chloroformed, a bent probe was passed through the vaginal opening into the rectum; at the site of the normal anus, the end could be indistinctly felt. Replacing the probe with a director, I slit up with a bistoury the tissue intervening, and made one cavity of the vagina and rectum. The rugæ of the rectum being apparent, the mucous membrane of its anterior part was dissected off to the extent of a few lines, but the connection between the rectum and vagina was so intimate that it seemed imprudent to further disturb it. Posteriorly, the coats of the bowel were easily dissected from their attachments, and then drawn down and connected to the skin of the perinæum by two sutures, one on each side: two other sutures united anteriorly the mucous membrane to the skin. A deep silver wire suture was then passed pretty deeply between the anus and vulva. A large quantity of meconium escaped when the rectum was opened; and since the operation none has issued from the vaginal opening. The wound has healed, and there seems every prospect of a sphincter-like action being maintained at the outlet. The outgrowth was not disturbed, although it became tense when the child cried; no communication could be made out as existing between it and the cavity of the rectum. It may degenerate in the course of time; at any rate, it can be dealt with at some future period.

JOHN TAYLOR, M.R.C.S., Ticehurst, Sussex.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

WESTMINSTER HOSPITAL.

TWO CASES OF ULCER OF THE STOMACH.

(Under the care of Dr. STURGES.)

THE following cases are of interest as illustrating some of the difficulties met with in the diagnosis of stomach ulcer at various periods of its course.

The first case especially shows how a distinct and typical instance of the kind may become obscure in its later stages only, and thus depend for its interpretation upon the past history. The second case shows an incident of stomach ulcer not in itself rare, yet so contrived as to render the discrimination between simple ulceration and malignant disease extremely difficult. There, too, if a correct diagnosis had been possible, it would have found its material in the early history of the patient.

[What follows is an abstract of the clinical notes of Dr. FOSTER of New Cross, at that time House-Physician. For the latter part of the case we are indebted to the kindness of Dr. BRISTOWE, under whose care the patient died at St. Thomas's Hospital.]

CASE I.—Ellen N., aged 20, domestic servant, a delicate looking girl of fair complexion, was admitted to the hospital May 9th, in a state of collapse, semiconscious, and cold, with constant hiccough and hardly perceptible pulse. She had been a patient under Dr. Fincham's care in March last, being then admitted with a history of epigastric pain after food, pyrosis, frequent vomiting, and hæmatemesis, symptoms at that time of three years' duration. With a restricted diet of milk with lime-water, rest in bed, bismuth, soda, and hydrocyanic acid, the patient had rapidly improved. The pain and vomiting entirely ceased; and at the beginning of April she was able to take beef-tea and light pudding. On the 10th April, she was sent to a convalescent institution. Here unfortunately she was allowed to take the ordinary diet; and on May 7th, after a hearty meal of meat and vegetables, sudden and violent epigastric pain occurred, followed by unconsciousness. She partially recovered, but still in her condition of collapse just described she again entered the Westminster Hospital. Nothing was now retained by the stomach but a little iced milk. Her temperature was 103.4°, and pulse 122; the abdomen was tumid, tympanitic, and painful on pressure; skin warm and moist; vomiting frequent. The patient lay constantly on her back, very prostrate, speaking with difficulty in whispers. For treatment, hot turpentine fomentations were applied, and iced milk was cautiously given for sole diet, with enemata of beef-tea every two hours.

On the day following, the vomiting continuing, enemata were given solely, nothing being taken by the mouth except a little ice and a quarter of a grain of powdered opium. This last, being well retained and apparently beneficial, was repeated every four hours.

On the 12th May (third day), there was extreme tympanites, temperature 104.2°, vomiting less frequent. The enemata were continued every two hours, brandy and laudanum being added; food by the mouth being rigorously excluded.

From this extreme condition (indicating plainly enough perforation and its immediate consequence in peritonitis), by persisting in the starvation treatment just described, the girl gradually mended. On the 25th, for the first time, that is, for sixteen days, she took and re-

tained a few teaspoonfuls of tea. There was now much less tympanites; the pulse was 102; and temperature, morning, 99°; evening, 103.6°. By degrees, from this time small quantities of beef-tea and milk were cautiously given, with an occasional vomiting; and by the 7th of June the enemata were discontinued.

She now began to complain of pain in the left chest, and had slight cough without expectoration. In this place, medium crepitation was audible, but there was no dulness. The evening temperature was now 104°, pulse 122, respiration 40.

It is upon these last symptoms that the interest of the case now turns. It will be seen in the sequel how they served to obscure the nature of the disease, and upon what a rare condition of the parts concerned they actually depended.

On the 18th June, the hospital having to be closed for repairs, it became absolutely necessary that the patient in her then precarious condition should be removed elsewhere. This hazardous undertaking, however, was successfully accomplished, with the kind help of Mr. Richard Davy, by means of a hammock of his invention. The patient reached St. Thomas's Hospital by this means without fatigue or injury, when she came under the care of Dr. Bristowe, to whom I am indebted for what follows.

At this time, as the foregoing abstract will in part indicate, the symptoms had by degrees become greatly modified from those we encountered when first the girl was brought to hospital upon the immediate shock and collapse of the ulcer rupture. She had now tenderness of the abdomen and moist sounds at the apex of the right lung, symptoms which, taken in connection with the girl's family history, and presently with the expectoration of fœtid and at last gangrenous sputa, simulated very nearly tubercular disease with peritonitis.

And, in fact, upon the girl's death in July, more than two months after the perforation, tubercles were found in both lungs, as well as in the peritoneum; but, in addition, and as the main source of the symptoms and cause of death was ulceration of the stomach. An ulcer situated anteriorly communicated freely by a small opening with a flat abscess lying between the diaphragm and the left lobe of the liver. Furthermore, this abscess had perforated the diaphragm and opened into the base of the left lung, and was, in fact, the source of the fœtid expectoration.

[Abstract from notes of Mr. GARMAN and Mr. BUTLER, Clinical Clerks.]

CASE II.—Annie H., aged 60, spinster, a thin anæmic woman, with no family history of significance, had been in failing health for eighteen months, the symptoms of the last four months being referred to the stomach, namely pain, sometimes intense, and usually worse after food, pyrosis, and occasional vomiting, liquid food being retained less well than solid; besides those symptoms, she had lost flesh rapidly. For the last ten days, little food had been retained. She occasionally vomited blood, but never in a large quantity.

It is not to the present purpose to detail this case at any length.

The patient slowly declined. Vomiting was not constant. She had no particular spots of pain. From time to time, she was fed by enemata. With the vomited matter, altered blood sometimes appeared. On examination of the abdomen, the stomach region appeared distended; no distinct tumour could be made out; but above the umbilicus, over a spot which was not always the same, the fingers encountered a resistance on deep pressure, the nature of which could not be further defined. During the last week of life, pulsation could be distinctly felt in this place. The woman gradually sank, and died after forty-seven days' residence in hospital.

From the age and aspect of the patient, from the variable character of the stomach symptoms, from the indistinct but not doubtful recognition of some solid body in connection with the posterior wall of the stomach, an opinion was formed that the disease was malignant. This diagnosis, however, proved erroneous.

On *post mortem* examination, the body was much emaciated. The stomach was dilated, but presented a hour-glass contraction, due, as it proved, to the existence of a large ulcer of its posterior wall, which had perforated and become adherent at its margin to the pancreas. This latter organ, in fact, formed the floor of a circular hole in the stomach, having sharp cut edges and a diameter of about three inches. There was a second ulcer about the size of a half-crown at the pyloric end of the stomach; and a third in the first part of the duodenum. Both of these presented the characteristic appearance of simple stomach ulcer. The other organs of the body were healthy.

BEQUESTS.—The late Mr. J. D. McMahon of Cork has left £1,000 to St. Patrick's Incurable Hospital, and a similar amount to the Mercy Hospital, Cork.

ABSTRACTS OF INTRODUCTORY ADDRESSES

DELIVERED AT

THE METROPOLITAN AND PROVINCIAL SCHOOLS.

On OCTOBER 1st, 1879.

DURHAM UNIVERSITY COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

THE lecture inaugurating the Session 1879-80 was given on October 1st, by Dr. DAVID DRUMMOND, Lecturer on Physiology, and Physician to the Infirmary, Newcastle-upon-Tyne.

The lecturer after welcoming the students, offered them on the part of his colleagues and himself all the assistance possible, to enable them to grapple with the many and extreme difficulties which would certainly beset them in their endeavour to attain to eminence in their profession. Fortunately, every branch of the tree of medical knowledge was hung with a variety of rewards which were within the reach of all who, having made up their minds to succeed, pursue their resolution with that unwavering zeal for which all successful men had been noted. He drew attention to a few cardinal features common to all who had won the highest rewards of the profession, which might almost be said to constitute the elements of success. The path marked out by successful men, if diligently followed, was sure to lead to honour and reward, but, like the "golden thread" which led to the king's palace, it conducted the traveller on a journey beset with difficulties. But to travel this path nothing daunted by its difficulties patience was required; for those who meant to win must encounter a variety of impediments, and be prepared to undergo the severe discipline of mortification and disappointment on their first entering into the calling. The talents and skill of a physician or surgeon could not be known immediately on his announcing himself a candidate for confidence and employment. He must wait on the slow operation of time and on the intervention of circumstances favourable to the disclosing of his professional abilities. It must be, however, a very peculiar concurrence of adverse events which could finally obstruct the success of persevering diligence and competent professional acquirements. It was many years before Jenner could get the profession to pay the slightest attention to his discovery. Yet he had patience, and worked on convinced of its importance; he was even ridiculed, but nothing abashed he brought the subject so frequently before the medical society of which he was a member, that at length the topic was denounced as a nuisance, and his hearers, to whom he failed to communicate his own enthusiasm, positively threatened to expel the orator if he continued to harass them with his importunate discourse; at length, however, he overcame this prejudice. It was only after twenty-five long years of patient endurance that Harvey's views on the circulation of the blood were received and even to a small degree appreciated. Mr. Hey, the eminent surgeon of Leeds, was engaged in practice ten years before he could secure even a small competence, but success came at last and with it renown. Hundreds, nay thousands, of examples could be adduced of patient endurance on the part of those who ultimately enjoyed the success they so richly deserved. One well known writer when alluding to this subject remarks, "There is no other quicker or easier way to obtain eminence in your profession; the good opinion even of your fellow students, much less the confidence of your brethren and of the public is not a thing to be taken by storm, by a sudden rush on the part of some bold adventurer, even though clad in triple brass. None suddenly jump to any permanent success. Such acrobatic attempts are perilous even for the most skilful mountebanks, and usually end in disastrous failures." But whilst the exercise of patience was incumbent upon all who would attain eminence in their profession; yet it was simply the scabbard that holds the sword, a passive element in the secret of success, and alone could bring forth nothing but the Dead Sea fruit of incompetent deception; like the apples of Sodom, beautiful on the outsides but bitter to the taste, and when mature filled with fibre and dust. The lives of men who have been shining lights showed that they did not reap their reward because of patience alone, but obtained their just recompense through industry and diligence, which were, as had well been said, "The only offerings on our part for which either fortune and fame will exchange with us the riches of their rewards; for no certain advance to a high professional position can be gained except it be purchased by the free expenditure of such coin and currency." Mr. Hey, to whom I have already alluded, was so industrious as a student, that during a winter session he devoted

as much as twelve hours a-day to the study of anatomy; in the lecture and dissecting-rooms, Simpson when writing to his friends, soon after he had been appointed *interim* lecturer on pathology, explaining how he managed to get through so much work, says "I rise regularly at three in the morning in order to get all ready by breakfast-time." Marshall Hall's illustrious career was inaugurated so well by such an industrious studentship, that not only did he master the so-called preliminary subjects of his profession, but he found time to collect materials for his work, afterwards published in 1811, on *Diagnosis*, which work might be considered to be the first step to fame in Dr. Hall's career. In after life, when investigating reflex action, he worked at this one subject not less than 25,000 hours whilst in the midst of a busy practice. Such colossal capacities for work were only the result of strong determination and perseverance. It was by this means that Sir James Simpson arrived at the power of concentration and untiring application which rapidly brought him to the front. Early in his career as a student, a friend with whom he lived in Edinburgh wrote to Simpson's brother, referring to the amount of work they were doing, as follows: "I can do with four hours' sleep; John Reid (a fellow student, afterwards the Professor of Anatomy to St. Andrew's University) can do with six, but I have not been able to break in James yet." Before long, however, as we have seen, he could undergo as much deprivation and hard work as any of his fellow students, and at times would sit up all night to complete a task he had commenced. With but very few exceptions, the men who have enjoyed the highest reputation in their profession have been noted for their industry from the very first. They commenced the Olympian competition in no sluggish manner, winning for themselves at the outset a reputation for industry, determination, and zeal, which stamped them amongst their fellow students as formidable opponents in the race of life, and led their teachers to predict for them, in due season, a rich harvest of honour and reward. John Hunter's success may be said to have commenced when a student. When he began the study of medicine in London, and first joined his brother William, he attracted so much notice through his indefatigable energy in the study of anatomy, that his subsequent fame seemed almost foreshadowed. With such unflagging zeal did the brilliant Sir Astley Cooper work as a student, that, at so early a period as his second winter session, he established for himself a reputation as an authority, which increased year by year until his fame was world wide; but it had its origin in the dissecting and class rooms. It is true that Cheyne, the famous physician, sadly neglected his opportunities as a student; but he had not possessed a qualification long before he became dissatisfied with his prospects, being anxious to distinguish himself in his calling. He was conscious that, unless he made a strenuous effort without delay, he must be content with a subordinate position, which his vanity would not have permitted him tamely to occupy. He therefore left the Horse Artillery, in which he held a commission as a surgeon, and turned his attention to pathological anatomy, under the guidance of Sir Charles Bell, and, working with a will, he retrieved lost time; and with him, as with all, industry brought its substantial reward.

The lecturer then continued: Would that I could convince you of the extreme importance of the period in your career which you are now passing through; would that I could, by striking the anvil of medical biography, scatter sparks of ambition which, falling upon the inflammable material of your true manhood might set up a conflagration of enthusiasm and determination to succeed, whose flame of zeal would burn up the dried stubble of slothful and pernicious customs, and form and consolidate, as the fire does the potter's clay, wavering and uncertain tendencies into excellent and important traits in your lives as successful men. Be assured of this, that you are now sowing the seed which will soon produce the plant that will grow into the tree that will bring forth the fruit in after years. The plant may be tenderly cared for, the tree pruned and treated in the most skilful manner; but, unless the seed be good, the subsequent growth in the different stages will be stunted and the fruit sour and disappointing, and even though shone upon by the bright sunshine of trustworthy and sympathetic friends, will never become mature; and remember, when the tares come up and flourish in profusion, whilst the wheat is scanty and poor, it cannot be said that "an enemy hath done this", for, strip off the husk of metaphor, and within is found a sweet kernel of truth or fundamental principle underlying all success, namely, you alone are responsible, and within your grasp are ripe and golden fruits, such rewards as our profession can offer if you will but stretch forth your hand in energy and seize them. Let me be thoroughly understood in this matter; in speaking of the rewards, the acquisition of which depends entirely upon a voluntary effort on your part, I do not refer to fame, or rather as it now-a-days would be better called notoriety, for surely she is a fickle goddess to worship, and her votaries are ofttimes disappointed, and too often the sacrifices she demands at her shrine are the life-blood of professional honour to give place to deception and charlatanry, for, as Lord Bacon has observed, "the weakness and credulity of men are such that they will often prefer a mountebank or witch before a learned physician". No! I refer to much more satisfying rewards, honours which you can obtain in an honourable way, and which are not purchased at the expense of self-respect and virtue, but by the legitimate coin of honest work and perseverance. Be energetic, be zealous, be conscientious in your work as students; and, having mastered the different subjects which will be presented to your notice and formed the habit of work, you need have no anxiety for your subsequent success.

Cultivate early the habit of observation. So soon did Galen begin to observe for himself, that before he was twenty-one he was the author of many medical works. Sir James Y. Simpson's great success was undoubtedly due to the early and constant exercise of this faculty; his first paper on the "Diseases of the Placenta", written when but a youth, showed to what an extent he relied upon his own personal observation. The illustrious Stokes, when but twenty-three or twenty-four years of age, did battle for the stethoscope, in order to prove, to use his own words, "its extraordinary utility as an assistant to diagnosis", hurling against those who spurned and despised it arrows tipped with zeal in the cause of truth and "winged" with accurate observation.

All eminent men in our profession have been noted for this important feature. In looking into the lives of a large number of those who were leaders in their particular walks, I was much struck with the fact that the degree of eminence at which they arrived seemed to be in a great measure in accordance with the extent to which they possessed the faculty of observation; fortunately, it is a faculty that can be cultivated and sharpened like memory, and will amply repay the most careful attention.

It is extremely important to have a method in your work in order to avoid going over old ground and thereby taking up a great deal of extra time, and in the long run failing to arrive at the much coveted excellence in the particular line you are pursuing. As few of us possess the memory of a Pascal, and as professional lore consists in a great measure in so-called facts, in the distinction of which as separate realities there is often a great nicety of perception required, and consequently considerable mental exercise, it behoves us to make the task as easy as possible. A good plan, and I think one calculated to reduce to a minimum the necessity for repetition whilst amassing a maximum amount of information, is one I have found extremely useful, viz.: When you come across in your reading something which it is all-important to recollect, write down the bare fact in a book kept for the purpose, with a brief note relating to the exact place in the work in which it is found, and where it is elaborated. By this means, you will in time compile for yourself a miniature practice of medicine or surgery, and, by formulating an intelligible index, it can be consulted readily. Without some such system, you will find it extremely difficult to acquire a clear and precise appreciation of the importance of symptoms, especially when you come to study nervous diseases, the differential diagnosis of which depends so much upon the proper interpretation and keen appreciation of the different symptoms, consequently it is necessary to be so familiar with these facts and their relative importance as to be able to call them up at will, and in order to do so the mind has to become "clearly defining", to cull a phrase from microscopy, by which I mean there should be no shading off and confusing, but the mind should be able to grasp and distinguish the facts that are presented to it in much the same way that the eye can with a good microscope recognise minute details which in an inferior one are totally absent, or so indistinctly set forth as to render recognition impossible. This power of concentration, like that of observation, can also be cultivated, for, though men may be born poets, they certainly are not born physicians and surgeons.

Place, from the very beginning of your professional career, all your hopes and earnest expectations of advancement upon the breadth and depth of your medical attainments alone; do not trust to friends, or to the advantages likely to accrue from the supposed possession of some amiable quality or taking manner; for recollect that the self-interest of humanity forbids that your character, as a social friend, should be the entire grounds upon which you are entrusted with a valuable life in a case of danger or doubt. But be independent, and put on a firm front; for decision is one of the most important characteristics a medical man can possess. Choose your particular line, if you have a leaning in any special direction, and keep it steadfastly, advancing with all your energies; not allowing other paths which may intersect your high road to lead you off, even though apparently more pleasant than your own walk. Hope, the talented author of the *Treatise on Diseases of the Heart*, having discovered that Bailie, the most celebrated physician of the time in London, owed much of his success and eminence to his

knowledge of morbid anatomy, although he (Hope) detested beyond description—perhaps more than any man who eventually overcame the dislike—the pursuit of anatomy, yet, he determined to concentrate all his powers on this the most essential, but to him least agreeable, of all his studies; and at length produced his work on morbid anatomy, the first treatise of the kind published.

Syme gave up a certainty, as an anatomical teacher, to take to what he considered to be his particular walk, that of surgery; although, in making up his mind, he went against the wish of his friends, who entreated him to take to general practice, as the field of surgery was already filled up; but he turned a deaf ear to such persuasions; his mind never contemplated failure; he always looked hopefully forward to succeed by dint of integrity and perseverance. Should you, convinced that

> "There is a tide in the affairs of men,
> Which, taken at the flood, leads on to fortune",

be disappointed early in your career, in your efforts to get an appointment, which at the time may seem to you to be essential to your advancement and ultimate success, do not be cast down. Simpson, when writing in after years of his defeat in an attempt to gain an appointment as a parish surgeon, in a small village on the Clyde, remarked that, had he been successful, he might have been there still, a village doctor.

To those of you upon whom fortune may, so far, not have smiled as she has upon your fellows, and who may feel pinched and at times embarrassed in a pecuniary sense, I would say, be not downhearted; for the history of our noble profession teems with the names of those who, having commenced in a humble way, in extreme difficulties, afterwards, by their gifted talents or strenuous exertions, rose to the highest eminence in their profession. William Hunter and William Cullen, whose names are household words in medicine, being unable to improve their medical education as they desired, entered into a partnership, the principal ambition and design of which compact was to procure the means whereby they might carry out their views and requirements; and, to further this honourable object, it was stipulated that one of them should be allowed alternately to study, during the winter, in some medical school, whilst the other should continue to carry on the practice for the profit of both. I would here humbly throw out the suggestion that the example of these veteran members of our profession might be followed with great advantage by some of my hearers to-day. Those of you who have ambition, backed up by zeal and enterprise, and being desirous of grasping the golden fruit of merited success, would do well to attend to one important item in the secret of the success of such men. Cullen took the first term, and passed his winter in Edinburgh, where he afterwards so ably lectured on clinical medicine. William Hunter chose London for his place of study when his season arrived, and, as we know, his selection was propitious to his future progress. To those of you who hope some day to excel in surgery, and who aim at being leaders in that particular line of our calling, I would say, nay, I would earnestly urge you to devote yourselves especially to the study of practical anatomy. I would be glad to be corrected by the distinguished members of the surgical staff of our Infirmary present, should I err on this point; but I feel assured that they will agree with me, when I say that the key to success in surgery is to be perfectly familiar with practical anatomy. Sir William Fergusson first attracted attention by the skill he displayed in dissection, so much so that Dr. Robert Knox, whose pupil he was, appointed him demonstrator of anatomy to a class numbering four hundred students. Of Sir Charles Bell, the distinguished professor of surgery in the University of Edinburgh, we are told: "His attention was early turned to anatomy; for, while a mere youth, he assisted his brother (Mr. John Bell) in his anatomical lectures and demonstrations, and, even before he became a Fellow of the Royal College of Surgeons of Edinburgh, he had published the first part of his plates of dissections." I have already alluded to the zealous way in which Mr. Hey attacked and overcame his anatomical difficulties. John Hunter's success as a surgeon undoubtedly depended, to a very large extent, upon his almost perfect knowledge of anatomy.

Such was Syme's indomitable energy in the perseverance of the study of anatomy that, when he had completed one year's dissection, Liston, who was just commencing to lecture on the subject, appointed him as his demonstrator to a class of sixty students.

Imitate the zeal and noble example of these men—nay, more—strive to excel in every branch of your medical studies; and, by so doing, you will not only do much to wipe off the slur cast upon us by the physician-poet Garth, when he wrote the lines—

> "Like a port sculler one physician plies,
> And all his arts and all his skill he tries;
> But two physicians, like a pair of oars,
> Conduct you faster to the Stygian shores"—

but you will carve out for yourselves an honourable career, pregnant with repeated successes, the rounds of the ladder by which you will climb to eminence; and having reached such a position by genuine work in the path of rectitude, yours will be the most supreme happiness granted to men on earth; for it will be yours to say—

> "I live for those who love me,
> For those that know me true,
> For the Heaven that smiles above me,
> And waits my coming, too;
> For the cause that needs assistance,
> For the wrongs that need resistance,
> For the future in the distance,
> For the good that I can do."

SHEFFIELD MEDICAL SCHOOL.

THE introductory lecture on October 1st was delivered by Mr. SIMEON SNELL, Ophthalmic Surgeon to the Sheffield General Infirmary, and Lecturer on Anatomy and Diseases of the Eye at the Sheffield School of Medicine.

The lecturer, in welcoming the new students, informed them they would ever find the kindly helping hand stretched out to them, and congratulated them on selecting as their calling a profession which was one of the noblest. The healing art had obtained a wider meaning than the name expressed. It had assumed the offensive, and was directed to the prevention of disease. Being thus concerned with the well-being of a nation's sons, it must influence more and more the action of our legislators. After stating that it was not his intention to preach a sermon or homily on good conduct, preferring to leave it to their common sense to steer clear of the shallows and quicksands that might ground them, as well as the sharks, in the shape of lazy, idle fellows, the bane of college life, the lecturer proceeded: "Happy were those who had laid in a good general education before commencing their medical studies. Those who may have devoted attention to any branches of natural or other science would do well to maintain their interest in them, and not to neglect any knowledge they might have acquired of modern languages. In these days of free interchange of thought and practice between Englishmen and their continental *confrères*, and in English literature, so much indebted to earnest workers in both Germany and France, the advantage of these latter languages to the truly zealous student could hardly be over estimated. As members of a liberal profession, their education should also be liberal and general, and not merely confined in extent to satisfy the modest requirements of a preliminary examination. At present, a student might go through his curriculum without a knowledge of Greek, to which so many medical words owed their derivation, or of German, which was the language of a nation of pioneers." The necessity for thorough honest dissecting-room work was insisted upon as the only way to learn anatomy, and the importance of physiology was alluded to. Botany was said to be out of place in a medical curriculum, and chemistry was thought to be better made a subject of preliminary education; while respecting midwifery, the proposal emanating from the Obstetrical Society for a more lengthened period devoted to it was supported. It was, moreover, deemed unfortunate that it was possible for one to pass through the curriculum, and become qualified with little knowledge of practical obstetrics. The number of cases necessary to be attended was deemed too small to supply the requisite experience. In dealing next with hospital practice, the student was strongly advised to devote himself earnestly, for the first two winters, to anatomy and physiology. "Attendance at the medical school during the period", it was said, "should be regular and constant; on hospital practice, occasional. The two winters allowed for learning anatomy were ample, if properly used; but opportunities then lost were with difficulty regained. After this, and when their first college was passed, was the time for them to throw themselves with zest into clinical work at the hospitals." Speaking afterwards as to the spirit with which their studies should be pursued, the lecturer remarked that "There was no royal road to the study of medicine but to obtain a correct knowledge of their profession, and to become good practitioners of their art, much steady hard work was necessary. It was fashionable with some to take life easily, neglect a great part of the session, and then, by a spurt, try to regain what had been lost by previous indolence; but this plan of working was not the course to be pursued, for

> "To climb steep hills
> Requires slow pace at first";

and by steady, regular, and sustained labour, more was attained than by brief periods of hard work, succeeded by longer ones of comparative rest. An eloquent and distinguished teacher had recently forcibly described the manner in which their work should be undertaken. After mentioning that "steady, moderate industry achieved greater results than fitful application of the severest kind", he said: "It is not the man who wastes weeks or months in frivolous amusements, and

then makes up for lost time by spasmodic efforts of fierce labour—the midnight oil burning before him, black coffee by his side, cloths steeped in vinegar cooling his fevered brow—it is not this man who succeeds in raising himself to eminence, or in adding his mite to the sum of previously acquired knowledge. No; it is the steadfast toiler, who never wastes the day he cannot recall, who (in the fashion of Titus of old, marked each day by an act of goodness) never allows twenty-four hours to slip away without having performed his act of work; who 'hives wisdom with each studious day'. It is the old story of the perpetual drop, drop, drop, eating its way through the rock, while violent occasional torrents pass over, leaving its surface unscathed." This was the spirit in which their work should be performed.

One was sometimes asked, and pained by being so asked, "How much was required of them to pass their examination?" But it should be borne in mind that their duty was to become conversant with their profession, and not merely to pass examinations. The latter were but necessary gates to be passed along the road, and only minimum tests of their capability to practise their calling. When they recollected the seriousness of their profession, in holding the balance of life and death in their hands, he trusted none of them would merely wish a proficiency sufficient to carry them safely through the different portals. Moreover, the knowledge they now laid in was their capital, and it was their commodity which, with diligence and discretion, they put out to usury in the exercise of their profession. The way to pass their examinations was to prepare for practice, and not for the examinations themselves. The knowledge they required was one that would stand them in good service at the bedsides of their patients, and it was now that students, by proper use of their opportunities, would gain the experience so conducive to that end.

> "Experience is by industry achieved,
> And perfected by the swift course of time."

The lecturer then passed to the consideration of ophthalmology, which he thought required more attention from the student than it generally received. There were few medical schools in which a course of ophthalmic lectures did not appear in the prospectus, but as none of the examining boards required attendance on these lectures, they were not so much taken advantage of as they should be.

A memorial from ophthalmic surgeons has recently been presented to the General Medical Council, urging the making of ophthalmology of more importance in medical studies.

Ophthalmology had, during the last five-and-twenty years, undergone a complete revolution. The discovery of the ophthalmoscope had rendered clear and distinct what was before unknown or little appreciated concerning many diseases. It possessed an extensive literature and a host of earnest workers, and to obtain a complete knowledge of it and its multiform operative procedures, required much laborious and continuous study, and could only be pursued by those specially impelled by aptitude, opportunity, or circumstance. Cases, the subject of eye diseases, however, were met with not rarely in practice, and the students should consequently acquire such a knowledge as would aid them in the recognition of these diseases, and their treatment. Moreover, the study of ophthalmology would beget habits of precision, as it required and compelled accuracy in observation; and in one of its branches, that dealing with the anomalies of refraction and accommodation, closely approached an exact science; also, in connection with general diseases, a knowledge of ophthalmology was of high importance. Dr. Hughlings Jackson had said he considered it the luckiest thing in his medical life that he commenced the scientific study of his profession at an ophthalmic hospital. The discovery of the ophthalmoscope by an Englishman, though, by an ophthalmic surgeon's supineness in not recognising its value, reinvented by the German Helmholtz, had produced an upheaving in medical science second only to Laennec's immortal contribution to our means of investigating disease. The optic nerve and retina being, as the history of their development demonstrated, portions of the brain projected as buds or vesicles towards the surface, the ophthalmoscopic appearances they presented were necessarily of interest and value in cerebral diseases. Examples of its usefulness in the diagnosis of these diseases were then mentioned, and the routine use of the ophthalmoscope was urged, in all cases of suspected brain-lesion. Not, however, in cerebral and spinal diseases merely was the ophthalmoscope of general medical service. Visible alterations in the retina were also produced by diseased conditions of the kidneys and heart, as well as by leucæmia, syphilis, hæmorrhagic diathesis, diabetes mellitus, pernicious anæmia, purpura, Bright's disease, etc. Whilst the discovery of apoplectic patches in the retina often pointed to grave apprehension as to the state of the circulatory system, and embolism of the central artery of the retina showed what occurred in consequence of embola in other nervous tracts. Again, the form of optic nerve lesion associated with the effects of tobacco and alcohol, illustrated the results of these agents on the nervous tissue. The ophthalmoscope was "an arm of precision" which was of great practical use "in detecting disease of the brain or spinal cord, and it had this great charm, that its use must favour a spirit of industrious observation, and must favour also that wholesome disposition of mind which welcomed any facts, however far away they might seem to be from traditional doctrines and dignified theories".

The speaker next passed to the consideration of the muscular apparatus of the eye. To ensure perfect sight, necessity existed in the eyes for their exact adjustment to allow of impressions being received on a certain part of the retina; any deviation from this was productive of derangement of vision. Here also, on account of the symmetry of the two organs and their consentaneous movements, slight degrees of paresis of the muscles were noticeable, which, in other and differently arranged parts, might escape detection. The diplopia caused by these deviations was often accompanied by vertigo. In estimating the cause in any case of vertigo, the possibility of its being ocular in origin should not be overlooked. The ready manner, also, in which the smallest disturbances in the third, fourth, and sixth cranial nerves could be recognised, had been of signal service in the diagnosis of intra-cranial mischief.

The association of a form of corneal inflammation with peculiar knotched and peggy teeth, indicative of hereditary syphilis, had been of use in aiding to assign to their proper cause ailments of doubtful character. As regarded anomalies of refraction, Hughlings Jackson had recently mentioned cases with distressing head-symptoms, which were relieved by the correction of the refractive errors by the proper adaptation of spectacles; and ophthalmic surgeons met with similar cases, and were familiar with the relief afforded by the appropriate treatment.

The development of pathological inquiry had been fettered by our imperfect knowledge of healthy function. The manner in which the various ocular structures were open to inspection, and in a way which was nowhere else attainable, had afforded it valuable assistance. He referred to the help gained to the pathology of inflammation by that process set up artificially or by disease in the cornea.

The next portion of the lecture was addressed particularly "to those students soon about to commence the responsibilities of their profession". After expressing the hope that in reality they would always remain students, some observations were made as to their relations to the public and the profession. Duties to both, it was said, "devolved upon them directly they became legally qualified practitioners". Some of their duties to the public were discussed, and then the lecturer proceeded: "I am not, however, aware that we owe it to the public to ask of them as little remuneration as possible for our services, as some by their actions might lead people to suppose. I refer particularly to the style of practice sometimes adopted under various guises, in which patients may be attended for absurdly low charges, barely adequate for the supply of decent drugs, and if such are used, not enough to provide the merest remuneration to the professional attendant. It is well known that the public estimate of a professional body, like that of individuals, is in great measure in proportion to the value they set on themselves; and thus it is that the reduction of medical fees to such infinitesimal ones, in these instances, will, if the practice be continued, be felt through the entire profession, and produce injurious effects. I have thus touched upon this subject, because, in commencing practice, temptations may beset you. I trust, however, you will cast them on one side, and discountenance any such proceedings as I have mentioned, as being injurious to your profession, and of very questionable benefit to the public. In all your and our dealings with the latter, let our conduct be characterised by straightforward manliness, and while remembering what is due to it, not forgetful of our obligations to our profession. May the words which Shakespeare puts into the mouth of one of his chief characters be each yours—

> "'Tis not my profit leads mine honour;
> Mine honour it."

The remainder of the lecture was devoted to pointing out the duties they owed to their profession, and asking them to be jealous of its interests. "Directly", it was said, "you are enlisted in its ranks, it not merely demands that nothing be done by you derogatory to it, but, moreover, requires of you that your energies be given to the upholding and advancement of its interests." The address was brought to a termination as follows: "I have now, gentlemen, touched upon a variety of topics. Had time permitted, several of interest still presented themselves. The agitation for more complete education and a more competent supreme head in medical affairs, has culminated in the present select Committee on the working and constitution of the Medical Council, and the unity of Examining Boards. Much has already been said and written on this very important subject, and one might have

been tempted to add his question to the discussion, believing, as I do, in the desirability of and necessity for legislation; but I feel I have already occupied your time and taxed your patience sufficiently. I thank you, therefore, for the kind attention with which you have listened to my address. Descartes, I believe it was, who said "That, if ever it became possible to perfect mankind, the means of doing so would be found in the medical science". In conclusion, I would express the hope that you may find comfort and joy in belonging to such a profession; that success may attend you; and that some among you, at least, may become ornaments, and excite the just pride and emulation of those around you. Now is your opportunity for laying the foundation of all these, or by negligence courting the reverse.

"There is a tide in the affairs of men
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is found in shallows and miseries."

And again—

"Men at some time are masters of their fates;
The fault is not in our stars,
But in ourselves, that we are underlings."

LEEDS SCHOOL OF MEDICINE.

THE Introductory Address was delivered, on October 2nd, by Mr. G. ATKINSON, F.L.S., Surgeon to the Leeds General Infirmary, and Lecturer on Surgery and Comparative Anatomy at the Leeds School of Medicine.

The lecturer, after welcoming his audience, proceeded to sketch the outline of the history of medical education in this country. Up to the year 1815, no qualification was necessary in order to practise medicine. Qualifications were to be had, but none were compulsory; nor was there a prescribed course of study for those who sought the diplomas of the examining bodies. The Royal College of Physicians was incorporated in the fifteenth year of King Henry VIII. Before this, the Bishop of London and the Dean of St. Paul's had the privilege of granting diplomas to exercise the professions of medicine and surgery. In these times, when king or prince were ill, the Privy Council selected for attendance on the royal persons those doctors who were "most profound, sad and discreet, groundedly learned, and deeply studied in physick". The same monarch, Bluff King Hal, confirmed to the surgeons of London a charter granted by Edward IV, by an Act which united the surgeons' and the barbers' corporations under the title of "barber-surgeons". It is difficult for us now-a-days to realise that this Act remained in force till so very near the present time, that Mr. Abernethy used to tell his class, "Would heart of man e'er think it, even I myself have doffed my hat to barber-surgeons". It was reserved for the professors of our art at the commencement of the present century to raise the nobility and dignity of surgery, and by their talents to verify the motto of our college, "Quæ prosunt omnibus artes".

It was in 1800 that the Royal College of Surgeons was incorporated by charter; but it was not until the passing of what was known as the Apothecaries' Act, in 1815, that it became illegal to practise without a qualification. Means for providing professional education now became a necessity. A wonderful activity began to be evinced in affording students an opportunity of hearing systematic courses of lectures, first at the London hospitals, and, in the course of a few years, in several provincial hospitals also. The Apothecaries' Act had, no doubt, serious drawbacks, but, nevertheless, it worked well in the main; and, during the thirty years or so that it remained in full force, it produced a generation of self-reliant practitioners—men of strong common sense and ready resource. But in due time the cry for educational reform began to be heard in the ranks of the profession, as in the world around them. The Medical Act of 1858 introduced a most wholesome reform. A preliminary examination in arts was made compulsory before a medical student could be registered as having begun his professional studies. And now again the thoughts of our reformers are deeply exercised on sundry vexed questions. Only the other day, a Committee was appointed by the metropolitan branch of the British Medical Association to draw up a series of questions for circulation among teachers of the medical schools and general practitioners, calculated to elicit their experience and opinions on proposed changes, with a view of simplifying and rendering more practical the medical curriculum. Another session of Parliament has passed without our obtaining the long-needed new Medical Act, to which we look for emancipation from some of our difficulties; but "it is a long lane that has no turning", and our hopes can scarcely be much longer deferred. Should the new Bill become law, much perplexity would be done away with by the establishment of a conjoint board, whose examination—sufficiently high in standard to be a real test of the candidates' efficiency—would be uniform throughout the whole kingdom, and admit men to the exercise of the profession with a diploma equivalent to the two which are now necessary for the double qualification in medicine and surgery. Whilst this pass examination would thenceforward be all that was needful to enable a man to practise, it would not, of course, prevent any who were anxious for further distinction to graduate in either branch of the profession at one of the universities, or to acquire the diploma of membership or fellowship of any special college or corporation. Those purely scientific subjects, certificates of attendance on which are required by various bodies, such as inorganic chemistry, biology (including botany and zoology), and physics, should in all cases form part of the preliminary general education and examination—and be dispensed with before commencing the special study of human anatomy and physiology—instead of being included, as some of them now are, in the first summer courses.

The question has been recently asked, "Is it desirable that a certain period, previous to admission to a medical school, should be spent (by an intending student) with a general practitioner, in the form of an 'articled pupilage'? If so, (*a*) how long? and (*b*) which of the preliminary scientific subjects of study should form part of his training?" Now, this question appears to indicate a feeling that we have lost some good thing by the abandonment of the old apprenticeship system, and to suggest whether a partial revival of it might not be made to fit in with the preparation for a preliminary examination in science. But I venture to think it would be beginning at the wrong end. The student's time is needed for other purposes; the practitioner is in general an indifferent tutor; and the student occupies a false position in being set to compound medicines before he knows anything of practical chemistry or the properties of drugs. If he be placed with a medical man, it should be simply that he may enjoy the privilege of a settled residence, and the advantage of such counsel and assistance in his studies as his house-master is able to give him. No assistant's work, however slight, should be expected of him until he have concluded his second winter and passed his primary examination in anatomy. A man's whole time is required for school work, hospital and private reading, so as to enable him to go up with comfort to himself and the confidence of his teachers that he will pass.

It has long been a reproach to English medical students that so few of them graduate in medicine and surgery, compared with the proportion of those who do so in Scotland and Ireland. Nor has the explanation been far to seek. The length of time required, the necessity for residence, and consequent expense at the older universities, will abundantly account for it. The University of London, whose charter dates from 1836, was intended to meet this want by throwing open its degrees to all who had matriculated there, no matter where their subsequent education was completed. But so numerous and difficult have the examinations been made, that, notwithstanding this concession, those only who (as was well said the other day) combine the rare advantages of having the best heads, the longest purses, and the most time, can aspire to what is justly styled the "blue ribbon" of the profession. Under these circumstances, it may be supposed that the recent announcement to the effect that the Privy Council were being memorialised to grant a charter for a new university for the north, which, among other things, was to confer medical degrees, was hailed by many as the harbinger of good news, and that the deficiency so long lamented was about to be supplied. It was expected that a scheme which emanated from so great, noble, and liberal a body as Owens College at Manchester would be characterised by a generous desire to assimilate its plan to that of the German universities, in so far as freedom to all comers is concerned. But it was found not only that the powers sought by the Victoria University would limit the degrees to the students of schools affiliated with her, but that the terms of affiliation were such as could not for many years to come be complied with by any other school than Owens College. In other words, the College stood declared as the University. Let it not be supposed that the provincial schools, in the almost unanimous opposition which they have offered, and offered successfully, to the claim of the Victoria University to grant medical degrees, are actuated by "jealousy" of that great and distinguished school. True it is that they have motives of self-preservation which they are perfectly justified in maintaining, and which they are not ashamed to own. Strange would it be if, after generations of good and honest work, they should tamely lie down and allow Owens College or any other scientific Juggernaut to ride over their heads. But we are all fully alive to the need of a free and popular degree in medicine and surgery; and whenever such can be granted by an university which invites candidates from all duly recognised schools of medicine, without imposing unequal terms of affiliation, then will the whole English profession unanimously hail a reform so benignant to its members and so advantageous to the public.

There is perhaps nothing more strikingly characteristic of our times than the activity manifested by men of science, and particularly medical

men, in the investigation of sanitary problems, devising methods for the remedy of insanitary conditions and the protection of the public health. Nor are their painstaking and often self-denying efforts less remarkable in trying to impress upon the public mind and on the Legislature the conclusions at which they arrive. Ten years ago, the British Medical Association were induced to institute a special section for deliberation on Public or State Medicine; and already the work of this section has been made to include so many subjects as to become unwieldy from its extent. But, in contrast with all this, what do we see in results? A great deal of machinery has been set to work, but its wheels do not run smoothly. Medical officers of health have been appointed throughout the country, but much of the good they might do is made to depend upon their individual energy or suppleness; and those who best know their duties and are anxious to discharge them are too often hampered and hindered by local authorities. Qualifications in State Medicine have been established at several of the universities, but the Local Government Board has not yet made the possession of this qualification compulsory upon their health-officers. Inspectors of nuisances and smoke-inspectors have been appointed, but their hands are too often tied by official offenders. Much good has been effected in our own town by the provision of a plentiful supply of pure water on the one hand, and by the purification of sewage on the other. A great public service, too, has been rendered by the publications of two of our medical fellow-townsmen, Mr. Teale and Mr. Copley Woodhead. But much yet remains to be done. Of what use is it to expel the fiend of sewer-gas from our homes only to be poisoned as soon as we go into the streets, or even put our heads out of the window? The all-important subject of the ventilation of our main-drainage has yet to be dealt with. It is the property of gases, in closed tubes, to ascend to a higher level. Thus, the higher you go, the greater the nuisance; and the deluded ratepayer who selects his residence on some hill-top, in the legitimate hope of enjoying fresher air and a healthier situation, is invaded, the moment he opens his door, by the quintessence of effluvium from a dense population! But sewers are not the only places where ventilation is required. Domestic dwellings are sorely in need of better provision in this respect, whilst improvement Acts leave untouched that most abominably vicious system of back-to-back houses, than which, I do not hesitate to say, there is not a more fertile source of ill-health, nor a more cleverly-devised trap for catching, and hotbed for propagating, infection.

Dr. Fergus, in his recent address in Public Medicine at Cork, asserted that the Registrar-General's returns show no diminution of the rate of mortality. How is this? The explanation probably lies in the increased tendency to aggregation of people around large centres; and we may be very certain that the death-rate shown by the bills of mortality would be far higher were it not for the mitigating influence of preventive medicine. But, besides this, hitherto the principles for which we contend have but touched the surface of society. The "upper ten" have become thoroughly infected by the mania for sanitation, as my worthy predecessor called it. But what is really wanted is to penetrate the understanding of the people—to teach the masses of our teeming populations the ordinary laws of health. If only our school-boards would substitute sensible instruction in these matters for some of the ornamental items on the present school programmes, we might in due time reap the fruit in the shape of healthier homes and a vastly reduced death-rate. One more topic connected with our relations to the public weal I will briefly refer to, viz., that fearful scourge—hydrophobia. It is a satisfaction to know that a Committee appointed by the British Medical Association have been engaged in the investigation of the subject, and that we shall soon have an exhaustive report on the disease laid before the profession. Meanwhile we may exercise a wholesome influence on the public mind with regard to it. When a neighbour has been bitten by a dog, the first thing advised is to slay the poor beast. Now, what could be more foolish than to destroy the only evidence as to the real or imaginary danger of consequences? Common sense on such occasions should say: "Where is the dog? Secure him; treat him kindly; watch him closely; and perhaps we shall find after all there is nothing to fear." There is always sufficient opportunity occurring to those who are desirous of doing good unostentatiously, by a timely word of counsel in perplexity, by running to the rescue of the injured, by supplying the missing link between the sufferer and those who would, but know not how to, help. And it is with the object of cultivating these heroic and humane impulses, while at the same time affording the instruction for lack of which well-meaning helpers often do as much harm as good, that the lately-revived Order of the Knights of St. John have set afoot those "ambulance classes" that are becoming so popular, and turning officious bunglers into ready and intelligent assistants. Recently, a policeman on duty, who had been a pupil in one of the ambulance classes, extemporised a tourniquet so successfully that the bleeding from a severed brachial artery was completely arrested, and by his skill and promptitude saved a lad's life.

In conclusion, Mr. Atkinson said, "What is worth doing at all, is worth doing well". If your opportunities be great, see that you make a great use of them. If your privileges be high, see that you do not abuse them. If your calling be a noble one, seek from the first to be worthy of it. In a word, as you hope to succeed in life, begin without delay to lay the foundation of all success—be in earnest.

"God often hangs great weight on slender wires,
Wraps oaks in acorns, life in viewless germs;
From smallest sparks kindles the greatest fires;
Sends us for wisdom to the ants and worms:
So, as we go unthinking on our way,
We stir great forces, tread on secret springs,
Lay trains of curse or blessing: day by day
Do deeds, speak words, with hidden sweets or stings,
Fraught with large consequences; mysterious powers,
Destined to bear their fruit in other lives than ours."

REVIEWS AND NOTICES.

COSSAR EWART'S MANUAL OF PRACTICAL ANATOMY. London: Smith, Elder, and Co. 1879.

PROFESSOR COSSAR EWART, who was Demonstrator of Anatomy in the University of Edinburgh, and subsequently Lecturer on Anatomy in the School of Medicine of Edinburgh, has been led, by his observation of the shortcomings of students of anatomy and their requirements, to prepare a brief Manual of Practical Anatomy intended for use by the student when dissecting, which, at the same time, supplies an account of the dissection of the region and of its practical anatomy; while a series of whole-page outline plates enable the student to make drawings at each stage of the dissection. Like many other teachers of anatomy now-a-days, he is of opinion that, in order to dissect with advantage, the dissector should plan out his work the night before, making rough outlines indicating the position of the principal structures to be met with. When the dissection has been made, those outlines should be filled in, and all points likely soon to be forgotten noted on the other side. On the evening of the same day, the sketch should be completed, and the student should make sure that each muscle, nerve, and vessel of the figure is thoroughly understood. A dissecting manual, or Quain and Sharpey's *Anatomy*, may be useful for reference; any point not mastered should be seen to the next morning. This, he considers, is the only satisfactory way of studying practical human anatomy; and, when adopted, the student feels as if he were engaging in an original investigation. For the benefit of those who have not acquired the art of drawing, and for those who find the time at their disposal too limited, Professor Ewart has prepared the outlines which form the atlas included in this book. They serve to enable the student to make graphic memoranda of his dissections, besides serving as a guide in dissecting. When completed from the dissection, and shaded and coloured at home, they may form an useful atlas. The figures of the bones are added, as a general idea of the muscular attachments to be obtained before the dissection has begun and during its progress. They are only intended to serve as a guide to the surfaces of attachment more or less visible on every bone.

This mode of working is one which every serious student should adopt, and which teachers of anatomy should sedulously encourage. It is comparatively a novel method, but one which belongs altogether to the spirit of the time. It is one by which the student feels not that he is doing a task by rote which he may do carelessly, and which is nothing more than a formal accomplishment of something which "the College" requires; but, as he observes, it teaches each man when he is making his dissection to make it in the same spirit as though he were making an original observation, and of course to whom the observation is original, and one of the most interesting of all original investigations. He thus acquires at once the true spirit of observation and of work. He does not take for granted whatever he sees in print in black and white, but he learns from the outset to study for himself what is before his eyes, to know at once graphically, as well as in writing, any deviations which the subject before him presents from the normal type, and he is from the outset of his studies imbued with the spirit in which all medical study and all anatomical work should be followed in the future if it is to be practical and progressive. We cannot too strongly commend the use of a manual such as this, and we should like to see this method of pursuing practical anatomy universal throughout the schools.

SELECTIONS FROM JOURNALS.

THERAPEUTICS.

FUCHSINE OR CHLORHYDRATE OF ROSANILINE IN CHRONIC ALBUMINURIA COMPLICATED WITH ANASARCA.—Dr. Bouchut has published in Nos. 8 and 9 of the *Gazette des Hôpitaux*, 1879, an article on this subject, of which we here give a short abstract. Up to the present time, ten cases of albuminuria cured by fuchsine have been observed, seven of which having been M. Bouchut's patients. In every case, the albumen rapidly decreased in quantity and quality, and finally entirely disappeared after a longer or shorter period. The treatment generally lasted from one month to six, and the dose of the remedy varied from 10 to 20 and 25 *centigrammes* (1½ to 3 or 3¾ grains) daily. The patients were at the same time prescribed a diet consisting mostly of milk and white meal; and several patients were also daily wrapped up for two hours in a hot blanket impregnated with vapours of benzoin to promote perspiration. During the whole of the treatment, the urine was of a more or less decided pinkish colour. The lips and tongue were red; the appetite was always good; and the patients never suffered from gastralgia, colic, or diarrhœa. Only in one case was there vomiting, which lasted for twenty-four hours; but it ceased the next day, although the fuchsine treatment was continued.

SALICYLIC ACID IN THE TREATMENT OF DIABETES.—Dr. Schaetzke publishes in the *Berliner Klin. Wochenschrift* for June 2nd, 1879, the history of three cases of diabetes successfully treated by salicylic acid. The first case was that of a lady aged 50, who had for eighteen months been under treatment for chronic gastric catarrh. Her father, sister, and husband had died of tuberculosis. When she was seen by the author, he at once suspected diabetes from the excessive thirst, polyuria, caries of the teeth, etc. The urine was examined, and found to contain sugar; the specific gravity was 1038. The patient was treated with salicylic acid, 3 *grammes* (45½ grains) being ordered to be taken three times daily for three days. On the first day, however, she felt giddy and had nausea. On the second day, she vomited once; her hearing was affected, and her gait became unsteady. The dose was, therefore, reduced from nine *grammes* daily to three *grammes*. Owing to her intolerance of salicylic acid, Herr Schaetzke sent her to Carlsbad. Upon her arrival there, the urine was found to be perfectly free from sugar, and remained thus both during her cure and afterwards. The second case was that of a man aged 58, who probably had been suffering from diabetes for the last two years. The urine contained a considerable percentage of sugar. As the patient could not be prevailed upon to go to Carlsbad, he drank the waters at home, but without much benefit. Herr Schaetzke then again resolved to try the salicylic acid treatment, beginning, as in the first case, with three *grammes* three times a day. The patient also evinced great intolerance of the drug. It was, however, continued for two weeks, in doses of three *grammes* daily during the first week and two *grammes* during the second week, when the sugar disappeared from the urine and did not reappear. The other case was that of a girl aged 26, who had been suffering from colic for years. She was treated in the same way as the two other patients, but was obliged to discontinue the treatment after the first four days, owing to her intolerance of the drug. A week later, another attempt was made with a dose of two *grammes* daily; this was continued for a fortnight, when the urine remained free from sugar. It is curious that in every one of these cases the patient should have been so intolerant of the salicylic acid. Could this phenomenon be in any way connected with their disease? and, if so, in what way? A series of three cases can hardly be regarded as sufficient for establishing the reputation of salicylic acid as a cure for diabetes; but the subject is worthy of being more thoroughly investigated.

OBSTETRICS.

ABDOMINAL PREGNANCY: INDICATIONS FOR INTERFERENCE.—Dr. T. G. Thomas (*American Journal of Medical Science*, Jan. 1879), reports six cases of abdominal pregnancy. The placenta may encroach upon the bladder, the omentum, the intestines, or any part of the peritoneum within its reach. The events of this condition are the following. 1. The fœtus, unnaturally attached and nourished, may die in the early months of its life, become encysted, and in time be cast off through the rectum, the bladder, or the abdominal walls. 2. The pregnancy may advance to the end of the ninth month, when, labour coming on, nature makes a persistent effort to expel the child, but fails; and the child, with its envelopes, is retained, and becoming encysted, remains in its nidus for years, creating no disturbance. 3. The child, shut up in its unopened shell, acts as a foreign body, creates suppurative action in its envelopes, and becomes surrounded with it in place of liquor amnii; or, the liquor amnii being absorbed, the fœtal bones become closely hugged by the walls of the cavity which contains them, and, acting as an intense irritant, set up the formation of pus, and in this way lead to hectic fever, from absorption of septic material. The reported cases illustrate each of these events. While no absolute rules can be given, Dr. Thomas suggests as a guide to the practitioner the following. 1. Before full term, should the child developing in the peritoneal cavity be alive, its growth may be carefully watched, and the end of the ninth month be waited for, in the hope of delivering at that time, either by laparotomy or by elytrotomy, a living child from a living woman. 2. Should the child have died early in pregnancy, delay in interference is advisable, but this should not be carried to the production of septicæmia or hectic. 3. Should the full term be passed, and the child be still imprisoned in its unnatural resting-place, the rule should be to wait for evidences of constitutional disorder, and to meet its development promptly and decisively by succour.

A CASE OF PUERPERAL APHASIA.—Sudden loss of speech after delivery is so rare that Kussmaul does not mention a single case in his work on the *Disturbances of Speech*. A Polish physician, Dr. Lewandowski, has published a case which came under his observation in the *Medycyna* (No. 38, 1877); and the reporter of his observation in the *Allgemeine Medicin. Central-Zeitung* (No. 33, 1879) adds another which he saw in Paris in 1873. In Dr. Lewandowski's case, the patient had, thirty-six hours after she had been delivered of her tenth child, eaten a basin of broth and a piece of cake. The next day, she had repeated rigors, and complained of heat, cephalalgia, and sleeplessness. In the tenth night after delivery, the patient suddenly began to scream, utter unintelligible and disconnected words; repeatedly put her hand to the left side of her head. She was perfectly conscious, but could give no answer to questions. Her pupils were equal in size; there was photophobia, but no symptoms of paralysis. Eight leeches were applied behind her ears, and chloral-hydrate given internally. The next day, she could say "No"; and in three days had recovered the power of speaking and writing. The second case is still more interesting, as the reporter was present at the *post mortem* examination. The patient had been delivered without much trouble, and did well for about a week. On the ninth day, rigor, headache, and pyrexia set in. During the next four days, she suffered from slight tetanic convulsions. In the following days, she retained consciousness, and could move freely her limbs and tongue, but had lost the power of speech. Nothing abnormal could be detected. During the following three days, convulsions and somnolence alternated. She did not regain consciousness, and died on the seventeenth day after delivery. At the *post mortem* examination, inflammation of the brain and its convolutions was found to exist. In the left anterior convolution was a partly decomposed focus of the size of a nut, surrounded by minute hæmorrhages. Several purulent foci were in the lungs, and two purulent foci in the uterus beneath the mucous membrane, and suppuration of the veins of the ovario-uterine plexus.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

SURGICAL INSTRUMENTS FOR HOT CLIMATES.

THE following is an extract from a report of Dr. Alexander Jamieson in the seventeenth issue of the Medical Reports of the Chinese Imperial Maritime Customs (Shanghai, 1879).

"As something worth knowing by medical men in China, who, in the hot weather, find their pocket-cases not only heavy to carry, but soon filled with rusty instruments, I would draw attention to Salt and Son's (Birmingham) excellent little case in aluminium, which contains all that is commonly necessary, and is so small as to be easily carried in the waistcoat pocket. All through last summer (1878), I used the case which this firm at first introduced, and in ordinary work had seldom need for anything not contained in it; while the steel instruments, effectually protected from the vapour of the body, remained unspecked by rust. This case has lately been improved upon, and, without any material increase in size, is made to hold a very complete set of clinical, dressing, and minor operating instruments."

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 11TH, 1879.

MEDICAL MANNERS.

IN more than one place lately, outside critics have discussed the bearing and manner of physicians towards their patients, and have developed a somewhat unexpected thesis. Medical men of the present day, we are told, and especially physicians in great practice, are too apt to assume an abrupt and cold manner, and to treat their patients rather as impersonal elements in a scientific problem, than as individuals whose feelings and conditions are all-important to themselves. This is rather an unexpected and singular charge at the present day; and, if we were persuaded that it represented any more than the accidental impression of one or two individuals, derived from some chance experience, and due, perhaps, to some personal error or eccentricity of interpretation, we should think it more important. We are inclined, however, to believe that such a charge finds little echo in the larger experience of the world. Certainly, looking around, and considering what we know of the habit, manner, voice, demeanour, character and feelings of the great majority of the best known practitioners of Great Britain, whether in town or country, we should say that exactly the opposite statement would much more nearly represent the truth.

No doubt every man's character is more or less unconsciously reflected in his manner; and no generalisation could be found which would convey any suitable description of the medical manner current in the present day applicable to any number of individuals, and not subject to considerable qualifications; yet we think it may be asserted that the essential character of the medical manner of the present day, so far as it can be differentiated, is an almost formal courtesy, and the habitual assumption of a semi-paternal and indulgent tone. It is commonly possible in any assembly of professional men to recognise the physician by a certain habit of gentle speech, of considerate and fatherly kindness, and half-condescending affable submission to opinions which it is not his business at the moment to contradict. The contrast between the medical manner and the legal manner, for example, is often so striking that, in an assembly of lawyers and doctors, it would often be possible, we think, to separate the one from the other by the palpable distinction. We should, therefore, at once and summarily reject any alleged experience which would fix upon medical men of the present day a tendency either to hardness, coldness, or severity of demeanour, or which would assert that they are in the habit of treating the feelings of their patients with disregard, and of dealing with them as pathological specimens, rather than as human beings self-contained and differentiated by their moral and mental conditions not less than their physical suffering.

It may, however, be worth while to consider how far popular opinion has the right to exact any particular manner from medical men, or what manner, if any, they should cultivate. The answer that we should be inclined to give to the question which thus suggests itself is that the manner of the medical man who does not attempt to cultivate any professional manner at all is likely to be the best. Politeness, it has often been said, is nothing else than the regulated code of acts induced by habitual kindness; and the medical manner to be perfect should be nothing else than the regulated action dictated by a sense of regard for the feelings of the patient, and the sense of duty in dealing with his wants and sufferings. A mere varnish of sympathy, a regulated mode of dulcet speaking, the tricks of simulated interest, are among the abominations of professional manner which it is often difficult to observe without pain and contempt. On the other hand, the abrupt self-assertion, the calculated egotism, the obtrusive acuteness, which are sometimes intended to mark the assertion of intellectual superiority and philosophic elevation, are at least as offensive. Fortunately, neither of these types is common; for, with the abandonment of a designated costume, and with the loosing of the etiquette by which it was at one time endeavoured to create a sort of medical caste, separating medical men from other citizens, and converting them into a pseudo-priesthood, many of the artificial forms into which it was for a time thought desirable to mould the professional manner and habit have fallen into disuse.

The first thing that is now required of a medical man is that he should be an educated, cultivated, and right-minded gentleman, and then that he should bring to his work the large and liberal knowledge on which alone its right performance can be based, and that he should fulfil his duties with kindness, with courtesy, and with a sense of just dignity. No doubt another opinion may be formed by those who are accustomed to the older traditions of dependence. When the physician was rather the servant than the equal of his employer, when apothecaries were many and University graduates were few, when the surgeon and the barber formed one corporation, or while the traditions of the union were still fresh, when the average doctor was a man without diploma, with little education, and hardly distinguishable except by his pretension from any of the other minor functionaries of the place, they might look for the deference, the subservience, the humility, and all the vices of the manner which belonged to an inferior caste when brought into contact with their social superiors. It will not easily be forgotten that quite lately a weekly paper of no small value, in a sneering article on a quarrel between a Duchess and one of her servants, coupled the doctor and the housekeeper in a conjunction intended to intimate that they stood upon a similar footing, and that an eqnal subservience was expected of both. Such a state of things now, however, exists only in the imagination of a few, or can be suggested only through a defective perception of the existing social relations of the learned professions, and of the position, claims, privileges, and duties of those who belong to them. Any particular manner is no more expected of a doctor at this date than a particular manner is expected of a clergyman, of a soldier, or of a statesman. The atmosphere which each one breathes in his daily work, the elements which constitute his main occupation, are no doubt influences which subdue his character and therefore his manner, and unconsciously mould them; but the more this is left to the natural play of external conditions reacting upon the mental constitution of the man, and the less the attempt is made to hide the natural character by an assumed manner, or to varnish it with an artificial polish, the more true, the more respectable, and, let us add, in the end the more popular will be the product. No generalised manner can fail to be artificial and unnatural; no assumed and professional amiability can in the end form anything else than a thin disguise, and no forced abruptness can be other than a blemish which many eyes will be quick to discern, and which must tell unfortunately upon the reputation of the person who assumes it.

A still more serious evil is that, in the end, such external and habitual assumption of a manner not natural to a man must and does injure his nature. It is in itself an habitual insincerity, and must take from him some of the manliness, some of the simplicity and self-respect which are the first elements of professional honour and of true professional success. Moving among scenes of pain, suffering, and of physical distress, the habitual witness of severe trials of the mental and moral strength of those who call him or who consult him, it would be strange if some reflection of the influences thus brought to bear on him were not evident in the manner of the medical man. He must necessarily be softened and rendered more thoughtful. He must be more conscious of the

weaknesses and of the unexpected sources of strength in the human character. He must bear about him the evidences of a man who is too often a confessor to be willingly a judge, and too often helpful to be willingly severe. The best school of manner for a right-minded physician is the hospital. It is there that he comes in contact with the poorest, the most suffering, and those who may, from the very nature of their cases and their conditions, most rightfully claim his constant sympathy, and it is in the hospital and in the early days of medical practice and of medical studentship that the character is most impressed, and that the foundations of manner in after-life are laid. It is there that the student and the doctor should be on their guard to study the best and not the worst side of the humanity of which all the weaknesses are plainly laid before them. It is there that they must guard against petulance, roughness, hurry, or impatience. No one can be familiar with the casualty wards or the out-patient rooms of a hospital without being struck with the development which they afford to the better nature of the better kind of men. No one can have failed to notice the self-restraint and patient kindness with which often score after score of the sick poor are treated, their stories quickly unravelled, the point of their ill-told histories detected, their pain of mind relieved, and their pain of body removed. On the other hand, it is possible sometimes to see less welcome sights, hear hasty words and impatient ejaculations, and sometimes even a rough neglect may be noticed. Against this, students and doctors alike need to be on their guard. Roughness of manner, unkind haste, or thoughtless indifference once admitted into the treatment of the poor, such evil habits follow a man into his poor-law practice, into his work in the army or in the navy, and undermine and destroy the qualities which he should bring to bear on the treatment of rich and poor. It is not possible to have one natural manner for the poor and another natural manner for the rich; but the habitual cultivation of those generous and tender thoughts which the work of the medical man is from the first especially calculated to generate will not fail, reacting upon the individual character of the physician to give him the manner which is most suited to his profession, a straightforward kindly consideration for his patient and a just dignity bred of self-respect.

We do not admit that a medical manner is necessary. We deny that there is any tendency on the part of the physicians or surgeons of the present day to the adoption of a cold or rough demeanour, but we would earnestly urge upon the students who are now entering their medical career that their manner in after-life is most likely to be, and ought always to be, the reflection of their habits of thought towards their patient, and it is their duty to themselves as well as to those who are entrusted to their care to cultivate habitual kindness, tenderness, and thoughtfulness to the hospital patients who are now for the first time brought under their attendance and observation.

THE DOCTOR IN THE KITCHEN.

Amongst the many evidences of extravagance in wasting our food resources there are few more striking than the waste of milk. Anyone who has lived in Lancashire or travelled in Ireland or in Scotland, and has noted the life and characteristic food of the farmers, of the peasantry, and of the working classes, will know how pleasant and acceptable a drink is buttermilk. On the first day, a thin and semi-acidulous beverage, clean to the palate, refreshing, and full of nourishment; on the second day, thicker and richer, and more nearly resembling the familiar curds and whey which are among the luxuries of cockneys, but with the curd broken into fine particles, and therefore less cloying and more digestible. The waste of butter-milk in this country is humiliating and painful to think of. It needs no scientific authority to say how nourishing it is, how full of digestible albumen and animalised salts. Half-a-pint of buttermilk contains as much nutriment, and is as sustaining a beverage, as many gallons of beer. No doubt, the taste for it is one which depends upon habit. To a Mecklenburg palate, for example, the preference for fresh milk over buttermilk would often be surprising; and it is quite certain that a taste for buttermilk would be much more easily acquired and is much more natural than the taste for claret or for bitter ale. It is a mere matter of habit and of prejudice; and that being so, it is not a little surprising to reflect that hundreds of thousands of gallons of buttermilk are thrown to the pigs from the sheer prejudice that it is not fit for human food, and from the indolence of those who will not take the trouble to acquire the taste for it. A few days since, one gentleman offered to supply a thousand gallons of buttermilk a-day for use in London, fresh daily, at a rate which would allow of its being sold retail at a halfpenny the large tumbler, and yield a profit of one hundred per cent. to the retailer. It might be well worth the trouble of some one who deals with large numbers of men to endeavour to cultivate the taste for buttermilk among them, and to save these gallons of excellent food from being thrown to the pigs. If any demand could be cultivated for it, no doubt the managers of coffee-taverns and coffee-palaces would be glad to undertake the sale of it; it would yield them a large profit and might with some trouble be revived as the national drink. Buttermilk need not by any means be considered as especially a drink for the poor; as a nursery substitute for the milk-and-water, with which children are largely fed, it would be more economical and infinitely more nourishing; nor can there be any doubt, as indeed it is not a matter of theory to assert, that children of any rank quickly learn to like it better than anything else that can be offered them.

In relating the advisability of reconsidering British extravagance in feeding, it is of course very far from desirable to confine attention to the feeding of the working and poorer classes. All extravagance is modelled upon the type of the wealthier classes, whose servants have become the wives of working-men, or whose relatives have learned from observation in the houses of richer people and the living in middle-class households what are the rules of eating and what the methods of cooking. To all classes the present season of scarcity and depression may well afford an incentive to a new departure. They may learn to substitute for the open fire, voracious of coals, a closed economic range of an American pattern, which will pay for itself in a year by the economy of coals; to practise the simple art of braizing, which makes the less choice pieces of meat as tender and nourishing as the finest pieces; and the art of cooking with them carrots, turnips, beans, onions, and white cabbages, and so perhaps create a new and larger demand for vegetables, which our agriculturalists will profitably substitute for cereals, in which they cannot compete with American and Russian growers. It seems to be regrettable that our list is not enlarged. The fresh sweet Indian corn, which is so universal a breakfast luxury throughout America, boiled in the cob, can be grown in England, as we can testify from experience, and would be a great addition to our breakfast luxuries, and one which would certainly be quickly appreciated. The "canned corn", imported from American sources, has already some sale, although necessarily so inferior to the fresh corn in the ear as to be hardly recognisable. From another vegetable, which is now plentifully imported from America, the housewife may learn more easily than from most others how easy it is to make even a "high art" soup with but little meat stock or without any. "Tomato pulp", boiled with a little stock or with water, enriched with butter or butter and milk, strained through a fine sieve to remove the pips, and with added rice (or broken biscuit), makes a soup of the most acceptable kind, which has all the finest flavour of the tomato, and is highly "antiscorbutic", and as really nourishing as, if not more so than, most meat-soups. For be it always remembered that there is no reason to believe that clear soups are truly nourishing in the ordinary sense of the word; they are stimulating to the digestion, but all the albumen of the meat is left behind in the meat fibre which the British cook considers to be something which has had all the "goodness" boiled out of it, and altogether a waste product. The fact is, that the fibre is nourishing and the soup is not; but the fibre, when boiled hard and robbed of its sapid elements, is not inviting or digestible; therefore, in making soup it must always be remembered that the most nourishing part of the meat, *i.e.*, the meat itself, is wasted unless the French method of the *pot au feu* is adopted.

The notion that clear soup is not nourishing is as shocking to the mind

of many an intelligent housewife as the discovery that gelatine has no nutritive value, and that calves'-foot jelly is chiefly valuable as a solid and diluted means of introducing sherry into the stomach. If once this truth is assimilated, the worship of clear soup and the contempt of the meat with which it has been made may be slowly overcome. At St. Mary's Hospital, the beef with which beef-tea is made is pounded finely and replaced in the soup, and thus the beef-tea there is a more perfect food than beef-tea usually is.

The example of the cook's efforts at economy for her wealthier employers will extend contagiously: the kitchen of the rich sets the fashion for the housekeeping of the poor. The art of dealing with simple materials, so as to make them attractive, is as much needed in the one as the other; and even the appliances are not to be found. Pottery "which goes to the fire" without being spoiled, and can be transferred from the hot plate or the oven to the dinner-table, is far too scarce in England. It is impossible to cook well, not to say economically, without a supply of white porcelain vessels and of white metal dishes, in which the *plat* may be cooked and carried direct to the table without the contents being transferred. Our English dinner and breakfast ware is for the most part of so soft a glaze that it cracks and becomes brown and discoloured if heated at the fire; but there are a hundred simple dishes, and more refined ones also, which must be served in the plate on which they are cooked. A sole *au gratin;* eggs *sur le plat;* maccaroni with tomatoes (*spagati*); various *soufflets*, are familiar examples; and without such an addition to the cooking implements *réchauffés* are too primitive, too limited in range, and unlikely to be attractive. This art to *réchauffer* is the one which the English cook must learn, if the first elements of economy are to be combined with variety and fitness of diet. With what despair or contempt will an uneducated cook regard the pieces of fish, the pieces of vegetable, the ends of meat left, which a little intelligence convert into a meal more attractive than that of the previous day, of which these are the remnants. The fragments of cold sole, which a bad cook will throw away to the cat, a good one reheats on a plate which "goes to the fire" with bread-crumbs, butter, and parsley; or bakes with bread-crumbs and a wine sauce; or serves with boiled rice and fragments of hard-boiled egg. What so hopeless to the unintelligent as a stewed kidney left unconsumed; but what more savoury than the *omelette aux rognons* into which it may be converted. And cold fowl; how many suffering martyrs have been victimised by the repetition of that most tasteless and comfortless morsel, when a piece of bacon and a buttered curl-paper wrapped round it, and a gridiron or a frying-pan, would in five minutes have converted it into a most toothsome, tender, and delicate dish, of which the merits may be heightened or varied by enclosing in the *papillotte* chopped tomatoes, or forcemeat, or some congenerous combination.

All this, however, is only to say that we must not blame the working classes and their wives, or our cooks, or our wives, or ourselves exclusively: we have been, for a generation at least, extravagant, careless, unintelligent eaters; satisfied with "the best of everything", because it wanted little trouble to prepare, and unprepared to make the best of everything. Surely the time has come when we may all of us take some lessons from our neighbours. No doubt, we have many excellent characteristics in our English cookery, and these we may hold to; such as excellent roasting of mutton and beef, beef-steak puddings, thick soups, fruit pies and puddings (it is a great loss to the French *cuisine bourgeoise* that they have no knowledge of our fresh fruit puddings and tarts); but our range is too limited; our selection falls too exclusively on the large and choice pieces of meat; we have neglected the art of stewing and of braizing; we know nothing of the art of cooking vegetables except by boiling them in water; we are absurdly prejudiced against such pleasant, economical, and nutritious kinds of food as hominy, buttermilk, Indian corn, haricot beans, and all their varieties; and our vast kitchen fires consume our substance while they spoil our food. There is another great defect in our English dietary; it is the too sparing use of butter, fat, and oil. A celebrated American physician goes so far as to ascribe to this source something of the prevalence of atrophy and scrofula.

THE MEDICAL HISTORY OF THE TEMPERANCE MOVEMENT.

It is sometimes thought and alleged that the attention which medical men are giving to the question of the use and abuse of alcohol, and the extent to which they favour scrupulous moderation or total abstinence, are evidences of a new-born zeal. The fact is, however, as Dr. Norman Kerr shows in a recent address, English medical men have for at least a century and a half thrown the weight of their knowledge and teaching into this scale.

In 1725, Dr. Cheyne had issued a second edition of his first work (1), in which he commends total abstinence as the most natural, healthy, and safe mode of living, and condemns moderate drinking as unhealthy and dangerous.

In 1747, Dr. James (2) wrote: "Every person who drinks a dram seems to me guilty of a greater indiscretion than if he had set fire to a house; and, for the same reasons, cordial waters are the most dangerous furniture for a closet." Again: "I cannot forbear admiring the great wisdom of Mahomet, who has strictly forbade his followers the use of fermented liquors for better reasons than are generally apprehended."

Dr. Darwin, author of *The Botanic Garden*, in 1794 (3) calls wine "a pernicious luxury in common use, and injuring thousands".

In 1802, Beddoes (4) pointed out the many dangers attendant on the social and medical use of intoxicating drinks, dwelling on the "mischief of wine taken constantly in moderate quantity", and emphasising "the enfeebling power of small portions of wine regularly drunk".

Dr. Trotter, two years later (5), denounces beer as "a poisonous morning beverage"; says "wines strengthen neither body nor mind"; and thus writes: "When wine was first introduced into Great Britain, in the thirteenth century, it was confined to the shop of the apothecary. It would have been well had it always been confined there."

Writing to Dr. Joshua Harvey in 1829, Dr. John Cheyne, Physician-General to the Forces in Ireland, in a letter published in Dublin (6), contends that the medical profession "ought to make every retribution in their power for having so long upheld one of the most fatal delusions which ever took possession of the human mind". Dr. Cheyne also trenchantly exposed the fallacy of supposing that fermented wines recruited the strength in bodily or mental exhaustion.

The "Medical Declaration concerning Alcohol" of 1871, drawn up by Professor Parkes and Mr. Ernest Hart at the suggestion of Mr. Rae, as the sequel of some observations of the latter in these columns, and signed by two hundred and sixty-one hospital physicians and surgeons, which is now the Magna Charta of medical temperance reformers and the backbone of many a speech, had two important forerunners, cited by Dr. Norman Kerr. The text of the declaration of Parkes and Hart, it will be remembered, recorded the widespread belief that the prescription of large quantities of alcoholic liquids by medical men had given rise to intemperance; urged the need for medical practitioners to prescribe these liquors only under a sense of grave responsibility; that alcohol, in whatever form, should be prescribed with as much care as any powerful drug; and that the directions for its use should be so framed as not to be interpreted as a sanction for excess, or necessarily for the continuance of its use when the occasion was passed.

Of the two earlier declarations, we learn from Dr. Kerr that the first was drawn by Mr. Julius Jeffreys in 1839, and was signed by Sir B. Brodie, Sir James Clark, Sir J. Eyre, Dr. Marshall Hall, Dr. A. T. Thompson, Dr. A. Ure, the Queen's Physicians, Professor Partridge, Professor Quain, Mr. Travers, Mr. Bransby Cooper, and seventy-eight leaders in medicine and surgery. This document declared the opinion to be erroneous that wine, beer, or spirit was beneficial to health; that man in ordinary health required no such stimulant, and could not be benefited by the habitual employment of such in either large or small quantities; that, even in the most moderate doses, alcoholic drinks did no good; while large quantities (such as by many would be thought moderate) sooner or later proved injurious to the human constitution, without any exception.

The second declaration was originated, and the many signatures published, by Mr. John Dunlop in 1847. More than two thousand of the most eminent physicians and surgeons signed this, including Sir B. Brodie, Sir J. Clarke, Sir W. Burnett, Sir J. Forbes, Sir H. Holland, Sir A. Munro, Sir J. McGrigor, Sir R. Christison, Dr. W. B. Carpenter, Dr. Copland, Dr. Niel Arnott, Dr. A. Farre, Professors Guy, Allen Thomson, Miller, McLeod, Easton, Anderson, McFarlane, Rainey, Buchanan, Paris, Winslow, Alison, Syme, Henderson, Lawrie, McKenzie, R. D. Thompson, Couper, and Simpson. This certificate set forth that perfect health is compatible with total abstinence from all intoxicating beverages; that all such drinks can, with perfect safety, be discontinued either suddenly or gradually; and that total and universal abstinence from alcoholic liquors and intoxicating beverages of all sorts would greatly contribute to the health, the prosperity, the morality, and the happiness of the human race.

It appears also that at its very beginning the temperance movement was powerfully aided by a large number of local declarations signed by leading practitioners in the various districts. Between 1830 and 1833, declarations setting forth the evils of the most limited habitual use of ardent spirits were signed by the medical men of, among other places, Dublin, Edinburgh, Bradford, Berwick, Kilmarnock, Leeds, Cheltenham, Brighton, and Bristol; while the Manchester practitioners testified that the habitual use of all intoxicating liquors was not only unnecessary, but pernicious. As far back as December 27th, 1790, the College of Physicians of Philadelphia memorialised the Senate and House of Representatives of the United States on the pernicious effects of distilled spirits upon the health of the people, stating that their habitual use in any case whatever was wholly unnecessary, and that they neither fortified the body against the morbid effects of heat or cold, nor rendered labour easier or more productive.

SANITARY LEGISLATION IN 1879.

SEVERAL short but somewhat important Acts of Parliament amending the sanitary laws were passed during last session. One, the Sale of Food and Drugs Act Amendment Act, 1879, sets at rest the prejudice to purchaser question which for a time stopped analyses of food in several counties and districts. It also enables a medical officer of health, inspector of nuisances, or inspector of weights and measures, etc., if appointed by the local authority, to procure at the place of delivery any sample of milk in course of delivery to the purchaser or consignee, and to have the same analysed; the penalty for refusing a sample being £10. It is also declared that an inspector or other duly qualified person may demand a sample of food, etc., exposed for sale in any street or open place of public resort; and may have the same analysed. Brandy, whiskey, or rum must not be sold of less strength than twenty-five degrees under proof, nor gin more than thirty-five degrees under proof, except with a label bearing a declaration of the strength; so that it will not be enough, as at present, to put up a notice that all articles sold are diluted. Finally, the summons taken out against an offender, in the case of a perishable article, must be served upon him within twenty-eight days from the time of purchase. The Poor-law Act, 1879, contains a clause empowering the Metropolitan Asylums Board to contract with any nuisance-authority in the metropolis for the reception and maintenance in any hospital under their control of any person suffering from any dangerous infectious disorder within the district of the nuisance-authority. The cost is to be paid by the authority, who will, however, be able to claim at any time within six months from the discharge of the patient the expenses they have incurred.

By the Artisans' and Labourers' Dwellings Improvement Act, 1879, the compensation payable by the Metropolitan Board of Works for houses taken under an improvement scheme is to depend on the decision of the arbitrators, who may, if the house or houses were a nuisance when reported on, determine what would have been the value of the house after the nuisance had been abated, or may deduct the estimated cost of abating the nuisance from the compensation payable in respect of the house. They will also be enabled, if they can show that equally convenient accommodation can be provided at some other place than the site of the houses pulled down for the working classes displaced under a scheme, to erect dwellings on another place for the working classes, and thus utilise good frontages for shops and private houses, and greatly diminish the cost of carrying out an improvement scheme. The Artisans' and Labourers' Dwellings Act (1868) Amendment Act, 1879, very materially alters the 1868 Act, which is best known as Torrens' Act. Under the original Act, the owner was required either to do the works necessary for making the premises safe and habitable, or to pull them down if they could not be made habitable; but, under the amended Act, the owner may, within three months after service of the order made by the local authority, require the latter to purchase the premises complained of, even when the order does not involve the demolition, but only the repair, of the premises. This provision is likely to make local authorities very unwilling to put the Act into force, except when houses are absolutely unfit for human habitation. The arbitrator is to fix the compensation by estimating the market value of the premises, and of the several interests in such premises, due regard being had to the condition and probable duration of the buildings and their state of repair. In addition, the arbitrator may, if he think fit, order the local authority to pay the costs of arbitration incurred by any or all of the parties having an interest in the property, so that the local authority may have to pay, not only the value of the premises, but heavy legal expenses as well. The Metropolitan Board of Works, in the event of a local authority neglecting or declining to put into force the provisions of this Act for three months after receiving notice from the Metropolitan Board so to do, may proceed to act as though it were the local authority of the parish or district in which the premises are situated. The new buildings have to be erected according to the plans, and to the satisfaction of the surveyor to the local authority. The costs of carrying out the Act are to be defrayed by the local authority out of the rates, not exceeding twopence in the pound *per annum*. The Act applies to the whole of the United Kingdom.

In addition to these, twenty-two gas, seventeen water, and twenty-three town improvement Acts have been passed during the session. The aggregate capital for the proposed new gas-works is £1,500,000; and the estimated cost of carrying out the new water Acts is as much as £5,039,250; and in addition to these are several waterworks to be constructed by local authorities under Board of Trade provisional orders. The Thames River Prevention of Floods Act has also to be added to the list of sanitary Acts passed during the session.

DR. EDWARD LAWRIE has been appointed Professor of Surgery at the Lahore Medical College in the room of the late Dr. Neil.

THE first meeting of the Clinical Society of London will be held on Friday (this evening) at 8.30.

THE first meeting of the session of the Society of Medical Officers of Health will be held at 1, Adam Street, Adelphi, on Friday, October 17th, at 8 P.M., when an inaugural address will be delivered by the President, Dr. J. S. Bristowe.

ADDRESSING a large audience recently, on his return from exploration in Northern Siberia, Captain Wiggins said that, from his experience in long journeys through the heart of the country in midwinter by sledges, he was strongly in favour of the benefit of abstaining entirely from the use of any kind of intoxicating drinks.

AT the last meeting of the Council of the Pharmaceutical Society, two ladies who had two years since passed examination as pharmaceutical chemists and have practised as such, were elected members of the Pharmaceutical Society by the Council, the President only dissenting. The question has more than once been discussed in successive years in the Society, and was last year negatived by one vote. It is now carried in the Council, one vote only being recorded against it.

DR. SYMES THOMPSON will commence the Gresham Lectures on Physic in the theatre, Basinghall Street, on Tuesday, the 14th instant, and will deliver the three subsequent lectures on the three following days. The subject chosen is that of the sanitation of dwellings, etc. The lectures are open to the public free.

DR. LABORDE, the Republican Senator of Ariége and a member of the Republican Left, has announced that, feeling that the Republic is now safe in the hands of M. Grévy, the most honest and safe of Republicans, he has resolved to quit the French Senate, which he had entered from motives of patriotic duty, and to return to the practice of his profession, being urgently recalled by his patients, whom he had only left unwillingly and from a sense of the urgency of the situation.

SURGEON-MAJOR J. H. REYNOLDS, V.C., who gained the Victoria Cross and promotion as a recognition of his highly gallant conduct during the attack on Rorke's Drift, arrived at Netley, in medical charge of invalids from Natal, on the 2nd instant. In the evening, he was entertained at dinner at the Army Medical Department mess. He was warmly congratulated by his brother medical officers at the station on the honours he had achieved for himself, and on his return to England in excellent health. In replying to the toast of the evening, Surgeon-Major Reynolds gave an interesting account of some of the occurrences in which he was personally engaged during the trying time of the onslaught of the Zulus on the hospital, and the subsequent fighting about the improvised entrenchments within which the small band of defenders was cooped up.

MISS STEPHEN, well known for the attention which she has given for many years to visiting workhouses, writes concerning the infirm women's ward of St. George's Union, that the cutting off of the daily half-pint of beer at the workhouse by the medical officer in carrying out his rule for the abolition of the use of alcohol, has been severely felt by the old women, who were making the best of the hard end of a hard life, inasmuch as neither soup nor coffee is substituted, and the dinner of suet-pudding and greens is unaccompanied by any comforting drink. She thinks it a pity that this experiment in teetotalism should be tried on these poor old women.

AMONG the alterations proposed to be introduced into the Indian Merchant Shipping Act are clauses to provide for the appointment of a port-inspector, who would not only perform the duties at present performed by the health-officer, but would inquire into any complaints which might be made on the arrival of a ship in port by any of the crew against the master or any other of the crew; to empower the local governments to fix a minimum scale of provisions for lascars or native seamen; to provide for the conveyance home of distressed Asiatic seamen in Indian waters, and to fix a reasonable rate of allowance for their subsistence when on the voyage.

AT the recent fourth annual meeting of the American Medical College Association, it was resolved:—"That it shall be considered derogatory to the dignity and good standing of any medical college represented in this association to advertise in any other than a strictly medical publication the names of its professors, with their respective chairs. This resolution does not apply to the annual circulars and catalogues issued by the colleges, but to advertising in non-professional periodicals, newspapers, and other like publications, in which only a card calling attention to the advantages of the school, length of session, fees, etc., with the name of the executive officers or secretary appended, should be permitted."

THE CEYLON MEDICAL AID COMMISSION.

AMONGST the Council papers recently made public is the report of the Commission appointed to inquire into the working of the estate medical aid ordinance. The Commissioners have come to the conclusion that it will be necessary to revert in a great measure to the old patriarchal system, aided by a staff of medical sub-assistants, a few surgeons, and an inspector of hospitals.

H.R.H. THE PRINCESS LOUISE.

IN contradiction to rumours that the visit of the Princess Louise to England is due to impairment of her health, we are enabled to state that, according to the latest news received, Her Royal Highness is in a perfect state of health.

THE OLDEST LECTURER IN EUROPE.

THE veteran chemist, Chevreul, whose name is associated with researches on fats and fatty acids, now in his ninety-third year, began, we read, his usual course of lectures on organic chemistry at the Museum of Natural History at Paris a short time since.

FEVER AND SMALL-POX IN LONDON.

THERE were 61 deaths from scarlet fever last week in London, being a slight further increase upon recent weekly numbers, but still 28 below the average of the week. The Metropolitan Asylum Hospitals at Homerton and Stockwell contained 276 scarlet fever patients on Saturday last, against numbers increasing from 212 to 253 in the four preceding weeks. The fatal cases of fever were 38, being two above the average. Two of these were cases of typhus. There were four deaths from small-pox. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had fallen steadily from 111 to 56 in the preceding six weeks, further declined to 45 on Saturday last. The new cases of small-pox admitted last week to these hospitals were four.

INSPECTOR-GENERAL DOMVILLE.

WE regret to learn that Dr. W. T. Domville, C.B., Inspector-General in charge of the Royal Naval Hospital at Haslar, has been suffering from enteric fever since Thursday, the 25th ult. We are glad to hear, however, that he is going on satisfactorily. The temperature has never been above 102°, and other conditions are also promising of steady progress towards convalescence. Dr. Domville is a medical officer of such recognised and high merit, and so many of the hopes of the public and the service are centred in his future, that all will hope that his convalescence may be speedy and complete.

A DANGEROUS EXPERIMENT.

A RATHER dangerous experiment appears to be in course on eleven hundred paupers. At the last meeting of the Bethnal Green Guardians, a letter was received from the Local Government Board, transmitting a copy of a letter addressed to the Central Board by Mr. James Milbourn, one of the guardians of the parish, in which he stated that, after £1,000 had been expended on the well, the water drawn was so hard as to coat plants in an artificial lake with lime, and to kill the fish in the pond. A sample of the water had been sent to Dr. Frankland for analysis, and he pronounced it not fit for use. It was found that there was 17 per cent. of sewage in the water, which was an alarming quantity, and likely to produce illness at any time. He felt, as a gentleman having the care of 1,100 persons, that it was his duty to ask the Local Government Board to make an order that the water be no longer used for dietetic purposes. In a postscript, he added that he had since heard that Dr. Frankland had written to a guardian, urging him to do all he could to prevent the Board continuing the use of the water.—The Chairman remarked that, when Mr. Milbourn wrote that letter, he was aware that the guardians were about to send a sample of water to Somerset House for analysis, but did not, because Dr. Bell was going away on his holiday, and deferred forwarding the sample till his return. That had since been done.—In reply to questions, the Master of the Workhouse said the first water from the well was hard and limy, but since then it had been pretty good.—Dr. Berdoe said there were conflicting statements from the experts as to the quality of the water. Dr. Tidy said the water was unfit for drinking purposes; Professor Wanklyn said it was fit for drinking purposes, but of no use for washing. He deprecated further discussion till the analysis by Dr. Bell was received.—The Chairman proposed that the Local Government Board be informed that the guardians were waiting for the result of the analysis from Dr. Bell before they could give any further reply to this letter; and, moreover, that a sample of water be forwarded to that body.—

This was seconded and agreed to, and the Board adjourned. In the meantime, however, the 1,100 paupers might reasonably deprecate being experimented upon with a water as to which the chief doubt appears to be whether it is more correctly reported by one analyst to be so loaded with lime as to be "of no use for washing", or by another, to be so loaded with sewage as to be unfit for drinking. Pending the return of the third gentleman, whose opinion is desired, from his holidays, it might seem reasonable, if the Local Government Board do not see its way to interfere, that the Home Secretary should object to continuing so extensive "an experiment on living animals" as this physiological testing, on 1,100 of the species, of a water of such remarkable chemical composition and animal richness. If, perchance, a specific poison should, in the period of waiting for the third analysis, which is to carry conviction into the chemically sceptic minds of the guardians, find its way into the well together with the sewage, the "inoculation of a poison" without licence might have effects which would almost rival in importance the drowning of a cat with a scientific object, or the examination of the web of a frog's foot under the microscope, both of which are at present forbidden without a Home Office licence.

THE DAILY RATION.

PROFESSOR CHURCH, in lecturing on "A Day's Ration" at the National Training School for Cookery, has given some interesting results of calculation of dietaries. The actual daily wants of the body, he observes, in the various conditions of rest, partial or full work, and the varying climatal conditions, are also more exactly known than they used to be, though much more remains here to be done. English writers have sometimes taken the results of North German experimenters and incorporated them in their works as applicable to England; but this is apt to be misleading, and shows the need of great caution in such important matters. The practical application of dieting tables in India in time of famine has been found of great use. For example, the average diet of an English soldier in time of peace is daily five ounces of albuminoids, three ounces of fat, twenty-two ounces of starch, and one ounce of mineral matter. This does not include the water in the foods. The amount of water taken in some form or other during twenty-four hours is over five pounds. It has been found that the famine diet of Indian natives can be as low as three ounces of albuminoids, one ounce of fat, eleven ounces and a half of starch, and two-thirds of an ounce of mineral matter. This is not sufficient to keep them in good working order, but it is enough to keep life going in time of famine. It must be borne in mind in connection with this that the calculations for an English soldier are made for a man of one hundred and fifty-four pounds, while the average of Indian natives is taken at one hundred and five pounds. A great defect of rice as a normal food is that it does not contain the required proportions of fat. One ounce of fat should go with every two ounces of albuminoids, and it can take the place of two ounces one hundred and fifty grains of starch.

A LIFE OF HEROISM.

THE following is the biography of Dr. Smith of Coggeshall, as given in a local journal, and it discloses a remarkable history. On Thursday, the 11th ultimo, the remains of Dr. Charles Edward Smith were interred in the Friends' burial ground, Coggeshall. Dr. Smith was born October 24th, 1837, and during the forty-one years of his life had experienced an unusual amount of suffering and adventure, in the course of which he had showed a rare heroism and had gained a host of friends. Many old friends and neighbours who had not seen him for years were among the many who followed his remains to the grave. He was educated at the Friends' School, Ackworth, where he afterwards taught. From his earliest years he possessed an increasing taste for ornithology, which gained him the great privilege of admission to the museum of the naturalist Waterton. He afterwards became a medical student at Edinburgh, and obtained an appointment as surgeon on the whaling steamer *Diana*, of Hull, which left Lerwick in May 1866, with a crew of fifty-one men. After a cruise in the fishing regions of Lancaster Sound and Pond's Bay, the ice began to re-form, and the ship was closed in at Coutts' Inlet, but in October and November passed Exeter Sound, Cape Victoria, and into Frobisher Straits. Great sufferings were experienced from the cold, to which the captain succumbed, Dr. Smith and others suffering severely from scurvy. In March they drifted to Hudson's Strait, and on the 18th they broke out of the ice into the Atlantic. The change from ice to fogs fearfully and fatally increased the scurvy, the slightest exertion often causing death. With the ship in bad condition and the whole crew labouring at the pumps, a frightful time was endured. On April 2nd, they entered the harbour of Ronas Voe, in the Shetland Isles. Of the fifty-one men, nine were corpses on deck, and another was dying, and only four could stand. Four more men died, and all except the captain were buried at Lerwick. A fresh crew from Hull brought the Diana there, where thousands of people were deeply affected by the painful signs of the suffering endured. The doctors of Hull gave Dr. Smith a public dinner and a silver cup in recognition of his services to their fellow-townsmen, in their extreme peril, privation, and difficulty. The Board of Trade presented a case of surgical instruments, value £50, and a testimonial signed by the Duke of Richmond, declaring that his services to the crew had been "generous, humane, and unwearied"—emphatic language rarely officially used. The people of Hull and Lloyds' underwriters also presented a testimonial and one hundred and eighty guineas. After many months of illness and exhaustion, Dr. Smith made a second but less adventurous Polar voyage, in another *Diana*. On his return, he was chosen as surgeon to a large party of railway navvies near Carlisle, but not being supplied with medicines necessary for the ague prevalent among them, resigned, and became house-physician to the Glasgow Royal Infirmary, and on leaving, received a testimonial from the nurses and attendants. After a short professional stay at Esk, Durham, he sailed, together with five hundred emigrants, in the *Dunedin* to New Zealand, where he bought a practice at Otepopo, and had an extensive district solely dependant on himself. His duties here necessitated rides of forty to fifty miles, and the performance at times of delicate operations single handed. He was held in great esteem by the Maories, many of whom almost felt the loss of a father, when he was compelled by ill health to return with his wife and child to England. After staying some time with his brother at Stratford, he entered St. Thomas's Hospital, and was treated by Dr. Ord, and his old fellow-student Dr. Fothergill. He then went home to his father at Kelvedon, where, in spite of all that skill could do, he sank, on September 6th.

THE EXAMINATION OF PORK.

ACCORDING to the official documents analysed by Mr. Eulenberg, there were in 1877 172,800 cases of trichinised pork in Prussia. In the district of Stettin, ninety-eight cases of disease were observed in man, of which fifty-four occurred in the city of Stettin itself. In the district of Mersburg, three small epidemics of trichinosis were observed in villages. Generally, the meat had been consumed slightly smoked, but uncooked. At Hoxeter, there were fifty-two cases. To prevent the country from being literally invaded by trichina, the Government had been obliged to have recourse to very energetic measures, requiring every pig which is slaughtered to be certified by an expert to be free from trichina after microscopic examination of a portion of muscle. This work is rather severe, and falls rather hardly upon the district medical officers, of whom one alone asserts that he was called upon in two days to examine 503 hams, three tons of lard, and 46 pigs.

AN AMERICAN NATIONAL BOARD OF HEALTH.

A NATIONAL Board of Health has been established in the United States, with head-quarters at Washington. The sum of fifty thousand dollars was appropriated for its expenses, and that sum has since, we believe, been very largely increased. It is provided that the duties of the National Board of Health shall be to obtain information upon all matters affecting the public health, to advise the several departments of the government, the executives of the several States, and the commissioners of the district of Columbia, on all questions submitted by them, or whenever in the opinion of the Board such advice may tend to the preserva-

tion and improvement of the public health. The Board shall report to Congress a full statement of its transactions, together with a plan for a national public health organisation, which plan shall be prepared after consultation with the principal sanitary organisations and the sanitarians of the several States of the United States, special attention being given to the subject of quarantine, both marine and inland. This action will probably lead to a department of health in the government.

THE ANATOMICAL EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

PROFESSOR FLOWER presided at the distribution of prizes at the Middlesex Hospital, on the 1st instant; and, in referring to the examinations at the College of Surgeons, expressed his surprise at the percentage of failures in anatomy. "Anatomy", he said, "is a definite science, and as such within the grasp of any ordinary intellect"; and he could not help thinking that there was either a want of system or application on the part of the students in following this branch of their education. He particularly advised students to pay attention to the study of osteology, the groundwork of anatomy; and, if they began by acquiring a thorough knowledge of that, the muscles, vessels, nerves, etc., would be more easily learnt.

DR. SAYRE AT UNIVERSITY COLLEGE.

ON the 2nd instant, Dr. Sayre, at the invitation of Professor Berkeley Hill, opened the course of Practical Surgery in University College for the current session. Dr. Sayre applied the plaster-of-Paris jacket to three patients: one of lateral curvature, with such extreme debility that she could not stand without support; one of angular curvature in the upper dorsal region; and one of lumbar caries, with abscess. The two first cases had been previously treated in the provinces with badly-fitted poroplastic corsets, which were removed and replaced by rigid plaster jackets to the great satisfaction of both patients, one of whom (she with lateral curvature) was able to stand firmly and erect as soon as the plaster had dried, gaining at once no less than five inches of stature by the straightening her spine received. Dr. Sayre explained his reasons for condemning poroplastic felt and other similar materials for spinal supports; which condemnation he had passed after careful trials. The reasons were two: one, that the material is not sufficiently plastic to adapt itself thoroughly to the inequalities of surface of the thorax, consequently a poroplastic corset must sooner or later (probably sooner than later) slip down from its proper place, and let the upper part of the spine drop again into its faulty position. If tightly buckled, with the endeavour to prevent this displacement, the felt-corset interfered with respiration and other necessary movements of the trunk. The second reason for the rejection of plastic-felt as a material in the construction of spinal supports, was its want of sufficient rigidity. In a short time, when maintained at the temperature of the human body, the felt softens and bends where the strain is greatest; and thus the corset collapses just where it should be absolutely unyielding. Dr. Sayre was attentively listened to by a crowded audience; his happy illustrations, and the dexterous manipulations of his son Dr. Charles H. Sayre, were highly relished, both by the junior students and by a large number of surgeons, English and foreign, who watched the application of the plaster-jackets.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN.

WE have received a letter from the Treasurer of St. John's Hospital, animadverting upon the comment contained in the JOURNAL of the 6th ultimo. He affirms that the charges made by Dr. Hoggan are unfounded; and that, had there been any foundation for them, the recent annual meeting afforded an opportunity when they might have been discussed. But the meeting passed off quietly. No complaints were made against the managers of the hospital, and their report was unanimously adopted. Whether Dr. Hoggan has been mistaken in his statements or not, the comment which we made was elicited by the new code of rules which has lately been passed for the guidance of the medical officers. Some of these rules are highly objectionable, and the summary dismissal of Dr. Hoggan shows how they operate. If the members of the staff are contented to give their services on such terms, so be it. But we would advise all those who are thinking of applying for appointments at this hospital to obtain a copy of the new code of rules, and to study them carefully. What advantages has St. John's Hospital to offer its physicians and surgeons that they should submit to unusually strict regulations?

THE ERASMUS WILSON TRUST.

IT may be necessary to remind intending candidates that applications, with a view to lecture under the above Trust, should be made to the Secretary of the College of Surgeons during the present month, as no application will be entertained after the 31st instant. Full explanations will be given at the College.

CERTIFICATION OF PAUPER LUNATICS IN THE KENSINGTON UNION.

IT has come to our knowledge that a most unwholesome condition of things prevails in this union in reference to the certification of pauper lunatics. It appears that certain of the relieving officers of this union are in the habit of exacting a portion of the fee paid under the order of the magistrate or justice of the peace to the medical officers. Some of the medical officers, to their great credit, have resisted this blackmail, with the result that they are not called on to give certificates. One medical gentleman, it is asserted, has been deprived of a considerable sum by these means. We feel satisfied that, if this very serious allegation can be substantiated, and the sources of our information are such as do not admit of doubt, on the fact being brought under the notice of the Local Board, some steps will be taken to check it. If, however, the latter should not be disposed to interfere, we are sure that the Local Government Board would.

INEBRIATE CRIMINALS.

DR. T. D. CROTHERS (*Quart. Jour. Inebriety*, June 1879), in a paper upon the above class of persons, states the following as the results of his study. 1. This class of criminals is numerous, and is generally studied as the type of all others. Unfortunately, they furnish the basis upon which much of the literature of inebriety is founded. 2. It is composed of several classes more or less distinct, requiring a comprehensive study of conditions and surroundings. 3. As patients in inebriate asylums, they are extremely difficult to manage, often bringing odium upon the asylum and receiving little benefit from it. 4. In the treatment, they should be classified, and put under strict military discipline, in which labour is part of the treatment, and this continued for months or years. 5. A removal and classification of this class in our asylums will increase the per cent. of recoveries largely; also a more thorough study of the different classes of inebriety will reveal many facts and clear away much confusion at present existing.

"SENSIBLE VEGETARIANISM."

THE *Spectator* carries the habit of unintentional misrepresentation to its furthest limits. It publishes in its last number an article, headed "Sensible Vegetarianism", founded upon the recent article in our columns on extravagance in diet. It represents it as the gist of our teaching that flesh is probably, as an article of diet, far from wholesome; and that we are leading people by easy stages into sheer vegetarianism. We should have little objection to this or any other sort of misrepresentation, which probably arises from hasty reading, if it were not that to attempt to impose upon us a meaning, which is altogether contrary to the text and to the sense of what we have written, is, so far as the influence of this article goes (and among its own intelligent set of readers the *Spectator* exercises a very considerable influence) to destroy the force which the main teachings to which it refers may, in some places and by som people, be felt to possess. If it were true, as the *Spectator* has it, that Mr. Ernest Hart is carrying out a passing fad in favour of vegetable food, and endeavouring to introduce the absurd doctrine that meat is unwholesome, and that Englishmen should become vegetable feeders, reasonable people would, we imagine, be inclined to pay very little attention to any sort of teaching from a source which would obviously be affected by unreasonable eccentricity. The fact is, however, exactly

the opposite; and, in advocating the larger range of selection of vegetable food; a more skilled attention to the preparation of legumes and of cereals; less extravagance in fuel; and greater economy in the utilisation of other than the best parts of meat, and in the quantity of meat consumed, we desire to assign to meat and to fish, to milk, and to butter, and to eggs, their due place in the dietary scale; and in this we are very glad to have the help of so well-informed and influential a writer as the editor of the *Spectator;* and we hope that, seeing that he evidently virtually agrees in the doctrines which we are trying to enforce, he will give us the further benefit of his help in discussing them, without the disfigurement of adding an implication of fanaticism or eccentricity of which we are by no means ambitious.

PHARMACEUTICAL USE OF GELATINE.

GELATINE, according to the editor of the *Pharmaceutical Journal*, is not suitable as a vehicle for tannin in pessaries or suppositories. A decomposition occurs with the formation of tannate of gelatine, and the otherwise gelatinous vehicle breaks down in the preparation. In those instances where medical men require a gelatine vehicle, it would be better that they left the most suitable relative proportions of the ingredients for that vehicle to the dispenser. It is usual to keep a gelatine medium ready prepared in proper proportions; and on liquefying this for the addition of the medicament, the pessaries are moulded in the usual manner. The usual vehicles for pessaries and suppositories are cacao butter, or some such substance, as a basis, on the one hand, and gelatine on the other; and it will be better for the prescriber to specify one or other of these, leaving the relative proportions to the dispenser, the writer of the prescription proportioning only the medicament. Very rarely do medical men give suitable proportions for the vehicle desired. The same may be said of pill-masses. A dispenser is often at this wits' end in too literally interpreting the excipient and its quantity ordered in a prescription. The ingredients being written, those minor details—in fact, the mode of combining those ingredients so as to form a pill-mass—may well be left to the practical experience of the dispenser.

QUARANTINE.

QUARANTINE questions are being fought out all over the world just now. A vigorous contest is, it appears by the *Times*, still proceeding between the German representative in Japan, Herr von Eisendecher, and the Japanese Foreign Minister, Taraschenin Munenori, as to the right to establish quarantine. The Government of Japan, ever carefully watching and adopting the developments of European civilisation, published some time ago regulations founded on the recommendations made at the Vienna Congress in 1874, establishing a system of quarantine against cholera, which permitted the co-operation of the European consuls in the different ports. These regulations were effectual and unobjectionable. But this year, on the occurrence of cholera in Southern Japan, a declaration of a quarantine of seven days from leaving the infected port was declared, nothing being said about the intervention of consuls. This was received with a common protest by the English and German envoys, while the American representative simply stated his readiness to submit to regulations intended to preserve human life. In July last, the Hamburg ship *Hesperia*, coming from Osaka, in the cholera district, was detained under the notice of quarantine at Yokohama; and although an official physician, sent by the German consul, pronounced the passengers free from taint, she was forbidden to pass. Upon this the German ambassador, doubtless feeling indignant with what he thought an useless persistence in red-tapism, is reported to have authorised the breaking of the quarantine, and this was effected. While making every allowance for the natural indignation of merchants, trading under treaty rights, at being subjected to an expensive delay, it must be admitted that if the lives of millions of human beings swarming hard by in the streets of Yeddo, the capital, could be effectually protected by a day or two's delay to vessels resorting for profit to Japan, it certainly seems somewhat unreasonable that those lives should wholly and unnecessarily hang upon the hurried observations of a single man. Neither side, however, seems inclined to yield.

SCOTLAND.

DR. J. NICOL COX has been elected Provost of Gatehouse-of-Fleet, Kirkcudbrightshire.

DR. THEODORE E. D. BYRNE, Elsieshiels, has intimated his intention of contesting the Dumfries district of Burghs, in the Conservative interest, at the next general election.

WE understand that by the retirement of Dr. Gilchrist, through failing health, from the charge of the Crichton Asylum at Dumfries, a very important and valuable appointment is now open to the psychological branch of the medical profession. We believe the resignation comes into effect on November 11th, and that the Board of Direction is now occupied in making inquiries for a suitable successor.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

AT a meeting held in the Faculty Hall on Friday, the 3rd instant, the following office-bearers were appointed for the session 1879-80. *President:* Dr. Andrew Fergus. *Vice-Presidents:* Dr. M'Call Anderson; Dr. D. Taylor, Paisley. *Council:* Dr. Wm. MacGill; Dr. Hugh Miller; Dr. Alex. Robertson; Dr. A. L. Kelly; Dr. Bruce Goff, Bothwell; Dr. J. Russell; Dr. Geo. Willis, Baillieston; Dr. Geo. Mather. *Secretaries:* Dr. Joseph Coats; Dr. W. L. Reid. *Treasurer:* Dr. Hugh Thomson.

SCARLET FEVER AT CAMBUSLANG.

SCARLET FEVER has broken out in Cambuslang, and has already caused several deaths, not only among children, but also among the adult population. The disease is at present confined to one portion of the village, which is reported to be in a bad sanitary condition. It has been decided by the local authority to build a hospital for the treatment of epidemic disease, and steps have been taken to secure a suitable site for the building.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

AT a meeting held on the 6th instant, in the Faculty Hall, the office-bearers for the ensuing year were elected. Dr. Andrew Buchanan was re-elected to fill the office of President for another year, while Dr. Scott Orr was chosen Visitor. The members of the Board of Examiners in the different subjects were re-elected. The President alluded in feeling terms to the great loss the Faculty as well as the profession in general had sustained by the death of Dr. J. G. Fleming.

DEATH OF DR. J. G. FLEMING OF GLASGOW.

WE regret to announce that the illness of this well known practitioner, to which reference was made in our last issue, has had a fatal termination. Dr. Fleming died at his residence in Glasgow on the morning of the 2nd instant, from typhoid fever. At first, hopes were entertained of his recovery; but his advanced age rendered his case a very anxious one, and he gradually sank under the disease. His loss will be much felt in Glasgow, where he was much esteemed and respected, and also by the Faculty of Physicians and Surgeons, whose representative he was for some time on the General Medical Council.

THE POISONING CASE AT AYR.

THE youngest and last surviving child of the carpet-weaver M'Harg, whose case was alluded to in the last number of the JOURNAL, died in Ayr Hospital on the 1st instant. The medical men are now of opinion that the whole five children died of scarlet fever, which in the case of the three boys was greatly aggravated by the fish of which they had partaken. Much sympathy is felt for the parents, who have thus been bereft of their whole family in eight days.

THE WEST OF SCOTLAND CONVALESCENT HOMES.

THE tenth annual meeting of the donors and subscribers to the Dunoon Seaside Home was held on the 6th instant. From the annual report, it appears that during the year 2337 convalescents had been admitted, being 339 in excess of the number received last year, and making a

total of 14,583 admissions throughout the last ten years. The new wing which has been finished is found to be a great acquisition. A good deal of discussion took place at the meeting as to some restrictions which it was found necessary to make as to the out-door recreation of the inmates; and eventually it was decided to request the directors to take the subject again into consideration, and ascertain whether there was any possibility of modifying the present restrictions.

GLASGOW MORTALITY TABLES.

DR. RUSSELL, the medical officer for the city, has issued his remarks accompanying the mortality tables for the quarter ending June 30th. From these remarks, it appears that the average death-rate of Glasgow in the second quarter of the year for ten years is 29.6; for 1879, it is 23. For all Scotland, the average death-rate of the quarter for ten years is 22.3, and for 1879 it is 20.4. Compared with the "eight principal towns" in Scotland (the mortality of whose entire population was 22), the mortality of Glasgow for the quarter is less than that of Paisley, Perth, and Greenock. The death-rate of Paisley was 35.6—the highest of all the towns in the United Kingdom, except Dublin, which was 36.5. The death-rate of London was 22.4, scarcely one below that of Glasgow. Of the twenty-four statistical subdivisions into which Glasgow is divided, those which show the five lowest death-rates are: Kelvinhaugh and Sandyford, 14; Blythswood, 17; Woodside, 18; Exchange, 18; and Monteith Row, 18.

IRELAND.

DR. HENRY MAUNSELL died on September 27th, at Greystones, county Wicklow, at an advanced age. The deceased was formerly the Editor of the *Dublin Medical Press*, and afterwards the proprietor of the *Dublin Evening Mail*.

SCHOOL OF PHYSIC, TRINITY COLLEGE, DUBLIN.

DRS. C. B. BALL and G. P. NUGENT have been appointed by the Board of Trinity College Demonstrators of Anatomy in the above School. The septennial election of University Professor of Anatomy and Surgery will take place on Tuesday next. Dr. Benjamin G. M'Dowel, the present holder of the Chair, does not seek re-election. The appointment carries with it, under the School of Physic Act, that also of a Surgeoncy to Sir Patrick Dun's Hospital. Three candidates have sent in applications for the Professorship, viz., Dr. Alexander Macalister, the Professor of Comparative Anatomy and Zoology, created by the Board in 1872; Dr. E. W. Collins, Surgeon to Jervis Street Hospital, and Senior Demonstrator of Anatomy in the Trinity College School; and Dr. Reuben J. Harvey, Lecturer on Physiology in the Carmichael College of Medicine and Surgery, and Assistant Physician to the House of Industry Hospitals.

OPENING OF PUBLIC BATHS, BELFAST.

THE baths and washhouses which have been erected at St. Peter's Hill, Belfast, were last week formally opened by the Mayor and Corporation of that town. The site cost £3,000, and the structure itself about £2,500, while the water is supplied free by the Water Commissioners. These baths must be kept open for at least seven years, in accordance with the Act of 1846, and they will be under the direction of the Sanitary Committee of the Corporation. As a promoter of health and preventative of disease, baths should be held in the highest esteem, and must be regarded as a sanitary agent of great importance; and we are confident that their establishment in Belfast will have a beneficial effect on the health of its citizens.

MALLOW DISPENSARY.

A SPECIAL meeting of the Mallow Dispensary Committee was held last week for the purpose of considering the resignation of Dr. Parsons Berry, who has acted as medical officer of the district for the past twenty-two years. Several of the members spoke in the highest terms of the admirable manner in which Dr. Berry had performed the arduous duties connected with his post; and a resolution was unanimously adopted recommending the Board of Guardians of the Union to grant him the full retiring allowance which the law permits.

QUEEN'S COLLEGE, CORK.

THE report of the President of this College for the academic session 1878-79 proves that the past session has in every respect been the most prosperous the College has had. At the entrance examinations in October and November, 101 candidates presented themselves, of whom 84 passed, 3 were admitted *ad eundem* from other Universities, making a total of 87 new matriculated students. The total number of matriculated students on the College books was 254, and of non-matriculated 26, or in all 280; of which number 175 were entered in the Faculty of Medicine. The library has increased since the last report by more than 1,100 volumes of books or pamphlets, of which 322 were purchased, and the rest presented. Increased accommodation is required for this portion of the College, which may be provided by building a new library, or, as has been proposed, by building a new Natural History Museum, and converting the present museum into a students' library and public reading-room. A biological laboratory adapted for chemical, histological, and other experiments on plants and animals has been built, and will, it is expected, be ready for work next session; while considerable progress has been made with the erection of the observatory, the building being nearly finished, and an equatorial telescope, spectroscope, and new siderostatic telescope have been obtained. To complete the observatory and furnish it with the necessary instruments, a sum of £2,500 will be required, of which £1,540 has already been subscribed. The new materia medica museum has been completed and fitted with cases, and the first instalment of a fine collection of drugs has been arranged; while some progress has also been made with the arrangement of a special educational collection of drugs and therapeutic preparations. The new anatomical and pathological museum has also been completed, and the pathological preparations belonging to the College transferred thither. The President concludes his report by directing attention to the inadequate remuneration of the professors and officers of the College, and states that in no way could the welfare of the College and the advancement of knowledge be better promoted than by making those entrusted with the high duties of University professors contented in their position.

THE CORK ASYLUM.

IT is satisfactory to find that the tardy investigation of the charges which have been preferred for some time against Dr. Eames, the Medical Superintendent of the Cork Lunatic Asylum, has resulted in that gentleman's complete exoneration, and in eliciting from the governors an unanimous expression of unabated confidence in his management. What those charges were it was throughout difficult to understand; for they were vaguely hinted at, and referred to in tones of awe and mystery, rather than boldly preferred. Considerable mystification had been created in the public mind as to the precise nature of the crimes of which Dr. Eames had been guilty.

"A little fuel", says the *Cork Examiner*, in referring to the matter, "will make a great vapour, every one knows; but it is not always possible to judge by the volume of smoke what the extent of the fire may be. The tendency is generally to believe that it is greater than it actually is; and, though we do not think in Dr. Eames's case there was any marked exhibition of such a feeling, still there can be no doubt there was a sort of uneasy sense that there must be something serious at the bottom of all this tremendous pother. This is the reason why we deemed it necessary to produce that long and elaborate report. It became absolutely essential to do so, in order to convince people that there was nothing more; that there was no curtain unlifted concealing some dark piece of wrongdoing; that the whole of the elaborate mystery meant a number of trumpery or groundless complaints—those which bore even the semblance of gravity being emanations of the hostility of a chastised subordinate. It is not our intention now to go through, even for the purpose of censure, such fiddle-faddle as the stuff that constituted the bulk of the charges—the situation of the cricket-ground, the adaptation of part of it to lawn-tennis, the use of the market-cart by the doctor to bring him into town, the boiling of pork to enable parsnips

to be consumed by the patients, and so on—we have no idea of repeating the dose which our readers have had so fully. Our chief object is to congratulate the governors on the good sense with which the majority treated the accusations, once they became fairly known; and to express an opinion on the folly of worrying and embarrassing a valuable officer in such a manner. It is not too much to say that Dr. Eames owes the accusations that have on this and another recent occasion been made against him to the very merits which have characterised the discharge of his duties."

DUBLIN ROYAL SANITARY COMMISSION.

As was stated last week, the town clerk was the first witness examined by the Commission. This gentleman informed the Chairman, Mr. Rawlinson, at the outset of his evidence, that the Corporation had concluded to allow all their officers to express, in a completely unfettered manner, their individual views on the subject of the inquiry. The town clerk having then given some statistics as to the population (245,722) and area (3,807 acres) of the Dublin district, its rateable value, rates, and the borrowing powers and income of the Corporation, proceeded to read a report he had drawn up embodying a history of the proceedings taken by the Corporation in reference to sewerage and drainage in Dublin. This report named the several Acts of Parliament which had been passed since 1851 for enlarging the powers of the Corporation as to drainage, etc. It referred to a report containing sanitary recommendations made by the King and Queen's College of Physicians at the request of the Corporation in 1853. A *résumé* was given of all that had been done since that year, in order to devise and carry out a scheme for the purification of the Liffey, the various plans for that purpose being mentioned, and their practicability discussed. It was also stated that the city engineer had reported, in 1878, that fifty miles of new sewers had been built by the present Corporation, and fifteen miles and a half of old sewers repaired, a sum of £240,000 having been expended in their construction, maintenance, and repair. In fine, that few cities had more efficient main-sewers than Dublin. Mr. Parke Neville, the city engineer, was next examined, and gave technical evidence as to various schemes proposed for the drainage of the city, its scavenging, and as to the construction and ventilation of its sewers. He referred to the defective sewerage of many houses of the best class in Dublin; and the Chairman, in corroboration of the carelessness displayed by the community as to the sanitary condition of their dwellings, even those inhabited by the highest classes, instanced Marlborough House and Spencer House, from beneath the basement of both of which cesspools and foul drains had been only lately removed. He stated that there was not a single nobleman's house in London, if it have not been dealt with within the last half-dozen years—and very few of them have been so dealt with—which was not in just as bad and unsanitary condition as it is possible for any place to be in. Persons who resided in such houses were living in a condition where their lives were not worth a twelvemonth's purchase. The Chairman further agreed with the witness that the River Liffey must be purified—it might be fairly described as an open sewer; but much more must be done than that to make Dublin what it should be. Domestic scavenging was of paramount necessity, as well as paving and the erection of artisans' dwellings. In Mr. Neville's opinion, the state of the streets and the sizes of houses have more to do with the high death-rate of Dublin than the drainage. Mr. Rawlinson said that the tenements of Dublin were just as bad as it was possible for places to be in which human beings were supposed to reside. At the same time, he must say he had not seen anything worse in Dublin than he had seen in what was called rich England. He was happy to say that exposure in other places had been followed by improvement, and he sincerely hoped the exposure which would now take place in Dublin would lead to a better state of things. It was impossible for language to describe anything worse than certain portions of the tenement districts of Dublin. The houses were not fit for animals, let alone human beings. They were not worth one year's purchase.

ERRATUM.—In the article of last week headed "the King and Queen's College of Physicians", p. 553, line 3 from bottom, for the word "or" read "on".

ROYAL COLLEGE OF SURGEONS.

FROM an interesting report in the Calendar of the College which has just been published, it appears that during the past collegiate year the Board of Examiners in Anatomy and Physiology has held six meetings for the Fellowship and thirty-one for the Membership of the College. At the first named, 95 candidates were examined, nearly half of whom—viz., 47—were rejected. For the Membership, the Board examined 785 candidates; of which number 530 passed, 222 were referred for three months, and, in pursuance of a recent regulation, 33 candidates had an additional three months, in consequence of their lamentable ignorance. The fees paid to the Board is represented by £1,855.

The Court of Examiners during the same period has held two meetings for the pass examination for the Fellowship, when 28 candidates presented themselves; of which number 18 were successful, and 10 were referred for one year. For the pass examination for the Membership, thirty meetings had been held, at which 507 candidates presented themselves; of which number 285 passed, 58 were approved in Surgery, but required to pass in Medicine, 76 were approved in Surgery and afterwards qualified in Medicine, 164 were referred for six months, and 361 diplomas granted. The fees paid to the Court at the pass examinations in Surgery and Medicine amounted to £2,660 14s.

For the Licence in Dentistry, 33 candidates were examined, 27 of whom passed to the satisfaction of the Board, who received in fees £299 5s. The total amount of fees paid to Council and Courts and Boards of Examiners amounted to £5,522 6s. For salaries and wages in the three departments of College, Museum, and Library, £3,915 19s. were required. For taxes, rates, stamps (exclusive of postage), £1,239 12s. 8d. appears to have been paid. Pensions are now reduced by death to £54 12s. The total income of the College is represented by £14,175 14s. 6d., and the expenditure by £14,878 11s.; leaving a balance at the bankers of £254 16s. 9d. One item in the former receipts of the College has quite lapsed—viz., for the Midwifery Licence, as no examinations have "been held for the last three years, and they are suspended until further notice".

The senior Fellow on the list appears to be that veteran James Moncrieff Arnott, F.R.S., a former President of the College, who, seeing he was admitted a Member of the institution so long ago as April 1817, and supposing him then to have been of the required age of twenty-two years, must now be in his eighty-fifth year. The oldest official of the College appears to be Mr. T. M. Stone, appointed assistant librarian in 1832, who in June next will have been in collegiate harness forty-eight years. The following have been recipients of the honorary gold medal of the College: Messrs. J. Wilson (1800), J. Parkinson (1822), J. Swan (1825)—deceased; and G. Bennett (1834), W. L. Crowther (1869), and T. B. Peacock (1876)—the last three happily surviving. The first Master of the College was Charles Hawkins, in 1800; the last who held this office was Thompson Forster, in 1820. The first President was Sir Everard Home, Bart., the brother-in-law of John Hunter; the gentleman now worthily holding that office is Mr. Luther Holden, the Senior Surgeon of St. Bartholomew's Hospital.

THE PREVENTION OF SUICIDE.

A CORRESPONDENT writes: In a paper read before the Psychological Section of the British Medical Association at Cork, which was published at page 533 of the JOURNAL of last week, Dr. Wade draws attention to the enormous number of suicides occurring in England; the total being not fewer than 1,600 in one year—that is to say, four or five on an average every day. Dr. Wade's remarks are extremely valuable, if considered as merely intended to direct public or professional efforts to taking steps towards the prevention of this horrible crime. But at the same time, we cannot but remark that we should have derived more satisfaction and assistance from his able paper if he had been more definite in his subdivisions of this awful malady. We are unable to gather from his observations whether or no he considers every person who commits suicide to be insane. Neither can we infer from his remarks whether or no he applies an equal share of blame to the ignorant relations of the patient outside an asylum, or to the skilled attendants attached to such an establishment. In both cases, without doubt, a want of "proper care" may exist; but the different amount of the deficiency of such care cannot be estimated upon the data Dr. Wade presents to us. That "means ought to be taken" to teach ignorant relations the premonitory symptoms of suicidal, and indeed of all forms of insanity, is a statement with which we most heartily agree. But, as Dr. Wade remarks, "there is another class of cases in which we ourselves, and not the public, are to blame." And the problem Dr. Wade would have solved is, what is to be done with such patients? In the present state of the law, cases on the borderland of insanity cannot legally be interfered with, whether they are imperilling their own lives and inter-

ests, or those of other people. It is true, that a feeble step in the right direction has been taken by passing the Habitual Drunkards' Bill; bu so dear is liberty to the British subject, that it is extremely improbable that proper steps will ever be taken in this country to insure the safety of those whose mental condition threatens danger to the patient's self or to others, short of manifest symptoms of insanity. What is really wanted is a halfway-house, where those suffering from violent attacks of delirium tremens or other temporary mental disorders, whether due to alcoholic excesses or other causes, might be received without incurring the stigma of having been ever incarcerated as lunatics in an asylum. The proprietors of such establishments should be altogether free from any liability to a civil action being brought against them, as long as it could be proved that they had acted *bonâ fide*, and under proper disinterested medical advice. Until some such plan is adopted, and until the ignorant are instructed in the manner Dr. Wade suggests, in the diagnosis of early mental disease, we do not anticipate any diminution in the number of suicides or of other disastrous consequences due to incipient nervous disorders in this or indeed in any other country.

THE OPENING OF THE SESSION AT THE PROVINCIAL MEDICAL SCHOOLS.

BIRMINGHAM.

The winter session was opened on Wednesday, October 1st, by an introductory address by Dr. Sawyer, the text of which appeared last week in the columns of the JOURNAL. After the address, the prizes for the last year were distributed. Mr. Bruce, the late Lecturer on Chemistry, has resigned, and his place has been filled by the appointment of Dr. A. B. Hill. Dr. Gibson has resigned the Assistant-Physiciancy to the General Hospital, and Dr. R. Simon of Manchester has been elected in his place. The Ingleby lecturer for the coming year will probably be Dr. B. W. Foster.

BRISTOL.

At the Bristol Medical School, the commencement of the winter session marks an important epoch in its history. During the past year, the management of the school has been placed by the faculty in the hands of an independent governing body, elected by the Council of University College, Bristol, and the staffs and committees of the Infirmary and the Hospital, and on which the faculty of the school is also represented. In accordance with the Articles of Affiliation between University College and the Medical School, the Council of the College have erected new and commodious medical school buildings on the College site in Tyndall's Park, and the work of the winter session has been commenced in the new buildings. The premises in the Old Park, occupied by the School since 1834, have long proved utterly inadequate to the wants of the School, the work of which has been carried on in them up to the present time only with the greatest difficulty; and the entry upon new medical school buildings, in excellent position, and erected to meet the present requirements of medical education, and to accommodate the increasing number of students, is an event of the greatest importance to the future of the School.

Mr. David Davies, the Medical Officer of Health for the city of Bristol, has been appointed to the newly constituted Chair of Hygiene; and special arrangements have been made to perfect the practical teaching of Anatomy and Physiology by the appointment of Mr. W. H. Harsant, F.R.C.S., as Demonstrator of Anatomy, and Messrs. F. S. Peck and G. M. Smith as Medical Tutors.

An important alteration has been made by the extension of the curriculum of the School over four years instead of three as formerly. Perpetual fees have been abolished, and for the general perpetual fee a composition fee has been instituted, which entitles to attendance on all the courses of lectures required for the usual qualifications. This alteration has been prompted by the experience of the Faculty that the granting of perpetual tickets to classes tends to encourage irregularity in attendance on the part of students.

LEEDS SCHOOL OF MEDICINE.

The introductory address, of which we published a long abstract at page 580, was delivered by Mr. E. Atkinson. There was a large attendance of pupils, and the delivery of the address was followed by a distribution of prizes to the successful candidates of last session. In the evening, the usual annual dinner was held at the Queen's Hotel, when the President (Mr. E. Atkinson) occupied the chair, being supported by the leaders of all sections of Leeds society. The Chairman, Mr. Samuel Hey, the Rev. Dr. Gott, Mr. Bruce, Dr. Clifford Allbutt, Mr. T. P. Teale, Dr. Heaton, Mr. Scattergood, and Mr. Malcolm were among the speakers; and the members of the Leeds Harmonic Union gave a selection of glees.

With respect to the arrangements for instruction at this school, the following slight alterations have been made. New prosectors have been appointed, one or other of whom will be almost constantly in the dissecting-room. The demonstrators themselves also have arranged to increase the number of hours daily during which they will be in the room. Microscopes are kept in the library, and physiological slides are shown daily under them. When possible, a pathological specimen of the tissue shown on any day is also shown under another microscope. Last summer, salmon-ova, or rather very young salmon, in which the circulation can be admirably seen, were kept under observation for many days. These microscopes are found to be highly attractive to students, and very useful, especially to first year's men. Materia medica and therapeutics have been made a second year's course. Moreover, more than half the lectures are really demonstrations in the laboratory, and are conversational. This plan is only possible with a small class (thirty to thirty-five); even then Dr. Churton feels obliged to divide them into two parts, and to take two hours instead of one to the lecture. At these demonstrations the drugs, and, whenever possible, their active principles, are shown; any extraordinary qualities examined; adulterations tested for; sometimes mixtures, right and wrong, are made. The students ask any questions they please—as indeed they do also during a formal lecture, interrupting it; and Dr. Churton frequently breaks off the lecture, and asks such questions as it seems they ought to be able to answer, either by direct knowledge or by reasoning power. This plan works well. The students, however, greatly prefer the demonstrations, and show a good deal of interest in them. Many admirable pathological preparations have been added to the museum recently, put up by the curator (Mr. Greenwood) and one of the demonstrators (Mr. Robson). There is no maternity charity in Leeds, strange to say. Some of the students are obliged to go a-begging for midwifery cases. It is hoped that in time this state of things will be altered. No new buildings have been added. The courses of botany, biology, chemistry, and practical chemistry, however, are given at the Yorkshire College by its professors, so that the laboratory and some other rooms in the school are now available for other purposes. The twenty-eight new entries at the school are more than last year, at the same date; and three or four more are still expected.

THE LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

The opening of the winter session at this important provincial school was held under circumstances of unusual *éclat*, calculated to influence very favourably its future prosperity. It was known beforehand that, among other distinguished medical visitors, Dr. Sayre of New York would be present, and would illustrate practically his treatment of lateral spinal curvature by the plaster-of-Paris bandage. He did this in the chemistry theatre of the School before a crowded assembly of local members of the profession, who witnessed the demonstration with much interest. At three o'clock, the theatre of the medical institution was filled by a large audience, consisting mostly of local medical practitioners, Mr. Gilmore, Chairman of the Royal Infirmary, several clergymen, and a large number of students. Professor Lister of King's College presided; and, among other visitors, were Professor Turner of Edinburgh; Drs. Matthews Duncan, Ferrier, Frederick T. Roberts, Clifford Allbutt, Wright of Leeds; Mr. Wheelhouse, also of Leeds; and Mr. Alfred Baker of Birmingham.

Professor Lister was most enthusiastically received; and, at his request, Dr. Caton, the Registrar, read the annual report of the School, which was extremely satisfactory. Dr. Wallace, the Lecturer on Obstetrics, then delivered the annual introductory lecture, which was listened to with great attention and frequent bursts of applause. At its conclusion, the prizes and certificates of honour were delivered by Professor Lister, who then made a few remarks. He urged those students who had been unsuccessful in obtaining any prizes not to be discouraged from attempting again, and warned them against the popular delusion that surgeons must be necessarily devoid of fine feelings, remarking that kindness of heart was an essential quality. Votes of thanks to Dr. Wallace and the Chairman concluded this meeting; after which, Professor Lister gave a demonstration of the antiseptic mode of treatment in the operating theatre of the Royal Infirmary, which was crowded to excess.

In the evening, the annual banquet was held at the Adelphi Hotel, under the presidency of Mr. Banks, Lecturer on Anatomy and Chairman of the School. Among the guests were the Mayor of Liverpool (Mr. T. B. Royden); the Town Clerk; the Rev. C. Beard; Professor Lister; Drs. Matthews Duncan, Ferrier, Roberts; Mr. Alfred Baker of Birmingham, etc. There were in all one hundred and forty-one gentlemen present, a larger number than on any previous occasion. After dinner and the usual loyal toasts, the Rev. C. Beard proposed that of the "Medical Charities of Liverpool". While giving every credit to

these admirable institutions, he deprecated their pauperising tendencies, and urged that the working man ought to pay for medical attendance in all ordinary ailments, resorting to the hospital only in cases of accident or exceptionally severe illness. Professor Lister proposed the next toast, "Provincial Schools of Medicine"; and stated that, if any justification for them were required, what he had seen that day would be sufficient. He defended very ably the present universities, medical corporations, and licensing bodies, and denounced the proposed one-portal system, observing that it would entail an enormous amount of work on the examiners, and probably lead to a number of subexamining boards. He also urged that, if the Medical Council did their duty by sending representatives to visit the examinations, and in suspending the powers of those corporations and licensing bodies whose examinations were unsatisfactory, the benefits of the one-portal system would be gained, while the evils of monopoly would be avoided. Mr. Reginald Harrison proposed "The Universities", to which Professor Turner replied. He agreed with much that Professor Lister had said, and did not see why they should not have universities in Manchester, Liverpool, and Yorkshire; but he also urged the importance of having a supervision of the examinations by the Medical Council. The health of Professor Lister was proposed by the Chairman in an admirable speech, to which Mr. Lister briefly responded. Other toasts concluded a most agreeable evening.

The various class-rooms, the dissecting-room, museum and physiological laboratory were visited by Professor Lister, Dr. Turner, and the other visitors, who expressed their approval of all the arrangements for teaching anatomy and physiology. Dr. Caton, the registrar, has already received notice of a number of new students, and the winter session bids fair to rival any of its predecessors.

THE OWENS COLLEGE (MANCHESTER) SCHOOL OF MEDICINE.

The practice of having a separate opening address in the medical department being discontinued, an introductory lecture for all the departments of the College was given on October 7th by Professor Marshall, the subject being on the Modern Study of Zoology. Amongst the changes affecting the Medical School, must be mentioned the creation of a separate chair of zoology, to which Professor Marshall has just been appointed. Further impetus will be given to the study of biology by the erection of a large museum to contain the various collections, together with the necessary laboratories and lecture-rooms. The plans for this building, which is to be on a very extensive scale, are already in the hands of the architect. By the resignation of Dr. Young, senior demonstrator in anatomy, and Mr. Priestley, demonstrator in physiology—a loss which is keenly felt alike by students and lecturers—two vacancies have occurred. Dr. Branfoot succeeds Dr. Young, and will share the work with Mr. Frazer. Mr. Priestley's post is still vacant. Another change we have to chronicle is the separation of medical jurisprudence from hygiene, and the appointment of Mr. C. J. Cullingworth to the lectureship on medical jurisprudence. The Medical School buildings being far too small for the present wants of the school, it is seriously contemplated to erect an additional building (a pathological laboratory, a new museum for materia medica, and some new anatomical workrooms). In the Manchester Royal Infirmary, where the clinical instruction is given to the students of the school, several changes have to be noticed. By the resignation of Mr. Bowring, Mr. W. Whitehead has been made a full surgeon. A vacancy is thus left for an assistant-surgeonship. There are already four candidates for this post, and the election will take place in a fortnight. The clinical teaching at the infirmary has been completely reorganised. Systematic clinical instruction at the bedside is now given every day at fixed hours, both in medicine and surgery; and each member of the honorary staff gives besides a six weeks' course of clinical lectures. A tutorial class on medical diagnosis has just been organised by Dr. G. Steell, the resident medical officer. The resident staff has been considerably increased by the appointment of four house-surgeons and two house-physicians; and an efficient system of note-taking is now being carried out. The wards have been rearranged, and some important alterations made as regards the baths and closets; and a new out-patient department has been built. This building, which is only connected by a corridor with the main building, consists of a centrally situated large waiting-room; and leading from this there are a number of smaller rooms for the physicians and surgeons, for ophthalmoscopic examinations, pathological work, etc. The lecturers and students will dine together to-day (Friday), under the presidency of Dr. Henry Simpson. The registration of students is not yet completed. The number of new students so far entered falls short of last year's entry.

SHEFFIELD MEDICAL SCHOOL.

The proceedings on the 1st of October consisted as usual of an introductory lecture, given this year by Mr. Snell, an abstract of which is printed at page 578 of this JOURNAL. In the evening, there was a dinner of the School staff and their friends. Mr. Laver has been appointed Assistant Demonstrator of Anatomy, and Mr. W. D. James now assists Dr. Dyson in the Lectures on Physiology, whilst Mr. A. S. Bell is to be associated with Mr. J. W. Harrison in the Lectures on Medical Jurisprudence and Toxicology.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE.

The session began on the 1st instant by a large public meeting, at which Dr. G. Y. Heath, the President, occupied the chair. The prizes were distributed to the successful students by Sir G. Elliot, Bart., M.P., who gave an excellent address, in which he urged upon them the inestimable value of steady continuous work. Dr. Luke Armstrong, the Registrar, read the report of the College for the past year. Dr. Philipson then took the chair, whilst Mr. Drummond delivered the introductory address, of which we publish an abstract elsewhere. Votes of thanks to Sir G. Elliot, to Dr. Drummond, and the President, concluded the meeting.

The arrangements for teaching remain substantially as last year. The lectureship on practical physiology in the summer course is at present vacant, and is or will be advertised. No additions have as yet been made to the buildings, but the increasing number of students and the large number of entries already this year—twenty-two on the first day of the session—renders some change in this respect very desirable. The present building is most conveniently situated, but is becoming too small, the dissecting-room being, when the College is in full swing of work, especially crowded. Every part of the building has been thoroughly cleaned and redecorated.

The authorities are most anxious to give a thoroughly sound and good education to the students, and to raise the tone of thought among them. Of late years, they have had a certain number of students from the London schools, who take a year's (medical) residence, in order to qualify for the examination for Durham degrees; and the authorities encourage their own men to go to London for a year. They think this reciprocity may be mutually advantageous. The infirmary is at present in first-rate order; every part of it having been repainted, the floor laid with pitch pine, polished and kept clean by rubbing, etc. The wards are absolutely without odour, and surgically sweet; there is no pyæmia, and erysipelas is almost an unknown disease. The building contains upwards of 200 beds—about 220. The Listerian antiseptic system is rigorously carried out, and there is rarely a death after amputation. The examinations for Durham are carried on with great strictness, two foreign examiners being always appointed; last year, Mr. Holden, St. Bartholomew's and Dr. Fenwick of London Hospital; previously, Dr. King Chambers and Professor C. Heath. The examination for Durham began here twenty-five years ago, and the examination is practically the same now, but improved in detail. The candidates are placed by the dead subject, and made to dissect, before the examiner, whatever region he chooses, and are afterwards examined upon their dissection. The candidates are also taken into the wards of the infirmary; and required to examine patients before the examiners, and give their diagnosis, etc., and opinion as to treatment. The whole of the patients in the infirmary are at the disposal of examiners for their purpose, and a certain number of recently admitted cases are reserved, and no opinion given upon them by the staff, so that the candidates have had no opportunity of hearing or knowing anything of them. The foreign examiners have always expressed themselves highly satisfied with the character of these examinations, with the class of students, and the way in which they acquit themselves.

THE DISSECTING-ROOMS.

WE are indebted to the Demonstrators of Anatomy of the various dissecting-rooms throughout the country for the following reports upon the number of subjects which were ready for dissection at the beginning of this session, and for the account of the methods which had been adopted for their preservation. It will be seen that at all the schools work could be begun on the morrow of the Introductories—a state of things far different from that which obtained some fifteen years ago, when students often waited for weeks before they could set to work upon a "part".

St. Bartholomew's Hospital.—The number of subjects in the rooms on October 1st was twelve; and Garsten's method is still used for their preservation.

St. George's Hospital.—The session was commenced with five subjects, and one has since been received. The mode of preserving is that mentioned in the JOURNAL last year; it answers very well. It is the

invention of the dissecting-room porter, and costs about five shillings per subject.

Guy's Hospital.—At the beginning of the session, there were fourteen subjects in the room. They were preserved by the method of injection described by Mr. Howse in the seventeenth volume of the present series of the *Guy's Hospital Reports*, with the additional precaution that the subjects, when injected, are put into a tank of carbolic acid solution.

King's College.—The session was started with nine subjects, preserved by Stirling's process, which has been adopted for several years, and which gives entire satisfaction.

St. Mary's Hospital.—There were three bodies in the dissecting-room on October 1st, which had been previously injected with a mixture of arsenic, vermilion, plaster-of-Paris, and size. Since October 1st, three other subjects have been received.

Middlesex Hospital.—Dissection was started with three subjects, which came in on July 7th and 19th, and September 15th. Each was injected through the aortic arch with about one pound of arsenic, dissolved in about one pint of a solution of carbonate of potash (three ounces to pint). The day following, the "paint" was injected. Each body was enveloped with rags soaked in carbolic oil, bandaged, and placed in a shell with sawdust. The result was satisfactory, and the subjects are now sweet and being dissected.

St. Thomas's Hospital.—There were seven bodies in the dissecting-room at the beginning of the session. They were preserved by "Howse's method", viz., the injection of glycerine and arsenic by a syphon, and, after being wrapped in cloths soaked in glycerine, were laid aside in slate tanks.

University College.—On October 1st, there were sixteen subjects ready to come into the dissecting-room. For their preservation, they had been injected from the aorta with a solution of one pound of crystal carbolic acid, in one gallon of glycerine, to each body. Afterwards, each body was wrapped in bandages soaked in carbolic acid and oil. This method of preserving gives excellent results if sufficient care be taken, and particularly if the bodies can be obtained moderately fresh. This is the great difficulty. It is commonly three or four days, not unfrequently six or seven, after death that the bodies are received; and in this time, in July, August, or September, decomposition has already so far advanced that no method can restore them or keep them satisfactorily.

Westminster Hospital.—There was one subject awaiting dissection in the room on October 1st. This had been injected with carbolic acid and glycerine, and then with paint injection. It had been subsequently kept in sawdust.

School of Anatomy and Operative Surgery.—On October 1st, there were two subjects in the dissecting-room; they had been preserved by the injection, through the left internal iliac artery, of a solution containing one pound of bichloride of mercury; and, in one of the subjects, the brain and spinal cord had been hardened by the injection of alcohol into the cavity of the dura mater and ventricles. Corrosive sublimate is probably better than other preservatives, and not much more expensive. It is more efficient than chloride of zinc, does not irritate the finger-ends like arsenic, and has no smell of its own like carbolic acid. The injection is made by the internal iliac artery for the following reasons. The lower limbs, in proportion to their weight and volume, are less vascular than the upper limbs, head, and neck, etc.; further, when the subject is injected from the aorta, the preservative fluid reaches the lower limbs only after having passed by the large and distensible arteries of the abdomen—therefore at a reduced pressure. Hence the lower limbs are less perfectly injected than the other parts of the body. It is a fact of observation that they usually begin to putrefy first. By injecting below the abdomen, the lower limbs get more of the fluid, and are more thoroughly preserved. Of the arteries in this situation, the internal iliacs are probably the most eligible; and, of the two internal iliac arteries, the left one is the more easily exposed, on account of the obliquity of the attached border of the mesentery downwards and to the right. The process for the injection of alcohol into the dura mater and ventricles is very simple. A hole is bored into the skull and dura mater a little above and externally to the external occipital protuberance. The occipital lobe of the corresponding side is then lacerated, so as to open the posterior corner of the lateral ventricle. A cork is then fitted into the opening, and into this a piece of glass tube. To this a piece of gutta-percha tubing is connected, communicating with the reservoir, and the alcohol is allowed to flow in slowly. This process has been tried two or three times; in every case the brain was much harder than it would otherwise have been, and proved useful; the brain was good enough to be used for demonstration to the class.

Birmingham.—On the opening day of the session, there were two subjects awaiting dissection, which had been preserved by injecting the vessels (from the femoral artery) with a mixture containing chloral hydrate, carbolic acid, glycerine, and methylated spirits, which make an excellent preservative.

Bristol.—At the commencement of the session, there was one subject, which was preserved by being injected through the femoral artery with a solution of arsenite of soda. This was allowed to remain in for two days, when the red injecting material was injected by the same opening.

Owens College, Manchester.—At the commencement of this session, there were six bodies. The method of preservation is a secret one.

Sheffield.—When the session began, there were two subjects in the dissecting-room, which had been brought in a few days before.

University of Durham College, Newcastle-on-Tyne.—The students are hard at work on three subjects in the dissecting-room, and are expecting one or two more. One has been preserved for some weeks by injection with arsenic, creasote and soda, and immersion in a dilute spirit bath. It is in very good condition. Another, in fairly good condition, has been preserved by the injection above named alone, whilst the third, at present as fresh as could be wished, has been injected in a similar way, hyposulphite of soda being substituted for the ordinary soda before used. This last has kept its colour extremely well, but the others have blackened somewhat. The injections in these cases have been experimental. During several years' experience, by far the most efficient preservative has been found to be a mixture of spirit and saturated solution of arsenic in equal parts, with about a quarter of an ounce of creasote to the pint. With it there is no smell and practically no decomposition, if it be thoroughly done. Its use will probably be continued in future.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 15th day of October next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, September 15th, 1879.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE next meeting of this district will be held in the Reading Room of the London Hospital Medical College on Thursday, the 16th instant, at 9 P.M.; Professor JOHN WOOD, F.R.S., President of the Branch, in the Chair.

With a view to elicit the opinion of members, a discussion will be opened on the following subject, by Fredk. Wallace, Esq., F.R.C.S.L.

"Should the System of Apprenticeship be revived? If so, in what form?"

The arrangement of the meetings for the session will then be considered, and, so far as possible, settled.

A. GRANT, M.D., *Honorary Secretary.*

370, Commercial Road, E., October 8th, 1879.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE first of the above district meetings for the present session will be held at Guy's Hospital Medical School, on Wednesday, October 22nd, at 8 o'clock P.M.; Dr. HABERSHON (President-elect of the Branch), in the Chair.

The President of the Branch (Professor John Wood, F.R.S.) will read a paper "On Double Extension in Diseased and Injured Spine and Pelvic Joints"; and Dr. F. T. Roberts one on "Pneumonia of the Apex".

Members wishing to bring forward cases will please to communicate with the Honorary Secretary.

H. NELSON HARDY, *Honorary Secretary.*

The Grove, Dulwich, S.E., October 8th, 1879.

YORKSHIRE AND EAST YORK AND NORTH LINCOLN BRANCH.

A CONJOINT meeting of these Branches will be held in the Museum of the Yorkshire Philosophical Society, York, on Wednesday, the 22nd October, 1879, at 3 P.M.

Members intending to read papers are requested to forward the titles to either of the Secretaries.

After the meeting, the members will dine at 5 P.M. at the Station Hotel. Tickets (exclusive of wine), 6s. 6d. each.

W. PROCTER, M.D., York,
E. P. HARDEY, Hull, } *Honorary Secretaries.*

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will he held at the Railway Hotel, Taunton, on Thursday, October 23rd, at Five o'clock.

The following question has been settled by the Council as the one on which members should be invited to express their opinion at the said meeting after dinner :—"What is the use of Alcohol in the Treatment of Disease?"

Members having any communication to bring before the meeting are requested to send notice of its title; also to inform the Honorary Secretary before the day of meeting if they purpose being at the dinner. Dinner, 5s. each, exclusive of wine.

W. M. KELLY, M.D., *Honorary Secretary.*

Taunton, October 6th, 1879.

THAMES VALLEY BRANCH.

THE next meeting of this Branch will be held at the Griffin Hotel, Kingston, on Thursday, October 23rd, 1879, at 6 P.M. The following papers will be read.

1. Dr. Balmanno Squire : On the Treatment of Skin-Diseases, as practised at Leukerbad, in Switzerland.
2. Dr. Sealy : On Croup and Diphtheria.

The dinner will take place after the meeting, at 7 P.M.

FREDERICK J. WADD, *Honorary Secretary.*

Richmond, Surrey, October 7th, 1879.

WEST SURREY DISTRICT.

THE next meeting of this district will be held at Guildford, on Friday, October 24th, 1879.

Gentlemen desirous of reading papers or cases are requested to communicate at once with the Secretary.

A. ARTHUR NAPPER, *Honorary Secretary.*

Broad Oak, Cranleigh, September 22nd, 1879.

STAFFORDSHIRE BRANCH.

THE sixth annual meeting of this Branch will be held at the George Hotel, Walsall, on Thursday, October 30th, at Three o'clock in the afternoon.

An address will be delivered by the President, Dr. J. H. TYLECOTE.

Dinner at 5.30. Tickets, exclusive of wine, 6s. each.

VINCENT JACKSON, Wolverhampton
J. G. U. WEST, Stoke-upon-Trent } *Honorary Secretaries.*

Wolverhampton, October 6th, 1879.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 30th, at a quarter past Seven o'clock; J. BEDDOE, M.D., President.

R. S. FOWLER,
E. C. BOARD, } *Honorary Secretaries.*

Bath, October 5th, 1879.

DUBLIN BRANCH.

NOTICE is hereby given, that a special general meeting of this Branch will be held in the King and Queen's College of Physicians, Kildare Street, on Monday, November 3rd, 1879, at 4 o'clock P.M., to consider a resolution adopted by the Council, proposing to increase the annual subscription to the Branch.

GEORGE F. DUFFEY, M.D., *Honorary Secretary.*

30, Fitzwilliam Place, Dublin, October 8th, 1879.

CORRESPONDENCE.

THE VICTORIA AND THE LONDON UNIVERSITIES.

SIR,—Having already taken some part in the discussion of this subject, I would beg to express my regret at the tone of the letter signed "Quoits". We are perfectly aware in Manchester that the temporary hitch in the degree-giving function of the Victoria University, so far as medicine is concerned, is due mainly to the sudden, and we think mistaken activity of our Liverpool friends, not perhaps without some aid from Yorkshire. But we know the Liverpool medical men too well, as near neighbours and as members of the same Branch of the Association, to suspect for a moment that they could be actuated by motives less honourable and less sincere than our own. Moreover, so far are we from assuming the least pretension, as teachers of practical medicine, of any superiority over our neighbours, that we look to the amalgamation of the Liverpool school with our own for the purposes of the new degree as likely to confer the highest honour upon us and as more than doubling our strength. We feel exactly the same with regard to our brethren in Leeds; and if "Quoits" really hail from Manchester—though I have no conception who he is—I trust that I may be held to have made the *amende honorable*.

The practical question of the new degree should be and is untouched by this diversion. English medical practitioners desire the opportunity of acquiring a degree in medicine on something like the same terms as their brethren in Scotland and Ireland and in Germany. Hitherto this has been denied to them; and the only prospect of its attainment seems to lie in the new University. There is no probability that London will alter its examinations sufficiently to allow those who have arrived at the highest excellence in medical science, but whose means have prevented them from becoming experts in all the collateral sciences, to obtain its medical degree; and if it could be persuaded to do so, the competition of at least one other university would be at once a stimulus to maintain a high standard and a check upon needless restrictions and requirements. Nowhere could this counterbalancing university be more fitly domiciled than among the teeming and intelligent populations of Lancashire and Yorkshire, and the existence there of several of our best schools of medicine should be an argument for, instead of a hindrance to, the development of the scheme.

Residence at one of the University centres must be encouraged during the earlier years of study, when contact with those following other professions, or bent on literature or science for their own sakes, is so desirable, but this must not be made to bear too hardly on those who cannot attain to it. The examinations in Arts or Science of London or other universities must be freely recognised as preliminaries to the medical degree. Liverpool, Leeds, Newcastle, Sheffield, and Birmingham, must be made centres of medical training, and aided and encouraged to provide the necessary requirements where they are deficient.

It were presumptuous in me to attempt to indicate what steps must be taken to bring about this harmonious action; the initiative must be left to the council of the new corporation, which has been made the subject of what appears to me very like a practical joke. Possibly some of the adjacent towns are ready for amalgamation in one or two faculties, though not in all, *e.g.*, in arts and science, or science and medicine, and the advantages of this plan might be found to outweigh some undoubted disadvantages. At any rate, the mistake of divorcing our youngest university from official connection with the only one of the learned professions which it can numerously attract, cannot be of long continuance, and a little friendly discussion and conference between those more immediately connected with the various educational bodies concerned must result in a scheme which will be satisfactory to the profession and which will meet with the approval of the Government and Privy Council.

I presume that it is now understood all round that the argument based on the danger of adding a twentieth mode of entrance to the profession, even though guarded by the strictest guarantees for efficiency and stringency, has served its purpose, and need not any longer be treated seriously. If, however, it be really considered necessary, for the sake of apparent consistency, to keep it still in view, why not enact that the new degree shall only be conferred, for the present, on registered practitioners? The Victoria University would doubtless ere long seek to be placed on a footing of equality with other degree-giving bodies, but it would probably prefer to extend the restriction to others rather than to remove it from itself. Medical degrees should indicate degrees of medical excellence; they should not be mere diplomas of a minimum fitness to practise.—I am, sir, yours, etc., J. THORBURN.

Manchester, October 6th, 1879.

SIR,—In his letter in the BRITISH MEDICAL JOURNAL of the 4th instant on the Victoria University, Dr. Carpenter asks why it is that men go for their degrees to other universities rather than to the University of London. I venture to think that in many cases the reason is to be found in the fact that the intending medical student has no knowledge of the course of study required for the various degrees and diplomas, and does not obtain exact information until he is about to begin his medical education. He then finds that on the road to the degree of the University of London there are two obstacles—the matriculation and the preliminary scientific examinations—which must be surmounted before he can reach his purely medical work, and that his degree is correspondingly remote. He therefore selects as his goal some qualification, such as the membership of the Royal College of Surgeons, the regulations for which allow him to commence his medical education immediately after a preliminary examination of no great severity. If still bent upon obtaining a degree, he must go for it to some University other than the University of London; and this he can do at a later period of his course. Probably the experience of others, who are brought into contact with intending medical students and their friends, will coincide with my own, that too often they are wonderfully ignorant of all matters pertaining to medical education, and that they do not acquire a knowledge of them until it is practically too late to prepare for the course required by the University of London.

With regard to the degrees of this University, it appears to me that the chief difficulties are the two examinations I have already referred to —the matriculation and the preliminary scientific examinations—and that if these are once surmounted, the degrees are not beyond the reach of any man of fair ability and steady industry.

Much that is said about the difficulty of examinations suggests the idea that the aim of the authorities concerned ought to be to prepare the examination for the student, and not the student for the examination; to bring down the standard of examination to the level of all aspirants, rather than to encourage and reward the attainment of wider general and professional knowledge. But surely the tendency of this will be to lessen the value of the degrees concerned, to abolish the honour of the profession, and at the same time to lower the standard of medical education in general. For it is probable that the University of London, besides its direct effect upon those students who aim at its degrees, exerts what may be called a *reflex* influence upon other examining bodies; by maintaining a high standard itself, it tends to discourage on their part undue laxity in examinations and any approach to unseemly competition.

While believing that, for the above reasons, it would be most undesirable for the University of London to lower the standard of its more strictly professional examinations, at the same time it appears to me that the preliminary examinations in arts and science—and more especially the preliminary scientific examination—might with probable advantage be made more accessible; for it must be remembered that the majority of students, at the time when they necessarily attempt these earlier examinations, are not of an age when any very extensive or profound knowledge of science can be reasonably expected.—I am, sir, your obedient servant,

E. MARKHAM SKERRITT, B.A., M.D.Lond.,
Honorary Secretary and Lecturer on Medicine, Bristol Medical School.
Clifton, October 7th, 1879.

SIR,—In Dr. Carpenter's letter, published in your last issue, he asks how it is that comparatively few men take the London degree. Will you allow me a little space to state what I believe to be some, at any rate, of the chief ones. I take it to be the case that the majority of students are not the sons of medical men, and come up almost fresh from school to begin their medical studies, and have but little opportunity of gauging the relative values of the diplomas within their reach. Their aim is to become qualified practitioners, and this much they know, but it is not until they have gained some little experience that they find how much to their advantage it would have been to pass the matriculation examination of the London University; and by this time they have become so rusty in their scholastic work that they dread the drudgery of going back to it; whereas, if they could proceed at once to the preliminary scientific examination, they would not be deterred by the stiffness of the succeeding ones.

Moreover, there are many qualified men, myself amongst the number, who would have no hesitation in getting up their scientific work, or even the matriculation work, if they could then proceed to the degree without years spent at the hospital again. They are too proud to take a foreign M.D., or call themselves "Dr.", and if their end could be obtained by the London University allowing work done before passing the matriculation to count, they would readily go through the tests. Until this university, or some other of good standing, takes such a course, I shall remain plain "Mr.", as will many others who dislike sham titles, and I am, sir, faithfully yours,

L.R.C.P.LOND., M.R.C.S.ENG.
London, S.W., October 7th, 1879.

SIR,—I was pleased to read, in the JOURNAL for August 30th, your article on the Victoria University. Surely, if Scotland, with three and a half million inhabitants, requires four universities, England, with twenty-two millions of people, of whom nearly a million live in Manchester and Liverpool, may be granted another university. Of the four existing English universities, not one, unless it be Durham, gives its students the facilities for graduating in medicine that are afforded at Edinburgh, Glasgow, or Aberdeen.

With regard to the limitation preventing the Victoria University from granting degrees except to students at Manchester, Liverpool, or Leeds, it seems to me that an university degree should imply *superior* education. Now, an university must judge of the education of candidates either by supervising that education in colleges affiliated to itself or by extremely severe examinations. The latter plan is followed by the University of London, apparently not with any great amount of success so far as numbers are concerned; and it would be a pity to have another purely examining university in the kingdon, differing from London only in the severity of its examinations. Besides which, it is an open question whether teaching is not a higher function for an university than examining. Even if the M.B.London were made more accessible, I think there would still be room for the Victoria University to grant medical degrees; and, with men like Roscoe and Gamgee as teachers and examiners, I think that the M.D. degree of the new university would soon be held in estimation by the medical profession.

When the North is provided for, we want increased university accommodation for the midland counties. I think it would be a great advantage if the University of London would lower the standard of its M.B. degree by abolishing or greatly modifying the preliminary scientific examination. It would then be more within reach of provincial students; and, if the university also did away the regulation requiring two years' attendance at a medical school *after passing the first M.B.*, provided the candidate had already spent four years in medical study, I think many men would take the degree after they had left their medical school. The standard of the M.D. might still be kept up by rendering it compulsory to take a degree in Arts or Science before proceeding to the M.D.

At most provincial schools, there is no adequate teaching in science subjects; but one does not like to launch a lad of seventeen in London as a medical student, away from his friends, and with no one to look after him; whereas, if he spend a year or two at a provincial school and then go to London, it is too late for him then to begin at the preliminary scientific examination; for, as things are now, he cannot go in for the second M.B. until he has spent more than three years at a medical school after passing the preliminary scientific examination.—Yours, etc.,

GEORGE BIRT, M.B.Lond.
September 1879.

SIR,—The numerous assailants of the University of London, whose communications have lately appeared in the BRITISH MEDICAL JOURNAL, seem to regard it as an injustice, without any redeeming feature, that the examinations for the medical degrees of this University are not to be passed so easily as the examinations of some Universities or Colleges in Scotland and Ireland, which confer a medical title of Doctor after examinations little more difficult than those of the London College of Surgeons and Apothecaries' Hall.

If the standard of the University of London were lowered to anything like this extent, it is my opinion that far more serious results to medical education and to the medical profession would follow than the inconvenience which is now so loudly complained of. The high standard of the University of London medical degrees is one of the most important of several factors which have effected a wholesome levelling up of the examinations of medical students during the last quarter of a century. My entrance into the medical profession commenced at about this time by becoming apprenticed to a general practitioner in the west of England. It was then believed that the three years to be passed in London walking the hospitals would be a period of ease and enjoyment.

The Apothecaries' Hall preliminary examination in Arts having been prepared for and passed, I learned that, if I could matriculate at the University of London, a degree in medicine might be obtained by hard work, which would be inferior to none as an evidence of professional knowledge. This examination was passed a month or two before I entered one of the London hospitals.

I now found that, if I intended to pass the first M.B. examination within two years, I must leave the ease and enjoyment of student-life to those who only intended to pass the College of Surgeons and Apothe-

caries' Hall; and this I did with the happiest results. Steady application for two years was followed by getting through the first M.B. The second M.B. was then easily passed, from the good ground-work and mental training acquired during the preparation for the first M.B.

My professional success has been far beyond that which I expected; but I have always felt most thankful for the employment which the first M.B. examination afforded to my faculties, which, but for this occupation, would have had much spare time at a period of life at which it was of the highest importance that my time should be fully occupied. My case is that of many others, and is very different from that of very many others who, without the inducements to industry which the first M.B. offered them, fell into idle ways; and, although very many of these have obtained the M.D. of St. Andrew's, their success in life has not equalled that of the University of London graduates.

I have watched with the greatest satisfaction the raising of the standard of examination by the London College of Surgeons. I know how far beneath that of the University of London it was about twenty years ago; and I believe that the high standard of the one has greatly influenced the levelling-up of the other.

A word for the alleged difficulty of the University of London examinations at the present time. I have lately had two pupils, each of whom has only been one year with me, and who prepare for matriculation during this year of apprenticeship; each has passed his preliminary scientific examination at the University of London at the end of his first year's, and the first M.B. examination at the end of the second year's, study at a London medical school. I agree, however, with the usual recommendation that the preliminary scientific examination should be passed before the regular medical studies are entered upon. Surely, now that the old-fashioned two or three years' apprenticeship with a country practitioner is almost entirely done away with, this is not too much to expect from those who wish to be considered a degree better than the ordinary general practitioner.

I hope that I may never see the standard of English degrees in medicine or surgery lower than they now are. Even the public are now beginning to know the difference between English and some of the low standard degrees. The former are valuable infinitely more from the practical study and moral discipline which any one possessing one has been obliged to practise in order to obtain it, than from any influence which the letters appended to one's name may impart; to use one of Sir W. Jenner's happy comparisons, an honour or title obtained by an examination is not what one has worked for and obtained; it is the knowledge, of which the honour, prize, or title is merely the token. The knowledge gained is the gold, and the prize or title is but the stamp of the gold.

Surely, the same journal which objects to "the smashing of the index", that will result from the abolition of competition by examination in the public medical service of the army and navy, is somewhat inconsistent in condemning the University of London for maintaining its index. The one portal system of examination, when carried into effect, will undoubtedly grant a qualification which the public will recognise as equal to the easy Irish and Scotch degrees, which now cause so much discontent to medical men who possess qualifications equal to these degrees in everything but in name.

For the medical profession to be united and persistent in demanding the speedy adoption of the one portal system will, in my humble opinion, be far wiser than to either endeavour to create a new university in England or to lower the high standard of the University of London.

Yours obediently, M.B.Lond.

MILITARY AND NAVAL MEDICAL SERVICES.

NAVAL MEDICAL SERVICE.

Sir,—It is reported, and with apparent grounds for belief, that Mr. Smith has promised a warrant for the Navy similar to that which is expected for the Medical Department of the Army. Sooner or later that document must appear; and it may, perhaps, at the present time not be out of place to let it be known what are the views which prevail—I may say universally—on the subject amongst naval medical officers. Briefly, they may be stated to be as follows. Increased pay and retirement, although necessary, are considered as of minor importance in comparison to other changes which are greatly required. Foremost amongst these is the question of cabin accommodation for "the medical officer" (as the senior is now called by the new instructions). It is necessary on account of his rank in the service, his age, and his social standing. So long as things remain as they are at present, a feeling of deep dissatisfaction is unavoidable amongst those who are serving; and that this feeling reacts on the outer world is apparent. When we find sixty-five vacancies on the list unfilled and no candidates forthcoming, a collapse of the department is clearly a question of time only. Not long ago, I was informed by the President of the College of Surgeons in Ireland that he knew numbers of young men who were prepared to enter the public services, but were determined not to do so under present conditions; and no one can say but that they are right.—I am, etc.,

October 1879. Index.

MEDICAL NEWS.

Apothecaries' Hall.—The following gentleman passed his examination in the science and practice of medicine, and received a certificate to practise, on Thursday, September 25th, 1879.

Groom, Henry Thomas, 345, Camden Road, N.W.

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 2nd, 1879.

Clarke, William Jenner, St. Augustus Road, Camden Town
Graham, Albert William, Cambridge Street, Warwick Square
Jackson, Thomas, Shackthwaite, Penrith
Pollard, George Edward, Brompton Square, S.W.
Steele, Warwick Charles, Wollaston House, Dorchester

The following gentlemen also on the same day passed their primary professional examination.

Atkinson, Thomas Renel, Guy's Hospital
Mahomed, Arthur George S., Guy's Hospital
Roe, Robert Bradley, St. George's Hospital
Kemm, Frederick St. John, London Hospital
Russell, John Hutchinson, London Hospital
Thomson, Thomas, Edinburgh Hospital

At the Preliminary Examination in Arts, on September 19th and 20th, "P. B. Bentlif" passed in the Second Class.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

The following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

DORE UNION—Medical Officer for Workhouse and Kentchurch District. Salary, £80 per annum. Applications on or before October 20th.

*EVELINA HOSPITAL FOR SICK CHILDREN—Physician to Out-Patients. Applications on or before November 6th.

GENERAL LYING-IN HOSPITAL, York Road, Lambeth—House-Physician. Applications on or before October 15th.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST—Resident Clinical Assistants. Applications, with testimonials, on or before October 11th.

*HOSPITAL FOR WOMEN, Soho Square—Assistant Physician. Applications to the Secretary on or before November 12th.

HUDDERSFIELD INFIRMARY—Assistant House-Surgeon. Applications to the Honorary Secretary.

QUEEN'S COLLEGE, Belfast—Professorship of Chemistry. Applications to be forwarded to the Under Secretary for Ireland, Dublin Castle, on or before October 18th.

TRURO UNION, District of St. Agnes—Medical Officer and Public Vaccinator Salary, £45 per annum, and £16 as Medical Officer of Health. Applications by October 14th.

*WESTMINSTER HOSPITAL—House-Physician. Applications not later than October 18th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—House-Surgeon. Salary, £80 per annum, with board, lodgings, and washing. Applications on or before October 25th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—Two Physicians. Election on or before October 25th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

Burman, C. Clark, L.R.C.P. & S.Ed., appointed District Medical Officer and Public Vaccinator for the Eastern Division of Belford Union, Northumberland, *vice* L. G. Broadbent, M.D., resigned.

Harvey, Thomas P., M.R.C.S., L.R.C.P.Lond., appointed Medical Officer to the St. Leonard's Branch of Hastings and St. Leonard's Provident Dispensary, *vice* D. W. Duke, M.R.C.S., L.R.C.P.Lond., resigned.

*Kemp, William G., L.R.C.P.Lond., M.R.C.S.Eng., appointed Physician to the Wellington Hospital, New Zealand.

Taylor, W. Marshall, M.A., M.R.C.S.Eng., appointed Medical Superintendent of Dunston Lodge Asylum, Gateshead-on-Tyne, *vice* Ridley, resigned.

Treves, Frederick, F.R.C.S., Surgical Registrar to the London Hospital, has been elected Assistant Surgeon.

Wear, Arthur T., M.R.C.S. and L.R.C.P.Lond., appointed Honorary Surgeon to the Newcastle-upon-Tyne Dispensary, *vice* C. Carr, deceased.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

DEATH.

Bridgeford.—On September 18th, accidentally drowned in the canal at Kilnhurst, James Skidmore Saunders Bridgeford, Assistant House-Surgeon, Rotherham Hospital, aged 25.

THE Belfast Board of Guardians, at a meeting held last week, fixed the salaries of their medical officers of health at £15 *per annum*, with a fee of one guinea for each attendance at petty or quarter sessions.

THE Tullamore Guardians having recently reduced the salaries of the medical officers of health in the union from £20 to £15 *per annum*, have been informed by the Local Government Board that they cannot sanction the proposed reduction, on the grounds that the amended Public Health Act, instead of lessening the duties, is calculated to give additional work to the medical officers.

VACCINATION GRANT.—The Local Government Board have, for the third time in succession, awarded to Mr. Julian Willis, Public Vaccinator of the New Winchester and Andover Unions, a first-class grant for efficient vaccination in his districts.

THE GENERAL HOSPITAL, BIRMINGHAM.—At a meeting of the Committee, held on Friday last, Robert M. Simon, M.B., B.A.Cantab., M.R.C.P.Lond., was elected Assistant Physician, in the room of George A. Gibson, M.B., D.Sc., resigned.

AT a meeting of the Walsall Town Council, it was agreed to acquire forty-six acres of land at Reed's Wood, for the purpose of a public recreation-ground, on the terms assented to by the lord of the manor, the Earl of Bradford.

THE Parkes Museum of Hygiene was reopened on Wednesday last. A new and enlarged edition of the descriptive catalogue of the museum has been issued. The museum is open on Tuesdays, Thursdays, and Saturdays, free.

J. B. CARRUTHERS, M.D., EDINBURGH.—The *Dumfriesshire and Galloway Herald* of the 27th ult. gives a lengthened report of the proceedings on the previous Wednesday, on which occasion a complimentary dinner, a handsome gold watch, and a purse containing one hundred guineas, were given to Dr. J. B. Carruthers, who for upwards of twenty years has ministered to the necessities of the sick poor of the Cramond District, Edinburgh. The dinner was largely attended by the clergy and resident gentry. We heartily congratulate Dr. Carruthers on this recognition of his general good-heartedness, professional status, and public services by those among whom he has lived so long.

HEALTH OF BELFAST.—Like the month of August, the death-rate for September has been at a satisfactory low figure; and, had it not been for the mortality from whooping-cough and diarrhœa, it would probably have been as low as in any large town in the United Kingdom. The medical superintendent officer of health, in a recent report, states that the urban sanitary district has never, within his recollection, been so free from typhus fever as during the past four weeks. Small-pox has entirely disappeared, and scarlet fever nearly so; indeed the only zymotic diseases which have been prevalent were whooping-cough and diarrhœa, and which accounts for the increased mortality among infants.

PUBLIC HEALTH.—During last week, 3,223 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 20 deaths annually in every 1,000 persons living. It was 18 in Edinburgh, 16 in Glasgow, and 26 in Dublin; small-pox caused 5 more deaths in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth 15, Leicester 15, Leeds 16, Nottingham 16, Brighton 16, Oldham 17, Sunderland 18, London 19, Sheffield 19, Birmingham 19, Bristol 19, Wolverhampton 19, Newcastle-upon-Tyne, 21, Norwich 22, Hull 22, Plymouth 22, Bradford 24, and the highest rate 26 in Manchester, Salford, and Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.5 per 1,000 in the twenty towns, and ranged from 0.0 and 0.7 in Portsmouth and Wolverhampton to 5.3 and 5.5 in Newcastle-upon-Tyne and Norwich. Four fatal cases of small-pox occurred in London, but not one in any of the nineteen large provincial towns. In London, 1,318 deaths were registered, being 83 below the average, and giving an annual death-rate from all causes of 19.0. During the thirteen weeks which ended on Saturday, 27th ultimo, the death-rate averaged only 18.4 per 1,000, against 19.3 and 22.1 in the corresponding periods of 1877 and 1878. The 1,318 deaths included 4 from small-pox, 21 from measles, 61 from scarlet fever, 8 from diphtheria, 34 from whooping-cough, 38 from different forms of fever, and 61 from diarrhœa; thus to these diseases 227 deaths were referred, being 36 below the average, and equal to an annual rate of 3.3 per 1,000. The deaths referred to diseases of the respiratory organs rose to 201 last week, but were 18 below the average. Seven cases of suicide were registered. At Greenwich, the mean temperature of the air was 54.5°, and 0.1° below the average. The general direction of the wind was south-westerly. Rain fell on four days of the week, to the aggregate amount of 0.57 of an inch. The duration of registered bright sunshine in the week was equal to 24 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 2 P.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

WEDNESDAY.—Hunterian Society. 7.30 P.M.: Council Meeting. 8 P.M.: Short Address by the President, Dr. J. Braxton Hicks. Mr. J. Hutchinson will read a paper on "The Relationship between Syphilis and Locomotor Ataxy".

THURSDAY.—Harveian Society of London, 8.30 P.M. Mr. Alderson, "A Case of immense Enlargement of the Heart"; Dr. Fothergill, "The Immediate and Permanent Treatment of Disease".

FRIDAY.—Society of Medical Officers of Health, 8 P.M. Inaugural Address by the President (Dr. J. S. Bristowe).

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

THE HOSPITAL FOR DISEASES OF THE HEART, SOHO SQUARE.

SIR,—Being away from town, my attention has only just been called to a letter in your last issue, signed "Joseph Rogers", in which it is erroneously stated that a fee of a "guinea" was demanded by me before a certificate of death would be given. The facts are simply these: A woman was brought to the Hospital as an out-patient, seen by me once only (on Monday, September 22nd), and from that date I heard nothing more of the patient until the following Monday (seven days after), when a man called and asked me for a certificate of her death. I explained to this person that it would be impossible for me to give a certificate, when I had only seen the case once, many days previously, and only for a few minutes; and further, that it would be impossible for a medical man, under the circumstances, to give a certificate without any means of identifying the body. I advised that he should go to the professional man who, he stated, had been attending his wife for many months, which, for some reason, he seemed reluctant to do. The only remark made about a "fee" was explanatory; viz., that I never attended patients at their own homes for less than a guinea, and to have given a certificate, under the special circumstances of the case, would, in my opinion, be acting in a discourteous and "unprofessional" manner to the medical man who had been so long attending the patient. Some capital is attempted to be made out of the statement that the person who applied for the certificate is a very poor man; the facts being that he is the proprietor of a wine-shop in the neighbourhood (which has since come to my knowledge).

I leave to my medical brethren to judge how far it is expedient or "justifiable" to grant certificates of death seven days after the patient has been seen, and then only once.

The "unqualified person" spoken of was the dispenser of the Hospital, who from a charitable motive, at the request of one of the physicians, called upon the woman to say a bed was vacant and she could be taken into the hospital.—I am, sir, yours, etc., VINCENT AMBLER, L.F.P.G., F.F.S.G., L.S.A., etc.

17, Buckingham Place, Montpelier Road, Brighton, October 9th, 1879.

WE have received several letters respecting bicycles and tricycles for country practitioners, and several others relating to the question of foreign degrees. We are, unfortunately, compelled by want of space to defer their publication until next week.

GOVERNMENT MEDICAL APPOINTMENTS.

SIR,—Can you or any of your readers give me any information regarding the services under Government open to a young medical man (the naval, military, and Indian, excepted); also, the means to be adopted to obtain an appointment in them? By so doing, you will oblige.—Yours very faithfully, A MEMBER.

Devonport, September 30th, 1879.

THE TREATMENT OF XANTHELASMA.

SIR,—I should be glad to be informed through the medium of the JOURNAL whether any treatment can be depended upon for the cure of xanthelasma (*vitiligoidea*). In the case under notice, the patches are symmetrically disposed, one under each eye. The patient, a female, has always been a "bilious subject"; but has been in better health since the appearance of these patches. The first patch appeared about a year since.—I am, sir, yours truly, FOLLICLE.

September 29th, 1879.

D. H. R. HADDEN.—The Association for the supply of pure vaccine-lymph has fresh calf-lymph weekly. The temporary office is 3, Hemmings Row, Charing Cross, London, W.C. A circular can be obtained on application to Mr. Edward Darke, Secretary.

MEDICAL CERTIFICATES.

SIR,—Both wrong-doing and loss to ourselves may be avoided by simply taking care to certify those things only which we actually know—not what we are told by others, however worthy of credit, or however likely the thing affirmed may be. That is not evidence, but solely that we veritably know for ourselves, so only can we be *sine timore*. Applying this to certificates of the cause of death, let us observe that the Act binds us, under a penalty, to give such certificates, awarding us no fee for so doing, but all the lawyers in England cannot compel us to certify that which we do not know: we are only bound to certify when we know the fact. Unless we saw our patient die, or have seen and identified his body after death, we may believe or feel sure that he is dead; but we do not know it, therefore cannot certify it. This is our protection against losing our fees: if we see occasion so to act, we can refrain from going and ascertaining the fact of death until our fees for attendance and advice are paid. We keep this needful power in our hands, provided we observe the rule, not else; and we ought to hold it fast, as it is the only power the Act leaves us. Respecting vaccination certificates, perhaps the same may apply; but the main point is, that it is derogatory to the whole profession and to the medical man himself, not to say untruthful, to certify vaccination, or anything else, of which he cannot give legal evidence. There are not many directions in which the profession can move so as to improve its status; but this, happily, is one, and quite within our power, to abandon, once for all, the loose habit that some among us have fallen into, of affirming or certifying that which we do not personally know. When we stand firm and make our position unassailable on this point, then we may expect to be treated with more of the respect which is our due in courts of law by officials and by the public; and respect mostly carries with it payment of fees due, just as disrespect goes with non-payment.—I am, sir, yours faithfully,

W. E. C. NOURSE, F.R.C.S., late Surgeon to the Brighton Children's Hospital.

Bouverie House, Exeter, September 29th, 1879.

MEDICAL ETHICS.

INQUIRENS would be much obliged to the Editor of the BRITISH MEDICAL JOURNAL if he would state his opinion on the following question of medical ethics. A. invites a brother practitioner (B.) to consult with him on a case of illness. They meet together, and agree to prescribe a given form of medicine, etc. The question is, who is to write the prescription—the ordinary medical attendant A., or the consultant B.?

Cheltenham, September 25th, 1879.

*** In the case of a consultation between two medical men, it is usual for the one who is called in consultation to write the prescription, and then the ordinary attendant appends his initials. The supposition is, that the consultant is mainly responsible for the line of treatment agreed upon.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE MURCHISON MEMORIAL.

THE following additional subscriptions have been received.

Dr. Liddall, Clifton	£1	1	0
Erasmus Wilson, Esq.	2	2	0
Dr. Robert Elliot	1	1	0
Dr. Wilberforce Smith	1	1	0
Dr. C. Holman, Reigate	1	1	0
Dr. Pearson	1	1	0
Dr. Granville Bantock	2	2	0
W. Scott, Esq.	2	2	0
Dr. R. Brisco Owen, Beaumaris	1	1	0
Dr. Withers Moore, Brighton	2	2	0
Dr. W. Hardman, Blackpool	2	2	0
Dr. W. Vaudrey Lush, Weymouth	1	1	0
Joseph Prestwich, Esq., Oxford	12	12	0
Professor Fraser, Edinburgh	2	2	0
J. Moncrieff Arnott, Esq., Ladykirk	5	5	0
Dr. Noël Gueneau de Mussy	3	3	0
Dr. W. Arding, Wallingford	1	1	0
Dr. C. J. B. Williams	3	3	0
Dr. Allfrey, St. Mary Cray	1	1	0
A. Campbell Swinton, Esq., LL.D., Kimmerghame	3	3	0
Dr. Douglas Powell	1	1	0
Professor Acland, Oxford	2	2	0
Dr. W. C. Coles, Bourton-on-the-Water	1	1	0
F. W. Hulke, Esq., F.R.C.S.	5	5	0
Dr. Clegg, Epping	1	1	0
Dr. Ranfort, A.M.D., Madras	1	1	0
Professor Aitken, Netley	1	1	0
Professor Frerichs, Berlin	3	0	0
Professors of the Calcutta Medical College, per Dr. David B. Smith, Principal—viz., Dr. D. B. Smith, Rs. 50; S. B. Parding, Esq., F.R.C.S., 32; Dr. J. E. Charles, 50; R. C. Chandra, Esq., 16; J. M. Coates, M.D., 32; H. Caley, Esq., 32; K. Macleod, A.M., M.D., 32; S. C. Mackenzie, M.D., 32; J. F. P. McConnell, M.B., 16; T. Anderson, M.D., F.R.S., 32; D. D. Cunningham, M.B., 32; C. H. Wood, Esq., F.R.S., 32; W. J. Woods, Esq., 16	33	9	1
Professor De Chaumont, Netley	1	1	0

T. F. P. (Hants).—There can only be one opinion about the course prescribed; and if the facts are precisely as stated, we should advise our correspondent to bring them before the Council of his Branch.

HYDRASTIN.

SIR,—In reply to the inquiry of one of your correspondents relative to hydrastin, I would refer him to your JOURNAL (January 1879, p. 31), where he will find the results of Professor Rutherford's experiments, showing that the drug is a mild hepatic stimulant, and worthy of further attention. The *Medical Digest*, Section 470-5, refers to its use in gonorrhœa by Dr Bredin, who finds an injection of one drachm to four ounces of water a specific in all stages. Mr. Payne highly values it as a lotion in cancerous ulcerations of the mamma, rectum, etc. In the *Practitioner* of June 1878, p. 453, is a note of the value that Dr. Gordon attaches to the use of the drug in uterine hæmorrhage, in frequent doses of twenty to thirty drops, until the hæmorrhage stops.—I am, etc., RICHARD NEALE, M.D.Lond.

IN answer to inquiries lately published concerning hydrastin, we learn that hydrastin is considered a valuable tonic, and is recommended as a substitute for quinine in intermittents. It possesses alterative properties in its action on the mucous membranes. It has been used by different practitioners as an aperient, cholagogue, deobstruent in reference to the glands generally, diuretic, antiseptic, etc. It has been used with great success as an injection in gonorrhœa. Dose, from one to six grains. Messrs. Burgoyne, Burbidges, and Co., 16, Coleman Street, E.C., inform us that they hold a stock of the above article, and will be glad to supply any quantity.

THE source of hydrastin, its reputed properties, and its effects on the secretion of bile, are all detailed by Professor Rutherford in the JOURNAL of January 11th, 1879.

A QUIVERFULL.

SIR,—Could any of your numerous readers point out to a medical man of some twenty years' standing, with good credentials, but with thirteen hearty high-spirited children, a spot in any part of the world where such a numerous progeny might be considered as riches? If so, they would greatly oblige one who at present is inclined to think that if Solomon had lived in modern times he would have somewhat modified his opinion as to the beatification of "the man who has his QUIVERFULL."

THE MEDICAL GUILD OF ST. LUKE.

SIR,—May I be allowed to direct the attention of your readers to an advertisement which is to appear in your issue of the 11th instant in regard to the anniversary festival service of this guild, which is to be held in St. Paul's Cathedral on the 21st instant? Our guild has now been in existence fifteen years, and I propose shortly to give some account of its work and objects.—Your obedient servant,

George Street, Hanover Square, Oct. 1879. ALFRED MEADOWS.

PREPARATION FOR PRELIMINARY EXAMINATIONS.

SIR,—Will you kindly permit me to seek information, through the medium of your columns, as to schools or colleges in London which prepare especially for the preliminary examination of the College of Surgeons, and what the terms are for boarders?—Yours faithfully, PATERFAMILIAS.

RED LAMPS.

SIR,—Having been in Dublin for some time last month, I observed that the general practitioners in that city do not use coloured lamps, and do not dispense medicine, and yet the proportion of doctors to the population and the keenness of opposition is nothing less than in London, where these derogatory customs so universally prevail, and where a flaring red light, with (in many instances) the name on the same, is used alike by M.D. and surgeon. The dispensing question has been often discussed.—I remain, yours truly, M.D.

DR. EDWARD WILLIAMS (Wrexham).—All the varieties of gluten bread and biscuit are supplied by Van Abbott, Princes Street, Cavendish Square.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE INCUBATION PERIOD OF SCARLET FEVER.

SIR,—A case was tried last week in the County Court at Poulton-le-Fylde, which must be of some interest to the medical profession. From the mode in which the case was noticed by the *Pall Mall Gazette* two days ago, I infer that that journal has been furnished with erroneous information. With your permission, I will state, as briefly as I can, the principal facts.

On the 14th June, I was asked to visit at the house of Mr. S., the gentleman who afterwards figured as defendant. I found one of his daughters, aged about seven years, suffering from sore throat, with some increase of temperature. There was an ulcer on the left tonsil, with some enlargement of the cervical glands. I looked at first for the development of scarlet fever or diphtheria; but after a few days, the child recovered without any new symptoms. There never was an eruption of any sort to be seen, and no desquamation has been observed since. The baby, who had been suffering for months from otorrhœa and induration of the cervical glands, was also ailing for two or three days, but the symptoms pointed to a fresh attack of ear-disease. Repeated examinations of the throat revealed nothing. A few days later (about the 20th), a servant-girl complained of her throat, and was looking ill, but the thermometer showed no rise of temperature. She never left off work, she received no treatment, and was well next day.

Owing to circumstances which would take too long to explain, I concluded that the family were suffering from one of those anomalous ailments which are usually attributed to an unhealthy state of the house, and I recommended that they should be sent to the sea-side, and that the house should be inspected, with a view to remedying any defects of drains, etc. This was on the 26th of June, when they all appeared well. On the 29th, I was sent for again, and I found a boy, aged about five years, in a condition similar to that in which his sister was a fortnight before. I then learned that the children were going to Blackpool the next day; but I recommended delay for a day or two, until we saw what came of the little boy's illness. Next day, he was rather better, and, with my approval, Mrs. S., two daughters, aged twelve and seven, a son aged ten, and the baby, left for Blackpool the same day. The invalid, who was left at home in charge of a sister, did not get well, and follow them in the course of the week, as was expected; but after remaining in much the same state for other two days, he became rapidly worse on the 3rd of July; and early on the morning of the 4th, after a cool bath and a wet pack, he was found covered with a scarlet rash. That was on the sixth day of illness. What had occurred at home was at once reported to the family in Blackpool, and I recommended that certain precautions should be taken with regard to the children there. On the 9th of July, I was informed that the boy, aged ten, had become ill the previous day, and I went to Blackpool early on the 10th. The boy died the same day. From what I saw and heard of his illness, I certified that scarlet fever was the cause of death. When I arrived in Blackpool, I found in attendance upon the boy Mr. S.'s eldest son, whom I had not seen or heard of before. He told me that he arrived at home in Manchester, after a holiday, about five o'clock in the morning of the 8th, and left about nine o'clock to go and see his mother and the children at Blackpool. He never thought of infection. He reached Blackpool (fifty miles from Manchester) about noon. His brother complained of sore throat and headache that afternoon and evening, and during the night he was very ill.

The body was removed early in the morning of the 11th. By order of the medical officer of health, the house was disinfected, and closed for lodgers for a month. The lodginghouse-keeper sued Mr. S. for £50 damages, for loss of custom, etc. When the case was heard in the County Court, the facts stated above were more or less clearly brought out. In giving evidence, I expressed the opinion that the infection was either carried with the family from Manchester or that it was caught afresh in Blackpool; and that it was not brought, as was alleged for the plaintiff, by the young man who joined the family on the 8th of July. The grounds given for this opinion were—(1) that it was not probable that infection would be carried over such a long distance after such slight contact with the invalid at home, and (2) that the period of incubation of scarlet fever is never so short as was alleged in this case. Dr. Haddon of Eccles, who is honorary secretary of the Manchester and Salford Sanitary Association, and was secretary to a committee of the Lancashire and Cheshire Branch of the British Medical Association that inquired into the duration of infection, gave similar evidence. In Blackpool, medical practitioners are required, under a penalty, to report cases of infectious disease. The solicitor for the defendant had asked for the report of the medical officer of health for June and July, but it was refused. The medical officer of health had been subpœnaed, but did not put in an appearance. Another practitioner, however, asserted in evidence that Blackpool was free from infectious disease at the time in question. In stating the grounds for his decision, the judge simply set the medical evidence aside. He did not think the S. family brought the infection with them at first, but he believed that the boy who died was infected by the brother who arrived in Blackpool on the 8th of July, after they were aware that there was scarlet fever at home, and he gave a verdict against the defendant for £48.

In forming an opinion upon the whole case, another set of facts should be kept in view. Mrs. S. and the little girl whom I first saw ill, spent part of Whit week at Blackpool, residing in the same lodging-house as the family afterwards occupied. They returned on the evening of the 3rd of June. On the 7th, the little girl first complained of sore throat, and she was ailing a week and under medical treatment for quinsy before I first saw her. It will thus be seen that the period for the eruption was past before the patient came under my observation. These very suggestive facts were not mentioned to me until quite recently, owing to circumstances connected with the change of medical attendant.

Looking at the ailments of the S. family in the light of subsequent events, there can be little doubt that they were throughout due to scarlatina infection, and it is probable that the infection came from Blackpool, perhaps from the same lodging-house. Legally, the case turned on the thoughtless visit of Mr. S., junior, on the 8th of July, and consequently it was also decided that the incubation period of scarlet fever may be only a few hours. This should be kept in mind when this case is cited as a precedent in similar prosecutions.—I am, etc.,

Manchester, Sept. 24th, 1879. WM. J. SINCLAIR, M.D.

MAGNETIC BELTS.

SIR,—At 12.30 A.M. on Monday, September 22nd, I was called in great haste to a Mr. F., aged 50. On my arrival, I found the patient to be in a state of complete collapse, with cold extremities and a very feeble pulse. His condition being very critical, I obtained the assistance of another medical man (Mr. J. Taylor); but in spite of our efforts, he gradually sank and died about three hours after the attack. The history of the case was to the effect that he usually enjoyed good health, but suffered occasionally from dyspepsia. He was induced by a friend to try a magnetic belt, widely advertised in this city. The belt was applied on the previous Thursday evening, and from that time vomiting of a bilious character followed, until I was called in on the Sunday night. It appeared that, alarmed by the continued sickness, his friends applied to the vendor of the belt on the Saturday evening, but he assured them that the vomiting was all right, and that the belt was working off from the system the drugs which had been taken in the previous years. On the Sunday evening they again applied to this individual, who actually visited the unfortunate patient, prescribed an egg beaten up in brandy, and a teaspoonful of chlorate of potash in a little warm water every four hours. Within seven hours of this visit the patient was dead. I was only able to obtain a partial *post mortem* examination. The body was well nourished, and the only evidence of disease was a slightly fatty heart. I enclose a copy of an advertisement of these belts, which appears in our daily papers, and contains the grossest abuse of the medical profession. The case is interesting both in a scientific and legal point of view. The question arises whether any or what steps should be adopted by the medical men of this city to protect the lives of a simple and gullible public.—Yours truly,

Bristol, October 1879. GEORGE FENDICK.

AN OCCASIONAL CAUSE OF DRAINAGE SMELLS IN BEDROOMS.

SIR,—I was asked to account for a very unpleasant odour in two of the bedrooms of a new and recently furnished house, in which the sanitary arrangements were considered perfect. After exhausting every possible cause, I discovered a somewhat circular brown stain, about a foot and a half in diameter, on the carpet close to the washstand; but was told that some clean water had been spilled on some Indian matting two days previously, and was not wiped up at the time, thus allowing it to soak through. On smelling the stain, it closely resembled cabbage-water, but the matting did not smell so strongly. I then discovered a smaller and darker stain in the other room. Since then, I have been informed by upholsterers that they have had several complaints about these mattings, and that they only use them in their own houses to protect their carpets from the "tread", and not from water; and that the quality of the carpet has nothing to do with the smell, etc. Feeling that there are some persons who are not aware of the stain and stench these mattings may produce, I shall be greatly obliged by your inserting this in your valuable JOURNAL.—Yours truly, G. CLARENCE HARDING, M.R.C.S.E., L.R.C.P.E.

Westgate-on-Sea, October 4th, 1879.

IS SYPHILIS FOUND IN CATTLE?

SIR,—May I ask if syphilis be known to exist amongst cattle, because a well known "vet." informed a friend of mine that a bull and cow belonging to him were suffering from this disease?—Yours, etc., X. Y.

Workington, October 6th, 1879.

THE SUPPLY OF EXTRAS BY RELIEVING OFFICERS.

SIR,—In your next issue, will you kindly give me information on the following question? The parish-doctor considers it unnecessary to order wine for a pauper: can the relieving officer legally supply the pauper with wine on his own authority and charge the same to the Board, thus stultifying the opinion of the medical officer?—Yours faithfully, A MEMB. B.M.A.

*** The relieving officer has no right to supply extras in the form of wine or other stimulants without a specific recommendation from the medical officer. We would advise our correspondent to lay the facts before the auditor, who will at once surcharge the relieving officer with the cost of the wine supplied without authority.

A CORRESPONDENT writes:—"Enclosed is the report of the Children's Hospital of Sunderland. Total number of new cases, 4,450; population of Sunderland, 112,459—that is to say, 1 in every 25½ of the population were under treatment at this hospital. Does not this state of affairs require the attention of the medical officer of health? Is it not a very large amount of sickness amongst the children?"

THE CHINCHONA PLANTATIONS.

SIR,—In the BRITISH MEDICAL JOURNAL of September 27th, it was stated that the coffee-bug had attacked the chinchona trees on an estate on the Nilghiri Hills. As the new insecticide "London Purple" is probably as certain an exterminator of this insect as it has lately been found to be of Colorado beetle, canker-worm, and cotton-worm, you may think it worth while offering the suggestion of a trial of it through the medium of your paper. I am in no way interested in the "London Purple Company" at 60, Mark Lane, where, at a cost of £29 3s. 3d. a ton net, the insecticide can be purchased.—Yours, etc., PERCY BOULTON.

THE BOY'S OWN PAPER, of which the first volume is before us, is a most excellent and interesting paper, full of sound information, bright illustrations, romance, and excitement: indeed, if it err at all, it is, we think, on the score of over-excitement. The publishers are the well known publishers of the *Leisure Hour;* and we are glad to see this journal, like the *Leisure Hour*, in the hands of a medical editor whose guidance will vouch for the absence of those biological errors and superstitions which deface so much popular literature.

ANCIENT TREATMENT OF STRICTURES.

SIR,—In answer to Dr. Cameron's letter in the JOURNAL of the 23rd ultimo, referring to the ancient treatment of urethral stricture, I think he will probably find the information he requires in a very interesting paper by Dr. Kerrison, "On the Dilatation of the Male Urethra by Inflation for Extraction of Calculi from the Bladder, as practised in Egypt near 250 Years ago", published in vol. xii of the *Medico-Chirurgical Transactions.*—Yours, etc., REGINALD HARRISON.

38, Rodney Street, Liverpool, September 1st, 1879.

THE TREATMENT OF RINGWORM OF THE SCALP.

SIR,—May I ask if any of your readers would kindly suggest a remedy for a most inveterate form of ringworm, of the dry and scaly nature? I have six children under treatment in one family who have suffered from the parasite for the last eighteen months: and for the last six of that period the cases have been entirely under my charge, during which time I have tried the usual parasiticides (without curing), including the following: acetic acid, iodine, perchloride of iron, sulphurous acid, combined with glycerine, and varying in strength from 1 in 7 to half and half, solution of sulphuret of lime, calomel ointment, citron ointment, the ointments recommended by the late Dr. Tilbury Fox, composed of juniper-tar, carbolic acid, sulphur, etc.; also chrysophanic acid ointment. In addition to this treatment, the heads have been shaved and carefully washed from time to time with borax, soft soap, etc. The towels, etc., have been carefully disinfected by baking and boiling.

During the first twelve months of the existence of the disease, the parents had recourse to the usual thousand-and-one remedies suggested by the wiseacres and busy-bodies which infest all manufacturing towns, and probably other localities as well.—I remain, yours faithfully, RICHARD JEFFREYS, M.R.C.S.E., L.S.A.

Chesterfield, September 20th, 1879.

P.S.—The ages of the children vary from eighteen months to eight years.

ALCOHOL AND OPIUM.

SIR,—In last week's issue, page 384, appeared a short but noteworthy article on "Opium and its Effects". In the *Alliance News* of May 24th, June 7th, and June 14th, appeared articles, paragraphs, and letters based on the speech of Mr. Moffat at Hawarden on May 20th, wherein he mentioned how the working-class had had recourse to laudanum-drinking when the publichouses were closed early. The *Sanitary Record* of May 30th also commented on his speech, the editor having communicated with him. I enclose you the report of an inquest held on the 6th instant in this town on a man who had drank two ounces of laudanum. The man was addicted to drink, though of course the wife, in her evidence, states "she had never seen him tipsy". He also had been subject, even quite recently before the taking of the poison, to epileptic fits, and these two conditions (he having been drinking for several days previously) tended to accelerate the action of the poison. It is, however, to the evi lence of the chemist who sold the poison, and to that of the coroner (a medical man), that I wish to draw attention. The former is quite exculpated by the "Sale of Poisons' Act"; but I certainly think, where such danger constantly exists, that opium and its preparations ought to be classed under Part I, and not in Part II, as at present; or, if not that, at any rate some restrictive limit in the sale should be made. In this case, the chemist says (which statement has been since corroborated by other chemists in this town): "Persons who are in the habit of taking laudanum buy it in much larger quantities than two ounces; he very often sold it in half pints, and even in pints." The coroner adds: "I have known people drink as much as two ounces at once, just as one would drink claret, and never feel the slightest effects." Doubtless many of your readers could give equally startling evidence, especially in some localities where opium-taking prevails: nevertheless, it appears to me that some restriction is called for where such danger exists, as in this case, for the evidence shows that he attempted to poison his wife and child as well.—Yours, etc., W. B.

Weston-super-Mare, September 11th, 1879.

ABSENCE OF THE RIGHT KIDNEY: DOUBLE KIDNEY ON THE LEFT SIDE.

SIR,—In making the *post mortem* examination of the body of a coolie child a few days ago, I found a very curious abnormality. The right kidney was absent, but on the left side was a double kidney, or rather there were two kidneys, connected at their apices by a prolongation from the cortical substance of each. Each kidney had a separate ureter, and these united and formed a single tube just before its insertion into the bladder. The organ which represented the right kidney was the smaller of the two, and both appeared to be healthy. The bladder contained about an ounce of urine. The child from whose body these kidneys were removed was twelve months old, well developed externally, and had no other anatomical abnormality. It died from neglected malarial fever, producing cirrhosis of the liver and ascites.

Should this specimen of Nature's freaks prove acceptable to the curator of the museum of the Royal College of Surgeons of England, I shall have much pleasure in forwarding it to him, otherwise it will doubtless find a place in the museum of my old college, St. Thomas's Hospital.—I am, etc.,

Spanish Town, Jamaica, Aug. 19th, 1879. JAMES TOMPSETT, M.R.C.S.

ECZEMA INTERTRIGO.

SIR,—Your correspondent "Far North" may with safety leave off all medicines with his little patient suffering from eczema intertrigo. I venture to guess that, when attacked, the baby was fat and flourishing; that it was most likely improperly dried after washing, powder being used before the skin was properly dry. Cases of eczema intertrigo so called are very common in some districts. I have seen many very severe cases. I never knew medicine or dieting do any good, but have always seen them recover after a few applications of white of egg or of a lotion of lead, or glycerine and rose-water. The great point is, that the sore parts must be well rubbed with soap and water and carefully dried, then the lotion or white of egg applied and left wet.

The lead-lotion I always use for these cases is made of sugar-of-lead thirty grains, dilute acetic acid two drachms, glycerine one ounce and a half, and rose-water to eight ounces. In nearly a quarter of a century of practice, with hundreds of cases, I never knew it fail. In this part of the country the poor people use white of egg only, and call the affection "galled creases". As a rule, it occurs only in fat healthy children, and is occasioned by the creases in the fat neck, etc., being imperfectly dried and smudged over with powder while damp, which dries and galls the delicate skin.—Faithfully yours, HERBERT B. HODGES.

Watton, Herts, September 9th, 1879.

MEDICAL ADVERTISEMENTS IN THE LAY PRESS.

SIR,—With your permission, I beg to call the attention of the profession to the system of medical institutions advertising for medical officers in the columns of the lay press side by side with those of cooks and butlers. When these advertisements are solely intended for the medical profession, why not insert them in the medical journals? In the Dublin papers, almost daily there appear such advertisements in the same column as those of domestic servants. When it is considered that on the board of every medical institution there are some of our profession, it is surprising why they ignore their own representative journals and agree to order these advertisements to be inserted only in the lay papers. Although the Local Government Board for Ireland has a medical commissioner, still none of the Poor-law advertisements for medical officers are ever inserted in the medical journals.—Yours, etc.,

September 1879. L.R.C.S.I.

CONDENSED MILK FOR INFANTS.

SIR,—As condensed milk is an article so commonly substituted for cow's milk, it would be of some interest to know the experiences of others regarding its use as nutriment for infants. Some difference of opinion appears to exist among the public as well as the profession as to its suitability for young children, who we know would in most cases do better if nurtured by their own parents. In my experience of some cases, it has been found that infants to whom it has been exclusively given, with an admixture of water only, instead of cow's milk (which latter I generally order when compelled, in default of a nurse, in the proportion of two or three parts to one of water), have emaciated to an extreme degree, thus appearing to indicate—at least in these cases—that condensed milk is too crude a substance for the digestive organs of infants. Whether this effect arises from the condensed milk not being sufficiently diluted with water, to give only the due proportion of casein and oleine as well as sugar of milk of which the human kind consists, or the amount of cane or grape-sugar be in excess, or either of these be a proper substitute for the sugar of milk, which differs in its properties from cane and grape-sugar, being converted into the latter by the addition of hydrochloric acid, and also being less soluble in cold or hot water than cane or grape-sugar, on which account it may be more chemically subdivided, longer retained in the stomach, and perhaps rendered more assimilable. No doubt some of your readers may feel enough interest in the matter to make observations and give the benefit of the results.—Yours, etc.,

September 13th, 1879. A MEMBER.

UNCERTIFIED DEATHS.

SIR,—In reference to the case put by "M.R.C.S." in the BRITISH MEDICAL JOURNAL for August 30th, 1879, I would observe that the office of coroner confers very peculiar powers—one of which is, that against his decision there is no appeal, except on points of form. At one time, the coroner was not only bound to hold an inquest on every sudden death, but also on every fire. The practice of modern times has been to knock off as many inquests as possible: hence by general consent it is now held to be good law for coroners to grant certificates without an inquiry *super visum corporis*, and to ignore fires. In the case noted there seems to be no error in form, though very possibly there may be such in facts, brought *ex parte* under the coroner's view. That, however, "M.R.C.S." offers no evidence about. The real question seems to be, supposing the practice of coroners' courts to have been moderately satisfactory two hundred years back, has that practice advanced *pari passu* with regard to the practice of the age and other legal reforms without interference with the *status* of the first court of criminal first instance—*i.e.*, is notification now performed in a more businesslike way? I am inclined to think it has not, and in this view agree with "M.R.C.S.", if I understand him rightly, in thinking the coroner should not have declined to hold an inquest, merely probably to please the Bench at Quarter sessions, who have latterly assumed a right to criticise the Coroners' Bill, which the law certainly does not give them the power to do, or, rather, most carefully avoids stating how far that power shall extend. If "M.R.C.S." have a remedy, it is by *mandamus*.—I am, etc., WM. SIMPSON, Chancery Clerk.

Chancery Lane, September 10th, 1879.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. L. A. Sayre, London; Mr. T. R. Jessop, Leeds; Dr. Procter, York; Dr. A. Carpenter, Croydon; Dr. W. O. Markham, London; Dr. Clement Godson, London; A Country Doctor; Dr. Joseph Rogers, London; Dr. W. M. Kelly, Taunton; Dr. R. L. Bayley, Stourbridge; X.; Dr. A. T. H. Waters, Liverpool; Dr. W. Roberts, Manchester; Mr. A. B. Kelly, London; Sir E. A. H. Lechmere, Bart., M.P., London; Mr. H. T. Butlin, London; Dr. A. Sangster, London; Mr. J. W. Haward, London; Dr. J. F. Goodhart, London; Dr. A. B. Duffin, London; Dr. S. Mackenzie, London; Mr. H. E. Juler, London; Mr. H. Morris, London; Mr. John Croft, London; Mr. A. E. Barker, London; Mr. T. Bond, London; Mr. W. Horrocks, Edgeworth; Mr. C. H. Golding-Bird, London; Dr. J. G. Sinclair Coghill, Ventnor; The Secretary of Apothecaries' Hall; M.D.Ed.; Dr. Lombe Atthill, Dublin; F.R.C.S.; Dr. De Chaumont, Netley; Mr. J. Kemp, Putney; Dr. W. Murrell, London; X. Y., Workington; Mr. Richard Barwell, London; Mr. G. C. Harding, Westgate-on-Sea; T. A., Diss; The Registrar-General of England; Messrs. Burgoyne, Burbidges, and Co., London; Mr. W. D. Husband, York; Dr. C. J. B. Williams, London; Medicus; Mr. Vincent Jackson, Wolverhampton; The Registrar-General of Ireland; Dr. W. Macewen, Glasgow; Mr. H. Nelson Hardy, London; Mr. E. Peacock, Nuneaton; Dr. E. M. Skerritt, Bristol; Mr. Henry Eales, Birmingham; Dr. Selby Norton, West Malling; Mr. Richard Davy, London; Dr. Hammond, New York; Dr. T. W. Barron, Durham; M.; Dr. J. Thorburn, Manchester; Dr. T. Wilson, Burton-on-Trent; Dr. R. Neale, London; B. M. J., Cornwall; L.R.C.P.London, M.R.C.S. England; Pater Familias; A Disgusted Club Doctor; W.; Dr. H. R. Hadden, Dublin; Dr. J. N. Vinen, London; Dr. J. Sawyer, Birmingham; Mr. Henry Burdett, Dublin; Dr. J. Haining, Chester; Mr. C. Mercier, London; Dr. Wade, Birmingham; Our Glasgow Correspondent; Mr. Lowndes, Liverpool; Mr. T. M. Stone, London; Our Dublin Correspondent; Dr. Wallace, Parsonstown; Mr. H. Page, London; Mr. G. Field, London; Dr. Robinson, Dublin; Dr. Meadows, London; Mr. W. R. McKeown, Holywood; Mr. Smale, London; Mr. Swanzy, Dublin; Dr. R. W. Reid, London; Dr. F. Page, Newcastle-upon-Tyne; Mr. A. P. Gould, London; Mr. R. J. Pye-Smith, Sheffield; Mr. S. Snell, Sheffield; Dr. T. Churton, Leeds; Dr. Saundby, Birmingham; Dr. Heath, Newcastle-upon-Tyne; Mr. T. Cooke, London; Dr. V. Ambler, Brighton; Mr. Harsant, Bristol; Dr. Dreschfeld, Manchester; Dr. H. S. Branfoot, Manchester; Mr. Mears, Newcastle-on-Tyne; Dr. F. Barnes, London; Mr. Cumberbatch, London; Professor G. D. Thane, London; Mr. W. H. A. Jacobson, London; Mr. A. Hensman, London; Mr. H. B. Appleby, Liverpool; Mr. H. Keatry, Woburn; Mr. J. Robinson, Bolton; Dr. A. Grant, London; Dr. H. A. Husband, Darlington; Mr. V. Hervey, Wolsingham; Mr. G. Mackey, Edinburgh; Mr. E. Owen, London; Professor Hirschberg, Berlin; Dr. J. Batten Coumbe, Reading; Dr. A. Fergusson, Peebles; Mr. G. A. Brown, Tredegar; Mr. A. W. Pearson, Dudley; Dr. J. W. Reid, Gosport; Mr. Rushton Parker, Liverpool; Professor J. Connor, London; Mr. B. May, Birmingham; Dr. A. G. Blomfield, Lynn; etc.

BOOKS, ETC., RECEIVED.

Observations on Contraction of the Fingers (Dupuytren's Contraction), and its successful Treatment by Subcutaneous Divisions of the Palmar Fascia, and immediate Extension; also, on the Obliteration of Depressed Cicatrices after Glandular Abscesses, or Exfoliation of Bone by a Subcutaneous Operation. By William Adams, F.R.C.S. With Four Plates and numerous Engravings. London: J. and A. Churchill. 1879.

CLINICAL OBSERVATIONS

ON

THE HEALING OF BURNS AND ULCERS BY THE UNION OF GRANULATIONS.

By JOHN DUNCAN, M.A., F.R.C.S.E.,
Surgeon to the Royal Infirmary, Edinburgh; Lecturer on Surgery; etc.

GENTLEMEN,—You will remember that this patient, Peter Matheson, a healthy young man aged 22, was brought to the Infirmary several weeks ago suffering from severe burns. He and his brother were attending to a steam-engine at Fauldhouse, when the boiler burst. His brother escaped with a fracture of the left thigh, and has already left us to resume his occupation. This patient, however, was not so speedily removed from the *débris*, and lay for some time with various parts of his body in contact with scalding bricks.

I have already pointed out to you the principles on which the treatment was conducted while the deep sloughs thus produced were separating. What may be called the boracic poultice—that is, moistened boracic lint covered by gutta-percha, which has been rendered aseptic and kept in position by a bandage of carbolised gauze—fulfils the indications of hastening the separation of the slough and rendering the process safe to the patient.

I have also taken the opportunity of comparing practically the progress which the different sores made under different dressings after the sloughs had separated. Those of you who have watched the case must have come to the conclusion that of all the methods used—antiseptics of various kinds, water-dressing, stimulating lotions and ointments—that which conduces most to the production of a healthy aspect and rapid healing is the application of the antiseptic principle by means of boracic lint, while the granulations are protected by dextrinised oiled silk. You would note, however, that many other conditions had to be taken into account. When the sore was situated on a part liable to frequent motion, as in the neighbourhood of a joint, it was absolutely necessary to apply retentive apparatus in the shape of splints and bandage. When tension was produced either from the wound lying over a bone, or from the skin in the neighbourhood not being movable and loose, or from the application of extension apparatus to prevent contractions, then, whatever the dressing, the healing was tedious and slow. All the burns, however, and they were many, have now healed, with the exception of two; and I wish to-day to draw your attention to a little operation which I have practised on these two, and which, I think, is capable of useful employment in a considerable number of cases.

One of these burns was situated over the upper part of the abdomen and the lower part of the thorax, in the left mammary line. It was originally more than four inches in diameter, being nearly circular, but at the time of operation had contracted to three inches.

I had attempted to hasten matters by grafting. Several of the grafts took, and were growing well, when suddenly one day, without rhyme or reason, they all sloughed, and involved in their destruction a considerable portion of the marginal cicatrix also. This is an accident which, in my experience, is not unfrequent. The new grafts and the epidermic growth which they provoke are, so to speak, of an exceedingly sensitive character. A very slight digestive disturbance, a little feverishness, as from a cold in the head, a trivial roughness of manipulation, is enough to destroy them; nay, as in this case, they will occasionally disappear without apparent provocation; and, if they do so, the growing epidermis round the circumference of the ulcer invariably sympathises more or less.

After this failure, I cast about for some means of hastening the march of events, and the procedure of which you now see the result occurred to me.

You have all of you, doubtless, heard of the process of healing by the third intention, by the union of granulations; but practically it is not often brought under your notice. Nevertheless, in the healing of large wounds, as after amputation and excision, it undoubtedly plays a large part; and it is sometimes, though rarely, utilised when plastic operations fail to unite by the first intention. It was this process that I called to my aid. It was possible, the skin of the trunk being loose, to bring the margins of the sore into contact by forcible pressure. The point that remained doubtful was our ability to maintain them in this position sufficiently long to allow the union to be consolidated. Ordinary sutures would undoubtedly cut their way out in a day or two. Many years ago, I made an unsuccessful attempt with hare-lip pins. I determined now to employ the button-suture.

Having washed the sore carefully with boracic lotion, I operated under the spray, because, after the parts are drawn together, the wound ceases to be a superficial ulcer. I then entered the needle two inches from the sore, and brought it out at the margin, entered it again at the opposite margin, and brought it out two inches off. When the sutures had been drawn tight upon the buttons (of the largest size), the sore, originally three inches in diameter, was reduced to a line three inches long. It was then dressed with carbolised gauze. The dressings were changed on the fourth day, and, on the ninth, I removed the buttons, the sore being healed with the exception of little marks where the silver wire passing from the buttons had slightly cut the skin.

Encouraged by this success, I now attacked the second sore, which is situated on the shoulder. It was two inches and a half in diameter, besides new cicatrix about half an inch wide. One or two lessons were taught us by this operation. I folded up the wound with my finger and thumb, and then passed a suture deeply under it, and drew it tightly over two large buttons. On removing the manual pressure, it was at once evident to you that this method was not nearly so effectual as the one previously described, in which the skin only on each side was involved in the suture. The folded-up sides of the sore, instead of lying in contact, formed a deep hollow—assumed a V-shape. To remedy this, I passed sutures above and below by the former method, and so succeeded in bringing about exact apposition. Thinking that by the first suture the tension must have been greatly relaxed, I used very small buttons for the upper one.

It has not been found necessary to change the dressing till now, the seventh day after the operation, and you see the result. The upper suture has cut itself out, and is lying quite loose. The part of the wound where it was inserted has diminished in breadth by half an inch, but the line which the wire has cut has been added to it. Where the lowest large buttons were applied, the burn is healed, and opposite the central deep suture it is reduced to half an inch in breadth. We have therefore gained much ground, but not nearly so much as in the former remarkably successful operation, and, I think, entirely because the manner of performance was less efficient. I have treated in the same way, and with perfect success, two other ulcers of smaller size than these, one of a syphilitic character on the forearm, the other a strumous sore on the neck.

It is evident that a method which shortens the healing of a wound by weeks, as in the case you have before you, is of the greatest possible value. And I believe that it may also present other advantages. In burns, for example, it may sometimes be used to prevent contraction by approximating the margins in a direction which will not be injurious. The mere diminution in the amount of cicatrix is in itself a benefit.

It is not difficult to appreciate the circumstances under which this proceeding may be practised. It is essential, in the first place, that the granulations be brought into a thoroughly healthy state by medication suitable to the particular case. It seems to me that the somewhat exuberant hyperæmia which results from the use of antiseptics is very favourable to a successful issue, if it be not permitted to go too far. Constitutional treatment is, of course, necessary as a preliminary to any interference with constitutional sores.

In the next place, the sores must be so situated that the margins can be brought into apposition. Plainly the trunk of the body is in this respect most favourably circumstanced. But in any part, if this condition be fulfilled, whatever the pressure employed to do so, I believe the result will be good. You saw that I had here to use decided manual force.

Some surgeons hasten the healing of obstinate ulcers of the leg by making incisions around them. This appears to do good, partly because it increases the area and source of epidermic growth, partly because it brings within the range of contraction a larger quantity of movable skin. I think it possible that, in some cases, a combination of these operations might be made, the possibility of perfect adjustment being always presupposed.

Lastly, it is plainly necessary that the apparatus used be capable of sustaining the tension without producing ulceration. The buttons should be of the largest size, at least an inch long; and I have found the greatest benefit from the little projections on the side which Mr. Lister has recently added.

ON SUBCUTANEOUS OSTEOTOMY.*

By WILLIAM ADAMS, F.R.C.S.,

Surgeon to the Great Northern Hospital, and to the Hospital for the Paralysed and Epileptic; Consulting Surgeon to the National Orthopædic Hospital; etc.

THE operation of "subcutaneous osteotomy" has, no doubt, been selected as one of the special subjects to be brought forward before the Surgical Section of this Association at its present meeting, in consequence of the rapidity with which it has been adopted in this and other countries within the last few years; and I cannot but regret that the discussion is not opened by a greater and abler authority than myself. The operation is, however, one that belongs to a large class of subcutaneous operations which have been grouped and described under the head of "subcutaneous surgery", a subject which has especially engaged my attention for many years, and to which I have made some contributions; so that I have the less hesitation in offering to this meeting some observations to which experience has led me, and a few suggestions as to the points which would, I think, be discussed with the greatest advantage, and upon which the experience of the members now present might be given to the profession.

There are a considerable number of surgical operations which owe their immunity from inflammation and suppuration, and consequently their freedom from danger, to the fact of their being performed in such a manner as effectually to exclude the admission of air. As familiar examples of this class, I need only refer to subcutaneous tenotomy; the subcutaneous operation for the removal of loose cartilages from the knee-joint; the subcutaneous operations for varicose veins, nævi, ununited fracture, the radical cure of hernia, the obliteration of depressed cicatrices, the division of strictures; and the operation of subcutaneous osteotomy, which forms the subject of the present discussion.

All these operations on the subcutaneous principle are performed by puncture instead of external incision; the puncture being made by a very narrow-bladed knife, for most purposes only an eighth or from that to a quarter of an inch in breadth, at a little distance from the structure to be divided; so that an indirect subcutaneous tract exists between the external puncture and the structure to be divided. These operations are all governed in their mode of performance, the pathology of the reparative process, and their terminations, by the same general law, described, more especially by M. Guérin, as the law of subcutaneous surgery.

It must not, however, be assumed that the exclusion of air offers an absolute immunity from inflammation under all circumstances, and independently of the amount of damage done to the deeply seated structures, or of the constitutional condition of the patient.

When the subcutaneous method is applied to the performance of operations of unusual magnitude, such as division of the neck of the thigh-bone, division of the shaft of the femur or humerus, it would be unreasonable to expect the uniformity in favourable results which follows the subcutaneous division of tendons, because the conditions upon which the safety of the subcutaneous method depends cannot all be with certainty fulfilled. In these large operations, the air may be effectually excluded: but the injury to the deeply seated structures may be excessive, either from cutting or laceration by the instruments used, or the force employed. Deep-seated suppuration, therefore, will occasionally follow such operations, although the rarity of this result has astonished every surgeon who has practised them. As we recognise the importance of the amount of injury inflicted on the deeply seated structures, in addition to the exclusion of air, it will be obvious that much will depend upon the mode of performing the operation, as well as upon the skill of the operator; and the conditions which must coexist to render the subcutaneous operations free from inflammation and suppuration may be stated to be as follows.

1. That the knife used be of small size, generally from an eighth to a quarter of an inch in breadth, and very little exceeding this in the largest subcutaneous operation, in which the saw or chisel is used, in osteotomy.

2. That care be taken to make an indirect, instead of a direct, track between the cutaneous puncture and the deep structures divided, whether tendon or bone. This may be accomplished by shifting the cutaneous puncture before completing the division of the deeper structures.

3. That care be taken to preserve this track by pressure, which the operator can make with the finger or fingers of his left hand, whenever a second instrument has to be introduced, as in dividing the posterior tibial tendon when a blunt-pointed knife is passed deeply behind the tendon after the withdrawal of the sharp-pointed tenotome; and in all cases of subcutaneous osteotomy, whether the bone be divided by the saw or by the chisel.

4. That the wound be immediately closed on the withdrawal of the knife or other instrument, and a compress and bandage applied, so as to continue the pressure over the seat of operation, and prevent the effusion of blood under the skin, or amongst the divided structures.

5. That the operation be performed quickly and neatly, with decision rather than force, and with as little disturbance to the soft parts as possible.

6. That perfect quiescence to the part be insured for three or four days, and the dressing remain undisturbed.

When all these conditions are strictly observed, it matters little whether muscles, tendons, ligaments, or bones are divided, or even whether the large joints of the body are opened. There is no better established fact in surgical practice than that subcutaneous wounds seldom inflame or suppurate when the above conditions are fulfilled.

Hunter, in 1784, made the exposure or non-exposure of wounds to the air the basis of his classification of wounds and injuries, and observes: "The injuries of the first division, in which the parts do not communicate externally, seldom inflame; while those of the second commonly both inflame and suppurate."

Although the principle upon which subcutaneous surgery is based was so well known to Hunter, and appreciated by him, he did not, so far as we are aware, ever apply it to practice; but in the numerous experiments he performed on animals, for the purpose of investigating the reparative process in tendons, Hunter divided some tendons subcutaneously, introducing "a couching needle under the skin"; and others he divided by open wound, for the sake of comparing the differences in the reparative process.

The operation which led the way to subcutaneous surgery, forming a starting-point from which it has gradually been developed, is that of subcutaneous tenotomy, first suggested and performed by Delpech in the year 1816; but, the first and only case recorded by him not being very successful, the operation seems to have remained dormant until 1831, when it was revived, and the method of performing it improved, by Stromeyer, whose name is now always associated with the operation. From this date, it was rapidly adopted by the German, French, and English surgeons; and other subcutaneous operations were gradually introduced.

The interest taken in this class of operations was greatly increased in the year 1841, when M. Jules Guérin published his treatise on what he described as "the subcutaneous method"; and it is undoubtedly to M. Guérin that we owe the first attempt to bring together in one group the facts observed in subcutaneous injuries, and subcutaneous operations; and, generalising from these facts, to show that, for the immunity from inflammation which they enjoy and the perfection of the reparative process, such wounds especially depend upon the same general law. Although I refuse to admit M. Guérin's claim to originality in the discovery of the subcutaneous law, which is purely Hunterian, there can be no doubt that for its development and surgical application we are principally indebted to the labours of M. Guérin.

Subcutaneous osteotomy seems to have been a late development in the series of subcutaneous operations; and for this we are also indebted to a distinguished German surgeon, Professor Langenbeck, who in the Schleswig-Holstein war of 1848 first introduced the use of a small straight pointed saw for the section of bones, passing it through the narrow opening in the upper arm in bullet-wounds, without further disturbing the soft parts; and in this way he removed exposed portions of bone. After the introduction of this saw, Langenbeck remarks that the idea of subcutaneous section of bones dawned upon him.

In his *clinique*, in the winter of 1852, Langenbeck performed subcutaneous osteotomy for ankylosis of the hip-joint, and also in a case of bony ankylosis of the knee-joint; and in 1854, when his observations on this subject were published, other cases in which he had operated for rachitic deformity of the legs were added. Langenbeck used a drill a quarter of an inch in diameter, placed in a brad very similar in its use and construction to that employed by cabinet-makers. After perforating the bone with this, through a small cutaneous incision, he introduced his narrow sharp-pointed saw, an eighth of an inch wide at the point, and four inches long; and with this the bone was sawn through subcutaneously until the shell or compact tissue was reached. The operation was then completed by breaking the remaining portion of bone, and the limb straightened. Suppuration, lasting from four to fourteen days, occurred in some cases.

Langenbeck's conclusions on the operation are:

"1. Bones can be cut subcutaneously like tendons, muscles, etc.

"2. Bones should only be partially cut subcutaneously, the partial section being preferable to the complete division.

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

"3. Healing of subcutaneous section of bone will not take place as in simple fracture, for the reason that the drill and saw produce some powder, which acts like a foreign body, and therefore some suppuration will take place.

"Subcutaneous section is indicated in deformity of bones and bony ankylosis, and where we cannot rupture, the bones being too solid."

The conclusion of Langenbeck with regard to the sawdust, I need hardly say, is not borne out by our recent experience, as we find that, in a very large proportion of cases, no suppuration whatever occurs; the subcutaneous puncture healing by the first intention, and the case proceeding as favourably as one of tenotomy.

In Germany, Meyer, Wernher, and other surgeons, adopted the operation, with some modification as to the instruments used, the chain-saw and a kind of trephine being employed.

Passing from Germany to America, Professor Gross of Philadelphia, in his admirable *System of Surgery*, reviews all the various surgical operations which have been adopted in cases of bony ankylosis, with the view either of obtaining motion or merely straightening the limb. After describing the large operations by open wound for ankylosis at the hip-joint adopted by Dr. J. Rhea Barton in 1826, and for the knee-joint in 1835, and the modification of this operation by Professor Sayre in 1862, Professor Gross observes: "In 1844, Dr. Gurdon Buck of New York, in a case of complete synostosis of the knee, with the limb at a right angle, so modified and extended the procedure of Dr. Barton as to remove the condyles of the femur, the head of the tibia, and the patella, in a wedge-shaped piece, thereby bringing the leg almost in a straight position."* This operation might certainly be classed with excision of the knee-joint.

The first subcutaneous operation for bony ankylosis of the knee-joint mentioned by Professor Gross in the historical sketch which he has given of osteotomy for ankylosis by open wound, and the subcutaneous method, is that performed on the knee-joint by that distinguished American surgeon, "Professor Pancoast, at the Clinic of the Jefferson Medical College in the winter of 1859, the patient being a youth on whom extension had previously been tried in vain. It consisted in perforating, with a stout gimlet, the femur subcutaneously, through a single opening, at half a dozen points, just above the knee, and then forcibly breaking the bone.....A large abscess formed at the seat of fracture, but with this exception, the case progressed favourably, and the boy made a good recovery."

Professor Gross then states that "an operation similar to the above was performed by Professor Brainard in 1860, upon a man twenty-three years of age; but in this case the femur was divided through its condyles by means of a perforator. The patient recovered with a good limb. In a second case, one of false ankylosis of the knee, the patella was detached subcutaneously from the femur and tibia, and excellent motion of the joint obtained."

Professor Gross himself quickly adopted the subcutaneous method, and at page 1,093 observes: "In 1861, I extended these subcutaneous operations to perforation of the joint itself, with disruption of the osseous adhesions between the bones entering into its composition. The instrument with which the operation is conducted, exhibited in fig. 548, consists of a shaft of well-tempered steel, four inches and a half in length, the point of which is one-sixth of an inch in breadth, and presents on each side an oblique groove with cutting edges, so that it acts as a gouge as well as a drill. This is fitted into a firm handle, its proximal extremity being large, smooth, and rounded, so as to rest comfortably in the palm of the hand. In some instances, the bony connections are so firm as to resist the action of the drill, in which event a narrow, sharp-pointed chisel may be substituted for it." This appears to have been the first case in which the chisel was used in America, and Professor Gross further observes: "This operation has been done successfully in six instances (*i.e.*, up to the year 1872), four having occurred in my own practice. In two of the latter, preliminary division of the hamstring tendons was demanded, and in all, firm bony union was procured."

The history of subcutaneous osteotomy by American surgeons is interesting, and shows how quickly they adopted an operation of German origin, an operation which afterwards slowly travelled into England.

The first operation of subcutaneous osteotomy in England was, I believe, performed in 1868 by Mr. L. Stromeyer Little, the son of the distinguished physician, Dr. Little, who introduced subcutaneous tenotomy into England in the year 1837, having been himself operated upon by Stromeyer in Hanover in 1836.

The case upon which Mr. Little operated, on November 11th, 1868, was one of bony ankylosis of the right knee-joint, with the leg flexed at a right angle, occurring in a girl aged 14 years, the result of strumous disease. An incision, the third of an inch long, was made on the outer side of the joint, and "a strong carpenter's chisel rather less than a quarter of an inch wide was inserted into the wound, and driven with a mallet through the united bones in several directions". The limb was readily straightened, and lint, with bandage and splint, applied. The case progressed very favourably, the wound being nearly healed on the sixth day; and in three weeks she walked on crutches, and in five weeks without crutches.*

In this class of cases, it seems to me that the chisel, as employed by Mr. Little, is to be preferred, either to the short subcutaneous saw, which I use, at the hip-joint for ankylosis, in the knee-joint for genu valgum, and in all subcutaneous divisions of the shafts of the bones,—or to the method of drilling through the ankylosis, and then dividing the bone by Langenbeck's long pointed saw.

In the following year, a further impulse was given to subcutaneous osteotomy in this country by the operation which I performed of dividing subcutaneously the neck of the thigh-bone within the capsular ligament, with a small saw rather more than a quarter of an inch in width, and with a cutting edge an inch and a half in length, at the end of a blunt shank three inches in length. This saw was passed through the track made by an enlarged tenotomy-knife a quarter of an inch in width. The operation was performed on December 1st, 1869, on a man aged 24, a case of bony ankylosis of rheumatic origin seven years previously; the thigh was flexed upon the pelvis at a right angle, and abducted.

I entered the tenotomy-knife a little above the top of the great trochanter, and, carrying it straight down to the neck of the thigh-bone, divided the muscles and opened the capsular ligament freely. Withdrawing the knife, I carried the small saw along the track made—preserving this by pressure of the fingers of the left hand—straight down to the bone, and sawed through it from before backwards. The section was accomplished in five minutes. No hæmorrhage occurred; and a compress of lint with plaster and bandage was applied. The limb at once moved freely in all directions; but, before it could be straightened, the tendons of the abductor and rectus muscles had to be divided. No inflammation whatever followed; no swelling or redness of the skin, or any deep suppuration; only a few drops of pus escaped from the granulations at the orifice, which did not close by the first intention, or possibly from the track. Three weeks after the operation, he began to walk on crutches; and by swinging the leg about, as well as applying weight extension at night, I endeavoured to preserve motion; but this was gradually lost, and bony ankylosis in the straight position resulted. The man was enabled to follow his occupation, and now keeps a small general shop at Bath, where he was exhibited to the Surgical Section of this Association last year.

The decennial period which has now very nearly elapsed since the performance of this operation has been fruitful in the suggestions of other operations for subcutaneous osteotomy, and also for osteotomy with open wound under Lister's antiseptic method. The operation on the hip-joint has been adopted freely by surgeons in this country, and as freely by our enterprising brethren in America; it is now an established operation in surgery, and if the cases in which it is performed be carefully selected, and the operation executed with the requisite dexterity, its reputation will be maintained. In a paper read at the Royal Medical and Chirurgical Society, October 10th, 1876, I recorded twenty-two cases in which the operation had been performed. Cases of a rheumatic or pyæmic origin are the most favourable, because in these affections there is no loss of bone-structure, and the head and neck preserve their integrity; but in the so-called strumous class—unfortunately much the largest—there is generally more or less destruction of the head of the bone, and other alterations in the anatomical relations of the joint; only the most favourable of this class should, therefore, be selected; but for the remaining cases in which my operation is not applicable, Mr. Gant's operation will be found to succeed. Mr. Gant proposed to divide the shaft of the femur subcutaneously, just below the small trochanter, using instruments similar to those employed by myself; but the saw had a longer cutting edge and a thinner blade; the width the same. Mr. Gant performed this operation December 10th, 1872, on a boy aged 6, who had ankylosis of the hip-joint, with extreme malposition of the limb upwards and inwards. Primary union of the wound occurred, and firm union of the bone with the limb in a straight position, giving an useful leg.

Mr. Gant has repeated this operation in several cases, and I have also performed it several times. In the same way, I have divided the shaft of the femur in the lower third; and the shaft of the humerus, a little above the elbow-joint, in two cases, for bony ankylosis in a straight

* *A System of Surgery*, by Samuel D. Gross, M.D., LL.D., D.C.L.Oxon. Fifth edition, vol. i, p. 1092-94. Philadelphia: 1872.

* *Med.-Chir. Trans.*, vol. 54, p. 247. Longman, 1871,

position. In all the cases, the wound closed by the first intention, without any inflammation, swelling, or redness occurring. The local disturbance seemed to be no greater than in an ordinary tenotomy case.

The largest and boldest operation of subcutaneous osteotomy is that first performed by Dr. A. Ogston of Aberdeen, who applied the principle which I had adopted in the hip-joint to the cure of genu valgum, and used the same instruments, but with Lister's antiseptic precautions, which I have never adopted, as it has always seemed to me that we might absolutely rely upon the protective influence of the subcutaneous law. Dr. Ogston introduced the subcutaneous saw into the healthy knee-joint, through the track made by the enlarged tenotome, or subcutaneous knife, and then splitting the lower end of the femur detached the inner condyle, which in these cases is considered to be in an hypertrophical condition—at any rate, there is no doubt as to its relatively increased length. This operation was successfully performed by Dr. Ogston on May 17th, 1876, and an account of it was published in the *Edinburgh Medical Journal*. It has been repeated by many surgeons, both at home and abroad, with great success, and has already become an established operation in surgery. The testimony in favour of this operation by many surgeons is so ample and satisfactory, that it must be regarded as one of the greatest triumphs in subcutaneous osteotomy.

Other surgeons have preferred the use of the chisel, which was most successfully employed by the late Mr. Maunder, whose sudden and melancholy death has deprived the profession of one who had contributed much to surgery in its various branches, and had especially interested himself in subcutaneous osteotomy.

The use of the chisel in detaching the inner condyle, as it is said without opening the knee-joint, has been adopted by Mr. Reeves, and with considerable success.

Osteotomy, with Lister's antiseptic method, for genu valgum, has been very successfully adopted by Professor Macewen of Glasgow; and the operation which he performs is a section, or partial section, of the lower end of the femur with a chisel, without opening the knee-joint.

Professor Lister himself adopts the open-wound, with a free external incision, from one to two inches in length, and then uses the chisel on Macewen's plan. The compound fracture thus made and subsequently treated on the antiseptic method heals, as a general rule, without inflammation or suppuration. The favourable progress of such cases I have recently watched in Professor Lister's practice, but time alone can determine what percentage of unfavourable cases may occur.

In the discussion to which I hope this paper will give rise, I would suggest the following points as some of the greatest practical interest, on which we should like to obtain the opinion, and the result of the experience, of the members present, viz.:

1. The method of performing the operation of subcutaneous osteotomy, and the instruments to be employed, viz., whether the saw, chisel, or drill:

2. The selection of cases in reference to their pathology; the joint involved; and the instruments to be used:

3. The relative merits of subcutaneous osteotomy, without any antiseptic precautions; and osteotomy by open-wound under Lister's antiseptic method.

SUBCUTANEOUS OSTEOTOMY BELOW THE TROCHANTERS.*

By FREDERICK J. GANT, F.R.C.S.,
Senior Surgeon to the Royal Free Hospital.

The results of hip-joint disease, in a large number of cases, have recently suggested questions relative to their treatment, of greater practical interest than with regard to the prior management of the disease itself. When, in the course of that condition known as scrofulous disease of the hip-joint, the treatment by rest and extension has failed to preserve the integrity of the articulation, or to result in fibrous ankylosis, excision may be resorted to for the removal of the disorganised articular surfaces in order to obtain a fibrous or movable union, and thus an useful limb. But there are cases not a few, where this result is not accomplished by the favourable course of the disease under treatment, [or even by the operative interference of excision. The union, at first fibrous, becomes ossific, and, if the patient be at liberty, more or less considerable malposition gradually takes place; the limb being raised to an angle with the pelvis, so as to be useless for standing or walking. A similar condition is witnessed as the result of chronic rheumatic arthritis; but here the ankylosis is often attended with an exuberant deposit of nodular and hard bone around the neck of the femur.

Under these circumstances, various operations of osteotomy have been devised, having in view the substitution of a fibrous ankylosis, or the formation of a new and movable joint, and thus also to bring down the limb to the position requisite for use. I may refer to the operations originally proposed and performed by Dr. Rhea Barton in 1826, and by Dr. Lewis A. Sayre in 1862. Both these procedures were intertrochanteric—osteotomy between the trochanters; and the latter was an excision of a transverse plate of bone in that situation. Both also were effected by more or less extensive incisions in the integuments.

Subcutaneous section, in the neck of the femur, is the well known operation of Mr. William Adams; first performed by him in 1869, and since practised with considerable success by himself and by other surgeons. This mode of osteotomy has the advantage of an operation governed by the general principles of subcutaneous surgery; and the situation of section, approaching nearest to the centre of motion, is the most desirable for the formation of a movable joint, thus to allow the freest movements of the limb. Accordingly, Adams's operation should always be selected, in appropriate pathological conditions, and when practicable. But there are exceptional classes of cases where this operation is impracticable, or, if eligible, would fail in its result. To these cases I would now direct the attention of the Association.

Firstly, when, in consequence of continued disease of the hip-joint, the head of the femur has disappeared, leaving only a stunted nodule of bone, representing the neck above the trochanters; in such case, the operation of section in the femoral neck cannot be performed, there being no neck to divide. This advanced degree of destruction may be ascertained by careful measurement of the femur compared with the other. Even when supratrochanteric section is practicable, the state of the neck may render this operation abortive. The seat of operation will be in an almost carious portion of bone, which is unfit to yield a fibrous union; or, possibly, atrophy or necrosis of the upper portion of the neck may ensue, by cutting off the vascular supply from bone already devitalised.

Secondly; another class of cases inappropriate for Adams's operation is when, the ankylosis having resulted from rheumatic arthritis, there is an exuberant deposit of new bone, forming hard nodules or spicula around the femoral neck, itself entire. The thickening and induration existing will resist any justifiable attempt to divide the bone in this situation.

In both these conditions of the hip, the operation of osteotomy may be transferred to below the trochanters; and with this additional advantage, that, the section lying below the small trochanter, the conjoint psoas and iliacus muscles will be set free, and thus the malposition of the limb effectually overcome. For these reasons, pathological and physiological, I originally devised what may be termed the infratrochanteric operation of osteotomy, as an alternative procedure to Adams's operation above the trochanters. My first operation below the trochanters was performed in the year 1872 (see *Lancet*, December); and the instruments used were a stout tenotomy-knife and a fine saw. These are the only instruments I have since employed: but the late Mr. Maunder preferred Volckmann's chisel, the operation being the same, only performed with a different instrument to divide the bone. His first case was in July 1875.

In the most recent case under my care, the condition may be taken as typical of the class wherein, owing to absence of the femoral neck from advanced disease, coupled with immovable ankylosis and extreme malposition of the limb, osteotomy below the trochanters may be practised with the most successful results. The leading particulars are thus reported by Mr. Atkinson, senior resident medical officer at the Royal Free Hospital.

C. K., aged 14, came to the hospital on April 30th, 1878, to see if anything could be done to alleviate the lameness, resulting from old hip-disease on the right side. When standing with the support of a crutch, the tips of the toes on that side just touched the ground, and the limb was dependent so far, only from great anterior curvature of the spine in the dorsal region; for when this lordosis was removed by raising the leg, the thigh formed a right angle with the trunk. The hip-joint had become firmly ankylosed, so that the pelvis moved with the movements of the femur, as though the two were one bone. To conclude the examination, it was found, by careful measurement of the femur, that, shortening having taken place to the extent of two inches, there could be no neck for section in that situation. Mr. Gant performed his operation of subcutaneous section below the trochanters, exactly as described in his *Surgery;* and as usual, without any antiseptic precautions. Following the principle of tenotomy, the puncture-

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

wound having been closed with a pad of lint, this was firmly retained by plaister and bandage. Then the limb was brought down to a straight position, and, the section-ends of the femur being in apposition, although with some angular inclination forwards, a long external interrupted splint was applied. The pad was not removed for ten days, when the wound had healed without any suppuration, the lint only sticking to the puncture. At the end of six weeks, the boy was able to get about the ward on crutches, the bone having firmly united; and in three weeks more, the limb could bear weight with equal balance on the other, and he was discharged from the hospital. A few days ago, after a year's result, he could walk well, with a high heel and thick sole to his boot.

ANTISEPTIC OSTEOTOMY IN GENU VALGUM AND ANTERIOR TIBIAL CURVES:

WITH A FEW REMARKS ON THE PATHOLOGY OF KNOCK-KNEE.*

By WILLIAM MACEWEN, M.D.,
Surgeon to the Glasgow Royal Infirmary; Lecturer on Clinical Surgery; etc.

THERE are several points, in addition to those already published, concerning the operation which I have advanced for the relief of genu valgum by transverse incision through the femoral diaphyses, which are considered worthy of attention.

A. *Direction of the Osseous Incision: Avoid encroaching on the External Condyle.*—Some surgeons have expressed a difficulty experienced by them, in endeavouring to carry out my operation by division of the femoral diaphyses, first of all, while dividing the bone, and, secondly, while bending or snapping the outer layer, after they considered it sufficiently divided. Not only so; but, as a result in some cases, a projection, which could be felt under the skin and sometimes seen, appeared on the anterior external aspect of the limb. It is more than probable that in these cases a mistake has been made in beginning the incision too low, and in then cutting transversely to the axis of the body, and so landing the instrument in the massive external condyle; where the operator, especially if it be his first case, and that case occurring in the adult, is apt, while cutting, to lose his bearings, and finds the bone difficult to bend or snap. Besides the disadvantages which the surgeon experiences, the upper external anterior extremity is apt to project and appear unseemly, and the transverse division of the external condyle may interfere with the origin of the plantaris, the outer head of the gastrocnemius, and even the popliteus muscles. A little consideration of the relation of parts will be sufficient to enable this error to be avoided.

In the normal limb, a line drawn from the spine for the insertion of the adductor magnus tendon, transversely to the axis of the limb, would in most cases pass into the upper part of the external condyle; but, in genu valgum, the whole internal condyle is lowered, so that a line drawn at right angles to the limb's axis, at the level of the spine, would pass into the middle of the external condyle, and would also encroach on the anterior femoral articular surface. In fact, in some very aggravated cases of genu valgum, a line drawn from the spine for the insertion of the adductor magnus tendon transversely to the body would land very near the lower portion of the external condyle. This mistake may be avoided in one of two ways: either by commencing in the adult an inch above the spine for the insertion of the adductor magnus tendon, and cutting *parallel* to the condyles; or by taking the guides formerly given by me, cutting transversely across the femur on a level with a line drawn half an inch above the upper margin of the patella when the limb is in the extended position; or by taking a line drawn transversely to the limb half an inch (in the adult) above the external condyle. By keeping these points in view, and operating according to the instructions given in the BRITISH MEDICAL JOURNAL for May 3rd, 1879, this will be found one of the easiest surgical operations.

B. *The Exact Seat of the Incision in the Soft Parts, so as to avoid Bleeding.*—Regarding bleeding from the seat of incision in the soft parts, I stated that I had not found it necessary in the last thirty cases to apply a ligature; the same result has followed twenty cases occurring since that time, making in all fifty cases in which no ligature has been applied in the femoral incision for genu valgum. Some surgeons have, however, told me that they have had arterial bleeding necessitating the application of a ligature or ligatures. In such cases, I would be inclined to think that the incision had not been made in the position pointed out, that is to say, at the point where the two following lines meet, a line drawn transversely from the upper border of the patella when the limb is in the extended position, and a line drawn longitudinally about half an inch anterior to the spine for the insertion of the adductor magnus tendon. That position is below and anterior to the anastamotica magna, and above the superior internal articular; and, by making an incision about half an inch in length directly to the bone at this point, it is impossible to touch any normal distribution of these branches. Any bleeding which might occur from superficial veins may be completely arrested by pressure of a sponge for a few minutes.

C. *The Transverse Extent of the Osseous Incision.*—The extent of the femoral osteotomy depends upon the nature of the case. When the bones are soft and yielding, as is generally the case up to fifteen or sixteen years, and typically so in plump girls at that age, if the bone be divided for fully the internal two-thirds, the remainder may be easily bent round so as to form a green-stick fracture. In this case, the bending ought to be performed gradually, and not with a quick jerk. On the other hand, when the bones are hard and brittle, when the feeling imparted to the osteotome is similar to that conveyed on cutting old dried bone, and when even by a smart blow with the mallet little impression is made—these are cases where the incision ought to pass to the dense shell of bone on the outer side, leaving it alone to be snapped. This state of bone is sometimes met with in the adult—twenty years and upwards; especially in those who have been rickety, the bones are found at that age to contain a large proportion of earthy matter and to be brittle. The individuals are thin and have a scraggy peculiar look, which in a short time the surgeon begins to recognise. In these cases everything ought to be done by cutting with the osteotome, and as little as possible left to be snapped. It is also specially necessary to avoid using much force in snapping. It has been stated that some surgeons place their knee as a fulcrum on the joint, and so break the bone; that others seek the aid of several assistants in snapping the bone. The employment of such force is not only quite unnecessary, but in the class of cases at present under notice might lead to very serious comminution and bad after-results. When the surgeon—placing his left hand over the wound, takes the right lower limb in his right hand, then using the left as a fulcrum, and the right as a lever—finds that he cannot readily cause the bone to yield, he may be sure that he has not sufficiently cut the bone all round; he ought to desist from attempting to snap the bone, reintroduce his osteotome, and find the point that requires division. Most often, the posterior border has some little point that requires division, when a very few touches with the osteotome will remove the obstacle to easy bending or snapping of the bone. After a little experience, the reintroduction of the instrument is seldom required.

D. *Does the Femoral Incision impair or arrest the Growth of the Bone?*—There has been a fear expressed that this femoral incision might in some way encroach on the epiphysis, and impair or prevent the ultimate growth of the bone. It must be remembered that the incision, as proposed by me, is through the diaphysis about an inch above the epiphysis, so that the latter is never interfered with. As a matter of fact, experience lends no countenance to that fear; those first operated on, three years ago, having continued to grow in strength and height, their limbs developing proportionately.

It must also be remembered that the operation, as an immediate result, increases the height of the patient. One man, operated on recently, rose from his bed four weeks afterwards three inches higher than when he lay down. Thus the operation not only rectifies a deformity, but adds to the patient's height.

E. *A very few Remarks on the Pathology of Genu Valgum.*—Having had over one hundred cases of genu valgum under observation, the general impression which their pathological condition conveyed pointed to certain conclusions; but, before formulating these, it was considered advisable to take more minute measurements than hitherto, and to arrange them according to a definite plan. At present, there have been over thirty cases thus minutely measured; and, though I intend reserving the consideration of these in detail for the future, it may not be inconvenient to state here several particulars which bear on the practical aspect of the question.

In every case, the articular surface of the internal condyle has been found at an abnormally lower level than the external. With this exception, there seems to be no constant invariable or pathognomonic condition of knock-knee. In the majority of instances, an alteration has been found in the plane of the condyles; so that the whole internal condyle is lowered, and the external condyle is elevated. In a number of these cases, this seems to be due to the inward curve of the lower third of the femur, and a twisting outwards of the condyles, as if one had taken the limb while still soft, and, putting one hand above the middle of the thigh, and the other on the condyles, and placing the operator's knee on the outside of the lower third, had thus bent the limb. At other times, this lowering of the internal condyle seems to be due to an increase of the lower internal end of the diaphyses, as Mikulicz has pointed

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

out. But where this is the sole cause, the deformity is not aggravated. In some rickety cases, besides the conditions producing the knock-knee there are other deformities, such as a forward bend of the lower third of the femur, but much more frequently a flattening and inward inclination of the internal condyle. Regarding the intrinsic lengthening of the internal condyle, there were cases where there was no increase in the relative length of the internal to the external condyle; and there was actually one instance where there was an abnormality in the opposite direction, the internal condyle being the same size as the external. In such cases, some other factor or factors accounted for the deformity. But there are also a considerable number of cases where the internal condyle was intrinsically longer than the external. These measurements were taken by callipers, and not by tape. This latter fact, regarding the lengthening of the condyle, is opposed to some views recently advanced. The lengthening of the internal condyle differed in degree in various cases: in some few, it seemed to be the chief element in the knock-knee; but in the majority it only formed one of the factors.

Besides the state of the femur, there was found in some cases a slight, and in a very few cases a marked, tibial elongation of the proximal internal aspect of the shaft. But these elongations of the tibiæ were very slight as compared to the femoral deviations. The most marked tibial deformity consists in the inward development of the shaft and flattening of the inner portion from before backward, ending in spines or buttresses on the inner side.

As a rule, there are generally two or three factors in the formation of knock-knee.

F. *Observations on the Tibial Incision in Knock-Knee.*—It has just been stated, under the brief remarks on pathology, that the tibia is sometimes involved; the question naturally arises, whether the tibia ought to be divided, in addition to the femur, and, if so, in what proportion of cases?

In the majority of instances, the tibia is not involved to an extent demanding the practical consideration of the surgeon. Even in genu valgum adolescentium, the tibia is not invariably involved; and in many instances, even when involved, it is to such a slight extent that the femoral incision alone is sufficient to enable the limb to be brought into a straight line, without producing one deviation for another, as has been remarked. Not only so, but even in these cases where the tibia is involved to a marked extent, in the production of knock-knee, the limb may be brought, by the femoral incision alone, *sufficiently* straight to enable the weight of the body to fall on a line drawn through the knee and the middle of the ankle-joint—thus making a limb which, as far as utility is concerned, is as good as when the tibia is cut as well as the femur. When such a limb is exposed, the flattening of the tibial head and the spine, which project on the internal surface, appear prominent, and make a lower limb which when nude is not symmetrical, but when clothed looks quite straight. In one of the most aggravated cases of genu valgum which has come under my notice, occurring in an adult of twenty-one years, the limb was brought into a straight line by femoral osteotomy, the tibia not being touched. The tibia, having the flattened head and well-marked buttresses on the inner side, is still to that extent deformed, though the genu valgum is obliterated. But even the addition of a simple tibial osteotomy would not do away with this deformity; it might assist, though it would not entirely efface it.

Keeping these reservations in mind, I have to state that the tibial incision, in cases of *very* aggravated genu valgum, not only is justifiable, but conduces to the ultimate result, imparting greater symmetry to the limb. In operating on the tibia, the form of the section of the bone just below the spine ought to be kept in view, though to the outline of the normal section a considerable flattening and thickening of the bone on the inner side ought to be added. In dividing the tibia, after having first operated on the femoral expanded diaphyses, one finds, as a rule, a very great contrast in the density of the bones, the tibia being much harder and more difficult to cut. The manner in which I perform this part of the operation is as follows. An incision in the soft parts, sufficient to admit the osteotome, is made at a point on the inner side of the tibial surface, midway between the anterior and posterior border and opposite the lower border of the tibial tuberosity. The tibia is then divided from within outwards, commencing from the posterior border, and raising the osteotome gradually up until it comes into contact with the anterior surface at the lower portion of the tubercle, which is by far the most dense portion. The osteotome ought then to be directed from before backward, the tissues to the outside being gently retracted meanwhile; and so this dense part is divided. The femoral and tibial incisions I have always performed at the same time.

The fibula I have never seen the necessity of touching, either by causing a simple fracture or by cutting, in any case of genu valgum. I have, therefore, never seen the necessity of performing Mr. Barwell's operation of division of this bone. On several occasions, I have divided the only tendinous structure which can prevent the perfect straightening of the limb after the femoral incision, the tendon of the biceps, as it is inserted into the fibular head. These were aggravated cases, where the tendon stood very prominently out, and in these I derived advantage from its division; but this division is seldom necessary.

In one very marked case, where the deformity was equal in both limbs, I divided the tibia in the one limb along with the femoral incision, and in the other I performed only the femoral osteotomy and divided the biceps tendon; and the result of the latter operation was the better of the two, though both were good.

G. *Observations on Division of the Femur from the External Surface in Genu Valgum.*—Some surgeons have in cases of knock-knee divided the femur on the outside of the limb, and they advocate this method in genu valgum. Though no mechanist would adopt such a course to rectify this deformity, yet the surgeon, relying on nature, believes that in her bounty she will make up for his shortcomings. I have great faith in the reparative powers of nature, yet, not considering them illimitable, do not care to overtax her, or to become a mendicant on her bounty, especially when there is no occasion for it. I cannot see a single reason why the external aspect ought to be chosen in genu valgum, and it has several grave disadvantages.

First, the form of a section of the femur, just above the condyles, may be roughly stated to be conical, the base or broad extremity being toward the outside; consequently, the surgeon cuts from the base towards the apex, and as he cuts the anterior and posterior borders, unless he exercises great care, he is apt to allow one border of the instrument to escape and to divide the soft tissues simultaneously with the bone. The femoral artery is also in this way more liable to be cut. On the other hand, with the internal division, one cuts from an apex toward an osseous base; the further the instrument enters, the deeper it is embedded in the bone, and the further are its borders removed from the soft tissues. Second, in passing the osteotome or chisel through the femur from the outside, a wedge opening is made of the thickness of the instrument, and to that extent the outside of the limb is shortened, instead of being lengthened. That is to say, the outside of the limb is already too short, and the operator intending to rectify this shortening commences by making it still shorter. When the operation is performed on the inner side, the side which is abnormally long is shortened. Thirdly, when the incision is made from the outside of the limb, the entire deformity is rectified from that side, and consequently a large gap is left to be filled by new tissue; and that, too, with the periosteum divided transversely, and in no way bridging the interspace, so that the new bone must be supplied from the widely separated osseous extremities. In dividing from the inside, the gap left by the graduated osteotome is immediately filled up by bringing the limb into the straight position, the cut and separated surfaces of bone and periosteum being placed in immediate contact. In aggravated cases, when the deformity is very great and the gap made by the graduated osteotome is not quite sufficient to rectify the deformity, the limb is brought into the straight position by leaving a slight gap on the outside, covered, however, by periosteum, either completely or in shreds; or, if the bone be young (fifteen to seventeen years of age), there may be, correctly speaking, no gap on the outside, but a mere stretching of the outer layers of bone, the osseous fibres still interdigitating somewhat after the fashion of a green-stick fracture. In aggravated cases, therefore, in cutting from the inner side, both sides of the bone are made to contribute to the rectification of the deformity; the inner by being shortened, the outer by being stretched or lengthened. Fourthly, though suppuration would rarely take place, still, if it did so, it would not readily find vent, owing to the manner in which the tissues on the outside of the thigh are bound down by the fascia lata. I have been told of two cases where this occurred after cutting from the outside, and where it gave rise to very considerable trouble, counteropenings behind having to be made for the exit of discharge. One would expect that those who operate from the outside of the femur would also advise the tibial incision; the latter so far making up for the shortening made on the femur, and also preventing the formation of too large a gap on the outside.

It has been said that operating on the outer side of the femur has resulted in straight useful limbs, and that fact has been placed against my criticism. I in no way doubt that fact, but cannot see that it is a sufficient reason for preferring that mode of operating. A straight limb resulted in a patient who had a bad knock-knee, and who came under my observation as the recipient of an accident, a cart-wheel having run over the deformed leg. Yet, I presume no one would be inclined to adopt that method of straightening knock-knee, even supposing the result in that case was good.

H. *Anterior Tibial Curves, and their Treatment.*—A considerable number of persons suffer from anterior curves in the tibia. Sometimes these involve the whole tibia, from the foot of the tubercle to the ankle,

forming a bow, with the tendo Achillis stretching along its base like a bow-string. More often the lower two-thirds are implicated, and sometimes the lower third is alone affected. In most of these cases, the tibia is elongated from before backwards, and flattened latterly; the fibula generally participating in this part of the deformity. In these cases, the deformity, when slight, may be corrected by a simple osteotomy; that is to say, the division of the bone from before backward, at the most prominent part of the convexity, by an osteotome. But, when they are more pronounced, a series of osteotomies, or the removal of a wedge, is necessary to rectify them. Of the two methods, I am inclined (when a single simple osteotomy is not sufficient) to remove a wedge, as being on the whole the most simple and satisfactory. Now, many have asked an easy method of ascertaining the size of the wedge to be removed, without going into mathematical calculations. One of the easiest methods of ascertaining the size of the wedge to be removed is by turning the limb on its side, and taking a tracing of the anterior edge of the tibia. Next, measuring the breadth of the tibia, from before backward at the most prominent part of the convexity, and drawing a second line parallel to the former, corresponding to the thickness measured, then cut this shape out. After this has been done, fold the paper, at the most prominent part of the convexity, wedge-fashion, with its base anteriorly, until the pattern has become straight. The base of the wedge will then represent the size of the wedge to be removed. Having ascertained this, it is convenient to have it marked by measuring it with a pair of callipers, keeping their blades fixed at the distance measured, so that they may be applied to the bone when necessary. An incision sufficient to admit the instrument is all that is necessary, as the skin will slide upwards and downwards to suit. A chisel (not an osteotome) is used. It ought to have a keen cutting edge, with little bevel. It is convenient first to remove a wedge smaller than is required; and then to remove from either side one or two shavings up to the desired extent. In this way, opportunity is given for making the incision on each side perfectly smooth. In cutting out the wedge, the periosteum on either side can be preserved, and, if so, it gives a surety that the border of the chisel has not injured any of the soft structures. After removing the wedge, and seeing that no fragments of bone remain in the opening, the fibula may be attended to. In many cases, a simple fracture may be made; but in some, especially when it is flattened and perhaps elastic, this is not so easy; and it is better to make a subcutaneous osteotomy with the osteotome; after which the limb will become straight by bringing the two anterior tibial cut surfaces into apposition. Some have spoken of dividing the tendo Achillis in such cases; and it is possible that it facilitates the rectification of the osseous deformity, when it is present to a marked extent. In the majority of cases, I have not divided the tendo Achillis, and have found that, after the first two or three days, there is no trouble with it, the foot being fixed to the foot-piece of the splint.

ON GENU VALGUM: WITH SOME REMARKS ON OPERATIONS FOR ITS REMOVAL.*

By B. E. BRODHURST, F.R.C.S.,
Surgeon to the Royal Orthopædic Hospital, etc.

GENU VALGUM is an affection of so frequent occurrence that it has lately attracted a good deal of attention, and various modes of treatment have been suggested. Some rely on mechanical support for its removal; while, again, we have various operations, namely, such as have been described and practised by Dr. Ogston, Dr. Macewen, Mr. Barwell, Mr. Reeves, and others; among which I will especially mention one which I have several times performed, and to which I have on another occasion directed attention.

But, before alluding more directly to this operation, I will answer the question: What is genu valgum? Genu valgum is produced by the yielding of the internal lateral ligament of the knee-joint, and it is usually preceded by flat foot. When first observed, it may be removed simply by taking the weight of the body off the feet, and later slight lateral pressure will produce the same effect. After a short time, however, the whole lower epiphysis of the femur becomes oblique, and at length the shaft of the bone becomes more or less seriously involved, as well as the tibia itself. The motions of flexion and extension become somewhat restrained, the leg and thigh-bones being somewhat locked, in consequence of and in proportion to the obliquity of the femur. In an early stage, the recumbent position, with perhaps some slight lateral support, is sufficient to overcome deformity; but, when deformity is considerable and has lasted several years, it is perhaps yet a question how this obliquity is most readily, and with the least material damage to the parts concerned, to be removed.

That there is such an affection as a prolongation downwards of the inner condyle I do not deny; but I contend that it is of great rarity; and, if the malady be not confined to the inner condyle, but extend along the entire breadth of the epiphysis, and implicate the shaft of the femur as well as the tibia, to operate on the inner condyle alone is calculated to complicate rather than to remove the deformity.

There are cases in which Mr. Barwell's operation—namely, to divide the femur in part, and then to straighten the bone, and subsequently and at some interval of time, to divide the tibia and the fibula, and thus to bring the limb into a straight line—may be the best to be done; but the cases are rare where the advantages to be derived would be considered sufficient compensation for such an operation. The instances are not frequent in which this operation is needed. But there are a large number of cases where osteotomy is not necessary, and where mechanical appliances are useless—cases where a certain amount of separation of the articular ends of the bones becomes necessary before the limb can be straightened. This may be gained by the division of the biceps tendon and the external lateral ligament, and, when it is tense, of the ilio-tibial band. When deformity is not very severe, the limb may be immediately placed in a straight position, and, being confined in a splint, may be so retained.

On June 15th, 1877, I operated on a youth, fifteen years of age, where the inner malleoli were eighteen inches apart and the patellæ were dislocated outwards. He left London in a fortnight with perfectly straight limbs, and in the course of six weeks he walked easily with supports. He continued to wear these supports for four months, and at the expiration of this time I advised that they should be discontinued. He has not since needed them. I saw the patient in June last, and found him straight, and without undue lateral motion of the knee, and able to take much exercise.

After considerable experience of this operation, I have never known any ill effects to arise from it, and have always had reason to be satisfied with the results.

ON OSTEOTOMY OF BOTH THIGH AND LEG FOR GENU VALGUM.*

By [RICHARD] BARWELL, F.R.C.S.Eng.,
Surgeon to Charing Cross Hospital.

IT is not my intention to detain the members of this Section with details concerning the different forms of operation for knock-knee, nor to criticise the methods proposed and adopted by other surgeons; my object is simply to give my reasons for operating by dividing the bones right across, and in most instances the bones both of the thigh and leg.

Firstly, however, it should be said that I believe it impossible to cure a well marked case of knock-knee by instruments, unless the bones be very unusually soft; and that, even were it possible, the long continuance and irksomeness of the treatment render it an undesirable method. It is worse than useless to attempt cure of a deformity which originates in obliquity of the bones by division of ligaments; a limb thus treated could only be put into a straight position by forcing and keeping the outer part of the joint-surfaces asunder. It need hardly be said that no articulation could, when thus distraught, perform its function.† Perhaps, too, a few words as to the advisability or the reverse of operations at an early age should be added. I would gladly avoid all such undertakings previous to the seventh year, but occasionally they are almost forced upon me; yet I absolutely refuse to operate if the bones bend or seem elastic to manual pressure. When, on the contrary, the bones are absolutely unyielding, I have frequently performed osteotomy with permanently good result. (Tracing shewn.) It must, too, be remembered, that if the deformity be unequal, if one limb be more distorted than the other, or if there be genu valgum on the one side, varum on the other, an oblique position (laterally) of the pelvis is produced, which must result in scoliosis; and a ricketty lateral curvature of the spine is rarely, if ever, curable; hence, early osteotomy, if the bones be hard, is frequently desirable; and when the first, the softening, stage of rachitis has ceased, the bones become exceedingly hard, almost stony.

The direction which the surgeon chooses for division of the bones will depend upon the notion formed by him of the deformity. Seventeen years ago, I had several opportunities of studying the real cause of

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

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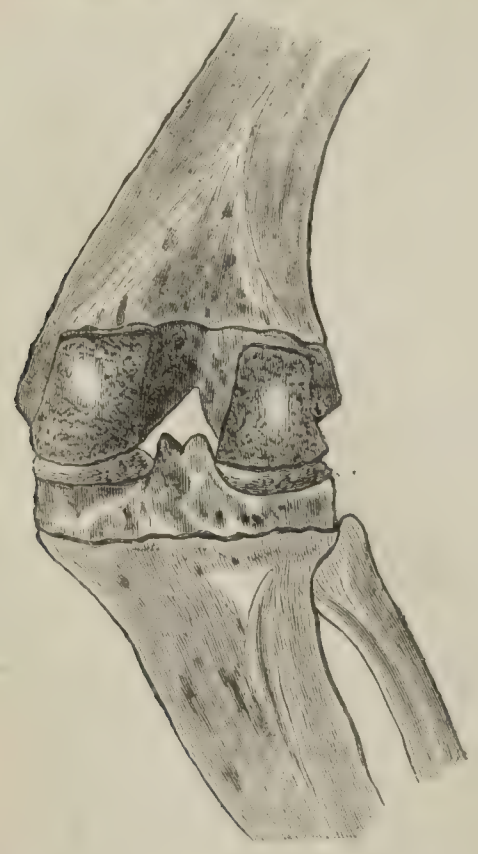
† This view was forcibly proved, I believe, to all present at a meeting of the Clinical Society in June, when a case thus treated was shown.

genu valgum; and in 1863, I—distinguishing two forms of the malady, as is certainly correct—wrote thus of one: "The femur receives two bends; the upper half curves, so that the convexity looks outward and forward, the lower half in the contrary direction, its convexity looking inward and backward. The tibia follows curves which are the exact inverse of those in the femur." Of the other kind of knock-knee, I said: "The actual locality of the morbid change resides in the lower epiphysis of the femur and upper one of the tibia. Thus, the angular bend is not a single one situated at the articulation, but the knee-joint itself and the bones a little over and under it are in normal relationship; the bend is a double one situated above and below the epiphysis." By epiphysis I mean the line of junction.* In 1878, I again wrote: "I conceive the malady not as a mere lengthening of the inner condyle, but as an obliquity of the whole lower epiphysis of the femur."

Now, an outward curve of the lower end of the femur, even an oblique position of the lower epiphysis on the shaft, can, unless exceedingly small, be verified by careful and properly directed palpation. To detect the former, the lower portion of the thigh should be grasped between the palms, which are then to glide down the limb; the finger- and thumb-tips of one hand may also be used. To distinguish the latter is even more easy; the finger-tips of each hand should make, at about the lower fifth of the limb, firm pressure on the inner and outer aspect of the femur, and then should, with continued pressure, travel downward until checked by the upper prominence of the condyles on each side. If this mode of examination be tried on a normal limb, the fingers on the inner side are thus checked on a somewhat higher level than those on the outer, or at the very least on an even level. But if genu valgum be present, the hand of the inner side will lie, when stopped by the upper boss of the inner condyle, at a considerably lower level; showing that the lower end of the diaphysis and the junction-line are oblique, while the mass of the epiphysis is equally thick on both sides.

In examining the tibia, one finds the portion of bone for about an inch below the knee-joint perfectly normal; just at that distance below the articulation one feels, in well marked cases of knock-knee, an angle from which the shin-bone slopes outward. Now, this angle marks the point where the shaft of the tibia sits askew on the epiphysis.

The views which I have, as above stated, from time to time enunciated have of late received singular confirmation in a paper by Dr. Mikulicz of Vienna, founded upon careful mensuration of a large number of specimens.† This paper is accompanied by lithographs. My figure, diminished from diagram II, represents two of these; I have taken the liberty of placing the tibia under the femur instead of keeping them



asunder. The following is very briefly, but in the investigator's own words, the gist of his paper. "When the femur is concerned in genu valgum, the deformity lies above the condyles, which cannot be materially involved. The bend must be above the epiphysal line." "The epiphysis is not materially affected and the deviation lies only in the lower part of the shaft. We perceive, then, that in genu valgum the deviation of the femur is thus caused, that the unaltered epiphysis lies obliquely on the diaphysis." "In regard to the tibia, it is demonstrable that the obliquity affected only the upper part of the diaphysis, and was produced partly by a bend high up in the shaft, partly by uneven growth of the diaphysal junction." "Genu valgum adolescentium is therefore a distortion situated in the extremities of the shafts, upper and lower respectively, both of the tibia and femur, caused in part by uneven growth of the epiphysal junction, partly by a deviation of the whole end of the shafts. The epiphyses themselves do not materially participate."

In Plate II is given a good representation of the condition; and a tracing (shown) from a case operated on by me last year, shows how these osseous deviations mark themselves on the soft parts. It should be stated that good outlines may be obtained by letting the patient lie with the limbs upon the paper and running a pencil along them, the feet being sketched in afterwards. Now, if one consider cases of knock-knee with reference to the bony anatomy of this figure, one cannot but see that an attempt to straighten such limbs by sawing off or chopping away the inner condyle could only succeed by causing as great an obliquity of the knee-joint as will compensate for the deviation of the bones both below and above the articulation. If the deformity be treated by removal only of a wedge from the femur, the lower end of the thigh-bone must, owing to the tibial obliquity, be made to curve as much inwards as it now does outwards. It is only just to Dr. Macewen to state that he of late has advocated in some cases division of the tibia as well as removal of a wedge from the femur.

My method consists in dividing, in part with a chisel, in part by fracture, the femur and tibia above and below the epiphysal lines respectively, and at each place rectifying its own proportion of the deformity; the operations follow one another in from a fortnight to three weeks. By this means, a wedge-shaped gap is left on the outer aspect of the bones. I hold that nature can fill up this gap more accurately than the surgeon who attempts the cure by removing a wedge on the inner side; and I have never found the slightest tendency in the uniting substance to yield in after months or years. Mr. Barker says—I do not quote his words but his meaning—that this method of mine has not found much favour with, nor been commonly adopted by, the profession; and Mr. Barker, whose courteousness I fully recognise, is quite right. But I hope he and the gentlemen now listening to me will not consider it egotistic to say that I confidently await the time when surgeons will, on this point, come to accept my views, or at least to follow my method; indeed, Dr. Macewen's division of the tibia is already a step in that direction.

My confidence in the matter is based upon the exposition above very shortly given of the anatomy of genu valgum; also on the fact, that other deviations are often combined with the knock-knee. For instance, the femora are often bent backward; the cases look as though there were imperfect power of straightening the knee-joint. These curves can only be corrected by entire division of the femur; and as this bone has been bent while in the soft phase of rickets by action of the flexors, a certain amount of tenotomy may be required. Another condition exists in which the diaphysis sits obliquely on the epiphysis, not only in the lateral but also in the anterior direction; and in these cases, the bones are usually twisted, so that from the middle of the thigh downward, the limb is more and more rotated outward. This complicated disarrangement gives the appearance of knock-knee, calf-knee, and splay-leg (see right leg of Plate IV). When I operated fourteen months ago, the child, aged 7, had recovered from the soft stage of rickets, but was flabby and abdominous from want of exercise. She is still clumsy in form about the pelvis, nor is the spine quite straight. Such result as shown in Plate IVA (figure with straight limbs) could only have been obtained by complete division of the bones, enabling me to untwist them, to straighten out the anterior bend, and rectify the knock-knee. Since being able to run about and play with other children, she has much improved in general condition.

* *Cure of Club-Foot*, p. 117 and 140.
† *Archiv für Klinische Chirurgie*, vol. xxxii, 3rd Heft.

GUILD OF ST. LUKE.—We are requested to state that the annual commemoration of this Guild for medical practitioners and students will be held at St. Paul's Cathedral, on Tuesday next, October 21st, at 7.30 P.M., when the popular preacher, the Rev. W. J. Knox Little of Manchester, is to deliver the sermon. Seats under the dome are reserved for the profession and their friends, and tickets can be obtained from the officers of the Guild on application. We understand the choir will number five hundred voices, and the organ be assisted by a small orchestra.

SUBCUTANEOUS OSTEOTOMY IN YOUNG CHILDREN.*

By ROBERT WILLIAM PARKER, M.R.C.S.,
Assistant Surgeon to the East London Children's Hospital, etc.

ALTHOUGH the hospital has afforded me abundant material for osteotomy in different kinds of deformity of the long bones of the lower extremity, I shall nevertheless chiefly confine myself in this paper to the subject of knock-knee. Osteotomy is now so thoroughly established as a surgical operation, that an apology for undertaking it is no longer needful; of all surgical operations, there are few, conferring so great a benefit, which are burdened with less mortality than this one. Out of fifty osteotomies, performed on children varying in age from three to thirteen, I have not had one death; and in only one case has there been any suppuration. This occurred in a little boy aged about four, on whom I operated for bow-legs. The left tibia was chiseled, and healed very satisfactorily; after two or three weeks the right one was operated on. All went well for a time; then some erysipelatoid œdema of the soft parts set in, and the boy was very ill for some days. Under treatment, however, I am glad to add he recovered with a straight limb.

I ought to say that, knowing the tendency which the slighter forms of rickety curvature of the long bones have to disappear spontaneously, I only proceed to osteotomy after having had the cases under observation for about three or four months, during which cod-liver oil and steel wine are tried, and also the use of splints kept on with India-rubber bandages. The facility with which these rubber bandages are applied by the lay public is a great recommendation; but a still greater one is the fact, that they not only never get loose, but, on the contrary, they rather tend to become tighter; thus they keep up a constant traction. If anything be likely to overcome deformity, it is constant pressure and traction such as this. The splint, which should be hollowed out somewhat and well padded, is placed on the inside of the leg; it need not reach beyond the foot, and then it will not interfere with walking. For I hold it very desirable that the patients should be out and about, rather than shut up in unhealthy rooms, fresh air being very essential for rickety children. In slight cases, much may be accomplished by this means, *if time and some little trouble be given to the case.*

I will now speak of genu valgum. It seems to me that we may divide the cases into two chief classes: the complicated and the simple. By the complicated, I mean where, in addition to a certain amount of genu valgum, there are rickety curvatures of the long bones, by which the former deformity is aggravated. By the simple genu valgum, I mean cases in which there is no other deformity, no curvatures either of tibia or of femur. The treatment must of course vary with the nature of the deformity. Speaking generally, it may be said that, the less a genu valgum is complicated, the more certain it is to be overcome by the condyle operation. In the complicated cases, very much may be effected by straight splints and the India-rubber bandages, or by the use of various orthopædic instruments. Even in these cases, however, if there be any obvious overgrowth of the internal condyle, I should recommend an operation; for it allows of so much immediate improvement in the position of the leg, that the remaining deformity of the femur or of the tibia can be the more easily treated. It is true, too, that a considerable degree of simple knock-knee may be overcome without any operation whatever, if the patient can provide himself with suitable instruments and have the almost daily supervision of his surgeon for a long period. But among the poor children who attend the out-patient departments of our hospitals there is a double difficulty to be met: they are too poor to provide themselves with instruments, and they cannot have the surgical supervision without which the best instrument is almost useless. Thus hitherto there has not been any available remedy for this class of persons for a deformity which is by no means uncommon, and we have been under the disagreeable necessity of sending away the severer cases without relief.

It has long been known that a hypertrophic lengthening of the internal condyle of the femur is the most frequent pathological condition which leads to the production of simple genu valgum. Many other conditions have been assigned. I have myself seen cases in which I could not demonstrate overgrowth in the condyle; in two cases now under care, I believe it is due to overgrowth of the internal tuberosity of the tibia; and I have several times seen how curvatures of the long bones may simulate this deformity. Nevertheless, the broad fact remains, that in a large majority of cases, this undue lengthening of the internal condyle is the cause of the deformity. I am the more disposed to regard this as the real source of the disease, because, in highly marked cases even, after the condyle has been loosened, the deformity can always be overcome.

We owe an especial acknowledgment to Dr. A. Ogston of Aberdeen for having first applied this knowledge to the purposes of surgery; for although other operations had from time to time been proposed and undertaken, none were comparable to Ogston's at the time when it was first published. In recording this, we must not forget to mention the obligation we owe to Listerism; without such a protection no surgeon would have ventured thus deliberately to open the largest joint in the body. In the next place, I think that great praise is due to Mr. Reeves for having improved on Ogston, by suggesting a subcutaneous osteotomy; and further, one which may frequently be done without even entering the joint.

Personally, I have not adopted Ogston's operation; I have not even done it once. Reeves' modification seems to me a less serious operation, and just as effective. Since its introduction, therefore, I have given up all other operations for uncomplicated genu valgum. In children, I believe it can be performed without entering the joint, for the layer of encrusting cartilage, together with its synovial lining, would stretch rather than crack sharply off, as was probably the case in adults. Fortunately for my patients, I have had no opportunity of putting this opinion to the test of the *post mortem* room; but the clinical experience of upwards of twenty-five cases seems to bear me out. Among these cases I have now and then had some effusion into the joint—about three or four times in all. On one occasion, in dividing the condyle, which was very soft, I felt the chisel move too freely, and I anticipated what really occurred—effusion into the joint. Though well marked, it was not really severe, and it quickly yielded to an India-rubber bandage and an ice-bag.

I now generally use the carbolic spray at all these operations, and apply a small Lister's dressing to the wound.

The operation is performed thus. An incision is made with a small scalpel down to the condyle. It should be made about its centre from before backwards; this will correspond to the axis of the femur, and will be about midway between the tendon of the adductor magnus and the inner margin of the patella. The chisel is then introduced, and the condyle is gradually separated. It is well to avoid entering the condyle too far in any one given place; the attempt should rather be made to chisel it equally in each direction by making the handle of the chisel describe the arc of a circle while the mallet is being gently used. If the chisel be sharp, a mallet will not be necessary when operating on young children. After the condyle has been freely loosened, *redressement forcé* is practised until the deformity is corrected. A little over-correction even is desirable. Then plaster-of-Paris bandages are applied from the toes upwards, and the limb is held in position until the plaster is hard. An ice-bag is kept applied for three or four days. There is not much pain subsequently, and rarely any constitutional disturbance whatever. After an interval of from four to eight days, the plaster bandages may be removed, and also the Lister dressing. It will generally be found that the limbs can be *voluntarily flexed to about two-thirds of their extent immediately afterwards.* The amount of stiffness varies with the length of time which has elapsed since the operation. If the joint have not been entered, there will scarcely be stiffness at all. But under any circumstances, I would dissuade from any movements but those of which the patient is voluntarily capable. I should not propose to allow the patient to walk about so soon as this, as it is impossible for the process of union and repair to have been completed thus early. In some of my earlier cases, I waited for three weeks, in others for a fortnight, before commencing movements. I have gradually reduced the time, as experience has shown it to be possible. *Voluntary movements* are always to be preferred, and should be practised every day.

Since experience shows that genu valgum (*vide* Holmes's *Surgery: its Principles and Practice*, 1st edit., p. 481) does not in any way tend to spontaneous cure, I have in well marked cases not hesitated to operate on children even as young as three years. I have been led on to this by the remarkably little effect which the operation seems to exercise upon them, and by the feeling that it is therefore better to relieve them early in life of a deformity which materially interferes with their own comfort, as well as with that of their families. A child with well marked genu valgum requires very much more care and nursing than another one whose legs are straight and strong. It is the additional labour and responsibility involved in the care of a weakly child which often constitute, for a poor family, the proverbial "last straw which breaks the camel's back". I think, therefore, it is preferable to operate early in suitable cases, seeing how harmlessly it can be done, rather than to wait for two or three years, simply because our patient happens to be a young child.

There is also another argument in favour of an early operation in

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

children when the knee-deformity is at all pronounced. It is, that a genu valgum cannot last long without giving rise to a kind of spurious talipes valgus, which then materially complicates the case. In consequence of the obliquity of the leg, the weight of the body falls largely on the inner part of the ankle-joint, as may be seen in Figs. 3 and 4, especially in the right foot. This unusual and too localised pressure on rickety joints little by little causes the ligaments to yield, and a talipes valgus results, more or less complete in proportion as the knee-deformity has lasted a longer or shorter period.

For the purposes of illustration, I append very brief notes of some of my cases.*

CASE I.—William B., aged 6, a healthy-looking child, had a well-marked double genu valgum, which was said to be getting worse. Reeves's operation was performed on June 28th, 1878, on the left leg, being my first operation. A straight splint was then applied, and an ice-bag over the knee. On August 2nd, the right leg was operated on in a similar manner, and the same after-treatment was adopted. A pressure-sore quickly formed on the outer side of the leg, over the bony prominence of the head of the fibula, which gave us some trouble, inasmuch as it interfered with the wearing of the splint. I may say that this operation, viewed in the light of my later ones, was only partially successful. The boy continued to wear straight splints, and subsequently an India-rubber bandage, for some months; and when I last saw him, a few weeks ago, his legs were sound and nearly straight.

I am not ashamed to own that I felt somewhat nervous in deliberately chiseling so nearly into the healthy knee-joint; this accounted for my not loosening the internal condyle of the femur sufficiently to allow the leg to come quite straight; the operator, therefore, rather than the operation must be blamed for the but partial success. I ought also to refer to the plan of after-treatment, which is answerable for something in this case; since this time, and in consequence of the trouble from pressure-sores in this case, I have relinquished the use of splints, and now only use plaster-of-Paris bandages. The leg having been forcibly straightened, plaster bandages are applied; the leg must be held in the required position until they are hard and dry.

CASE II.—H. O. D., aged 5½, was admitted on October 1st, 1878. He was a rickety child, with curvature of the femora and of the tibiæ, and also with double genu valgum, especially marked on the right side. It is stated in the case-book (by Mr. H. R. Hutton) that "the thighs being put together with the patella forwards and the internal condyles touching, there is a distance of eight inches between the malleoli". Reeves's operation was done on October 8th on the right knee. Plaster-of-Paris bandages were used. There was no rise of temperature. The first dressings were removed on the eighth day; it was found that the boy could semiflex the joint without any pain. The left knee was then operated on in a similar manner, and the dressings were again removed on the eighth day. From this time, all appliances were left off. He was exhibited at the Clinical Society on November 8th. Figs. 1 and 2



Fig. 1.



Fig. 2.

show the boy's condition before and after operation. He was seen by me at the Children's Hospital in July of this present year, quite healthy and well, and with his genu valgum cured.

CASE III.—H. P., aged 6, was admitted under Mr. Reeves and kindly transferred to my care. She was the only surviving child of four. She was extremely rickety; her ligaments were loose; the long bones were curved. When she stood, the left knee was completely behind the right one, and the malleoli even then were some inches apart. Her parents were both poor and neglectful. Reeves's operation was performed on the left leg on April 4th; plaster bandages as usual. On April 29th, the right leg was operated on the same way. The condyles were quite soft, so that they could be, and were, cut with the chisel without the aid of a mallet; the chisel accidentally cut its way into the joints, and there was considerable effusion into the left knee, and slighter effusion into the right one. An India-rubber bandage and an ice-bag were applied, and the effusion quickly subsided. The genu valgum was cured. Of course, the rickety curvatures and the loose ligaments remained *in statu quo*. The notes were taken by Mr. R. E. R. Morse, as also the following.

CASE IV.—James T., aged 5; a severe case of genu valgum. The deformity had first become apparent twelve months ago. It was said to be increasing rapidly. The usual operation and after-treatment were adopted. Figs. 3 and 4 show the boy's condition before and after the operation. I



Fig. 3.



Fig. 4.

have a third photograph, showing the amount of flexion, which was voluntarily possible on the eleventh day after the operation. It was about three-quarters of the maximum. There was not the slightest effusion into either joint. The legs were operated on at four days' interval between the first and second.

CASE V.—John M., aged 3, was admitted under my colleague Mr. A. Cæsar, and subsequently transferred to my care. He was an exceedingly rickety child. The epiphyses generally were large; the tibiæ were also curved. The boy had well marked double genu valgum, which was said to be becoming rapidly worse. His parents brought him to the hospital expressly to have "something done; they knew of some other child which had been cured". I operated on both knees on the same day, June 17th, 1879, putting up the legs in plaster bandages afterwards; ice-bags were then applied. The deformity was quite overcome. Four days later, the plaster was removed; and on the following day the photograph, of which Fig. 5 is a copy, was taken. It

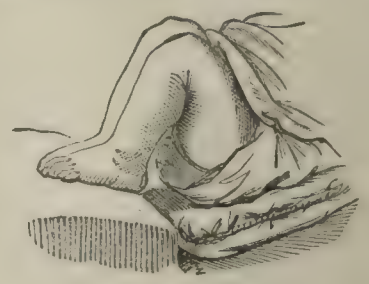


Fig. 5.

shows the amount of flexion of the joint which was voluntarily possible thus early after the operation, and to my mind completely proves that this form of operation may, if carefully performed, be completely *extra-articular;* for I cannot think that such movement would have been *voluntarily* performed if the joints had been opened.

CASE VI.—Joseph T., aged 5½, had a double genu valgum. The usual operation and the after-treatment were followed. There was very slight effusion into the joints. I had to use considerable force in straightening the limbs, and then did not succeed entirely to my satisfaction. I record the case, for it is probable that the line of the incision into the condyle was too oblique, that is, *not sufficiently corresponding to the axis of the femur itself.* It will be obvious to anyone, that the difficulty of displacing the loosened condyle upwards sufficiently to allow the leg to be brought into the straight line, will be in proportion as the incision into it is more or less oblique. I am inclined to regard the slight effusion into the joint in this particular case as the result of the pressure which was necessary to straighten the limb.

* Photographs of the cases, before and after operation, were shewn. The accompanying figures were copied from the photographs, being selected as typical cases.

In doing this operation, it is to be borne in mind that a sufficiency of the condyle must be loosened; otherwise, in straightening the limb, the internal tuberosity of the tibia will impinge on the stump of the condyle, and this will effectually prevent a complete reduction of the deformity. The chisel ought to be so directed that the lowest part of the incision shall correspond to the lowest level of the external condyle, which should always be carefully ascertained before an operation is commenced.

I must acknowledge my great indebtedness to my surgical colleagues Mr. Arthur Cæsar and Mr. Reeves for many of the cases, and for their beds which they placed at my disposal, as well as for help at the operations.

SHORT NOTES OF A DOZEN CASES OF SUBCUTANEOUS OSTEOTOMY.*

By THOMAS JONES, F.R.C.S., M.B.,
Surgeon to the Children's Hospital, Pendlebury, Manchester.†

As osteotomy is one of the subjects chosen for discussion at the Surgical Section of this meeting, I have been induced to record very briefly the chief points of interest in some of the cases which have been under my care. These cases may be conveniently arranged in three groups.

1. Those rachitic distortions of the legs in which the tibia was operated upon.

2. Those in which there has been much inbending of the knees, relieved by division of the internal condyle of the femur.

3. A case of osseous ankylosis of the hip-joint in a flexed position, straightened by dividing neck of femur.

I will now proceed to relate as much of the history of each case as is considered necessary.

CASE I.—John Edward H., aged 6, was admitted into the Children's Hospital, Pendlebury, on August 16th, 1878. For some months previous to this, he had been brought as an out-patient. He had had splints applied with the object of correcting the deformity of his legs, but did not derive much, if any, benefit. The mother stated that the boy commenced to walk at eighteen months of age. At that time, his legs were quite straight; they, however, soon gave way. He was very late in cutting his teeth. The wrists were expanded and the head was large. The ribs were distinctly "beaded". Both legs were bent outwards and slightly forwards. On August 29th, the right tibia was divided subcutaneously with a saw about two inches above the ankle-joint. The wound was covered with lint soaked in collodion, and the limb placed in the straight position between two side-splints. On September 21st, the left tibia was operated upon in a similar manner. The progress of the case was uninterruptedly good; and, when the boy was discharged on September 30th, his legs were quite firm and straight. On July 29th, 1879, his legs were in as good a position as on the day he was discharged.

CASE II.—Sarah N., aged 5, was admitted November 29th, 1878. She was very late in cutting her teeth. She began to walk when a year and seven months old. The right leg was curved outwards and to a certain extent forwards. On December 7th, the right tibia was divided subcutaneously with a saw at the point of greatest concavity. She was discharged cured on January 7th, 1879.

CASE III.—Jessie Ward, aged 5, was admitted May 24th, 1878. The child was brought up by hand. She had many evidences of rickets in the expanded epiphyses, and a large head with flat top. Both legs were very much deformed; the right one was the worse of the two. On May 25th, the left tibia was fractured and the leg forcibly straightened. On June 15th, the right tibia was divided and the limb placed on a back-splint. She was discharged with the limbs in good position on September 2nd, 1878.

CASE IV.—Edwin H., aged 4½, was admitted February 24th, 1878. This boy began to walk when two years and a half old. Seven or eight months afterwards, his mother detected his legs becoming bent; since then the deformity had gradually increased. He was a stout, light haired, intelligent boy, with a large rickety head and beaded ribs. The extremities of the long bones were enlarged, and the legs curved in the upper half. This curvature differed very markedly from that which is usually found in the lower third of the tibia, and involving a much larger extent of bone. There was also a forward curve of both femora; there was no undue movement at the knee-joint. On March 8th, the left tibia was sawn partly through, about the centre of the gradual but extensive curve. The limb was fractured, and secured to an outside splint. On March 28th, the splint was removed. The leg was quite firm and perfectly straight. A piece of felt was moulded to the outer side of the leg, and fixed on by a gum-and-chalk bandage. This boy was readmitted on the 30th of May last, and the right limb was straightened by fracturing the tibia. He was discharged June 30th, 1879.

CASE V.—Jessie W., aged 6, was admitted May 30th, 1879. She was a strong, well nourished, healthy looking child, with both legs very much curved outward and forwards in the lower third. On June 14th, the right tibia was partially sawn through about an inch and a half above the ankle. When the bone was broken, the outward curvature was immediately corrected, but the anterior curve became more marked; this difficulty was, however, overcome by division of the tendo Achillis. The leg was fixed between side-splints. On June 19th, the leg was placed on a back-splint, and side-splints were applied. On July 6th, the leg was taken out of the splints. The limb was straight and firmly united. On July 12th, a similar operation was performed on the left leg. The same difficulty was encountered; and it was met in the same way.

CASE VI.—Alfred K., aged 6, was admitted February 7th, 1879. His family history was good. He had never been a strong boy. His legs had been growing forwards and outwards since he was two years old. The forward curve being very pronounced, it was deemed advisable to remove a wedge of bone from the tibia; the thicker portion of the wedge corresponding with the convexity in the bone. On February 15th, the operation was performed under the carbolic spray. An incision one inch in length was made along the subcutaneous surface of the left tibia in the long axis of the bone. The periosteum was then carefully separated from the bone by a crucial incision, a wedge-shaped piece of bone removed from that part of the tibia where the deformity was most manifest, and the leg placed in the straight position. The edges of the wound were approximated by wire sutures. The wound suppurated for a few days, but eventually healed soundly. The procedure adopted proved perfectly successful, and the boy was discharged with a straight left leg. This boy was readmitted on June 27th, and the right leg was subjected to the same treatment, with equally gratifying result. There has been but little suppuration from the second operation-wound, and that from the superficial parts only. The boy is still an inmate of the hospital.

These six cases belong to the first group; and as in three of them both legs were operated upon, we have in all nine osteotomies; simple subcutaneous division of bone in seven, removal of a wedge of bone in two.

In the second group, we have five cases, where the internal condyle of the femur was divided or otherwise operated upon to relieve the deformity usually known as "knock-knee".

CASE I.—Clara E., aged 7, was admitted September 18th, 1877. She was the subject of double genu valgum of an extreme kind. Other members of the same family were rickety. On October 24th, the internal condyle of the left femur was divided according to the plan known as Dr. Ogston's. The deformity was easily remedied after the separation of the condyles. On November 14th, the limb, which was found to be quite straight, was put up in a plaster-of-Paris bandage. On November 21st, the internal condyle of the right femur was divided. The result was equally satisfactory. This girl has presented herself on many occasions at the Children's Dispensary. Both legs maintain their corrected positions.

CASE II.—Edith H., aged 11, was admitted September 18th, 1877. Her legs began to give way seven months ago, without any very obvious cause, as her general health appeared to be quite good. The distortion of the left knee was very obvious, but it was not so much developed on the right side. A wedge-shaped piece of bone was removed from the left internal condyles. Although the operation was performed antiseptically, yet there was a good deal of suppuration afterwards. Eventually, however, the wound healed soundly, and the limb remains quite straight. Ogston's operation was performed on the right internal condyle. This patient was exhibited to the members of the Manchester Medical Society at the July meeting. It would be obviously very unfair to draw any conclusions from the observation of a single case; but the result of the operation on the left limb was entirely superior to that on the right.

CASE III.—Fanny V., aged 5, was admitted November 6th, 1877. Both knees were very much deformed; there was also much distortion of the tibiæ and femora. The inbending of the knees had become much worse the last six months, and had now advanced so far as to make her quite unable to walk. On November 21st, osteotomy (Ogston's) of the internal condyle of the left femur was performed.

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

† I am indebted to the Resident Medical Officers at the Children's Hospital for the particulars of these cases.

On February 9th, 1878, a similar operation was done on the right side. The result in this case was not so good as we had anticipated. This is to a great extent to be attributed to the curvatures existing in the long bones. We fear that, before any permanent benefit can be obtained, it will be necessary to resort to osteotomy of some of them.

CASE IV.—Emma W., aged 13, was admitted February 3rd, 1878. She was a strong and, to all appearances, a healthy looking girl, with considerable bending inwards of the right knee, which began twelve months previous to her seeking advice. There was no evidence of rickets. On March 2nd, Ogston's operation was performed on the right internal condyle. There was no difficulty in straightening the limb, which was encased in a plaster-of-Paris bandage. Since her discharge from the hospital, she has presented herself at the dispensary. She complains of pain in the right knee-joint. The movements of the articulation are, however, quite free and painless, and nothing abnormal can be detected on the most careful examination.

CASE V.—Eliza H., aged 5, was admitted March 26th, 1878. There were evidences of very advanced rickety distortion of nearly all the long bones. Her teeth had all fallen into early decay. There was double genu valgum of an extreme degree. The deformity commenced two years ago. On September 13th, division of the left internal condyle (Ogston's plan), with tenotomy of the biceps, was performed. The limb could then be placed in a good position. The right leg was forcibly straightened. This could not be accomplished until the tendon of the biceps was divided.

The only case in the third group is one of faulty osseous ankylosis of the hip-joint. In order to render the limb more useful, the neck of the femur was divided subcutaneously.

CASE.—Mary J. H., aged 11, an inmate of a girls' industrial schools, was admitted into Hospital January 22nd, 1878. She was quite well until five years ago, when she sustained an injury to her left leg. Since then the thigh had become flexed at right angles to the pelvis, to which it was firmly ankylosed. There was no movement of limb independent of the pelvis, even on the application of considerable force under chloroform. The left lower extremity was very much shortened and wasted. There was very marked lordosis. On February 16th, the neck of the left femur was divided with a saw, according to the plan suggested by Mr. W. Adams. We found it essential to tenotomise the sartorius and adductor longus muscles, before the result could be considered at all satisfactory. By the application of a long outside splint and weights, however, we succeeded in getting a straight, although wasted and shortened, limb. By the aid of a boot with a high heel, she is now able to move about with comparative ease and comfort.

It will be noticed that in several of these patients both limbs were operated upon; so that the twelve cases constitute nineteen osteotomies. In sixteen of these the operation was made by a saw introduced through a small puncture in the skin. The bone-*débris* which resulted from the working of the saw did not produce any local irritation or inconvenience, for we obtained primary union of the skin-wound in all.

A wedge-shaped piece of bone was removed in each of the remaining three osteotomies. This was accomplished partly by a saw, and partly by a chisel. We succeeded in obtaining union without deep suppuration in one of these only.

Before drawing these remarks to a close, I should like to mention that of late, in every case of extreme rachitic distortion of the legs, I have attempted to fracture the tibia before resorting to operative measures. In some, I have been quite successful, even in children of six years of age. In others, although the bones have given way, the fracture has not been exactly at the desired situation, but generally higher up. The distortion of the limb has therefore not been thoroughly corrected. Again, in young subjects, it is quite possible by division of the biceps tendon, together with some of the ligamentous structures on the outside of the knee, to forcibly straighten a genu valgum. Osteotomy must therefore, in my opinion, be reserved for cases which we are unable to treat satisfactorily in any other way.

BIRMINGHAM.—The vital statistics of Birmingham for the second quarter of this year are less favourable than those for the corresponding period of 1878, the death-rate being 22.04 as against 21.35. The increase is entirely due to a larger mortality from local diseases generally, more particularly bronchitis, induced, no doubt, by the unusually cold weather which prevailed throughout the quarter, and to atrophy and debility. It is satisfactory to observe a marked diminution of the mortality from zymotic diseases, which numbered 265, against 384 in the same period in 1878. This considerable fall is due to the fewer deaths from each of the zymotic diseases except measles and whooping-cough, which were slightly more fatal than in the same period of last year. The epidemic of scarlatina seems to have now died out.

SURGICAL MEMORANDA.

COLOTOMY THROUGH THE PERITONEUM.

IN two cases recently, both aged men suffering from cancer of the upper part of the rectum, I have during the operation of colotomy been compelled by the presence of a meso-colon to open the peritoneal cavity, and to incise the gut through its peritoneal covering. The cut edges of the bowel, brought through the opening in the peritoneum, were stitched to the skin as in the ordinary operation. No bad effect followed. In one of the cases, omentum appeared first at the opening in the loin. The operations were not done antiseptically, but care was taken to prevent the introduction of any foreign material within the cavity of the abdomen. In July last I performed colotomy for the relief of cancerous stricture of the upper third of the rectum, in a woman whose age was twenty-eight.

T. R. JESSOP, F.R.C.S., Surgeon to the Leeds Infirmary.

TREATMENT OF SPINAL DISEASE BY SAYRE'S METHOD.

MY experience of this treatment has been somewhat extensive, both amongst private and hospital patients, during the past two and a half years, and, beyond occasional faintness, sickness, and discomfort from the suspension, I have not witnessed any untoward symptoms; and, since the adoption of Golding-Bird's modification of the apparatus, with the increased dexterity of application which experience gives, even these symptoms have become of rarer occurrence.

When freshly prepared plaster-of-Paris is used, and care is taken that a sufficiency of bandage encircles the waist, there need be no fear of not having a perfectly firm and efficient casing. Care must be taken not to crack the plaster during the process of lifting the patient on a mattress. Latterly, I have obviated this difficulty by using a board with a foot-piece, upon which the patient rests during the change of position. The use also of a starched bandage over the dried plaster bandage prevents its crumbling and prolongs its utility. In one of my cases, a plaster bandage so protected was worn with benefit six months. Most patients feel more comfortable, and in better health, with than without the unyielding jacket. The digestion mends; the cough and dyspnœa, so frequently a source of trouble to the patient and anxiety to the parents, disappear; and walking, which in some cases before was out of the question, becomes a possibility; and, where the case is not so advanced, able to be indulged in with a degree of comfort not before known.

It is, therefore, no misapplication of terms to call such results "brilliant"; and not attainable, at so little expense, either of time, personal discomfort, or money, by any other treatment. Much of the non-success of the treatment has, I apprehend, been due to a want of knowledge of its *rationale*, and carelessness in its application. Very much of its success depends upon attention to the details. Were its advantages sufficiently appreciated, every practitioner, either in town or country, would be in a position to treat successfully with a class of disease which hitherto has fallen into other hands.

GEORGE ELDER, M.B., C.M.,
Surgeon to the Hospital for Women, Nottingham.

TRANSIT OF A NEEDLE FROM THE STOMACH TO THE HAND.

THE following case is interesting, as illustrating the long period a foreign body may remain in the human frame without causing material disturbance; and the curious course sometimes taken in its journey from the stomach to the external world.

J. S., aged 26, a soldier, stated that, about eight years ago, he accidentally swallowed a needle. It caused no inconvenience until about three years since, when he felt something in the inner side of his right arm, which a surgeon, to whom he showed it in South Wales, stated was the needle, but did not remove it. A few days ago, he complained to me of "something pricking" in the interspace between the metacarpal bones of the right middle and fore fingers. On examination, a foreign body could be felt, which, on deep-seated pressure, protruded between the knuckles. This was cut down upon, and the needle removed. It was an ordinary sewing-needle, blackened on the surface and the point bevelled, apparently from friction against some hard substance in its transit. The wound healed by "first intention".

R. DE LA COUR CORBETT, M.D., Surgeon A.M.D.,
Station Hospital, Cork.

THERAPEUTIC MEMORANDA.

INFANTILE DIARRHŒA AND SWISS MILK.

In the course of some remarks upon this complaint in the JOURNAL, p. 126, Mr. Budd of Exeter, after advocating the use of Swiss milk as a therapeutical agent, concludes thus: "In infants who must be brought up by hand, I much prefer the condensed milk to ordinary cow's milk, providing it agrees." To this opinion, I would oppose my most earnest protest. Theoretically, it must occur to any observer that condensed milk, with its excessive saccharine element, is an unnatural food; and experience has abundantly proved to me, since the introduction of condensed milk in 1868, that children so brought up often look the pictures of health as far as fat goes, but that too frequently the bones become rickety, the skin loaded with eruptions, and, fortunately for the ill-fed victims, that comparatively slight illnesses carry them off at an early age, thus saving them the misery of prolonged ill health. As a therapeutic agent, the value of the condensed milk is undoubted.

RICHARD NEALE, M.D.LOND.

PECULIAR EFFECTS PRODUCED BY THE ADMINISTRATION OF HYDROCHLORATE OF MORPHIA.

THE following case presents two interesting features. 1. The development of peculiar symptoms from the administration of morphia; 2. The marked physiological antagonism of belladonna to morphia, proved by the power of the former drug, to speedily relieve the ill effects of the administration of the latter.

A male Coolie, under treatment for lumbago in the Lucea Parochial Hospital, Jamaica, was ordered a hypodermic injection of one-sixth of a grain of morphia, the injection to be repeated every night. This treatment was continued for three nights; and, on the morning following the third use of the injection, the patient complained of feeling unwell at breakfast, and retired to bed at 9.10 A.M., where he was seized with convulsions of a tetanic nature. His symptoms were the following. He was quite insensible, his eyes were widely opened and staring, the pupils slightly contracted, teeth clenched, face flushed, nostrils dilated, and breathing hurried. There was spasmodic contraction of the muscles of the upper extremity; the temperature was increased; the heart's action regular, though weak. This attack lasted for ten minutes, when consciousness returned; but, on attempting to speak, he was seized again, and the convulsions returned at gradually increasing intervals until they finally left him at 12 noon.

The treatment immediately adopted in this case was the administration of doses of ten drops of the tincture of belladonna every hour, with coffee and brandy, and the application of the extract of belladonna down the course of the spine. This treatment was continued for a few hours; and, all urgent symptoms having yielded to it, the belladonna was given in diminished doses of five drops every four hours, and continued for the two following days. At the end of that time, no recurrence of the convulsions having taken place, the ordinary treatment for lumbago was recommended, of course with the omission of the morphia injection.

J. HOYSTED COURTENAY, L.R.C.P., etc.,
Medical Officer in Charge of the Lucea Parochial Hospital, Jamaica.

OBSTETRIC MEMORANDA.

A CASE OF TUBO-UTERINE GESTATION.

ON June 19th of the present year, I was summoned to a lady under the following circumstances. Previously to taking up residence at Forest Hill in June, she had been necessitated to keep the recumbent position, owing to frequent attacks of hæmorrhage, for upwards of a month; she did not fancy that she was pregnant, but regarded her condition as the result of debility. Her age is twenty-nine; married four years. One child, a fine healthy boy, is living; but, previously to his birth, she had four abortions of early date. Upon visiting her, I found she had pain at the lower part of the abdomen, on the right side, when suddenly a profuse flow of a clear, colourless, inodorous fluid set in, from something, as she stated, having burst. A soothing mixture was prescribed, and perfect rest was ordered. When she was again seen, she still complained of much uneasiness through the right groin, with the discharge of the watery fluid, tinged with blood. Upon manipulation, the ovary was tender, and a swelling, about the size of a lemon, was perceived, lying parallel with Poupart's ligament. The uterus was found to be large, congested, somewhat sensitive to the finger; the os uteri was slightly patulous, but nothing like a fœtus, membranes, or a clot, was discovered. Upon the right of the uterus a swelling was detected. I regarded the case at this time as one either of rupture of a small ovarian cyst, or concealed abortion. For several days, no perceptible change in the symptoms was discerned until, after a while, the inguinal swelling increased in size, quietly encroaching towards the pubic region; pains of a grinding, forcing character were complained of—so much so that she thought something must come, especially if she were permitted to stand upon her feet. In due course, a movement was felt in the tumour, and, upon examination *per vaginam*, the head could be perceived lying in a pouch at the upper part of the vagina, on the right of the uterus. The uterus was enlarging and quietly rising. It was evident the case was one of ectopic gestation, most probably tubal. Throughout, after being informed of her pregnant condition, she felt convinced the child was not lying in its proper place, as she could not discern the least movement, except on the right side. There was much suffering from contraction of the muscular fibres of the Fallopian tube; also occasionally from that of the uterus—so much so that, if any fœtus had been located in the uterus, the pains would have been ample to expel it, the os being partially opened. At length, she was certain its position was altering; as it seemed to her, it was forcing its way across the lower part of the abdomen to the opposite side; ballottement was felt more central; the swelling in the groin was still visible, but not so large as previously. On the morning of August 13th, uterine pains occurred, and, after about half-an-hour's duration, a child of six months was thrown off, the placenta lying on the right side of the body of the uterus. The child breathed imperfectly for nearly an hour. The labour was perfectly free from moisture of any kind until, upon removal of the placenta, a small clot was expelled. During the succeeding twenty-four hours, pains proved somewhat distressing until a coagulum, of the size of a hen's egg, was discharged; this was pale in colour and fibrous in character. Under the administration of quinine and a nutritious diet, the patient has become convalescent, although as yet not very strong.

REMARKS.—No doubt the aqueous discharge throughout was (judging from the extreme dryness of the labour) liquor amnii, being excreted as it was secreted. The hæmorrhage, which was seen about every fourth or fifth day, arose from the contraction of the muscular fibres of the Fallopian tube, causing rupture of some vessels in forcing the fœtus towards the uterine cavity. The ovum was impregnated, either in the right ovary or in that portion of the Fallopian tube in close proximity to it (judging from the earlier symptoms). From the constant drain going on, it is somewhat mysterious how the fœtus remained viable until nearly an hour after its expulsion from the uterus. Generally speaking, when the sac becomes deprived of liquor amnii, the ovum perishes, and absorption takes place. It is known that a peculiar modification occasionally occurs, as stated by Dr. Barnes. The uterine end of the Fallopian tube, when pregnant, may become so dilated as to allow the ovum to escape into the uterine cavity, constituting that variety known as tubo-uterine gestation, when in due course it passes into the external world as in normal labour. In the majority of recorded cases of extra-uterine pregnancy, it is the left side that is involved, being most liable to displacement and compression by the sigmoid flexure.

If the case had not terminated as here stated, measures would have been adopted in order to destroy the viability of the fœtus, by which means absorption might have resulted.

SPENCER T. SMYTH, M.D., F.R.C.P., Forest Hill.

BLEEDING IN PUERPERAL CONVULSIONS.

THIRTY years ago, the question of bleeding in puerperal eclampsia was warmly discussed in the pages of the *Provincial Medical Journal*. About that time, two cases of puerperal convulsions occurred in my practice. In the first case, a large bleeding, to the extent of twenty-five ounces, was followed by the best results. In the second case, the convulsions came on in a primipara who, for some months before labour, had been the subject of anasarca in the lower extremities, with heart-disease. A moderate bleeding was advised in consultation, but proved to be of no value. The case ended fatally. The principle of bleeding under these serious childbed complications is fully treated by Dr. McClintock in his edition of Smellie's *Midwifery* (Sydenham Society). In reference, however, to the use of bleeding in certain gynæcological conditions, I venture to call attention to some practical observations recorded by Dr. Protheroe Smith, in his paper on the Pathology of Ovarian Dropsy, which was read before the Association, and published in the BRITISH MEDICAL JOURNAL in September 1876. Dr. Protheroe Smith thinks that venesection has been too much neglected as a prophylactic means against the troubles of ovarian hyperæmia. I believe that most physicians of forty years' standing will agree in this opinion.

HENRY DAYMAN, F.R.C.S., Millbrook, Southampton.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

GUY'S HOSPITAL.

OPHTHALMIC CASES.

(Under the care of Mr. CHARLES HIGGENS.)

Mass of Fungus in the Superior Canaliculus.—Jane W., aged 59, was admitted March 18th, 1879. In the right upper eyelid, extending from the tear-punctum to the inner canthus, was a small irregularly shaped tumour; one large red granulation projected from the tear-punctum, another from the margin of the lid nearer the canthus; the tumour felt firm and nodulated; pressure upon it caused the escape of thick purulent discharge through the tear punctum. The patient gave the following history. Six months ago, her right eye first began to water constantly; about the same time, some swelling commenced at the inner canthus. Three months later, a discharge of blood and matter began to issue from the inner corner of the eye; at the same time, a decided lump was first noticed in the position of the present tumour; the lump varied in size at different times, but had not increased very much since first noticed. The discharge of matter, at times mixed with blood, had been constant and very profuse. Caustics had been applied to the granulations and some medicine taken.

March 24th, 1879. The tumour, which was looked upon as a small epithelioma, was excised. On cutting across the canaliculus, a bright green body, resembling in size, shape, and colour a very young green pea, escaped amongst a quantity of thick pus and some blood. The conjunctiva and skin were stitched together over the raw surface, the eye being covered with a piece of wet lint and a turn of bandage.

March 28th. The wound having quite healed, the sutures were removed, and the patient left the hospital.

Further examination of the parts removed showed that the tumour was formed by the greatly dilated upper canaliculus, partially filled with organised lymph, which projected in nodules through the tear punctum and edge of the lid, forming the granulations noticed before removal.

The remainder of the canaliculus had no doubt been occupied by the small green-pea like body which escaped on cutting it across. The little green mass was microscopically examined by Mr. E. Nettleship and Mr. Frèderic Durham, and found to consist of fungus composed of fine branching mycelium, which in thick layers under the microscope appeared distinctly green; no spores were discovered; there were a few pus-cells. The mycelium was very closely matted together.

REMARKS.—The diagnosis in this case was entirely wrong, and the treatment adopted, though effectual, much more severe than the nature of the disease required. It would have been quite sufficient to slit the canaliculus, and turn out its contents; as it was, the patient lost a good piece of her upper eyelid. When the small green mass escaped, several suggestions as to its nature were made by those standing by. Mr. Higgens had never seen anything like it about the eye before, and declined to give any opinion as to what it might be. Had the patient been nineteen, instead of fifty-nine, he would have been inclined to look upon it as a foreign body which had been purposely introduced into the conjunctival sac.

He was under the impression that concretions of fungus in the lachrymal canaliculi were extremely rare. Mr. Bader only remembered to have seen one case, and Mr. Higgens could find nothing but the barest mention of the subject in any of the works on ophthalmology which he afterwards consulted. Mr. Bowman said that they were by no means so uncommon as Mr. Higgens had imagined. The case reported was the only one Mr. Higgens had met with.

Tumour of the Optic Nerve.—Lucy G., aged 5, was admitted November 25th, 1878. Two years before, her mother had first noticed that she had external strabismus of the left eye; this lasted about two months, and then disappeared entirely, and had never since returned. The eyeball from this time up to admission had seemed to grow gradually larger. The child had never complained of any pain in the eye; the sight seemed to have gone about six months. The right eye had been in no way affected. The patient had been some months under observation without much change, was partially idiotic, and was said only to have been so since the eye had begun to enlarge.

On admission, the left eye was considerably protruded in a direction forwards and upwards; its movements were but little affected; it appeared to be quite blind. A firm growth could be felt pushing forwards between the eyeball and floor of the orbit. The ophthalmoscope showed atrophy of the optic disc, with great diminution of the retinal blood-supply. The child laughed and screamed in an idiotic manner, and resisted so much as to make examination difficult.

An exploratory incision being made through the conjunctiva below the eyeball, a finger passed through it into the orbit made out a firm growth passing quite behind the eyeball, and apparently unconnected with it. Nothing further was done.

The child was seen at intervals during the next four months, the protrusion of the eyeball gradually increasing.

March 17th, 1879. The eyeball and growth were excised. Examination of the parts removed showed that the optic nerve, about three-fourths of an inch behind the eyeball, passed into a firm somewhat pear-shaped growth, the thick end of which doubled up the nerve, and pressed forward beneath the globe, whilst its thin end extended quite back to the apex of the orbit. The growth was cut into three pieces during removal, but that last removed was evidently its extremity, and none was left in the orbit.

April 4th, 1879. The wound in the conjunctiva had quite healed; there appeared to be some hardness deep in the orbit. Ever since recovering from the effects of the anæsthetic, the child's mental condition appeared entirely changed. She seemed now to be a rather sharp intelligent girl.

July 17th, 1879. There was no sign of return of the growth; the child's mental condition appeared to be the same as when she left the hospital. Further examination of the tumour, after six weeks' hardening in Müller's fluid, showed that it sprang from the sheath and connective tissue of the optic nerve, which was entirely surrounded by it, and extended through it as a central axis; the sheath of the nerve between the growth and the eyeball being much thickened. The microscope showed the growth to be made up entirely of fibrous tissue.

Mr. Higgens remarked that tumours growing from the optic nerve itself or its sheath were sufficiently uncommon. He remembered one other case under Mr. Bader's care, in which a tumour of similar structure to that in the case reported sprang from the sheath of the nerve some distance behind the eyeball. The nerve was not surrounded by the growth, which was attached to one side in much the same manner as an oak-apple is attached to a twig. It was removed without excising the eyeball, which, however, was subsequently destroyed by suppuration.

What the tumour or its removal had to do with the child's mental condition Mr. Higgens was not prepared to say; but the fact remained that, during the time she was under observation, about eight or nine months, she certainly appeared to be well qualified to take her place in an idiot asylum; whilst, after the operation, all her former symptoms disappeared, and had not again returned. Possibly the change was due to the moral effect of residence in the hospital.

Dermoid Cyst in the Orbit.—William G., aged 7, was admitted May 26th, 1879. The left eye was affected with convergent strabismus of some years' standing. The globe had become rather prominent during the last four months, and the prominence was increasing. There was no pain. The movement of the eyeball outwards was considerably impaired by a firm growth pushing forwards between it and the outer wall of the orbit; the globe was rather prominent, and there was convergent squint. The squint was concomitant; but the right eye, when covered, deviated more than the left when the latter was fixed upon an object, apparently from interference by the tumour with the action of the right external rectus.

Vision in both eyes $= \frac{6}{24}$ c. $+ 2.25 \frac{6}{18}$. The ophthalmoscope showed, in addition to hypermetropia in both eyes, great congestion of the optic disc and engorgement of the retinal veins in the left. An incision was made through the conjunctiva, and a puncture made into the tumour, the nature of which was at once demonstrated by the escape of some white cheesy matter. An attempt was made to remove the cyst whole, but it was ruptured in another place, and its contents escaped freely and in large quantity. The little finger could be passed into the cavity of the cyst quite behind the eyeball. One finger being kept within the cyst, it was peeled away from the surrounding parts, and removed piecemeal; a small drainage-tube was then passed into the orbit, and the wound in the conjunctiva closed around it with sutures.

May 28th. The conjunctiva was much swollen; the lids were œdematous. There was a good deal of pain and constitutional disturbance.

June 6th. The swelling was subsiding. The eyeball was uninjured. There was extreme convergent squint, with no power of abduction.

June 12th. The wound had quite healed. There was no discharge, and no power of abduction.

July 24th. There was some discharge of thin pus from an opening in the conjunctiva near the inner canthus. The optic disc was normal.

Mr. Higgens remarked that dermoid cysts around the margin of the orbit were common enough, but were much more rarely met with in its cavity. Probably a portion of the cyst had been left behind, and a sinus discharging pus would remain for an indefinite time. Had the nature of the tumour been diagnosed, there would have been a better chance of removing the whole cyst by a free incision through the skin; but, on account of the want of mobility of the eyeball outwards, it was thought that the tumour was between the muscles and the eyeball, and would therefore be easily removed through the conjunctiva. The external rectus was probably damaged to such an extent that the eye would remain fixed in a more or less inverted position. In addition to the tumour, there was ordinary convergent strabismus, which had nothing to do with it, but was dependent on hypermetropia.

CITY OF GLASGOW FEVER HOSPITAL, BELVIDERE.

CASE OF ENTERIC FEVER TREATED WITH SALICIN.

(Under the care of JAMES W. ALLAN, M.B., Superintendent and Physician.)

WM. BROWN, aged 28, was admitted January 2nd, 1878, on the eighth day of his illness.

January 3rd (ninth day). He did not sleep very much; was sponged; had had no motion since coming in. He said that yesterday week he went to work in the morning, and it was snowing. When he commenced work (stock-taking), he began to be shivery and shaky, and vomited. At first, the bowels were bound; but, after taking medicine, they became too loose. Temperature 101.4°. He was ordered acid mixture and milk-diet.

January 4th (tenth day). He took the draught last night, but did not sleep, and had still had no motion since coming in. An enema was ordered. Enteric spots were visible. Morning temperature 101.6°; evening temperature 102.6°.

January 5th. He took the draught at 12 last night, and slept well after it. After the enema yesterday, he had a motion, which was partly loose and yellow. Morning temperature 101.0°; evening temperature 102.0°.

January 7th (thirteenth day). He was ordered four ounces of wine. Morning temperature 100.2; evening temperature 100.8. He was ordered to have ten grains of salicin thrice daily.

January 8th (fourteenth day). He took three of the powders yesterday. Morning temperature 101.6; evening temperature 101.8. He was taking wine and milk-diet.

January 9th (fifteenth day). He slept well. He had a slight formed yellow motion this morning. He took three of the powders yesterday. Morning temperature 100.6; pulse 97; evening temperature 101.4. The salicin powders were continued.

January 10th. Morning temperature 98.2. The nurse said that, when she was taking his temperature this morning, he complained of being cold. He had three of the ten-grain powders yesterday, one this morning, and will to-day have two more. The dose of salicin was ordered to be increased to twenty grains three times a day, commencing on the 11th. Evening temperature 100.0.

January 11th. He passed a good night. To-day he had the first of the twenty-grain powders. Morning temperature 97.6; evening temperature 103.8.

January 12th (eighteenth day). He had a costive motion. He took three of the powders yesterday and one this morning. Morning temperature 99.6. It seemed curious that the temperature last night rose after the dose of salicin had been swallowed. He was now ordered to take a powder *every four hours*. Evening temperature 100.2.

January 13th. He slept well, and had a powder every four hours. Morning temperature 100.0; evening temperature 99.8. He was ordered to continue the salicin powders every four hours.

January 14th. He had passed a good night. Morning temperature 99.4; evening temperature 99.4. He was ordered to continue the salicin powders every four hours, and an enema to be administered if the bowels did not act before night.

January 15th (twenty-first day). He had had a good night. Yesterday he had a natural motion without enema. A powder was given every four hours. Morning temperature 98.6; evening temperature 98.4. The salicin powders were discontinued.

January 16th. He had a good night. The powders were stopped yesterday. Morning temperature 98.4; evening temperature 98.6.

January 17th. He had passed a good night; had a formed motion. He was taking wine and milk and a little arrowroot, but no medicine. Morning temperature 97.2.

Subsequently the patient became worse again, the symptoms being pain about the umbilicus; a rise of temperature; loose motions. The following was the treatment: turpentine in twenty-drop doses, and hot fomentations with turpentine over the bowels.

The patient left his bed on February 11th. Susequently there was a rise in temperature; but he was dismissed well on March 13th, 1878.

SELECTIONS FROM JOURNALS.

SURGERY.

SUPRAORBITAL NEURALGIA CURED BY NERVE-STRETCHING.—Dr. Kocher relates, in the *Correspondenzblatt für Schweizer Aerzte*, November 11th, 1879, the case of a man aged 32, who had for seventeen years suffered from neuralgia of the right supraorbital nerve. The attacks, at first rare, afterwards became more frequent, until at last there were only brief intervals of freedom from pain. All the ordinary therapeutic measures had been tried for years without success. Dr. Kocher laid bare the nerve and three of its branches by an incision along the upper border of the orbit, and stretched it forcibly by means of an aneurism-needle passed under it. The healing of the wound was attended with abundant suppuration. From the moment of the operation, the patient was free from pain, and the neighbourhood of the supraorbital nerve was anæsthetic. The patient was last seen three months after the operation; he had had no return of the pain; sensation was diminished over a space ten *centimètres* in extent, but was otherwise perfectly restored. After neurectomy, paroxysms of pain are usually observed during the first few days after the operation. As these were absent in the present case, Dr. Kocher concludes that the lesion of the nerve is less when the nerve is stretched than when it is divided. The value of nerve-stretching as a substitute for excision will be greater in neuralgia of the second and third divisions of the fifth nerve, as here a much smaller wound will suffice.

SPONTANEOUS ANTERIOR SUBLUXATION OF THE HAND.—Dr. Madelung publishes, in von Langenbeck's *Archiv* (vol. xxiii), a report of twelve cases of this affection which have come under his notice. In one of the cases, he was able to make a thorough anatomical examination. The upper border of the articular surface of the radius had degenerated into a tuberosity, which prevented the carpus from assuming its normal position; the epiphysis of the radius was considerably inclined towards the volar surface. There were no signs of inflammation. The author regards this deformity as dependent on an arrest in the growth of the wrist-joint, and as being analogous to talipes valgus and genu valgum, which are caused by excess of weight pressing on the lower extremities. This spontaneous subluxation is most frequently met with in the age between thirteen and twenty-three, and in females belonging to the working-classes, especially laundresses. The movements of the joints are limited to a certain extent by the arrangement of the bones, the ligament, and the muscles. The latter are of special importance for the movements of the wrist-joint. The manual labour of daily life is almost entirely executed by the pronator muscles. Excess of flexion on the palmar surface is prevented by the tendons which run across the epiphysis of the radius, and, in arduous manual labour, exercise a constant pressure on the bone. When this muscular apparatus is unable from exhaustion to discharge its functions any longer, the bones and ligaments take its place; and thus gradually the excessive pressure on one part of the articular surface of the radial epiphysis arrests its further growth, and favours the excessive development of those parts which are not subject to pressure. This deformity of the articular surfaces is always accompanied by pain in the affected joint, which has often been erroneously ascribed to neurosis. If the patient continue to work as before, subluxation of the joint ensues, the pain ceases, and the wrist-joint becomes deformed and much limited in its movements. When the affection is fully developed, it becomes incurable; but it may be arrested by carefully avoiding all labours which entail a forced dorsal flexion, and by wearing a broad leather strap which fits tightly to the joint, can be made tight or loose according to the wearer's will, and prevents the articulation from executing excessive movements.

FOREIGN BODY IN THE BASE OF THE ORBIT.—At a meeting of the Medical Society of Greifswald (*Deutsche Medicin. Wochenschrift*, August 16th), Dr. Schirmer related a case in which a foreign body had remained five months in the orbit without producing remarkable disturbance. On February 20th, a soldier aged 25 came to the eye-clinic on account of entropium of the left lower eyelid; the middle part was specially affected, being turned inwards at an angle. The cause of this was apparent in the form of a cicatricial band extending from the edge of the lid to the lower fold; it implicated the conjunctiva and a portion of the tarsus, but left the cutis free. Another vertical cicatrix passed

through the thickness of the whole upper eyelid, not quite reaching the edge. There was also a vertical cicatrix nearly an inch long on the forehead, reaching as far as the left eyebrow. In the previous October, during a fight, it was said, the patient had been wounded in the forehead and upper eyelid by a knife; but the eye had not been injured. These wounds were united by sutures; the injury of the lower lid was not noticed. The entropium had set in soon afterwards. On examination, it was found that the conjunctival cicatrix was firmly adherent to the base of the orbit; and it was hence supposed that the instrument which produced the injury had penetrated the antrum of Highmore, and had pushed a portion of the lower fold of conjunctiva into the opening of the bone; and that, perhaps, also a broken portion of the knife remained there. No foreign body, however, could be felt with certainty in the orbit. An incision about four-fifths of an inch long was made through the soft parts along the lower border of the orbit; and the floor of the orbit was explored with a blunt instrument as far as the cicatrix. At this part, there was found a broken piece of knife, with its back turned towards the border of the orbit, and its edge towards the eyeball. Some force was required in removing it. It was a piece of a knife, about an inch and one-third long and three-fifths of an inch wide. After its removal, the lower eyelid regained its normal position, and the patient was discharged completely cured.

Emphysema of the Upper Eye-Lid produced by Blowing the Nose after an Injury.—Dr. A. D. Williams relates the following case. A young woman called to ask him about her eye, which she had injured only a few minutes before by a severe fall. By accident, she tumbled down four or five steps out of a front door upon the pavement, striking heavily upon the bricks with the supraorbital bone of the left side of the head and body. The fall caused considerable contusion of the flesh and some abrasion of the skin over the left eye, but no cut. Soon after she stood up, she had occasion to blow her nose quite hard, and was surprised to find that the upper eyelid swelled up to such an extent that she could not open the eye even with her fingers. The suddenness of the swelling and her inability to open the eye in any way naturally frightened her very much. Upon examination, Dr. Williams could find no injury other than the contusion of the flesh and the abrasion of the skin over the eye. The peculiar cracking feeling communicated to the fingers by palpation conclusively proved that the great swelling of the lid was caused by the presence of air in its areolar tissue. By pressing upon the lid a little, the air could be forced out of the lid into the deeper tissue of the orbit, which allowed the lid at once to partly open. The pressure caused the cracking noise to be both heard and felt by the patient. To account for the emphysema of the lid, it is necessary to suppose that the fall caused sufficient fracture of the bone at some point to make an opening through it. The locality of the fractured point was most likely in the outer or anterior wall of the frontal sinus. When the patient blew her nose, the pressure was sufficient to force the air through the opening in the areolar tissue of the lid.

Traumatic Tetanus: Different Methods of Treatment.—Dr. Mollière relates the following case in the *Gazette des Hôpitaux*. The patient, aged 25, had been accidentally shot in the right foot. The fourth and fifth toes were so badly injured that they were amputated at once; the first phalanx of the third was fractured and the articulation opened, but it was thought that it might be preserved. The patient was treated antiseptically, and seemed to progress well during a fortnight, when suddenly he began to complain of a feeling of lassitude, the wound became very painful, and he experienced some difficulty in opening his jaws and turning his head. The toe was dressed with laudanum, and the patient took half a drachm of bromide of potassium and a drachm and a half of chloral daily; he had also two hypodermic injections of morphia. Notwithstanding this treatment, the patient became worse, the pain in the foot increased, and all the symptoms of acute tetanus showed themselves; he had general convulsions, could not move his head or open his mouth, perspired abundantly, had very high temperature, etc. The wound becoming exceedingly painful, the injured toe was amputated. From that day the local pain ceased, and the other symptoms gradually vanished. The patient remained sleepless for a rather long time, notwithstanding the use of hypnotics, but could open his mouth more freely, and could swallow. Smaller doses of chloral and bromide of potassium were given, and a month after the operation the patient was well enough to leave the hospital. On dissecting the toe which had been removed, it was found that a small sharp fragment of bone was sticking in the internal lateral nerve, and had in this way caused the tetanic convulsions. This case is remarkable on account of the different methods of treating tetanus having been combined in the treatment. Without the amputation, the drugs given would have had no effect; but on the other hand, if the powerful doses of hypnotics had not been administered, the surgical treatment would, in the author's opinion, have proved useless.

Total Unilateral Rupture of the Kidney.—Dr. Anders, in No. 50 of the *St. Petersburger Medicinische Wochenschrift*, gives the following account of an interesting case. The patient, aged 15, a well built and well nourished individual, fell from the second floor of a house to the ground, but was not rendered insensible. He said that he had first struck the ground with his feet and then with the right hip. No symptoms of external injury could, however, be seen, except a slightly purplish spot over the right trochanter. No fracture of any kind could be traced, neither was there any symptom of concussion of the brain or spinal cord. He could not walk very well, but was able to move his extremities freely when lying in bed. The pulse was small, 60. Sensibility was not decreased. He freely passed bloody urine. The patient complained of severe pain in the abdomen, especially in the left renal region, but nothing abnormal could be detected in that part, either on inspection or palpation. The epidermis, and those parts of the mucous membranes which were visible to the eye, were exceedingly pale. The urine, on being examined under the microscope, was found to contain a large number of red blood-corpuscles. Towards night, the patient grew weaker, his abdomen was inflated, he frequently passed bloody urine, and complained of an increase of pain in the left lumbar region and the abdomen, especially if touched there. The symptoms of internal hæmorrhage increased; he was a little delirious during the night. On the next morning, the mucous membranes seemed to be perfectly bloodless, while the skin was yellow. During the night, the urine was very little bloody, and on the morning quite clear. The patient died at 11 A.M. The treatment consisted in applying ice-bags to the abdomen and the lumbar region, and in giving several doses of morphia during the stage of prostration. At the necropsy, the thoracic viscera and the brain were found perfectly normal. On opening the abdominal cavity, several superficial subperitoneal extravasations, varying in size from a threepenny-piece to a penny-piece, were seen, both on the visceral as well as the parietal peritoneum, especially in the portions which corresponded to the cæcum, descending colon, sigmoid flexure, and parts of the ileum. A dark blue tumour of the size of a child's head, extending from the iliac fossa to above the tenth rib, and covering the three superior lumbar vertebra, was found in the abdominal cavity. It consisted of coagulated blood, in which the kidney, which had been torn into two distinct halves, was found imbedded. The rupture was transverse, going from the anterior superior part of the organ to the posterior inferior, and extending over the capsule and the pulp. The pieces were about two inches distant from each other, and entirely separated from their adhesions. The ureter was torn off, and was attached, to the length of two inches, to the lower fragment; the renal vein and artery were in the same condition. The right kidney was perfectly sound. The peritoneum was not ruptured. No fluid was contained in the abdominal cavity, and no blood in the bladder. Dr. Anders remarks that this case belongs to a class of rupture of the kidneys which very seldom comes under observation. 1. All the other organs remaining unaffected, the left kidney only was the subject of an indirect injury. 2. Death was caused by acute anæmia, as shown by the large clot of blood which was found in the left renal region and the hæmaturia. 3. The vein, artery, and ureter, were all three divided. 4. The reason why no blood was passed with the urine in the morning is, probably, that the blood being still liquid for the first hours after the accident, flowed down the divided ureter into the bladder; but later on coagulating stopped it, so that the urine which was secreted by the right healthy kidney remained clear, and was passed as such.

Bee-Stings Simulating Hernia.—M. Lepage read, before the Medical Society of Indre-et-Loire, the following observation of a singular case of simulation. A man presented himself, declaring that he was suffering from an inguinal hernia of several years' standing, but he could not give any particulars, and seemed rather deficient in intellect. The part in question being examined, no prominence could be seen; neither was one caused by coughing. The left side of the scrotum was larger and redder than the right, and, especially in the lower portion, had the appearance of an œdematous tumour, which extended far backwards, and was more suggestive of a large abscess than of a hernia. The testicles were normal. There was nothing unusual in the external appearance of the scrotum, with the exception of the inflammatory state, which could only be ascribed to the formation of an abscess in the tunica vaginalis, the origin of which, however, was not clear. In examining it more carefully, M. Lepage discovered, on the surface of the swelling, two slightly prominent black spots, which adhered closely to the skin. After a little pulling, they were removed,

and proved to be stings of bees. The origin of the inflammation was now clear; but, notwithstanding this discovery, the patient persisted in saying that he had a hernia, that he always had had one, and that he knew nothing about the stings. It seems that this kind of simulation, which used to be commonly practised formerly, does not occur often now. It is easy to prove it if the stings happen to have been left in the wounds, but after they have been removed it is very difficult, as the traces left by the sting are almost imperceptible.

PATHOLOGY.

INFUSORIA IN THE EXPECTORATION.—At the hospital at Leyden, where the sputa are examined with great care, many interesting facts are constantly being discovered. Thus, Herr Kannenberg (Virchow's *Archiv*, t. lxxv, p. 471) has, in five cases out of six of pulmonary gangrene, met with infusoria of the monad family, *cercomonas* and *monas lens*. They are small rounded bodies of the form and size of a lymph-cell, from which they may be distinguished by their rapid movements and a small appendage in the form of a tail. They are found in great abundance in the small whitish lumps which fall to the bottom of the spitting-basin, although they are sometimes found in the liquid portion. They are most easily found in fresh expectoration, as at that moment their movements are the most rapid. At the end of four-and-twenty hours, it is impossible to find them again. They are no longer distinguishable, being immovable, and surrounded by cellular forms. This fact sufficiently indicates that these minute organisms have not accidentally found their way into the spitting-basin. Examination of the buccal secretions has furnished negative results, so that it may be believed that these monads proceed from the lungs, and more especially from the portions in a state of gangrenous decomposition. They may even be the primary cause of that decomposition. This hypothesis has at least the merit of being logical; and Kannenberg, who advances it somewhat timidly, is able to support it by excellent reasons, amongst them being the small discovery with which he has just enriched science.

PERFORATING ULCER OF THE STOMACH; VOMITING OF A TUBULAR AND SACCIFORM MASS.—Dr. O. Hjelt relates the following case in the *Finska Läkarasällskapets Handlingar*, Band xx (quoted in *Nordiskt Mediciniskt Arkiv*, Band xi). The patient, a woman aged 42, had enjoyed good health, with the exception of some slight dyspeptic troubles. On February 15th, she had a severe rigor, followed by fever, with burning pain in the throat, and violent vomiting. When admitted into the General Hospital, she had constant vomiting, and some, but not very severe, diarrhœa, which had set in about a week previously; she had also dysphagia. The mucous membrane of the mouth and fauces was much injected; and there was a diphtheritic deposit on the soft palate, uvula, posterior pharyngeal wall, and also on the tongue and gums. The epigastrium was very tender on pressure. Almost everything that the patient ate caused vomiting. This condition lasted about two weeks; after which there was some improvement. The diphtheritic process in the mouth and fauces gradually ceased, and the gastric symptoms were so far relieved that the patient could take easily digestible food without provoking vomiting. At the end of March, however, there was a change for the worse. The patient again became feverish; constant vomiting, partly of blood, set in; and the patient's strength was much reduced. On March 31st, she vomited a large consistent tubular and sacciform membrane, which was apparently a cast of the stomach and of a part of the œsophagus. An extremely severe pain in the epigastrium, which had troubled the patient for some time previously, ceased immediately afterwards. On April 6th, she had a severe attack of pleurisy in the left side, which two days later spread to the right side; on the 10th, there was peritonitis, with tympanic distension of the bowels, and great tenderness over the whole abdomen. The patient rapidly fell into a state of collapse, and died on April 11th. At the necropsy, the œsophagus was found to be much thickened, and to pass imperceptibly into the stomach, which formed a round sac of the size of a smallish apple. The spleen formed a tongue-shaped, obtuse, rounded body, about eight-tenths of an inch in diameter, lying nearly free in the stomach; at its lower part it was firmly enclosed in the wall of the stomach, but above this the point of the little finger could be passed into an open canal below the diaphragm and the adherent capsule of the spleen. The cavity of the stomach, which was much contracted, contained only 60 cubic *centimètres* (little more than two ounces) of fluid. The pyloric portion was much thickened; Brunner's glands were swollen; the pancreas was elongated and loose. The canal above mentioned as commencing in the stomach opened into the peritoneal cavity at the upper part of the spleen, which was here eroded, while the portion lying within the stomach had a firm thickened rough surface. The spleen, which in its middle part was firmly adherent to the diaphragm, the capsule being very thick at this part, had a semiglobular form, and was about four-and-a-half inches in length and two inches in thickness. The membranous cast of the stomach and œsophagus, mentioned above, was 37 *centimètres* (14½ inches) in length. Narrow above, it increased gradually in breadth, until it suddenly expanded into a semiglobular sac; its outer surface was rough, rather uneven, of a brown grey colour with dark spots; its inner surface was of a dark colour, here and there nearly black; it was of firm consistence, and its thickness through the greater part of its extent was double that of a sheet of writing paper. The membrane consisted of a granular mass, with numerous fibres crossing in all directions, and a great abundance of small yellowish red conglomerated blood-corpuscles and large dark adherent clots of blood. It might be regarded as a blood-extravasation moulded on the mucous membrane of the stomach and œsophagus.

TUBERCULOSIS IN INFANTS.—From a consideration of nine cases of tuberculosis in infants from ten weeks to ten months of age, including seven fatal cases with necropsies, Dr. Alois Epstein (*Prager Vierteljahrschrift*, Band 142), concludes that the presence of the disease in infants is in most cases due to infection with the milk of a tuberculous mother, and not to hereditary predisposition, as is usually supposed. Two of the children were the offspring of healthy mothers, but one was suckled by a phthisical wetnurse. Seven were the children of phthisical mothers. In one of the cases, there were intestinal ulcers and cheesy infiltration of the mesenteric glands. The author remarks that the tuberculosis of infants and young children differs from that of adults in the great frequency with which the lymphatic glands, and especially the glands of the small intestine, are affected, and also in the comparative rarity of pulmonary disease in children. These facts appear to indicate that the starting-points of tuberculosis in children and in adults are different; and that, while in adults and older children it is breathed in, it is sucked in by infants and young children.—*Allgemeine Medicin. Central-Zeitung*, July 26th.

THERAPEUTICS.

THE PHYSIOLOGICAL EFFECTS OF CAPSICUM.—Dr. Högyes (*Archiv für exper. Pathol.*, Band ix), has made several experiments with capsicum annuum and its alkaloid capsicol, on cold and warm blooded animals. He found that both drugs stimulated especially the sensory nerves, increased the secretion of the gastric juice and the saliva, and quickened peristaltic action. In man, besides the above mentioned symptoms, others were experienced, such as itching, feeling of intense heat in the mucous membranes, and a more or less considerable amount of reflex hyperæmia. The author does not consider the plant poisonous; he thinks, on the contrary, that it is a pleasant condiment, and a stimulating drug in cases of chronic weakness of digestion.

THE COMPARATIVE VALUE OF TANNATE AND SULPHATE OF PELLETIERINE IN THE EXPULSION OF TAPEWORM.—Dr. Berenger-Féraud is of opinion that the tannate is a very advantageous salt, having a more certain action than any other. A purgative, consisting of 30 *grammes* of castor-oil, or 30 *grammes* of compound tincture of jalap, or 45 *grammes* of sulphate of soda, should be given a quarter of an hour beforehand; and this produces motions more easily and causes less often nausea and vomiting.

TOXICOLOGY.

MENTAL DISTURBANCE CAUSED BY POISONING WITH ATROPIA.—Dr. Kowalewski relates, in the *Vogenno Medical Journal*, 1879, the following case which had come under his observation. The patient, a man aged 29, addicted to drink, had lost in his youth one eye, through a stroke with a hatchet. Some time ago, a leucoma began to form on the other eye. Iridectomy was subsequently performed, and the patient treated with atropia. The dose having been rapidly increased, he became unexpectedly restless and excited, and hallucinations of sight, hearing, and sensation set in. The patient felt very much elated; he had splendid visions, in which abstract ideas assumed a personality. Thus, he saw the tree of life, Divine mercy, hallelujah, etc., as it were embodied in a personal form. The only other symptoms of poisoning which were observed at the same time were sleeplessness and acceleration of the pulse. There was no dryness of the throat or tongue, no spasm of the glottis, etc. It was impossible to have any idea as to the state of the pupil, owing to the leucoma and the iridectomy which had been performed. Large doses of morphia were given; the use of this drug was followed by dryness of the tongue and fauces; the pulse became normal, and all the symptoms disappeared ten days later.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 10TH, 1879.

E. HEADLAM GREENHOW, M.D., F.R.C.P., President, in the Chair.

THE PRESIDENT gave a short congratulatory address.

Case of Leprosy with Enlargement of the Glands.—Dr. D. POWELL read a report of this case, which he had exhibited at the Society last session, and upon which a committee of observation, consisting of Drs. Cayley, Dyce Duckworth, and Liveing, with himself, was appointed. The case had been placed under Dr. Powell's care by Surgeon-Major Porter. When shown at the Society, the man's clinical features were considerable mahogany-coloured pigmentation of the skin, especially of the legs; marked thickening of the lips and lobes of the ears, and corrugated thickening of the skin over the brows and occiput, which gave the patient, aged 24, the appearance of a man much older; and the "leonine" aspect characteristic of leprosy. The hair had almost entirely disappeared from the head, face, and surface of the body, and a papulo-squamous eruption covered the entire surface of the trunk. There was still marked enlargement of the glands, especially of the axillæ and groins, although in this respect the patient had greatly altered for the better since his portrait was shown at the Pathological Society six months previously by Mr. Porter. The disease had first made its appearance when the man was serving with his regiment in India in December 1876, when he had "rupia", followed by a scaly skin-affection, with loss of hair, for which he was treated with antisyphilitic remedies. The glands of the neck first, but soon also of the axillæ and groins, became enormously enlarged, whilst the patient steadily became emaciated and lost strength. This downward course continued, notwithstanding good diet with fruit and vegetables, iron, and cod-liver oil. For four months after he was admitted into Netley Hospital, until May 1878, Mr. Porter gave him cod-liver oil containing one-tenth of a grain of phosphorus. His condition then began rapidly to amend. He gained weight and strength, whilst the glands steadily diminished in size. He was admitted into Middlesex Hospital under Dr. Powell's care, in January 1879. Careful observations had been made by the committee as to surface-sensibility, but no anæsthesia had been made out. The nerves at the bend of the elbows were slightly thickened, and small characteristic ulcers were present at the right wrist and left great toe. The urine was natural; the temperature normal. He was placed on gurjun oil, and for six months appeared to be doing well. The blood examined was found to be rich in red corpuscles, and to contain no filariæ nor excess of white discs. At the end of the first week in March, however, the patient had severe rigors; the temperature went up, and an erythematous patch appeared at the left elbow, which rapidly extended day by day, so as to attack in turn the whole surface of the body and extremities. This spreading erythema was complicated by bronchopneumonia, and attended with typhoid symptoms; and finally albuminuria set in, and the patient died on March 30th. At the *post mortem* examination, fibroid induration of glands, bronchopneumonia, with some cicatrices and indurated patches in the lungs, marked fatty degeneration of the liver, and recent nephritis, were found. No disease was apparent in the ulnar nerve or its ramifications, as examined by the unaided eye, and the internal glands were not notably affected. On minute examination, however, some early changes were observed in the nerve; also fibroid thickening of the skin, with small-celled growths or deposits and fibroid degeneration of the glands. The Committee, in their remarks, observed that the case in its clinical features was one of elephantiasis Græcorum, remarkable chiefly in two respects; viz., in the great enlargement of superficial glands—a certain degree of such enlargement being not uncommon—and in the amendment of the condition apparently under the influence of phosphorus; secondly, in the termination of the case by such an extensive erythematous inflammation of the skin, patches of this disease being again not uncommon as a complication of this disease. The microscopical evidences were such as were compatible with leprosy in a comparatively early stage, viz., about two years' duration.—Dr. T. C. FOX remarked that in two-thirds of the cases of tubercular leprosy the glands became enlarged, and he would be glad to learn if the Committee had found any cell-deposits in the glands about the viscera, such as were described by Hanson as characteristic of this form of disease.—Dr. POWELL said the Committee had not noticed any such aggregations of cells. The pathological appearances were those of leprosy in an early stage. He would direct attention to the discovery of the cells mentioned by Dr. Fox.

Myxœdema, or Universal Degeneration of the Connective Tissue of the Body.—Dr. D. DUCKWORTH read notes of this case. The patient, aged 34, married for ten years, mother of three children, came to St. Bartholomew's Hospital in November 1878, complaining of weakness and of failing health for two years previously. First her eyelids and face, then the body generally, swelled. Her voice had become altered and thick; her manner had become altered, and her temper sullen and irritable. She was well grown, of large build, but had lost two stones in weight during the previous eighteen months. Her face was of peculiar aspect, and she wore a listless expression. The complexion was waxy, with some clear redness over the malar bones and several moles about the chin and cheeks. The eyelids were œdematous; the hands were clumsy-looking and seemingly swollen about the backs; but no dints could be made in them. It was alleged that they felt numb and sleepy at times. There was no appreciable change in common sensibility, and pins could be readily picked up. On examination, some general condition of xeroderma was found on the limbs more especially, but no ordinary œdema. The first impression was that there was some form of chronic nephritis present; but the urine was found to be quite void of albumen, of specific gravity 1010, acid in reaction. The heart was natural. The tongue was clean, and protruded naturally. The uvula was observed to be swollen and œdematous-looking. Appetite good; bowels usually constipated. The case was now regarded as one of myxœdema. The family history afforded no clue to the nature of the case. The children were healthy, with the exception of the youngest, which was very rickety. (The patient was present at the meeting, and a water-colour drawing of the face was shown.) The treatment consisted mainly of steel and cod-liver oil. On subsequent examinations, the disorder was found to be making progress. The thyroid gland could not be felt, and a fatty cushion was found in the left supra-clavicular fossa. The face became more waxy and swollen, and the voice more slow and snuffling. The urine never was albuminous. The patient's manner was more sullen and reserved, and she was shy and resentful of clinical examination. Dr. Ord saw this case six months ago, and confirmed the opinion formed respecting it. It added one more to a series of cases which occur only, so far as is known at present, in the persons of women about middle life; the symptoms appearing to be due to a mucoid degeneration of the intercellular tissue throughout the body, which thus shuts off full and prompt appreciation of peripheral and other nervous impressions. Dr. Duckworth promised to report further observations upon this case.

Myxœdema.—Dr. ORD read some further observations on this subject, of which the following is an abstract. The paper gave the history and morbid anatomy of a second fatal case of the disease first described by Sir William Gull as "a cretinoid condition supervening in women in adult life", and subsequently named by Dr. Ord "Myxœdema". The patient was a woman aged 52, married, the mother of five children. Her illness dated from her last confinement twelve years before. She had begun then to swell in the face and all over the body; had become lethargic; had difficulty in collecting her thoughts, in walking, and in holding up her head. When she came under observation, fourteen days before death, the whole body was swollen, giving her the aspect of a person suffering from renal disease. The skin was translucent, dry, and very rough, on all parts except the face. The eyelids were bulged; the lips, upper and lower, greatly swollen; the alæ nasi much thickened. Each cheek presented a sharply limited pink flush; the hands were spade-like, expressionless, and, with other extremities, were blue, by reason of feebleness of the circulation. She spoke slowly and painfully, with leathery nasal intonation. Her movements were slow, and she halted quiveringly in her gait, but had no true paralysis, ataxy, or tremblings. The droop forward of the head, noticed in a previous extreme case, was remarkable, the pressure of the chin upon the neck actually interfering with deglutition. Her senses were essentially unimpaired, but her response was long in coming; memory was defective, and thoughts slow. The urine was of average quantity, of rather less than average specific gravity, and contained a trace of albumen. The arteries were firm, and the heart enlarged, but weak. The thyroid body was small. Having received bad news immediately after her admission to St. Thomas's Hospital, she fell into a lethargy which deepened daily, with intervals of feeble delirium, till she died, on the fourteenth day. While under observation, her temperature was very low; for twelve days the average was between 90° and 92°; on the thirteenth 88°; on the last day 77°. At the *post mortem* examination, all the tegumentary and surface parts of the body were found swollen; the thyroid body was reduced in size; the kidneys were very firm, not reduced in size, smooth on the surface, and not adherent to their capsules; the cortical portion was somewhat narrower on section than normal; the liver and spleen were too firm; the heart, dilated and hypertrophied, weighed twelve ounces and a half. The microscope showed in all parts a great increase of connective tissue. The fibrillar element was more abundant and more defined than normal; the interstitial mucus-yielding element was

greatly increased in proportion and quantity; nuclei were larger and more numerous. This was best seen in the skin, in the glandular organs, and in the coats of arteries. The connective tissue presented a strong resemblance to that of the umbilical cord, and suggested the idea of a retrograde degeneration. Its encroachment on tissues and organs was apparently the cause of death. Five other cases, all in women between thirty and fifty, all married, were compared. All had low temperature, nervous weakness, and lessened sensations; two, very advanced, had delusions. Those two had traces of albuminuria; the rest, less advanced, gave no indications of renal affection. The symptoms and appearances being altogether of the same character as those observed in previous cases, Dr. Ord maintained that they showed the disease under consideration to be a substantive disease, and that they justified the use of the term "myxœdema", as marking the cause of the symptoms and of the fatal termination. — Dr. SANDERS (of Edinburgh) remarked that he had seen three or four of those cases in Scotland. They were well defined clinically, but he had no complete history to give, inasmuch as the patients had all disappeared before the slowly progressing disease had ended. In his opinion, the symptoms and pathology quite corresponded, and the prognosis, as a rule, was bad. One patient only had he seen to improve, but that was for a time, and the ultimate result he did not know. —Dr. GOODHART suggested that the overgrowth of connective tissue which was supposed to compress the nerves might also, in cretinism, in the same way affect the brain. But between sporadic cretinism and this malady there seemed to be this essential difference—that the former was congenital; the latter occurred in middle life only. Would it not in the latter case be so that the brain, having already received many impressions, would retain much of its mental food? He was rather inclined to suspect a kind of general mischief similar to *sclérose en plaques*.—Dr. DUCKWORTH said that of course in his case there could be no pathological details, seeing the patient was yet alive. She was not easily managed, and had only been seen at intervals.—Dr. ORD said that in one of his cases he could give the history of the children. One seemed of unusual ability as a painter; others seemed muscular in a high degree; in none had any signs of the disease been seen, but then all were under the ordinary age for such symptoms to manifest themselves. True, the prognosis was bad, but in no case did it seem to prove fatal under six, or usually ten or twelve years. No treatment seemed to do good. Neither in the brain nor spinal cord was there anything which could strictly be called sclerosis, though the connective tissue round about the blood-vessels was increased. He still held that padding round the nerve-fibres, and the consequent interruption of communication with the periphery, was a prime factor in the disease.

A Case of Empyema in which Portions of the Ribs were Excised.—Dr. F. TAYLOR read for himself and Mr. H. G. HOWSE a paper on this case. The patient, a child aged 6, was admitted into the Evelina Hospital in January 1877, with a history of acute pleurisy eleven weeks previously. The left chest was shrunken, and dull on percussion posteriorly, with deficient breath-sounds, and some crepitation at the base in front. The temperature was at first nearly normal; but, after a time, it fluctuated considerably, often rising in the evening to 103° Fahr. As this continued, and the physical signs were confined to the base of the left chest, this was explored on April 16th, and pus was found. The chest was then incised, and about ten ounces of pus were discharged. Tubes were inserted, and the chest washed out daily. On May 20th, a counter-opening had to be made; but, by the end of June, very little real progress had been made, as the sinuses rapidly closed, and thus the pus secreted was retained. On July 2nd, Mr. Howse made a T-shaped incision through the skin round the existing aperture, and, after separating the periosteum, removed with the bone-forceps portions of the seventh, eighth, and ninth ribs. Each portion was about an inch and a half long. The thickened pleura was then cut through from the sinus, and two drainage-tubes were inserted. The immediate improvement was decided; but the wound rapidly filled up, and in a short time the sinus was reduced to a channel no larger than it was previously to the operation. From this time, nothing further was done by operation. The pus continued to be secreted, and its retention was quickly followed by hectic symptoms. Albuminuria was discovered in September 1877, two months after the operation; anasarca developed later, and there was frequent diarrhœa; so that she sank from the internal complications in October 1878. At the *post mortem* examination, the empyema was found to occupy chiefly the posterior part of the chest, reaching from base to apex. The lung was airless, except at the apex. There was no tubercle. The sixth, seventh, and eighth ribs were united by bony bridges. The liver, kidneys, and intestines were lardaceous, and there was recent acute peritonitis. The operation performed in this case permitted more falling in of the chest than would have otherwise taken place, but did not facilitate the drainage so much as was desired. This was due to the rapid development of granulations and bone which took place after the operation, the opening being quickly reduced to a narrow sinus. In another case, it would probably be advisable to remove the periosteal tissue much more freely, even if it necessitated also the removal of the thickened pleura. The large opening thus obtained would also allow more complete exploration of the smaller cavities, apparently distinct from the main cavity, such as were found in this case at the time of the operation.—Dr. POWELL said he had now a patient under his care where something of the kind must be done. Would not gouging away a portion of the rib, so allowing a kind of bed for the cannula, be equally satisfactory?—Dr. F. TAYLOR said their object was to prevent closure of the opening, and, if possible, to aid in the falling in of the ribs. Gouging, he thought, might fail, as this plan had done. Hence they did not repeat the operation, on account of the bad constitutional state.—Mr. HOWSE thought gouging had little chance in such cases. The operation itself was easy enough.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

LIQUOR OPII DIALYSATUS.

UNDER this title, Messrs. Corbyn and Co. introduce to the notice of the profession a solution of opium obtained by dialysis, for which they claim special properties. From our examination of this article, we incline to the opinion that it is well worthy of attention, as it possesses all the advantages *minus* several of the disagreeable effects of the tincture, etc. They also prepare a similar preparation ten times as strong for hypodermic injection.

CHAULMOOGRA SOAP.

MESSRS. CORBYN, STACEY, AND CO. have also forwarded specimens of their speciality in this combination. From our examination thereof, we can confidently recommend its introduction into general use as a very valuable adjunct in the treatment of certain forms of skin-affection—notably, of those milder species so constantly seen among children. It has a very agreeable odour, and might be utilised beneficially in the bed-room, etc., of adults.

THE THROAT AND EYE SPRAY.

WE have received from Messrs. Corbyn, Stacey, and Co., of 300, High Holborn, a new form of throat and eye spray (price 12s.), which they specially manufacture. It is a very simple form of spray-producer, not easily getting out of order, very portable, and easily applicable in practice. It is enclosed in a neat velvet-lined box, so as to admit of being readily carried about, or kept from injury when not in use. It is furnished with a vulcanite tongue-depressor, whereby all the spray produced can be thrown on the part affected; a similar smaller arrangement can be utilised for throwing a spray into the eye. From personal use, we strongly recommend this spray-producer to the notice of the profession.

GARDINER'S PATENT LEVEL COTS.

MANY of the medical passengers on board the steamer *Xenia*, trading between Bristol and America, had the opportunity of testing the value of this invention in preventing sea-sickness, on the passage which that vessel made carrying a number of the members of the Association to the recent meeting at Cork. The cot was subsequently exhibited in the museum at Cork, and has proved itself so useful on board the steamer, and was so much liked, that the specimen was secured for the use of the steamer on the return voyage, and it is now permanently in use. This very ingenious and comfortable invention gives great relief from the lurching and rolling in a heavy sea, and is the most comfortable and effective invention of the kind which has been brought under our notice. A great deal of evidence has been accumulated as to its affording great relief from sea-sickness, and there is no doubt that sea-going travellers will find it a very great comfort. It is, we should think, likely to come into extensive use, especially on board steamers luxuriously fitted for travellers, such as the larger lines. It does not, however, take up much room, even on board smaller steamers; and we imagine that on yachts, and in all cases where extra fittings to secure the comfort of the travellers are in favour, this cot has a strong claim for employment.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 18TH, 1879.

STUDIES OF FŒTAL ANATOMY AND THEIR APPLICATION.

A RECENTLY published thesis by M. Ribemont on this subject, reviewed in Dr. Bourneville's excellent new annual summary,* is pointed out by the author of this part of the review as an example of the remarkable discoveries which may result from the observations of careful and intelligent observers. By the help of congelation, he has been able to make antero-posterior and transverse as well as horizontal incisions in still-born fœtuses, and on infants who had survived their birth but a very short time; and has filled twenty-eight large plates with exact reproductions of drawings made from the surface-section of these organs. These plates not only show the relations of the various organs, but, when they are compared, show the changes which the establishment of respiration causes in their reciprocal position.

The examination of the lungs and heart shows the distance between the central organ of the circulation and the vertebral column, and how it comes directly into contact with a somewhat extended surface of the left antero-lateral thoracic wall: an extent of surface which may, on an average, be estimated at a square of from twenty-eight to thirty *millimètres*. It is especially by this region that, during intra-uterine life, the cardiac and fœtal sounds are transmitted. So soon as the infant breathes, the heart, on the contrary, is driven back by the left lung towards the median region of the thorax. In comparing, also, by a vertical incision, the situation of the heart in relation to the two extremities of the fœtus doubled back on itself in the uterine cavity, M. Ribemont has come to this unlooked-for result: the centre of the heart is ofter rather nearer to the pelvic than to the cephalic extremity. From these facts a certain number of consequences must result, with reference to the auscultation of the fœtus at the end of pregnancy and at the moment of delivery.

The vertical incisions likewise show the considerable size attained by the liver in the fœtus, this organ alone occupying nearly two-thirds of the abdominal cavity. It will, therefore, be important to avoid placing the hands on the abdominal wall of the infant, so as not to risk the production of contusion of the liver and hæmorrhage: a result which has sometimes been observed.

M. Ribemont has likewise made a study of the effects of torsion of the neck of the fœtus, carried as far as 180 degrees, on the spine and the spinal cord. It is important to be thoroughly conversant with these effects; for, if they be injurious, the practice of bringing forward the occiput or chin under the pubic symphysis with the forceps should be avoided. If, on the contrary, these effects have no injurious result, it would be allowable to give the head the rotary movement which generally occurs in natural delivery. Up to the present time, a certain number of cases in which the extended rotation made by the forceps had not caused any lesion in the fœtus; and experiments reported by M. Tarnier, and a case published by M. Budin, seem to prove that this movement is not at all dangerous. M. Ribemont has been able to furnish the anatomical reason; which, however, has already been indicated by M. Tarnier. His incisions show that, if the face of the fœtus be directed backwards in such a position that the chin corresponds with the back, the torsion of the neck is spread over the whole extent of the cervical column and the six or seven first dorsal vertebræ. There is no resultant lesion of the tissues and of the marrow, which, undergoing a torsion on its axis parallel to that undergone by the vertebræ, is not exposed to any compression. M. Ribemont has added a chapter on the modifications which supervene in the articulations of the limbs submitted to powerful traction.

The same anatomical studies of the incisions made vertically across the buccal region, the pharynx, and the larynx have, it is pointed out, led M. Ribemont to study afresh catheterism of the air-passages. The important influence which artificial respiration may exercise on infants who come into the world apparently moribund is too well known to need enlarging on. The labours of Chaussier and of Professor Depaul have sufficiently demonstrated that tracheal insufflation is the most efficacious means which could in this case be put in practice. This insufflation is generally performed with Chaussier's tube, either in its original form or as modified by different inventors. M. Ribemont, however, demonstrates that the tube usually employed has some defects, which the careful study of incisions performed on frozen tissues and some hints given by M. Tarnier have enabled him to remedy. He has therefore constructed a new insufflator, for which he claims the following advantages. The introduction of the new insufflator is easier than that of Chaussier's modified tube, owing partly to its special curve. M. Ribemont's tube also terminates in a rounded and blunt button; it therefore slips easily over the mucous membranes; whilst the original tube, which has a terminal opening only, makes its way by rubbing the surface of the mucous membranes, the folds of which are apt to become entangled in the orifice. There exists between the two instruments the same difference that there is between an urethral sound with a blunt end and another with a divided termination; the latter, we know, traverses the urethra with much less ease than the former. Chaussier's tube presents a curve which causes the end to have a tendency to penetrate into the œsophagus; that recommended by M. Ribemont is, as it were, traced on the bucco-laryngo-tracheal anatomical curve afforded by median incisions performed on the bodies of frozen new-born infants. The form of the instrument, therefore, at the moment of introduction, easily adapts itself to the shape of the fœtal parts.

Another advantage resulting from the curve given to his insufflator by M. Ribemont is that, whilst the original tube of which the semicircular end in no way corresponds to the form of the parts, is most easily displaced during application, M. Ribemont's invention, from its convexity, adapts itself with exactness to the concavity of the palatine arch. Kept in contact with the arch, it is retained in the same situation by the projection formed in front by the alveolar edge of the superior maxillary. The insufflation can therefore be continued without the instrument leaving the larynx.

When Chaussier's tube is used, the air escapes between the instrument and the walls of the larynx, and only partially enters the lungs; and many inventors have recommended various plans for preventing the egress of air. An ingenious arrangement of the laryngeal portion of Dr. Ribemont's tube, based upon an idea of Dr. Tarnier's, obviates this inconvenience. This portion is in the form of an elongated cone, flattened laterally; it enters like a spigot in the bung-hole of a cask, until the upper opening of the larynx is closed; thus all reflux of air is rendered impossible. This conical form of the end of the tube, by closing the opening of the glottis, gives the power of discovering, after the first insufflation, if the instrument is in position. If it be in the larynx, the injected air silently enters the lungs; no sound is heard; only the walls of the thoracic cage, which become dilated, are seen to rise. If, on the contrary, the instrument have been introduced into the œsophagus, the opening of this duct, being much larger, is not obliterated, and the air escapes, producing a characteristic gurgling.

Some writers have charged laryngeal insufflation with inducing, in certain cases, pulmonary emphysema. In order to avoid the entrance of too large a quantity of air into the lungs, and consequently to avoid

* *L'Année Médicale*, 1878. Paris, Plon, 1879.

the production of the exaggerated distension which brings on emphysema, M. Ribemont has added to his tube a pear-shaped India-rubber container, gauged with exactness, so as not to allow a larger quantity of air to enter the lungs than will counterbalance the quantity which escapes from them during expiration; the production of emphysema is thus rendered very difficult. It is therefore no longer with the mouth, but with the help of this pear-shaped flask, that insufflation is effected. There is also another advantage in this method of procedure; frequently, premature efforts of inspiration have caused liquid mixed with glairy matters, mucosities, and meconium to enter; these matters may place obstacles in the way of the re-establishment of respiration, and bring on secondary fatal pneumonia. It is therefore necessary to begin by performing aspiration, to clear the air-tubes; and this operation, which is a very unpleasant one to perform with the mouth, is rendered very easy by the use of this India-rubber flask.

Insufflation is the best method of treatment for apparent death in new-born infants, and has already saved the lives of a considerable number of children. We should never, therefore, hesitate to have recourse to it; and it is further necessary to make use of the methods and of the instruments which give the greatest guarantee of success. M. Ribemont's insufflator, having the advantage of being easily introduced into the air-passages, and offering many other advantages, seems to be the most perfect instrument hitherto devised for the purpose.

A CHRONIC HOSPITAL.

ONE of the most successful of English provincial hospitals—the Birmingham General Hospital—has just completed the hundredth year of its existence as a medical charity. In commemoration of this event, the Committee propose to found in the suburbs of Birmingham a new hospital for the treatment of chronic cases only. Before examining this proposal to add one more to the numerous class of special hospitals in this country, it may be well to see what changes a hundred years have brought in the system of medical relief of a town like Birmingham.

In 1779, there was no single medical charity previous to the month of September in that year, when the General Hospital was founded. Now, there are at least a dozen medical charities, more than half of which are hospitals. In the first year of its existence, the Birmingham Hospital had forty beds; it relieved two hundred in-patients and three hundred out-patients; and the population of the town was seventy thousand. In 1879, the population, including the suburbs, has increased sevenfold; but—alas for this improvident age, with its extravagance and luxury!—the in-patients at this one charity have increased fifteenfold, and the out-patients nearly a hundredfold. Yet this increase has taken place in spite of the relief afforded to thousands of Birmingham artisans by the numerous other medical charities established during the century.

The Committee, warped apparently by the bias which often causes hospital managers to overlook one important aspect of the public welfare in their enthusiasm for what they hold to be the interests of their charity, do not look upon the above startling figures as proving the pauperising tendency of the present system of medical relief, or in any way as unsatisfactory. On the contrary, looking at the figures exclusively from another point of view, they declare that "the progress exhibited by these figures affords remarkable and most gratifying evidence of the increasing and permanent hold which the General Hospital has acquired upon the confidence and affection of the public". They believe that this feeling, manifested by the acceptance at their hands of gratuitous medical relief by an ever-increasing (and may it not be added, presumably more well-to-do?) class of their fellow-townsmen "is *the deserved reward* of faithful, devoted, and intelligent services", medical and lay. In one sense, this is, no doubt, perfectly true. Animated, however, by these sentiments, they think "the centenary of a charity whose history presents such *an unvarying course of prosperity and usefulness* should be commemorated in a permanent form". They propose, therefore, to appeal to the public for funds to enable them to found another free hospital for the treatment of chronic cases.

Such, then, is briefly the history of a hundred years of medical relief in Birmingham, and such are the lessons which a study of these events appears to have inculcated into the minds of the managers of one of the largest and most prosperous of English hospitals. It would be matter for regret if the study of the figures given in the circular issued by the Committee had raised no doubts in the minds of its members; but such a feeling is heightened by the knowledge that throughout the century not only has the population, but the prosperity, of all classes in the town of Birmingham materially increased. Hence it is that we have read this circular with very mixed feelings. We read it not without sorrow, because it seems to offer a striking proof of the little interest taken by some of the managers of the most prosperous English medical charities in the growth of provident principles amongst the artisan class. We cannot but regret that not only is the consecration of a great principle of sound medical relief ignored, but the centenary is made the excuse for attempting to still further pauperise the masses.

We do not, of course, regard otherwise than with sympathy the commemoration of a notable event in the history of a great charity, or the proposal to establish a chronic hospital. What we regret is the crudeness and pauperising character of the plan by which these objects are to be accomplished. The General Hospital has been for years, and is at present, in a state of great financial prosperity. It has a large invested property; its balance at the bankers' is considerable; and it is about to receive a handsome sum from the Festival Committee. It might have been hoped that, in deciding to recognise the hospital centenary by establishing a hospital for chronic cases, the Committee would have paused before appealing for special funds to enable them to carry out their proposal. This appeal is, however, based mainly on the assumption that, if the chronic cases can be drafted to a special hospital, the additional beds thus set free will enable the Committee to increase the number of free cases now admitted "fourfold". In other words, for every chronic case thus treated elsewhere, four additional urgent and active cases will receive free treatment and care. Thus a hundred years hence the free medical relief given to all comers at the General Hospital will have increased at least twice as much as it has done since 1779. This scheme, then, will tend yet more to increase the pauperising tendency of the present system of free medical relief.

In order to celebrate their centenary in a worthy manner, and to deserve the full sympathy and support of the public and the profession, the managers of this charity should show themselves alive to the principles of enlightened administration, and should not seek to extend and perpetuate the abuse of free charity and the extension and encouragement of improvidence. The whole of the managers of the London hospitals recently assembled to declare their conviction of the reality of these abuses, and the desirability of favouring prudence, and of amending the system of hospital relief, as a condition of asking for further funds. Birmingham is more independent and more progressive; its charities are not fettered by old traditions and ancient charters; and the beginning of a new secular period of the General Hospital might well be marked by some improved adaptation of the machinery to the real uses of charity, as well as by an effort to increase the bricks and mortar and to multiply agencies at present not wholly beneficial.

DISSENT AND DIPHTHERIA.

WITH the growth of our knowledge on the subject of the causation and spread of epidemics, comes an increasing difficulty to the etiologist of excluding every known predisposing influence to the disease but the right one. Dr. Ogle has just made a further addition to the number of these influences, so that no investigator can now be certain that he is on the right track till he has satisfied himself as to the congregational habits of the sufferers. The connection between dissent and diphtheria is not at first sight very obvious; but it is rendered at least probable by the circumstances of an epidemic in the island of Anglesea, which Dr. Ogle was sent to investigate for the Local Government Board. In the course of the outbreak thirteen houses were attacked, and these houses were widely scattered over the country; in several parishes, almost all of them were isolated farmhouses, two only being houses in a village.

These farmhouses subsist almost entirely on their own produce, so that all notion of community as regards milk, water, or food may be discarded. The fact of so many farmhouses being attacked suggested two hypotheses; (1) disease among farm-stock, and (2) direct and separate importation of infection from the market town; but neither hypothesis stood investigation. Dr. Ogle was assured in answer to repeated inquiries that there had been no disease among farm-stock, whether horses, cattle, swine, or sheep; and the second hypothesis would only be tenable if the men, who are the connecting links with the market town, had been the first persons to be attacked, which was not the case. School attendance again could have played no important part in the matter; for in no fewer than nine of the thirteen houses the first case was a person above school age. The houses concerned were very far asunder, their occupants were by no means intimate with each other, and the season had been adverse to friendly meetings; the severe cold which prevailed during the greater part of the outbreak having kept the occupants of the farms as much as possible within their own premises. There had been no general gatherings for festive or other purposes, with one exception—attendance at places of worship.

The Welsh are most devout and sedulous in this observance. They are also divided into no few sects, each of which has its own churches or chapels. These chapels are as a rule small, and, in such weather as prevailed, closely shut up during use, so that each attendant inhales in a more than ordinary measure the breath of the rest. Moreover there is a custom of assembling together before or after service in the small room attached to the chapel, which becomes naturally the accustomed place for friendly greeting. The possibility of transference of infection on these occasions is apparent enough, when once pointed out; but it did not occur to Dr. Ogle, until, on inquiry in one of the farmhouses where diphtheria had been, he was assured by the mistress that none of the family had left the house for more than a fortnight before this illness, "excepting to go to chapel". On further inquiry he ascertained that the first person attacked in this house had two days previously to the attack been to chapel, and had actually there conversed with a girl from a remote dwelling, who was still suffering from a sore throat which is believed to have been diphtheritic. Dr. Ogle therefore inquired into the chapel attendance of the inmates of the several houses affected, and found that, out of the thirteen, no fewer than eight went to the same chapel. This chapel was moreover attended by the family from the farmhouse first attacked, so that it is not by any means impossible that the infection may have spread by this agency from this house to the seven others. Again, one or two of the occupants of these eight houses went exceptionally to another chapel, and amongst these was the girl before mentioned, who went to chapel while still having sore throat, and there came into contact with a woman from a ninth house, who fell ill a few days after the interview. In seven of the nine houses, that have thus been shown to be connected by chapel attendance, the first case of illness was in a person above school age. This unusual proportion is in harmony with the hypothesis, for it would be the young children who would be most likely to be left at home when the bad weather rendered chapel attendance at a distance a difficulty. To the possible objection that persons would hardly be likely to attend chapel while suffering from diphtheria, it may be answered that at least one person actually did so; but it is important also to insist upon the fact that the diphtheritic poison hangs about persons, and can be transmitted by them for a much longer period after apparent recovery than is usually supposed.

On the whole, it occurs to us that the evidence very strongly favours Dr. Ogle's conclusion, that chapel attendance was one of the main agencies by which the infection of diphtheria was disseminated. In any district which was not so scattered and thinly populated as that under consideration, it might have been difficult to speak so positively on the subject as Dr. Ogle has been able to do; but, under the circumstances, we confess we can see no flaw in his argument, and we are obliged to him for having raised for discussion a point so novel and interesting.

NOT a single fatal case of small-pox was registered last week in London or either of the nineteen other large English towns. Two deaths from the disease occurred in Dublin.

THE death-rate in London, during the thirteen weeks which ended on Saturday, the 27th ultimo, averaged only 18.4 per 1000, against 21.8, 19.3, and 22.1 in the corresponding periods of the three years 1876-7-8.

WE understand that Dr. Thorburn has just received from Professor Nyrop of Copenhagen a valuable collection of obstetric instruments invented by himself and others in Denmark, which will be an useful addition to the obstetric museum now in course of formation at Owens College, Manchester.

AN inquest was held on Monday last at Guide Bridge on the body of Miss Mary Handford, who died on Saturday from the effects of chloroform administered for the purposes of a surgical operation. A verdict of death by misadventure was returned.

IN his report to the Court of Quarter Sessions, the Chief Constable of Lancashire expresses regret that, as the law at present stands, magisterial orders for the suppression of the dog nuisance can only be made after cases of rabies have actually appeared. He adds his belief that if magistrates could make restrictive orders at their discretion, it would be a relief to the public mind.

DR. DELORE of Lyons sums up a lecture on the Changes in the Fœtus born dead with the following practical conclusions. 1. When the amniotic liquid proceeding from the bag of waters is covered by meconium or blood, the death of the fœtus may be feared. 2. The epidermic desquamation of the fœtus is an incontestable proof of death in the uterine cavity. 3. Any *débris* of the cord or the centre suffice to denote death before delivery.

THE last edition of the German University Calendar gives the number of medical students in the principal universities for the summer session of 1879 as follows:—Vienna, 697; Munich, 503; Wurzburg, 458; Dorpat, 436; Berlin, 412; Leipzig, 389; Greifswald, 244; Breslau, 181; Freiburg, 174; Tübingen, 174; Zürich, 168; Strasburg, 166; Bonn, 144; Halle, 143; Göttingen, 141; Bern, 138; Graz, 137; Heidelberg, 136; Marburg, 126; Königsberg, 125; Erlangen, 121; Jena, 100; Giessen, 98; Kiel, 97; Bale, 77; Rostock, 37.

NOTWITHSTANDING the strong representations in favour of maintaining the site of the old Queen's Bench Prison in London as an open space or playground, it has been sold to private speculators for building purposes, and unless a very determined effort be made, a still more eligible site—that of Horsemonger Lane Gaol—will share a similar fate. It has been truly pointed out that there is hardly a district in London which has greater necessity for a public garden or playground than the Borough. It consists of a dense mass of narrow streets, alleys, and squalid courts thickly populated; and, now that the old Surrey Gardens are being built over, there is not an open space nearer than Kennington Park. Horsemonger Lane Gaol was situated in the very centre of the densest part of the Borough, and its site, if railed in and turfed or gravelled, and furnished with a few seats and a drinking-fountain, would prove an inestimable boon to thousands of poor people. If the more influential inhabitants of the district would energetically take up the matter, it might be possible to preserve it as an extra lung, which would give breath to a portion of the metropolis where it is most needed.

OUR "BOY" SOLDIERS.

THE letter of Professor Maclean, in the *Times* of the 8th instant, on "boy" soldiers, was opportune, and we commend it to the serious attention of those who are charged with the duty of reconsidering the whole subject of our military organisation. Dr. Maclean points to the medical history of all armies in proof of a fact amounting, as he justly says, "to a truism", that the system now in vogue with us of

sending boys and not men into the field is "costly, wasteful, and cruel". In this, as in most other parts of our military organisation, we copy the system of continental armies, and what we copy we spoil. The system of short service in Germany answers well, because it is only a part of a great whole, under which every adult male, without respect to birth or station, is obliged to serve his country as a soldier. We, with nothing but voluntary enlistment to depend on, have adopted this system of short service; and the result is that our soldiers retire into the reserve just as they reach the time of life when they are fit to serve; and, except in times of great national danger, "our boys" have to bear the first strain of war, and the hardly less severe strain of tropical service; and the result is, as Dr. Maclean has said, "costly, wasteful, and cruel". Military authorities on the continent, who watch with unceasing vigilance all the restless changes in our military organisation, will hardly allow that, under the present system, we have an army, as they understand the term, at all, and go so far as to say that, in so far as military organisation is concerned, we have lost the governing faculty altogether. Our business is with the medical aspect of this question, and from this point of view it does not admit of argument at all. We have in India a great possession, requiring at the least from sixty to seventy thousand British soldiers to maintain it. It is here the shoe pinches. It is for this purpose, of all others, that the costliness, wastefulness, and cruelty of the system of short service is most apparent. The sooner a remedy is found for this crying evil, the better it will be for the finances of India, the safety of the empire, and the cause of humanity.

SERIOUS ILLNESS OF INSPECTOR-GENERAL W. T. DOMVILLE.

INSPECTOR-GENERAL W. T. DOMVILLE, C.B., Royal Hospital, Haslar, whose attack of enteric fever we reported in our last number, continued to progress favourably until the 12th inst., the morning temperature of the 11th and 12th being normal. On the 12th inst., however, the fever became intense (104°), and signs of phlebitis in the left lower extremity manifested themselves. Since that date until our latest information—evening of 15th—the fever has continued high, with evening temperatures of 104°, 104.6°, 103°, with but slight remissions. The patient's condition causes the gravest anxiety; and the phlebitic symptoms have not abated.

SURGEON-GENERAL HAMMOND.

AT length, and after a long series of years, the sentence of the court-martial removing Surgeon-General Hammond from the head of the Medical Department of the United States Army during the war of 1864, has been, after a very complete investigation, annulled as very harsh and unjust. An Act of Congress was passed on March 15th, 1878, allowing that finding to be revised, and the result of a complete and conscientious inquiry has been that the whole finding and sentence have been annulled and reversed; and the Secretary of War has addressed a letter to Surgeon-General Hammond (of which a copy is before us), in which he says that, after a thorough examination of the case, he had reached the conclusion that a great wrong had been done, and that Dr. Hammond was clearly entitled to vindication; that he never performed an official act with a clearer conviction that it was one of simple justice; and that he notes with satisfaction the fact that the country, with scarcely a dissenting voice, approves and applauds the act which restores Dr. Hammond to the position on the retired list of the army as Surgeon-General. The Secretary of War heartily congratulates Dr. Hammond on this, if long delayed, nevertheless complete triumph, and in that congratulation the profession at large will join, seeing that the most competent persons, after minute inquiry, have decided that it is but a tardy act of justice.

ANGLICAN DISEASES.

SOME of our English extremists will learn with surprise, from Dr. L. H. Petit, of the *Paris Médical*, that the English call *teetotallism* "the morbid state produced by the total absence of alcoholic liquor", and *vegetarism* "that which results from an alimentation exclusively vegetable". He cites, as an example of these morbid states, a case mentioned by Mr. Barwell, in which, osteotomy of the tarsus for club-foot having been performed in a vegetarian, prolonged suppuration followed, which complicated the operation, notwithstanding an antiseptic mode of treatment; and he does not hesitate to incriminate here "vegetarism". "It is a second time in which a case of operation on vegetarians gave rise to very slow convalescence with abundant suppuration of the wounds."

TYPHOID EPIDEMICS FROM INFECTED MILK.

AN increasing number of epidemics of typhoid fever due to infected milk are reported year by year. This is not, of course, because milk is more polluted than formerly, but because medical officers of health are now able to trace outbreaks, for which in days before milk-infection was thought of they would be unable to account, to the specific pollution, by some means or other, of the milk supplied by particular dairies. Three epidemics of this kind have recently been brought under our notice. Neither is reported so minutely as it might be, but the evidence implicatory of the milk seems in each case to be unassailable. About the third week of August 1878, a sudden but limited epidemic of typhoid fever occurred at Croydon. The incidence of the disease, according to a certain milk-supply, was so marked as to lead to the conclusion that the fever-poison was distributed by that article. Of forty-eight cases of which Dr. Philpot obtained information, thirty-seven lived in houses supplied with milk from one source. About the same time, there was a considerable prevalence of typhoid fever at Portsmouth, which attracted the attention of the medical officer of health, and which was for some time, until experimentally disproved, supposed to have arisen through the leakage of a water-main. After much pains, the epidemic was traced down to a farm where there was a child lying ill of typhoid, and where the well was within a few feet of the privy cesspit. The supply from the dairy was distributed to a number of milkmen, besides about twenty persons; and, amongst these last, there were eight cases of typhoid. Numerous cases could also be traced back to the dairy; and its use at the mess at Eastney barracks was followed by an outbreak of typhoid there. When the source of the mischief was discovered, the farmer was forbidden to sell any more milk, and the milk in stock was purchased of the retailers and disposed of down the nearest drains. Out of a total of 153 cases of typhoid occurring during July, August, and September in the borough (where the disease is always more or less prevalent), 64 per cent. were shown to have obtained their milk directly or indirectly from the suspected source. A very recent case of the same kind was reported by Mr. Davies to the Bristol Town Council at their meeting last week. Hearing of several cases of typhoid fever in the northern part of the city, all clearly traceable to polluted milk from a mixed retail supply, Mr. Davies immediately visited the retailer, who told him whence his principal supplies were derived. Acting on this information, Mr. Davies visited a farmhouse three miles from Bristol, where he found the only hard water on the premises to be drawn from a pump in the dairy in a farmyard containing manure in all stages of decomposition. This water stank abominably when pumped, and is described by Mr. Davies as "simply poisonous". It was stated that this water was never used for washing the milk-utensils, but that soft water was used. However this may be, Mr. Davies is convinced that the evil lies in the well; and certainly the place seems, from its surroundings, to be totally unfit for a dairy. In reporting on this epidemic, Mr. Davies says:

"I consider that no dairy for the supply of towns should be licensed as such unless proved to be well supplied with hard water, and also free from a supply of impure water, on the premises. Without such a requirement for all milk-supply dairies, the section on dairies in the Contagious Diseases (Animals) Act will prove a delusion and a snare for the public."

Of course, in this recommendation of Mr. Davies we heartily concur; and we may say further, that it is now well known, from the example of a well known company in London, that all the rigid precautions necessary to secure absolute safety in respect to the water-drainage and condition of the milk may be imposed without interfering with the ordi-

nary course of business. It is much to be regretted, therefore, that means are not taken, such as this experience has proved to be possible, to ensure the safety of the milk-supply of cities. A further precaution —to which Mr. Davies does not refer—is, however, essentially necessary; and that is, that the premises in which the milk is received from the farms shall be so constructed as that no dwelling house or living rooms communicate with the place in which the milk is stored, and that no drains open into them through which polluted sewer-gas can enter. There exists a well known model in London on which the necessary precautions may be based; and it is much to be regretted that the by-laws of the Metropolitan Board of Works in London and of other authorities elsewhere do not provide adequately for the cutting off of the places in which milk is stored and sold, from living rooms and dwelling houses of which the inmates are at any time liable to become the subjects of infectious disease; nor are any precautions taken that the places in which the milk is stored are suitable for the purpose of receiving a fluid so highly absorbent of miasm.

CONSCRIPTION AND MUTILATION.

THE Tribunals of the Department of the Seine have been occupied lately with rather a curious question in connection with voluntary mutilations practised by young men in that department with the object of escaping the conscription. This operation appears to consist in the deformity of the big toe or of one of the great toes, produced by an induced retraction of the flexor muscles. The individual affected with this deformity is unable to walk with the full surface of the foot on the ground, and hence becomes unfit for military service. According to the results of the inquiry, it appears that this mode of mutilation has been practised in the country for more than forty years, and that since 1839 it has been the custom to exempt all the conscripts affected by this deformity. The precise mode of deformation has not been ascertained, and appears to be a secret which the military surgeons who have examined the question have been unable to penetrate. It seems, however, that in the particular case which led to the inquiry, the young man, who had formerly been a good walker and active dancer, had throughout the winter in which the deformity was produced, rarely gone out of the house, and that he had abstained completely for some months from appearing at the village dance. It seems remarkable that for forty years it has been possible to carry on this induced mutilation in all the conscripts, except three, of one village with success; and the question appears to be one which French physicians think worthy of much further investigation.

CANTHARIDIN FROM THE POTATO-BEETLE.

MANKIND will hardly be prevailed upon to desist from vigorous efforts to exterminate the insect, because it is now shown to be capable of acting effectually as a physical as well as a moral blister. It appears, however, from some experiments detailed in the American *Journal of Pharmacy* for June, that the fresh powder of the "potato-beetle" yields about one and a third per cent. of pure cantharidin. This is a large product, and no doubt these pests will be increasingly used as a cheap source of this drug.

LONGEVITY IN THE FENS.

THE Lincolnshire fens are not precisely the localities in which we would look for examples of prolongation of life. Nevertheless, in his annual report for 1878, Mr. Thomas Stiles, medical officer of health for part of the Spalding rural sanitary district, records some instances of longevity in the much abused fens of Lincolnshire. In the Pinchbeck registration subdistrict, containing a population of 3,244, 5 deaths were consecutively registered in the summer months, the united ages amounting to 392 years, or an average of $78\frac{2}{5}$ years each. In the Gosberton district, containing a population of 3,236, only six deaths were registered in the winter months, the united ages amounting to 422 years, or over 70 years each. In the whole of Mr. Stiles's district, which has a population of 9,076, 63 out of the 146 total deaths were of persons above the age of 60 years.

INFANT LIFE PRESERVATION ACT.

AT the Cheshire General Sessions, the Deputy Chairman, Mr. Horatio Lloyd, referred to the Tranmere baby-farming case, because of a remark made at one of the inquests, that the reason that the Act for the Better Preservation of Infant Life had been practically a dead letter was that the local authorities were in fault for not adopting it. He hoped that there would be more facilities for finding out baby-farms; and although he had the greatest objection to unnecessary police inquisition, that vigilance would be exercised in that direction. He also hoped that houses of that kind would cease to exist, or be registered under the Act referred to. Should neither course be taken, proceedings should be vigorously taken against the offenders at the magistrates' meeting.

THE METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during September, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other Companies, and by the Tottenham Local Board, was: Tottenham 1.3, Colne Valley 1.4, Kent 1.8, New River 3.4, Lambeth 4.1, Grand Junction 4.3, East London 4.6, West Middlesex 4.6, Southwark 4.7, and Chelsea 6.5. The waters delivered by the five companies drawing their supply from the Thames showed rather less organic impurity than in August, and had all been efficiently filtered. The Lea water supplied by the East London Company was not superior to the Thames water, but that delivered by the New River Company showed less organic impurity; it had been efficiently filtered by both Companies. The deep-well waters delivered by the Kent and Colne Valley Companies and by the Tottenham Local Board of Health were of their usual excellent quality. The Colne Valley Company's water had been softened previously to delivery.—Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town was clear, but rather harder than that supplied in July or August.—Dr. Mills reports that the Loch Katrine water supplied to the city of Glasgow was "very light brown in colour, and contained little suspended matter".

THE CENTENARY OF THE GENERAL HOSPITAL, BIRMINGHAM.

THE Committee of the General Hospital, Birmingham, have, on the occasion of the centenary of the institution, issued an address, in which they say that, on September 29th last, the General Hospital completed the hundredth year of its existence as a medical charity. The town has greatly advanced within the century. In 1779, its population was not more than 70,000. In 1879, including the suburbs, it is not far from 500,000. The hospital, the first medical charity established in Birmingham, and one of the oldest in the provinces, has grown with the town. It was designed originally for one hundred beds; but when it was opened, only forty beds were provided. It now contains 250 beds, more than six times the number with which it commenced. In the week of its opening, ten patients were admitted; in the first year, there were about 200 in-patients and 300 out-patients; a total of 500. In 1878, the last completed year of hospital work, the in-patients numbered 3,043, and the out-patients 28,963; a total of 32,000. Since the foundation of the charity, over a million patients have received medical or surgical treatment by its honorary and resident staff. In 1779, the annual subscriptions were about £900, and the total income was under £1,000. In 1878, the annual subscriptions amounted to £5,400, and the total income from all sources—subscriptions, donations, endowments, legacies, and periodical collections, was £15,000; of which, excluding special contributions, the ordinary income may be reckoned at £9,000. The centenary of a charity, whose history presents such an unvarying course of prosperity and usefulness, should be commemorated in a permanent form, by some new undertaking in harmony with the design of the institution, and in accordance with its traditions. Such a memorial, the Committee believe, may be most appropriately provided by the foundation of a suburban hospital for the

treatment of chronic cases. The existing building is no more than sufficient for the reception of urgent and accident cases, and even these occasionally strain the resources of the charity to the utmost; yet beds, which might otherwise be allotted to urgent cases, are not infrequently occupied by patients whose ailments, being of a chronic nature, require long periods of detention in order to their effectual treatment. The presence of chronic patients in a general hospital is injurious to the institution, since it has a tendency to impair the discipline of the wards, and thus to interfere with the regularity of administration; whilst at the same time the medical conditions inseparable from the patients themselves inevitably affect the sanitary state of the wards, and thus unfavourably influence the progress of acute cases. The Committee are content for the present, however, to indicate in this general form their proposal to commemorate the centenary of the charity by establishing a chronic hospital in some parts of the suburbs of Birmingham, where patients may enjoy the benefit of prolonged treatment, and of the curative agencies of rest and pure air. To give effect to this proposal, a special appeal to the governors and the public will be necessary in order to raise the funds required for the building; but it is hoped that, with a moderate addition at the most, the ordinary resources of the charity will be sufficient to meet the current expenses of a chronic department. In the state of commercial depression which now unhappily exists, the Committee do not, however, propose to make an immediate appeal for donations, or to do more than take measures to secure a suitable site for the proposed building. Their purpose will be served by recording in a formal manner the centenary of the noble charity, the administration of which, on behalf of the governors, it is their happiness to conduct; and by proposing to commemorate that event in a manner which they believe to be most in accordance with the necessities of the poor, and with the designs and the traditions of the hospital. Comments on the proposal to establish a chronic hospital will be found in another page.

HOSPITAL ASSISTANCE IN GERMANY.

An official statistical statement of the general hospitals in the German empire for the year 1877 has lately been issued. Prussia stands first, with 888 hospitals containing 37,039 beds; the number of patients admitted was 210,960, and the average duration of each patient's stay in hospital was 37 days. Bavaria shows 420 hospitals with 12,489 beds, 79,491 patients, and an average duration of 20 days. Twenty-four other states have hospitals varying in number from 99 in Baden to 1 each in Saxe Altenburg, Waldeck, and Lippe; the total for them being 574 hospitals, 22,691 beds, and 116,096 patients. The shortest average stay of patients in hospital was 14 days, among 703 patients in the three hospitals of Reuss of the younger line; while in Schaunburg Lippe, with 95 patients, the extraordinary period of 139 days was reached.

ESCAPE FROM A HOSPITAL.

A Paris correspondent says a terrible sight was witnessed by passers-by in front of the Hôtel Dieu. One of the patients of the hospital went mad, and, leaping out of a window overlooking the street, perched on the cornice. He addressed the crowd below in incoherent language, and threatened to throw himself down when anyone approached the window. Mattresses and rugs were spread on the pavement, and the firemen were immediately sent for. One of the latter let himself down by a rope affixed to the roof, and, securing the madman under the arms, managed to thrust him into the open window, where he was taken charge of by the attendants. The plucky conduct of the fireman was oudly cheered by the crowd in the street.

ACCIDENTAL POISONING BY CARBOLIC ACID.

A fatal case of accidental poisoning by carbolic acid occurred at the London Hospital on Saturday last. A child aged 2 years, a patient of Mr. Adams, drank a quantity of solution of carbolic acid of the strength of one part to thirty of water; the amount imbibed being estimated at about two ounces. The child had been admitted for a contused thigh, and was in good health. The accident occurred at 7.30 A.M. An emetic of warm water produced an immediate evacuation of some of the poison, and the stomach was subsequently washed out with a little warm milk and water. The child developed the usual symptoms, became drowsy, insensible, livid, and almost pulseless. Brandy was freely administered. By 3 P.M, the child had become much worse; the lips, cheeks, and extremities had become almost purple, in place of the blue tint observed soon after the appearance of symptoms. There were increasing dyspnœa and progressive failure of pulse. At 3 P.M., the child was transfused by Mr. Reeves, assistant-surgeon to the hospital. The blood was taken from a dresser, Mr. Neatby, who generously supplied three ounces of the required fluid. The blood having been defibrinated, an ounce and a half were injected by means of a common ear-syringe, to the nozzle of which a small cannula had been fixed. The immediate effect of the transfusion was remarkable; the child for the while improved in pulse, the dyspnœa was less marked, and the livid tint of the lips and extremities was replaced by a nearly normal hue. These effects were maintained for a short time only, the child dying at 7.30 P.M., exactly twelve hours after the accident. Presuming that an important factor in carbolic acid poisoning is the destructive action of the acid upon the blood-corpuscles, transfusion, if practised early enough and with a full injection, would seem a reasonable proceeding to adopt. The change effected in the livid hue of the patient in this case would appear to support this suggestion.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

A quarterly court of the directors of the above society was held on Wednesday, October 8th, at 5 P.M., in the rooms of the Royal Medical and Chirurgical Society. The chair was taken punctually by the President, Sir George Burrows, Bart., and the meeting was well attended, the change of hour from eight to five o'clock evidently suiting the convenience of the directors. Applications for grants were received from fifty-eight widows, twelve orphans, and three orphans on the Copeland Fund. A sum of £1250 was recommended to be granted at the next meeting. The expenses of the quarter amounted to £36. The treasurer stating that the funds would allow of a donation at Christmas to each widow and orphan now receiving assistance, it was resolved that the same amount be presented this Christmas as upon the last occasion. The deaths of two widows were announced; and two orphans had become ineligible. One member was elected, and the death of one reported. The consideration of the question of extending the area of the benefits of the society was adjourned to next meeting.

DEATH OF DR. PATRICK BLACK.

We regret to record the death of Dr. Black, F.R.C.P., which took place on the 12th inst., at his residence in Queen Anne Street. He was a graduate of the University of Oxford, where he obtained his M.D. degree in 1839, and in the following year was elected a Fellow of the Royal College of Physicians. The deceased was early in life appointed assistant physician and subsequently physician to St. Bartholomew's Hospital. He also held the appointment of physician to Christ's Hospital and to the Marine Society. Dr. Black was for some years a member of the Council and also examiner at the College of Physicians.

DEATH UNDER CHLOROFORM.

On Wednesday, Dr. Hardwicke held an inquiry on the body of Harry Knowlton, aged seven years, son of a smith, living at 1, Remerton Street, Barnsbury, who expired in the University College Hospital while under chloroform administered for the purpose of an operation. The evidence showed that for the last two years deceased had been under treatment in four hospitals for contraction of the sinews of the legs and arms; and at last he was taken to the University College Hospital. On Thursday, he was placed under bichloride of methylene, and was operated on by Mr. Marshall, the senior surgeon, who ordered that next day he should be again placed under the vapour, and splints put on to his limbs. He was removed into the ward, and the following day Mr. Sayer, one of the resident medical officers, administered chloroform with a view to carrying out Mr. Marshall's instructions. At firs ,

deceased became excited, but getting quieter the house-surgeon began the operation, when it was found that he was not sufficiently under the influence of the chloroform, and more was about to be administered when it was found that respiration had ceased. Artificial respiration was resorted to, but without success. The jury returned a verdict of Death through misadventure.

M. DEVERGIE.

THE death of M. Devergie is reported in Paris. This well-known and learned physician died at the age of eighty-two, having lived an active scientific life almost to within a few days of his death. He was a member and former President of the Académie de Médecine, Honorary Physician of the St. Louis Hospital, and former President of the Society of Legal Medicine. He was the author of a highly valuable work entitled *Médecine Légale, théorique et pratique*. He was of late years especially known in connection with questions of medical jurisprudence, and was one of the founders of the Medical Legal Society of Paris, a Society which, founded in 1868, has during the last eleven years given numerous proofs of its utility to the public, to the profession, and to the legislature. M. Devergie was President of the International Congress of Legal Medicine which was held in Paris at the period of the Universal Exhibition of 1878.

HUMAN OSTEOLOGY AT THE ROYAL COLLEGE OF SURGEONS.

WE recently announced that new catalogues, both of the normal and of the pathological specimens in the museum of the Royal College of Surgeons, were in course of preparation. Professor Flower has already succeeded in completely revising the human osteology series, the description of which appeared last week as the first instalment of the osteological catalogue, and is published by Mr. Bogue, 3, St. Martin's Place, W.C. It appears as an octavo volume of over two hundred and fifty pages, more convenient in form than the familiar quartos, which have lain for years on the shelves and the glass cases of the museum. Its contents show that the specimens will be arranged so as to begin, not from the lower forms of the vertebrata passing upwards, but in the reverse direction: this was thought preferable, owing to the importance of the osteology of the mammalia, the number of specimens illustrating the anatomy of the bones of that class, and the greater practical interest taken in that subject, as compared to the osteology of the lower vertebrata, in the organisms of which the bones play a less prominent, if not less important, part. The preceding osteological catalogue was brought out by Professor Owen as long ago as in 1853; that distinguished anatomist had previously urged the incorporation of the fossil with the recent series, an arrangement which, for some unexplained reason, was not carried out, but will now be adopted, as we learn from the title-page and preface in the new edition. In this preface, it is stated that, instead of a minute description of every individual specimen, the present catalogue is intended as a complete list of the contents of the human osteology department of the museum, arranged upon a system combining modern views of classification with convenience of description and capability of extension. Great attention is paid to accurate nomenclature, and to the authenticity and history of each specimen. The catalogue is provided with an introduction describing the order in which the specimens are arranged. The first section is devoted to the general osteology of man; the second illustrates dentition, practically inseparable from osseous anatomy; the third section consists of the fine series of skulls and skeletons of the different races of man, one of the chief glories of the museum. A short description is given of the methods of examination of skulls, and the terms employed by Broca, Topinard, Busk, by the author of the catalogue, and other authorities on anthropology. All the crania in the series have been carefully measured several times by the author, by Dr. Garson, the present anatomical assistant to the museum, and by Mr. M'Ara, a museum attendant and a ready calculator, to ensure freedom from fallacy. At the end of the catalogue will be found an appendix on these measurements as characteristic of race, with an explanation of the system of classification of skulls by certain "indices" or ratios of their breadth to their height, and by similar ratios of the measurements of the orbits, etc. These indices are now recognised as of great value in the comparative anatomy of man, especially when a large number of skulls belonging to the same race are available for calculation. All who have read Professor Flower's lectures on the comparative anatomy of man, published last spring in the BRITISH MEDICAL JOURNAL, will understand the practical application of this method of estimating distinctions of race. As the necessary calculations are somewhat tedious, several tables are appended, in which the indices may be found under every possible combination of length to breadth. Thirteen hundred and eleven specimens are described in the essential part of the catalogue, and most of these are crania. The name and locality of the specimen are given on the same line with the number, followed by the measurements and, when necessary, by short details. Altogether, the catalogue is compiled and published in a compact form, equally convenient for the direct study of the collection itself, or as a book of reference in the library of the student interested in the proper study of mankind.

MONSTROSITY.

A REMARKABLE case of monstrosity is reported in the *Wiener Medicin. Presse*, 1879, No. 9. The child had been born dead. The upper part of its body was single, the lower double. It had two faces on a skull, which was about thirteen *centimètres* wide. Both individuals were not equally well developed, the one being five *centimètres* shorter than the other (thirty-five and thirty *centimètres*), and the external genital organs were absent. It had also a large bifid spine. There were four frontal and as many parietal bones, and two occipital bones. The spines were separate. Both breast-bones were united in one; at their lower end, there was an opening in the skin of the size of a palm, through which the intestines protruded. The corresponding parts of the cerebra were united; the cerebella were separate. The organs of the throat and thorax were double; the œsophagus was single; the stomach also; the intestines were double, but abnormally formed. A small intestine ran from the stomach into the pelvis of the smaller fœtus, where it developed into a cæcum furnished with a processus vermiformis which opened into a duct, from which the ileum of the normally developed fœtus sprang. This ileum ended in an anus in the larger individual.

ENGLISH SURGERY ABROAD.

A NOTE of the impression produced on a brilliant French observer of the great English surgeon at the International Congress at Amsterdam, will not be without interest to all who have seen with pleasure at the recent Congresses this year, that British surgery, represented by Mr. Lister at the International Congress, and by Mr. Spencer Wells at the German Congress at Baden-Baden, was received with unusual distinction, such as serves to mark a brilliant period in English surgery through which we are now passing, and which it may be hoped the younger and rising members of the profession will strive to maintain at its present height. In the most picturesque and lively account of the Amsterdam Congress which has yet appeared in any French journal, that, viz., which is published in the *Lyon Médical*, the accomplished author writes: "The question much discussed in all the Sections was that of miasms, ferments, and poisoning by microscopic germs. Mr. Lister of London undertook to treat it in a public *séance*, as it is the basis of his method of treatment of wounds. The reputation of this surgeon gave to his communication an importance which everyone appreciated. It was the great attraction of the day, and accordingly the hall was crowded, and all the preliminary conversations before the public *séance* turned upon the man and his subject. When he advanced towards the tribune, a thunder of applause shook the hall. Notwithstanding its force and prolongation, the President, not wishing to be overwhelmed, seized a momentary pause to join the general movement, and rising then and lifting his arms he made a sign to the members of the Congress that they also should rise out of respect to the orator. Then took place an explosion such as may be seen only in the theatres of the centre of Europe — clapping of hands, stamping with the feet, tapping with

sticks, knocking on the floor, bravos, hurrahs, cries of all sorts rose from all parts of the hall. Not only did the audience rise, but they stood upon the chairs. The flags and decorative trophies with which the hall was hung shook with the waves of sound." Then follows a brief sketch of Mr. Lister, which we shall give in the original :—"M. Lister est un homme de moyenne taille. Sa figure fine, douce, ronde est flanquée de favoris côtelettes d'un roux tendre. Ses manières sont celles d'un gentleman. Il a supporté, tête baissée et la face rouge, immobile comme une statue, toute l'avalanche." "Mr. Lister, when calm was re-established", continues the reporter, "described with the most extreme simplicity of manner his aseptic method of dressing wounds; but he almost exclusively occupied himself with replying to the attacks which have been directed against it."

CARBOLIC ACID POISONING.

THE following curious case of poisoning by the application of carbolic acid to the skin is reported in the *Berliner Klinische Wochenschrift* for October 6th by Dr. Haunhorst. During his residence as house-surgeon at the Lunatic Asylum of Ueckermünde, he was asked one night to see one of the nurses, who had not felt very well for several days. She was suffering from a commencing phlegmon on the right forearm. The limb was much swollen, red, and very tender to pressure. He applied pads of cotton-wool that had been soaked in carbolic acid to the arm, wrapped it up, and told the patient to go to bed. On returning to his room, Herr Haunhorst felt his fingers becoming numb, and began to suspect that the carbolic acid had been too strong. A few minutes later, he was summoned in haste to his patient. She had lost consciousness; threw herself about in bed; her face was flushed; the pupils were contracted; the pulse slow; she breathed with much difficulty. The dressing was immediately removed, and a fresh one applied, which had been soaked in a 3 per cent. solution of carbolic acid. In the course of an hour, the patient recovered consciousness, and told him that immediately after the dressing had been applied she had felt a violent pain in her arm, and lost consciousness. She complained of fatigue and frontal headache. No urine could be obtained. The corrosive effect of the acid showed itself on the arm in several circumscribed white spots, beneath which the skin was exposed. The arm was healed in a fortnight, and the phlegmon had not broken out. The mischief had been caused by a mistake of the druggist, who had dispensed a 15 per cent. solution, instead of a 3 per cent. one.

SANITARY NEGLECT AT WALTHAM NEW TOWN.

ATTENTION has again been directed to the unwholesome state of Waltham New Town, which is chiefly inhabited by workmen employed at the Royal Small Arms Factory. Colonel Hay, R.A., the Superintendent of the Waltham Abbey Gunpowder Factories, has taken up the case on the men's behalf, and has endeavoured, by putting pressure on the Local Government Board, to compel the Local Board of Cheshunt, in whose district the place is, to do their duty. So long ago as 1875, the district was inspected by one of the Government Medical Inspectors, but nothing seems to have been done to carry out his recommendations. From a recent report by the Medical Officer of the Gunpowder Factory, it appears that at the date of his visit many of the cesspools, with which Waltham New Town is riddled, were overflowing into the gardens, and that all of them were very offensive. The soil is so porous that the contents of the cesspools rise and fall with the water in the river Lea, and the consequence is that the wells are useless, and the water dangerous to use for drinking purposes. The Local Board seem determined to evade the evident necessity for proper drainage, and the only step they have taken is the perfectly futile one of sending notice to each occupier to empty his cesspool. Nothing but thoroughly and efficiently draining the place will be of the least benefit; and the longer such a remedy is put off the greater risk there is to the health and lives of the families who are compelled to live there. We would recommend the complainants to make a formal representation of the authority's default to the Local Government Board, so that an inquiry may be held under Section 299 of the Public Health Act.

PRIZES OF THE FRENCH ACADEMY OF MEDICINE FOR 1880.

THE prizes offered are: the Academy prize, of the value of 1,000 *francs* (£40), for the best essay on the Influence of Diseases of the Heart on Diseases of the Liver, and *vice versâ;* Baron Portal's prize, of the value of 1,200 *francs* (£48), for the best essay on the Pathological Anatomy of Articular Cartilages; Madame de Civrieux's prize of 1,500 *francs* (£60) on the part played by the Nervous System in Heart-Diseases; the Capuron prize, of the value of 1,500 *francs*, for the best essay on the Influence of Coxo-femoral Dislocation on the Conformation of the Pelvis; the Barbier prize, of the value of 7,000 *francs*, on a subject not yet announced; the Godard prize, of the value of 1,500 *francs*, for the best memoir on Internal Pathology; the Desportes prize, of the value of 2,000 *francs*, for the best memoir on Practical Medical Therapeutics; the Burguet annual prize, of the value of 1,500 *francs*, for the best essay, either printed or in manuscript, on the Application of Physics or Chemistry to Medical Science; the Orfila prize, of the value of 2,000 *francs*, on Veratrine, Sabadilline, and Black Hellebore; the Falret prize, of the value of 1,500 *francs*, on the form of Madness known as *folie circulaire*, *folie à double forme*, and *folie à formes alternes;* the Huguier prize, of the value of 2,000 *francs*, on the best unpublished or printed essay on the Diseases of Women, more especially on the surgical treatment of those affections, excluding those peculiar to lying-in; the Jäger prize, of the value of 1,500 *francs*, to the experimenter who shall produce a thyroid tumour by the administration to animals of substances extracted from the water or soil of countries where goître is endemic; the prize of 1,000 *francs*, offered by the Commission on Infantile Hygiene, on Weaning and its comparative study in the different regions of France; and the Monbinne prize of 1,500 *francs*, intended to supplement missions of surgical, medical, or veterinary interest.

MORTALITY FROM INTEMPERANCE.

DR. NORMAN KERR has been further investigating this subject, and he stated last week at Manchester that his estimate had been arrived at by applying the results of his own medical experience to the total number of medical men in the kingdom. The medical profession had been supposed to number 16,000, and on this hypothesis his former estimate was based; but, having since had occasion to communicate with every member of the profession, he found the actual number of practitioners, exclusive of the army and navy, to be 18,090. The original computation, then, that 120,000 persons died every year in Great Britain and Ireland from intemperance—40,500 dying from their own excess, and 79,500 dying from the indirect consequences of the excess of others—was far under the truth, as had been from the first contended by Dr. Hardwicke and many competent observers. Dr. Kerr reviewed the fortieth report of the Registrar-General with reference to deaths from alcoholism, and suggested that the Social Science Association should ask confidential returns from 500 medical men in different parts of the country, with the view of arriving at approximation to the truth. It was significant that gout was more fatal now than it was ten years ago; and that Italy, a most temperate nation, had only 240 per 1,000,000 of violent deaths, while England, an intemperate nation, had no fewer than 757 per 1,000,000. Dr. Hardwicke, in commenting upon Dr. Kerr's results, expressed the opinion that this subject was of paramount importance, seeing that the last estimate of the mortality from this cause was put down at from 50,000 to 60,000 *per annum*. From his own observation, he believed it ranged at 100,000 at least. He thought that perhaps no one living had seen so much of it as he had. He noticed that this question had been systematically ignored as a cause of the high rate of mortality. by medical officers of health and medical gentlemen generally throughout the country. His firm belief was that nearly 100,000 lives were destroyed by alcoholic excesses in this country annually.

ALCOHOLIC POISONING.

DR. HARDWICKE read at Manchester a paper by Mr. James Whyte, in the course of which the writer said that it was not settled that all doses under a certain quantity were harmless; but it was quite settled

that all doses above a certain quantity were injurious, were poisonous. The outside quantities that might be taken in twenty-four hours were one ounce and a half by a healthy man, and three-quarters of an ounce by a woman; and feebler people, who were very numerous, must take less, so the average dose might be reduced to one ounce each. The question arose how much was consumed, and what was the number of consumers. The quantities of liquor consumed and their proportions of alcohol were known. Calculations (worked out by the author) gave three and a quarter gallons of alcohol per year per head of the population. Out of 25,000,000 in England, 10,000,000 might be classed as non-consumers, reckoning abstainers and children. Consumers were divisible into sections, some consuming less than their share and others more; but the proportion of alcohol was over two ounces and a quarter for every consumer in 14,000,000; and as many drank less, others drank more, up to six, seven, and ten ounces a day. The conclusion was, that it was impossible to doubt that much more than half of the alcoholic liquor consumed in this country was consumed in poisonous doses. Sir W. Gull told the Lords' Committee that alcohol was the most destructive agent in the country, and that people were dying, day by day, poisoned by it, but not supposed to be. This probably referred to what went on among the upper classes. But what was the condition of the lower classes? Dr. Parkes and Dr. Burdon Sanderson, in their reports on the condition of Liverpool, questioned whether twenty per cent. of the labouring class in certain districts of that town were living lives of ordinary restraint and decency. Men earning twenty-seven shillings a week were spending twenty-one shillings in drink, while sober people were living comfortably on less. In Glasgow, on a Saturday night, Dr. J. C. Bucknill saw, with amazement and horror, a drunken population, drink-shops and lodging-houses teeming with drunken men and women, and even children, police-cells occupied by comatose drunkards, and the police-surgeons attending to drunken accident cases, while the police took no heed of the drunkard who was quiet and could keep on his legs.

SCOTLAND.

SURGEONS' HALL, EDINBURGH.

At a meeting of the Lecturers of the School of Medicine, Surgeons' Hall, Edinburgh, held last week, Dr. Affleck, Assistant-Physician to the Royal Infirmary, was elected unanimously to the Lectureship in the Practice of Physic, vacant by the resignation of Dr. Muirhead. At the same time, Dr. J. B. Buist was unanimously elected Lecturer on Pathology, in place of Dr. Wyllie, resigned.

GLASGOW MATERNITY HOSPITAL.

At a meeting of the contributors to the Glasgow Maternity Hospital, held on Oct. 9th, it was resolved to erect a new hospital on the site of the present building in Rotten Row and North Portland Street. The new hospital is expected to cost about £6,000, of which a nucleus of about £3,000 is at present available.

ARSENIC IN PLAYING-CARDS.

Dr. William Wallace, Analyst to the City of Glasgow, has written a letter to one of the daily journals, in which he draws attention to the subject of the presence of arsenic in playing-cards. He states that he happened to play recently with a pack of green-backed cards, and it occurred to him that it would be interesting to examine the colouring matter. The result of the analysis made showed that each card contained 1.6 grains of arsenious acid and .91 grain of oxide of copper, or, in a whole pack, 83 grains of arsenious acid and 47 grains of oxide of copper. The green colouring matter (arsenite of copper) was confined to the backs of the cards; but, when it is considered that the pack contains nearly one-fifth of an ounce of arsenious acid, Dr. Wallace thinks the practice of using this dangerous colour cannot be regarded with indifference, and that it is well the public should be informed of the matter, so that they may be on their guard.

THE PAISLEY FEVER HOSPITAL.

At a special meeting of the Sanitary Committee of the Parochial Board of Paisley, held on the 9th instant, it was agreed to reconsider the question of erecting a fever hospital on the site resolved on some time ago; and it was further decided that it be remitted to the joint committees to select a site outside the parliamentary boundary of Paisley for the erection of the hospital. Dr. Littlejohn of Edinburgh has been requested to visit Paisley and report on a suitable site.

HEALTH OF GLASGOW.

The mortality of Glasgow for the week ending the 11th instant was at the rate of 18 per 1,000 of the population. For the corresponding week of last year, the rate was the same. The rate was only 16 the week previous. From the medical officer's report just issued, it seems that scarlet fever has not spread much in the aggregate during the past fortnight, though it is now diffused pretty uniformly throughout the city.

EDINBURGH ROYAL INFIRMARY.

The financial year of Edinburgh Infirmary having just terminated, it is found that (exclusive of donations to the "furnishing fund" of the new infirmary) the amount derived from donations and legacies amounts to £9,352 2s. 10d. In this amount are included three sums of £1,000 each, one of £500, one of £454, one of £783, one of £391, one of £370, and various others down to £50.

LECTURES TO WOMEN, ABERDEEN.

A course of lectures to ladies is being delivered by Dr. Stephenson, Professor of Midwifery, University of Aberdeen, in the Music Hall buildings, Aberdeen. The first lecture was on Aids to Bruises and the Nursing of the Sick.

PATHOLOGICAL LABORATORY, GLASGOW INFIRMARY.

We observe, from a note in the *Glasgow Medical Journal*, that the pathological department of the Western Infirmary has been started with a well-designed laboratory, under the charge of Dr. Newman; but under conditions arising from want of funds. It appears that the funds of this, as of many other public institutions in Glasgow, are languishing under the influence of general commercial depression and recent disasters; and that the managers of the Infirmary have not seen their way towards making any contribution to the expenses of the Pathological Laboratory. We think this is much to be regretted in the public interest. It is perfectly obvious to any one who has considered the subject, that a main public purpose of institutions such as this is not limited to the immediate relief of the sick person under treatment, but also extends to the gathering of such knowledge from the study of his case, and from the carrying out of such investigations suggested by the conditions observed, as shall issue in the thorough comprehension of the conditions of the disease in the patient, of its causation; and, by these researches, ensure a further progress towards the comprehension of the subject at large, and the application of that knowledge to cases which are in future to be received. In other words, the duty of a hospital or of an institution must be considered to be, as far as possible, to make progress in knowledge, as well as to apply existing knowledge; and no public hospital or institution can be considered to fulfil its duty, unless a large regard be had to the utilisation of the opportunities which its wards afford for the furtherance of medical progress, and the gathering of such new knowledge as shall conduce to such improvements in the basis of medical science and in its applications to healing. Hence a pathological laboratory ought to be regarded as much a part of any hospital as the sick ward itself; and we cannot but think that the managers of such an institution take an incomplete view of their responsibilities, if they omit to provide for the one as well as the other. In the present state of medical science, pathological research, especially of the chemical and histological kind, is the very basis of knowledge, and very often affords the keystone of the fabric of new views in therapeutics. It is sufficient to point at a recent example of the admirable work which is issued from the Pathological Laboratory of the Salpêtrière in Paris, which has rendered at least as great services to medical science as have the observations in

its wards. It is much to be regretted that the munificent patrons of public charities, and philanthropists desirous of furthering the public good, are not more frequently influenced to contribute their funds to such objects as these. The endowment of pathological laboratories, at this and other hospitals, would probably do more for the service of suffering humanity, and render much more permanent and fruitful aid, than the endowment of new hospitals. Medical men, who have from time to time the opportunity of directing the benevolence of their clients, might well bear in mind the urgent necessity which exists at the present moment for increasing the facilities for truly scientific research in connection with our hospitals and public institutions. England is far behind any of the continental countries in the endowment of research; and, of all research, pathological investigation must be admitted to be that which is the least open to any sort of remarkable objection, and the most likely to yield immediately fruitful results in beneficent knowledge.

HEALTH OF THE PRINCIPAL TOWNS IN SCOTLAND.

ACCORDING to the monthly report of the health of the eight chief towns in Scotland, issued by the Registrar-General for September, there were 1,788 deaths, of which 932 were males and 856 females. This is the smallest number of deaths during any September for ten years, and is 506 under the average. The mortality in the different towns was, per 1,000: Aberdeen and Greenock 16; Glasgow, Edinburgh, and Dundee 17; Perth 18; Leith 19; Paisley 20. Of the total deaths, 39.8 per cent. were of children under five years of age; the lowest percentage in Perth being 27 and in Greenock the highest 45. Zymotic diseases caused 285 deaths, or 15.9 per cent.; in Paisley, this rate was considerably exceeded. Of 35 deaths from fever, 9 were typhus, 21 enteric, and 5 from simple continued fever. Diarrhœa was the most destructive of the epidemics, having caused 88 deaths, equal to 4.9 per cent.; in Leith the percentage of deaths from diarrhœa was 8.1. Whooping-cough caused 48, scarlatina 36, croup 24, diphtheria 13, measles 5, dysentery 4, and metria 2 deaths, while 9 deaths were ascribed to cholera. There were 43 deaths from the debility of premature birth, 106 from diseases of the nervous system (including apoplexy), 101 from cardiac disease, and 72 from hydrocephalus. Pulmonary consumption caused 12.9 per cent., and inflammatory affections of the respiratory organs (other than croup, phthisis, and whooping-cough) 14.9 per cent. of the deaths. Of 71 deaths from violent causes, two were due to suicide. One male and two females were over ninety years of age. During the month, the births of 3,590 were registered, of whom 1,826 were males and 1,764 females. The illegitimate births constituted 8.4 per cent. of the whole. The mean barometer pressure was less by .006; the mean temperature less by 1.1°; the mean humidity less by 2, the rainfall less by .01 inch; and the wind pressure less by 29 lbs. in square feet, than the average of the same month during the last twenty-two years.

IRELAND.

THE annual collection for the Dublin Hospital Sunday Fund will be made this year on Sunday, the 9th November.

QUEEN'S UNIVERSITY IN IRELAND.

THE election of two representatives of Convocation on the Senate of the Queen's University, in the room of the late Sir Richard Griffith and Sir Thomas Larcom, took place on Friday, the 10th instant. The first vacancy took place about a year ago; and Dr. McKeown of Belfast and Dr. Thornley Stoker of Dublin were the candidates for the vacant seat. Recently, the second vacancy took place; and for that seat there was only one candidate, viz., Mr. Wilson of London, Barrister-at-Law. The voting was as follows: Mr. Wilson, 247: Dr. McKeown, 183; Dr. Stoker, 82. Mr. Wilson and Dr. McKeown were declared duly elected. Although the medical graduates number about one-half of the graduates of the University, and the medical faculty is by far the most important, Dr. McKeown is the only medical representative on the Senate, whilst four seats are filled by lawyers.

SURGEON-MAJOR REYNOLDS, V.C.

THE President and Council of the Royal College of Surgeons in Ireland intend entertaining this distinguished and gallant Irish member of the profession at dinner in the Albert Hall of the College, on the 1st November.

THE NEW VACCINATION ACT.

AT the quarterly meeting of the Council of the Irish Medical Association, held at the Royal College of Surgeons of Ireland on Tuesday, September 30th, the following resolution was unanimously adopted:

"That the Council of the Irish Medical Association, in acknowledgment of the able and valuable services rendered in Parliament by Mr. Charles H. Meldon, M.P., to the public and to the medical profession, with regard to the recent amendment of the vaccination laws of Ireland, hereby desire to express the deep sense of their gratitude to him; and to record their opinion that, owing in a great measure to his great tact, energy, and ability, a marked improvement has been effected in the law, by the passing of the Vaccination Amendment (Ireland) Act, 1879, the provisions of which must prove very beneficial to the public interests. The Council at the same time desire to express their well considered and decided opinion that, until the provisions of the law now in force in England are fully extended to Ireland, it is futile to suppose that equal satisfactory results as regards protection of the public from small-pox, or mitigation of that disease and its dread consequences, can possibly be realised in Ireland. The Council, therefore, beg most earnestly to urge upon Mr. Meldon the advisability of continuing his able and active exertions to obtain for the public of Ireland the fullest provisions for their protection, not the least essential or important in effect of which is the extension to Ireland of the system of awards and inspection now in force in England; whereby not only would justice be extended to the Irish public vaccinators, but most beneficial results would accrue to the community of Ireland, of which they are as much in need, and to which they are as well entitled, as the people of England."

THE QUEEN'S UNIVERSITY AND THE ASSOCIATION.

AT a meeting of the Senate of the Queen's University in Ireland, held in St. Patrick's Hall, Dublin Castle, on Wednesday last, the degree of M.D. *honoris causâ* was conferred by the Chancellor of the University, His Grace the Duke of Leinster, on Dr. Denis Charles O'Connor, President of the British Medical Association; and, *in absentiâ*, on Dr. Randle Wilbraham Falconer, ex-President of the Association, in recognition of the late annual meeting of the Association in Cork, one of the University's College towns. The honorary degree of Master in Surgery was also conferred on the same occasion on Mr. William Mac Cormac of St. Thomas's Hospital, and a distinguished *alumnus* of the Queen's University, in recognition of his services as chief of the Anglo-American Ambulance during the Franco-Prussian War, and of his eminence in his profession.

PROFESSOR MACALISTER, M.D.

AT a meeting of the Provost and senior Fellows of Trinity College, held on Tuesday last—the members of the Board having been duly sworn, according to the School of Physic Act, by the President of the King and Queen's College of Physicians—the above named gentleman was elected Professor of Physiology and Surgery in the University of Dublin.

THE ADELAIDE HOSPITAL.

HIS Grace the Duke of Abercorn, K.G., President of this hospital, opened the recently completed new "Madeline" wing for the reception of patients on Tuesday last. There was a large and distinguished attendance of the friends and supporters of the hospital present, including the Right Hon. the Chancellor of the Exchequer and the Attorney-General for England. The new wing has been erected at a cost of £14,000, and has been named after the late Lady Madeline Crichton, whose husband has contributed a large sum of money for the purpose. The floors of the wards in the new wing (which also includes a commodious operation theatre) are of teak, and the walls are of Parian cement. The sanitary and heating arrangements appear to be satisfactory.

DEARTH OF ARMY MEDICAL OFFICERS IN INDIA.

THE reports which reach us from Afghanistan state that the paucity of medical officers with the armies moving towards Cabul is a source of serious inconvenience. The greatest difficulty is experienced in meeting the demands for medical assistance at the various hospitals which have to be established along the lines of communication between the troops and the several bases of the military operations. Not only every medical officer that could be spared from Bengal has been sent forward for service at the seat of war, but as many as could be got have been borrowed from the establishments of the Madras and Bombay Presidencies. It is certain that very little help can be afforded from the diminished Army Medical Department in England.

THE ENTRIES AT THE MEDICAL SCHOOLS.

BY the courtesy of the Deans and Secretaries of the London and Provincial Medical Schools, we are enabled to publish the following list of students entered at the various medical schools. A refers to students entered for the full curriculum; B signifies the number of students entered for partial courses of lectures or hospital practice; C refers to dental students.

Schools.	A.	B.	C.
St. Bartholomew's	134	20	2
Charing Cross	38	—	0
St. George's	46	5	0
Guy's	103	12	0
King's College	59	—	0
London	106	—	0
St. Mary's	27*	4	0
Middlesex	38	5	13
St. Thomas's	55	32	0
University College	91	39	0
Westminster	23	8	0
Bristol	17	1	0
Leeds	29	14	0
Liverpool	27	4	1
University of Durham, Newcastle	51	27	0

VIVISECTION.

THE following letter has been addressed by Canon Duckworth to the Honorary Secretary of the Society for the Total Abolition and Utter Suppression of Vivisection.

"77, Hamilton Terrace, N.W., October 13th, 1879.

"Sir,—In the *Echo* of October 8th, a copy of which has been sent to me, I see that the remarks on the agitation of the 'Society for the Total Abolition and Utter Suppression of Vivisection' which I addressed to the Staff and Students of Westminster Hospital on the 1st October are embodied by the Society in one of its advertisements, accompanied by abusive comments. This was no more than I expected when I found that my words had been reported beyond the walls of the hospital. It was not likely that the intolerant body which you represent would let off a clergyman who expressed in public strong disapproval of its objects. The chance was not to be lost of appealing from the competent minority to that large and ill-instructed section of society which regards a minister of religion as bound *ex-officio* to take up with every crotchet of a shrieking sentimentalism.

I claim to feel as deep an abhorrence of cruelty as any man. My calling, which brings me into incessant contact with suffering, binds me to minister to it. It does not occur to you that a minister of religion may differ from you and yet be humane; still less that he may possibly have a farther-sighted regard for the interests of humanity. You choose, for your own purposes, to assume and to publish that I am ignorant of the subject on which I spoke. As a matter of fact, I question whether many persons outside the medical profession have taken greater pains to arrive at a rational opinion. I have had abundant opportunity, through long intercourse with distinguished physicians and men of science, of ascertaining the views of the most enlightened workers in the domain of physiology, and I have had at least equal opportunity of hearing the views which your Society propagates. I have been pelted with sensational pamphlets, pictures, and petitions, and my conclusion is that to which I gave utterance on the 1st October, viz., that the safeguards which now exist are amply sufficient to protect the lower animals from wanton torture at the hands of vivisectors, and that the agitation which your Society persists in carrying on is mischievous and unjust. If I spoke strongly, it was because I felt strongly: it was because I was eager to vindicate a noble profession which is being unfairly attacked, and to prevent the imposition of tighter fetters upon scientific research.

If my words can promote ever so humbly those worthy ends, I am quite willing to be gibbeted in foolish advertisements.—I am, sir, your obedient servant, R. DUCKWORTH, D.D.

"G. R. Jesse, Esq."

* First year's students.

ROYAL COLLEGE OF SURGEONS.

AT the Council Meeting, on Thursday, October 16th, the two following clauses of Mr. Hancock's motion were passed, subject to confirmation: 1. The necessary arrangements to be made for the institution of Examinations in Chemistry, Materia Medica, Pharmacy, and Midwifery, to be passed by all candidates (not otherwise qualified in these subjects) for the Membership and Fellowship of the College; 2. To advise the College as to degrees, diplomas, or certificates which should be accepted as exempting candidates from the necessity of passing the examinations in these subjects. Mr. Simon's motion, that the rule which restricts the appointment of Examiners in Anatomy and Physiology to Fellows of the College be rescinded, was rejected.

SURGEON-MAJOR REYNOLDS, V.C.

AT the meeting of the Committee of Council of the British Medical Association on Wednesday last, the President of the Council, Dr. Alfred Carpenter, being in the chair, it was resolved, on the motion of Dr. Sieveking, that Surgeon-Major Reynolds, V.C., the gold medallist of the Association, be invited to a dinner to be given in his honour as soon as may be conveniently arranged; that any member of the Association who may wish to join in the demonstration have the privilege of being present; and that the President of the Council, with two other gentlemen to be selected by him, be empowered to make the necessary arrangements.

In consequence of this resolution, the President of the Council has nominated Dr. Sieveking and the President of the Metropolitan Counties Branch to act with him.

Members of the Association who may wish to be present, and who are also willing to act as stewards at the proposed dinner, are requested to forward their names at once to Mr. F. Fowke, the General Secretary, at 161A, Strand, so that some idea of the number likely to attend the demonstration may be ascertained.

DUBLIN ROYAL SANITARY COMMISSION.

LAST week we published a necessarily brief *résumé* of the evidence given during the first two days' sitting of the Commission.

Mr. BOYLE, secretary to the Public Health Committee of the corporation, stated that the total number of inhabited houses in Dublin was 23,380; ten being the average number of inhabitants to each house. Rather more than one-third of the 9,760 tenement-houses in Dublin were rated under £10. The average density of population over the area of the city was 65 per acre; but there were portions where the density reached 242 per acre. Over a considerable extent, the density was 154. The average number of inhabitants in tenement-houses was 13 or 14; but he had discovered one house which was occupied by 78 persons. In his opinion, the causes of the high death-rate in Dublin were the class of dwellings, the saturation of the soil upon which the houses stood with organic matter for a period of 150 or 200 years, the defective amount of air-spaces in many parts of the city, and the want of frequent scavenging in the narrow lanes and courts. He was satisfied that there were leprous houses in Dublin, for which the only remedy was entire removal. There was a tendency on the part of a large number of the population to spend on whiskey what they ought to spend on social comforts. 1,100 tenement-houses were owned by five persons. Mr. Boyle further stated that, since the passing of the Public Health (Ireland) Act, there was increased necessity for the appointment of a magistrate to adjudicate on sanitary cases, and that a memorial urging the Government to make such an appointment had been made on two occasions to them. The Corporation contemplated organising a staff for the domestic scavenging and cleansing of tenement-houses.

Dr. GRIMSHAW, Registrar-General for Ireland, was also examined. He stated that, according to the census of 1871, the population of the registration district was 314,666. The population within the municipal boundary was 246,326. The registered death-rate within the registration district for the subsequent ten years was 26.3 per 1,000. The actual death-rate was, however, a little higher. A clause in the new Public Health Act required the registrars of cemeteries to report deaths

to the Registrar-General, and the result of that had been to show that, during the preceding ten years, 9 per cent. of the deaths that occurred escaped registration. The returns for the first half of the present year had been checked by the cemetery returns. During the past five years, the average infant death-rate in Dublin had been 150 per 1,000, which was low compared with other places. He was inclined to say that a very small proportion of the excessive death-rate of Dublin was attributable to the state of the Liffey between the quay walls. His predecessor had taken the death-rate amongst the people living along the quay walls, and found it lower than elsewhere. But from that it did not follow that a foul river should be tolerated, or that a system of intercepting sewers would not benefit the health of the city. He believed the house-drainage of Dublin to be excessively bad, and was sure that, in a large proportion of cases, it had a very injurious effect on the public health. There was nothing that could be called a system of filth-removal in Dublin like that which existed in England. It was his impression that the Dublin death-rate, compared with that of London, was higher at the healthier ages and lower at the unhealthier ages. The death-rate from zymotic diseases in Dublin (between 5 and 6 per 1,000) was not inordinately high. The death-rate from diseases of the respiratory organs in Dublin during the last five years was 5.67 per 1,000. In London during the same period, it was 4.72. The death-rate from constitutional diseases was considered by sanitarians of high authority, including Dr. Farr, to be a better sanitary test than that from zymotic diseases. The death-rate from phthisis in Dublin was 3.02, in London 2.48, and from Ireland generally 1.9 per 1,000. In England generally it was 2.14. The causes of the high mortality in Dublin were, in his opinion, due to defects in ordinary sanitary arrangements, such as the removal of house-refuse and soil. The streets were not sufficiently scavenged, and another element was the system of allowing filth that had been removed to accumulate within the city. Many ashpit-cleaners had manure-yards where they mixed the various materials that they collected. The Corporation themselves had two or three of the biggest manure-yards in Dublin. Refuse was collected in the streets and brought to the depôts within the city, where it was sold to farmers. The arrangements for removing patients to hospital were very imperfect in Dublin. He, the Registrar-General, believed all these deficiencies were chiefly to be attributed to the difficulty of getting funds to pay for the remedying of the evils. Slaughter-houses also were scattered through the city, and the cowsheds and dairy-yards were very great nuisances. The mean rainfall in Dublin for the last ten years was 29.11. There had been rather an increase in the death-rate since the introduction of the Vartry water-supply to Dublin in 1867. One way in which the high-pressure water-supply might have operated to diminish health was that, immediately after it was brought in, numbers of water-closets were put up in houses without sufficient regard to the extent of drainage-accommodation that existed; and the result was that a great deal of water-closet refuse found its way to the basements of the houses. In conclusion, the Registrar-General said that, for the first half of the present year, the average death-rate in the city was 38.9 per 1,000.

Dr. CAMERON, Superintendent Medical Officer of Health for Dublin, gave evidence as to the sewage-contamination of the Liffey and its foreshores. He disagreed with Dr. Grimshaw in the opinion that the river did not exercise an injurious influence upon the health of the city generally. It was, he believed, an unsanitary factor. There was a well organised system of inspection of diseased animals in Dublin; but he was sorry to say that the flesh of cattle that had been condemned under the Order in Council was used in Dublin for human food. There were a number of dairy-yards and cow-houses, many of which were not as clean as they ought to be, in central portions of the city, instead of in the suburbs, as they should be. There were also numerous private slaughter-houses in the city. From a great number of these, blood and matter were discharged into the sewers. All such slaughter-houses should be compulsorily closed. He had come to the conclusion that the immense majority of the houses in Dublin were imperfectly sewered, and the sewers badly made. As a rule, water-closets were not properly trapped and ventilated. The main sewers were useless unless properly connected with good house-sewers. There were also ashpits which were too large and exposed to rain. Dr. Cameron thought the Vartry water perfectly pure and wholesome, even when it had some colour. There was no ground for charging any increase in the death-rate of the city to the use of the Vartry water. It contained about 4½ grains of solid matter for every 70,000 imperial gallons, 2½ of which consisted of peaty substance, and the rest chiefly of chloride of potassium. If it contained a little more lime than it did, it might be more palatable. The tenement-houses of Dublin were in a most deplorable state and overcrowded. He thought the municipality should provide accommodation for persons of the lowest classes. These individuals, who might be numbered by thousands, could not afford to pay the rents demanded for apartments in the industrial tenement dwellings. Referring to an opinion expressed by Dr. Cameron, that Dublin occupied a naturally unhealthy situation, the Chairman, Mr. Rawlinson, said he did not think site was a matter of much importance. A great portion of the south and west of London was built on ground that was originally a morass, and the surface of the ground was considerably below the water-line. He believed that a proper system of draining and surface-cleansing would make Dublin as wholesome a city as it was possible to have. At another period of the inquiry, Mr. Rawlinson remarked that, according to the opinion of the most eminent chemists of Europe, the purer the water supplied to the inhabitants of any city was the better, and to say that the Vartry water was impure or unwholesome, or that it was the cause of the excessive death-rate of Dublin, was to reverse the decision of all the most eminent men in Europe, and all the experience of the residents of Dublin. The causes of it were rather to be looked for in the state of the streets, lanes, and and tenement-houses.

Mr. FURLONG, on the part of the Dublin Sanitary Association, stated they made no reflection on the quality of the Vartry water. It was their honest belief, supported as it was by the evidence of very able men, that a better water-supply could not be had than that of the Vartry. The filtration of the water might be more perfect than it is; and, in order that the public might have full confidence in it, they had asked the City Engineer to have an analysis of the water published once a month, and he had undertaken to do so.

Several engineers gave evidence as to plans devised by them for dealing with the drainage of the city, which space does not permit us to report.

Mr. BURDETT, of the Greenwich Hospital, who made an admirable report of the state of the city in 1876 for the *Sanitary Record*, was also examined. The report that he then made was now handed in and taken as evidence, and supplemented, as the case required, by data derived from another inspection of the city during the past week. Mr. Burdett, on the whole, considered that there was some slight improvement in the sanitary condition of the city since his former inspection. He had scarcely sufficient information to state whether or not there was more poverty in Dublin in proportion to the population than in other places, but the number of tenement-houses was out of proportion to the total number of houses in Dublin. He would strongly suggest that Dublin should have a medical officer whose time was entirely devoted to the city. Experience, especially in connection with combined sanitary districts, had shown him the great advantage of this. He also suggested the total demolition of the tenement-houses, and the replacement of them by new buildings; and he would, in the third place, urge that the scavengers should be carefully inspected and overlooked.

Dr. MACCABE, one of the Commissioners, said the Corporation ought to feel obliged to Mr. Furlong and the Sanitary Association for bringing forward evidence to show the Commissioners and the public the real state of affairs, and thus prepare the citizens of Dublin for that increase of taxation which, whatever plan might be adopted, would certainly be necessary. Mr. Furlong said that some time ago the Public Health Committee of the Corporation adopted a tone in their reports that the causes of the high death-rate were quite evident, and that they were doing everything that was needed. He was glad to say that this tone had been changed.

Mr. F. W. PIM, one of the heads of a large mercantile firm in Dublin and an Honorary Secretary of the Dublin Sanitary Association, said he thought the improvement of the tenement-houses the most important, but at the same time the most difficult, sanitary measure to be carried out; the adequate scavenging of the city next; and after that the purification of the Liffey. The public scavenging was not what it ought to be, especially in the back streets. He (Mr. Pim) was aware that the Corporation had had in contemplation the construction of *abattoirs;* and he thought that perhaps one of the advantages of the present Commission would be that it will give them an additional stimulus to carry out a great many things that they have contemplated and talked about for a long time. He was aware that the Corporation had obtained additional powers, and that they were more stirred up about sanitary matters than they were some years ago.

Dr. J. W. MOORE said, in his evidence, that the climate of Dublin was very equable; and so far it exercised a beneficial influence on the public health. The drainage of private houses in Dublin, even of the best kind, was very deficient. He considered street scavenging also of great importance to the public health, especially in a city like Dublin, where the people did not see the mischief of throwing refuse in the street. A great deal of disease was spread by the sweating system—the making and keeping of clothes in tenement-houses. The arrangements for taking infectious cases to hospitals in Dublin he considered very inadequate. One of the most pressing wants was the establish-

ment of a convalescent home. There was great fear of infection being spread by convalescent cases being turned out of hospitals too soon, owing to the calls upon them by acute cases. He had noticed that epidemic diseases fell more heavily on Dublin than on other places, and lasted longer. He attributed this to dirt, and also to the fact that the population appeared very feeble in resisting disease.

Mr. DILLON, C.E., stated that the condition of the streets, tenement-houses, and house-drains was a more important factor in the high death-rate than the state of the river Liffey. Overcrowding of their houses and want of air had such a weakening effect on the labouring classes in the city, that they resorted to stimulants more extensively than they would if their houses were more comfortable. He was of opinion that the dirty habits and drunkenness of the people were chiefly due to overcrowding, and that it was one of the largest factors in the high death-rate.

Dr. JAMES LITTLE, Vice-President of the King and Queen's College of Physicians, said he was aware that the Dublin death-rate was excessive. The great cause of Dublin mortality was the extreme frequency with which ordinary catarrhal attacks, bronchitis after measles, and coughs and colds, were allowed to become chronic complaints. Another great cause was that ordinary rheumatic attacks were allowed, from want of a little care, to become severe and often to end in incurable heart-disease. Typhoid fever was unusually prevalent and unusually severe in Dublin. Epidemics spread in Dublin very widely and quickly. The great circumstance which tended to cause such an excessive mortality under the head of lung-diseases and heart-diseases was the want of any appreciation as to material comfort in food, clothing, and dwellings of the artisans' classes. The artisans were prepared to spend their money in drink before they provided themselves with the ordinary necessities of life, to an extent that did not prevail anywhere else. He believed the artisans could afford, on their present wages, to have a better class of houses than they had. The effect of drunkenness in increasing the death-rate was very excessive. The defective cleansing of the streets in Dublin was awful. He had known typhoid fever to arise from defective house-drainage. When an epidemic appeared in Dublin, really vigorous measures could stamp it out. It could only be coped with at the beginning.

Dr. HEAD, President of the College of Physicians, gave evidence confirmatory of that of Dr. Little as regards the causes of the high death-rate. In Dublin, there was a lower resisting power to the action of disease than in the country. He had observed an increase of enteric fever lately. He attributed the increase of enteric fever to the practice of putting water-closets in houses not properly drained, and also to the position in the house in which the water-closet was put.

The Rev. Dr. HAUGHTON was also examined. He entirely concurred in the evidence given about the tenements of Dublin being the great cause of disease. He also concurred in the evidence about street and house scavenging, and he agreed in the small influence of the Liffey on the death-rate. In Trinity College, when they gave up using pump water, the water rose in the lower storeys, and they had to erect a pumping station at a cost of £300 a year; and that was one of the unexpected consequences of using the Vartry water. He did not suppose their poor people were better or worse than poor people elsewhere, but their surroundings had been so disadvantageous as to produce bad habits. A large amount of their poverty and low condition in health was due to excessive whiskey drinking. Another cause of disease was "waking". So was also the keeping of animals in yards, and allowing the manure to accumulate. He knew it to be a practice to let empty stables as tenements. Dublin was, as he had stated on another occasion, unfavourably situated geologically; but he did not mean to say it could not be improved in a sanitary condition. The boulder clay of Dublin was impervious to water, and therefore it naturally kept up a damp soil under the houses; that was *primâ facie* a disadvantage to Dublin. Another disadvantage of their geological position was the impossibility of getting macadamised stones for their streets; no matter how well they macadamised the streets, they never could get rid of the mud which made their streets so bad. He considered the emanations from the Liffey an infinitesimally small factor in the death-rate of the city.

Mr. TICHBORNE, President of the Pharmaceutical Society and Lecturer on Chemistry in the Carmichael College of Medicine, gave evidence as to the condition of stable lanes in the city, which he considered most fruitful sources of atmospheric and other contamination. These lanes frequently consisted of half stables and half tenement-houses densely crowded. They abounded all over the city, and he had personal experience of the general characteristics, for there was one immediately behind his private residence. Witness described their condition, and suggested that they should be properly drained, and subject to proper control.

PRIZES IN THE MEDICAL SCHOOLS.

THE following are lists of the successful candidates for prizes in the various Schools during the Session 1878-79.

ST. BARTHOLOMEW'S HOSPITAL.—Lawrence Scholarship and Gold Medal, T. Kirsopp; Brackenbury Medical Scholarship, C. P. Lukis; Brackenbury Surgical Scholarship, H. W. T. Mudge; Senior Scholarship in Anatomy, Physiology, and Chemistry, D. D. Day; Open Scholarships in Science, A. J. Anderson and J. Berry; Preliminary Scientific Exhibition, J. R. Forrest and A. Hill (equal); Jeaffreson Exhibition, A. Shadwell; Kirkes Gold Medal, G. Barling and W. T. Wyatt (equal); Bentley Prize, Henry Smith; Hichens Prize, R. Jones; Wix Prize, R. Jones; Practical Anatomy, Senior: Foster Prize, C. L. H. Tripp; 2. F. J. Short; 3. W. A. Hoyle; 4. C. A. Morton; 5. A. C. Roper; 6. E. G. Colville and A. T. G. Heath (equal); F. W. Alexander, J. W. Field, and C. A. James (equal); Practical Anatomy, Junior: Treasurer's Prize, J. Berry; 2. F. F. Walker; 3. C. J. Stansby; 4. A. S. Nance; 5. H. Rayner; 6. A. W. Wheatley; 7. R. W. Jalland; 8. J. Payne.

CHARING CROSS HOSPITAL.—Llewellyn Scholarship, James Turton. Golding Scholarship, C. W. G. Burrows. Governors' Clinical Gold Medal, James Turton. Pereira Prize, J. C. Culling. Anatomy, Senior: Silver Medal, E. E. Newnham; Certificates, C. W. G. Burrows, H. Harris, and J. F. Williams. Anatomy, Junior: Bronze Medal, W. J. Haddock; Certificates, S. Wyborn and H. R. Hancock. Physiology, Senior: Silver Medal, C. W. G. Burrows; Certificates, J. Smjth, J. F. Williams, T. H. Pounds. Physiology, Junior: Bronze Medal, J. T. Tibbles; Certificate, Geo. Locke. Chemistry: Silver Medal, W. B. C. Treasure; Certificates, J. S. Tibbles and Geo. Locke. Medicine, Senior: Silver Medal, J. C. Culling; Certificates, J. Turton and C. G. Bunn. Medicine, Junior: Bronze Medal, C. Rout; Certificate, A. Honman. Surgery, Senior: Silver Medal, James Turton; Certificate, R. W. Branthwaite. Surgery, Junior: Bronze Medal, C. W. G. Burrows; Certificate, J. S. Reynolds. Botany: Silver Medal, H. R. Mosse; Certificate, — Koettlitz. Materia Medica: Silver Medal, C. Rout; Certificate, C. W. G. Burrows. Midwifery: Silver Medal, James Turton. Forensic Medicine: Silver Medal, J. F. Williams; Certificates, M. Pittard, J. Smith, and J. Cotman. Pathology: Silver Medal, M. Pittard; Certificates, J. F. Williams and W. J. Clarke. Practical Chemistry: Silver Medal, T. E. Rogers; Certificates, C. R. Lyster, C. W. G. Burrows, and H. R. Mosse. Comparative Anatomy: Certificate, E. Wooton.

ST. GEORGE'S HOSPITAL.—William Brown £100 Exhibition (held by) G. R. Turner; William Brown £40 Exhibition, A. M. Sheild; Brackenbury Prize in Medicine, T. V. Dickinson; Brackenbury Prize in Surgery, A. M. Sheild; Sir Charles Clarke's Prize, F. Dale; Brodie Prize in Surgery, A. M. Sheild; The Henry Charles Johnson Prize, O. Giles; The Treasurer's Prize, T. V. Dickinson; The Thompson Medal, E. C. Fisher.

GUY'S HOSPITAL.—Treasurer's Gold Medal for Medicine, Harold E. B. Flanagan; Treasurer's Gold Medal for Surgery, James Thomas Jackman Morrison; Gurney Hoare Prize, Chas. Wood. Third Year's Students (equal), Geo. Ryding Marsh (£27 10s.); John William Sanders (£27 10s.); Certificate, Edwin A. Starling. Second Year's Students—Joseph Hoare Prizes—First Prize, £25, Edwin Leonard Adeney; Second Prize, £10, John Alfred Parry Price; Certificates, Edward Hargrave Booth, Walter Chester Dendy, Robert Howell Perks, Lockhart E. W. Stephens. Michael Harris Prize, John Alfred Parry Price. First Year's Students, First Prize, £50, Edwin James Wenyon; Second Prize, £25 (presented by one of the Governors), Louis Albert Dunn; Third Prize, £10 10s., Walter Thomas Harris; Certificates, Sidney Worthington, Holland Hodgson Wright, Alfred C. E. Woodhouse, Walter T. F. Davies.

KING'S COLLEGE.—Scholars: Norman Dalton, Senior; Edgar March Crookshank, Second Year. Robert Garner Lynam, Alfred Mason Vann; (equal), Harry Lord Richards Dent and Lewis Archer Buck, Warneford, Class 1. Sydney Sargent Merrifield and John Edward Perkins (equal), Science (Clothworkers' Company). Albert Ernest Menké, Daniell. *Winter Session.*—Jelf Medal, Denis McDonnell, Medallist; Warneford Endowment, William John Penny, Prize. Divinity, Robert Garner Lynam, Gerald George Hodgson, Harry Lord Richards Dent, First Year; Sidney Ernest Craddock and St. Clair Thomson, Second Year, Prizes. Anatomy, Edwin Hermus Holthouse, Prize; George Leonard Webster, Frederick Harvey Norvill, and Simpson Powell, Certificates. Physiology, William Thomas Maddison, Prize; St. Clair Thomson, and John Arthur West, Certificates. Chemistry, Alfred Mason Vann, Prize; William Thomas Maddison, James Trelawny Cheves, and Arthur Rea Edwards, Certificates. Medicine, Denis McDonnell, Prize; Hibbert Sullivan Parker, Frederick Theodore Hebb, Certificates. Clinical Medicine, Hibbert Sullivan Parker, Prize. Surgery, Septimus Farmer, Prize; Hibbert Sullivan Parker, Chas. Henry Whitcombe, and Alex. Symonds Kenny, Certificates. Clinical Medicine (Prof. Wood), John Phillips, Prize; Chas. Henry Whitcombe, Certificate. Clinical Surgery (Prof. Lister). Denis McDonnell, Prize; Richard Pratt Bond and Arthur Lofthouse, Certificate. Zoology and Comparative Anatomy, Sydney Sargent Merrifield, Prize; Gerald Geo. Hodgson, Certificate. *Summer Session.*—1879. Junior Scholars: Walter Tyrrell Brooks, First, Guy David Porter, Second, and Robert Garner Lynam, Third. Practical Physiology, H. R. Beevor, Prize; Joseph Pollard and H. L. R. Dent, Certificates. Practical Chemistry, H. L. Dent, Prize; J. W. G. Kealy and R. H. Botham, Certificates. Botany, Alfred Mason Vann, Prize; Harry L. R. Dent, First Certificate; J. H. Gwillim, and T. S. Short (equal), Certificates. Tanner Prize, Septimus Farmer. Todd Clinical Prize, H. S. Parker. Pathological Anatomy, F. W. Kendle, Prize; Practical Biology, G. G. Hodgson and Alfred Mason Vann (equal), Prize; T. S. Short and H. L. R. Dent, Certificates. Forensic Medicine, Simpson Powell and J. A. West (equal), Prize; Samuel Rabbetu, Certificate. Obstetric Medicine, Bertram H. S. Stivens, Prize; J. A. West and J. W. G. Kealy, Certificate. Materia Medica, Simpson Powell, Prize; Walter T. Brooks, Certificate. Medical Clinical, W. Collier, Prizes.

LONDON HOSPITAL—Medical Scholarship (£20), J. Hutchinson; Honorary Certificate, E. English. Surgical Scholarship (£20), Fenton Jones; Honorary Certificate, F. G. Stonham. Obstetric Scholarship (£20), W. J. Pook. Scholarship in Human Anatomy (£20), R. F. Fox and William Coates (equal); Honorary Certificate, Geo. Adkins. Scholarship in Anatomy, Physiology, and Chemistry (£25), D. P. Harris; Honorary Certificate, W. F. East. Duckworth Nelson Prize (£10), Fenton Jones. Out-patient Dresser Prizes—£15, T. H. Openshaw and W. E. Price; £10, E. T.

Green and A. A. Lipscomb; £5, J. M. Carvell and R. H. Cowan. Entrance Science Scholarships, £60, R. F. Fox: £40, C. E. Brunton. Buxton Scholarship, £30, F. Taylor: £20, F. H. Kenny.

ST. MARY'S HOSPITAL.—1878. Open Scholarship in Natural Science, P. P. Whitcombe. 1878-79. Scholarship in Pathology, R. H. Lovell and J. E. Lane; Scholarship in Anatomy, W. Pearce; Prosectors, T. B. F. Eminson and J. Hern. *Summer Session*, 1878. First Year, Materia Medica, Prize, T. B. F. Eminson; Certificates, F. H. Butler, H. Stott, and J. Hern. Botany, Prize, F. H. Butler; Certificates, T. B. F. Eminson (equal, but disqualified for Prize), J. Hern (with special mention), H. Stott, W. R. Tytheridge, and R. P. Griffin. Practical Chemistry, Prize, J. Hern; Certificates, T. B. F. Eminson, F. H. Butler (first in Examination, but disqualified for Prize), and L. Déquè. Second Year, Midwifery, Prize, W. A. Smith; Certificates, R. N. Hormazdji, C. G. Havell, H. F. Parsons, and K. W. Millican. Medical Jurisprudence, Prize, R. N. Hormazdji; Certificates, W. A. Smith and J. Tucker. *Winter Session*, 1878-79. First Year, Anatomy and Histology, Prize, J. R. Cater; Certificates, A. H. Willoughby, P. P. Whitcombe, and W. F. Webster. Chemistry, Prize, J. H. Spitzly; Certificates, P. P. Whitcombe (first in Examination, but disqualified for Prize as Scholar in Natural Science). Second Year, Anatomy and Physiology, Prize, F. J. Ingoldby; Certificates, T. B. F. Eminson, J. Jackson, R. R. Hardwicke, J. Hern, and W. Steer. Third Year, Medicine, Prize, W. A. Smith; Certificates, C. G. Havell and J. Tucker (equal), J. P. B. Wills, K. W. Millican, and H. B. Runnalls. Surgery, Prizes, F. W. E. Hare and C. G. Havell; Certificates, H. F. Parsons and J. Tucker. Operative Surgery, Prize, F. W. E. Hare; Certificates, J. P. B. Wills, H. G. Hill, and H. F. Parsons. Pathology, Prize, C. G. Havell; Certificates, A. Benson, W. A. Smith, and J. P. B. Wills. Third and Fourth Year, Clinical Medicine, Prize, W. A. Smith; Certificates, D. A. Fraser, C. G. Havell, K. W. Millican, W. E. Ryves, J. Tucker, and R. T. Vivian. Clinical Surgery, Prize, C. M. Handfield Jones; Certificates, W. E. Ryves, T. Vivian, and J. Tucker.

MIDDLESEX HOSPITAL.—Broderip Scholarships—1. John Palmer; 2. Mark Jackson. Governors' Prize—A. Wheeler. Clinical Prize—A. O. Knight. Medicine—Prize, A. Wheeler; Certificates, M. Jackson and J. Palmer. Surgery—Prize, J. B. Magor. Pathology—Prize, J. Palmer; Certificate, A. Wheeler. Practical Surgery—Prizes, P. Sturridge and A. Wheeler; Certificates, C. D. Davis, M. Jackson, J. Palmer, and J. M. Rogers. Anatomy—Prize, P. T. Thane; Certificates, C. H. Duff, G. Frost, and J. B. Sutton. Physiology—Prize, P. T. Thane; Certificates, G. Frost and J. B. Sutton. Dissections—Prize, C. H. Duff. Chemistry—Prize, C. G. Brodie; Certificates, J. H. Douty, G. Frost, J. F. McMillan, J. B. Sutton, W. E. Wynter. Midwifery—Prize, R. W. Gentles and P. T. Thane; Certificates, E. Davis, J. H. Minchinton, and J. B. Sutton. Medical Jurisprudence—Prize, J. B. Sutton; Certificate, J. H. Minchinton. Materia Medica—Prize, J. H. Douty; Certificates, C. G. Brodie, E. B. Dimsey, S. R. Dyer, C. E. Faunce, G. Frost, W. H. Gimblett, W. Hern, M. W. Russell. Practical Chemistry—Prize, W. Hern; Certificates, J. S. Amoore, C. G. Brodie, E. C. Collins, J. H. Douty, C. E. Faunce, G. Frost, J. C. Harris, J. F. McMillan, E. Stewart, J. B. Sutton, and W. E. Wynter. Botany—Prize, W. E. Wynter; Certificates, C. G. Brodie, J. H. Douty, S. R. Dyer, C. E. Faunce, G. Frost, J. C. Harris, W. Hern, and J. F. McMillan. Practical Physiology—Prize, G. Frost; Certificates, C. G. Brodie, E. B. Dimsey, J. C. Harris, and W. Hern. Medical Society's Prize—C. E. Thompson. Entrance Scholarships, October, 1878—1. J. H. Douty; 2. W. E. Wynter. Extra Exhibition—M. W. Russell, and A. E. Tate. Prosectors—F. Canton, H. Harratt, J. B. Sutton, and P. T. Thane.

ST. THOMAS'S HOSPITAL.—*Summer Session*, 1878.—First Year's Students, W. Wansbrough Jones, £15 and Certificate; C. W. Haig-Brown, Godalming, £10 and Certificate; L. W. Bickle, St. Leonard's-on-Sea, £5 and Certificate; Melville R. H. Jay and F. W. Stoddart, Certificates. Second Year's Students, W. A. Duncan, £15 and Certificate; R. Heelis, £10 and Certificate. *Winter Session*, 1878-79. Entrance Science Scholarship, W. W. Hull, £40 and Certificate. First Year's Students, F. H. Furnival, Tite Scholarship, £30, and Certificate. Second Year's Students, W. W. Jones, Scholarship, £42, and Certificate; C. W. Haig-Brown, £20 and Certificate; M. R. H. Jay, £10 and Certificate of Honour. Third Year's Students, W. A. Duncan, Second Tenure of Musgrove Scholarship and Certificates, also Prize £20 and Certificate of Honour. Physical Society's Prizes, W. A. Duncan, Third Year's Prize and Certificate; G. D. Thudichum, Second Year's Prize and Certificate. Anatomical Assistants, C. S. Sherrington, H. N. Holberton, and W. A. Duncan, Certificates; Prosectors, W. Fell and Mr. R. H. Jay, Prizes and Certificates; Resident Accoucheurs, J. F. Nicholson, W. Tyrrell, F. M. Sandwith, and H. U. Smith, Certificates. Grainger Testimonial, W. A. Duncan, Prize, £20. Surgery and Surgical Anatomy, Kanehiro Takaki, The Cheselden Medal. Practical Medicine, T. D. Acland, The Mead Medal. House-Surgeons and Assistant House-Surgeons, G. H. Makins, G. H. D. Gimlette, H. U. Smith, W. F. Haslam, K. Takaki, and Hutton Castle, House-Surgeons; W. F. Haslam, H. Castle, R. P. Smith, and D. S. Davies, Assistant House-Surgeons, Certificates. House-Physicians and Assistant House-Physicians, W. H. Battle, G. H. Gimlette, G. E. Sheppard, and F. M. Sandwith, House-Physicians; S. A. Crick, J. H. Battye, K. Takaki, W. W. Groome, W. B. Hadden, W. F. Haslem, and R. C. Bennington, Assistant House-Physicians, Certificates. General Proficiency and Good Conduct, Kanehiro Takaki, The Treasurer's Gold Medal.

UNIVERSITY COLLEGE, LONDON.—*Winter Session.*—Entrance Exhibitions (tenable for two years), £30, C. M. McShane; £20, W. C. C. Wilkinson; £10, E. R. St. Clair Corbin. Atchison Scholarship, for general proficiency (£55 per annum, tenable for two years), J. E. Hine. Atkinson-Morley Surgical Scholarship (£45 per annum, tenable for three years), H. F. Stokes. Anatomy: Gold Medal, H. R. Woolbert; Silver Medal (equal), P. F. Moline and Frank Quick; Certificates: 4. C. J. Pike; 5. Charles Stonham; 6. E. J. Dobell; 7. Robert Boxall.—Junior Class, Silver Medal, W. R. Buckell; Certificates: 2. W. C. Wilkinson; 3. F. J. Bollen; 4. W. H. Horrocks; 5. W. D. Halliburton; 6. F. Knight; 7. E. W. von Tunzelmann; 8. C. R. Elgood; 9. Edward Skipper; 10. E. Hudson; 11. F. A. Stokes. Physiology: Gold Medal, W. D. Halliburton; Silver Medal (equal), S. H. C. Martin and H. D. Waugh; Certificates: 4. W. C. Adams; 5. (equal) W. A. Brough and Robt. Boxall; 7. (equal) E. W. von Tunzelmann and W. R. Buckell; 9. E. Laurent; 10. E. Skipper; 11. F. J. Bollen. Chemistry: Gold Medal, A. J. Turner; First Silver Medal, H. Duncan; Second Silver Medal, E. W. von Tunzelmann; Certificates, 4. G. F. Gutheridge; 5. W. A. Gostling; 6. F. E. Girling; 7. (equal) C. M. Foster and T. Wilson; 8. (equal) G. V. Perez, Albert Tarn, and E. E. Berry; 9. (equal) R. F. F. de Cordova, B. F. Halford, W. E. Roth, E. Skipper, and J. S. H. Roberts; 10. (equal) J. W. Draper, E. R. St. Clair Corbin, A. E. Taylor, J. B. Muir, H. G. Aubin, and N. P. Birch; 11. (equal) F. N. Williams and H. H. Williamson. Medicine: Gold Medal, J. E. Hine; Silver Medal (equal), J. F. Easmon and A. E. Buckell; Certificates: 4. (equal) M. F. Sayer and J. I. Paddle. 6. H. A. F. Powell. Surgery: Gold Medals (equal), J. E. Hine and J. F. Easmon; Silver Medal (equal), Bilton Pollard and C. J. Bond; Certificates, (obtained the number of marks qualifying for a Silver Medal), 5. (equal) J. I. Paddle and W. Banks; 7. (equal) A. E. Wigg and R. S. Walton; 9. Walter Falla; 10. F. Wilde; 11. G. E. Twynam; 12. F. W. H. D. Harris. Zoology and Comparative Anatomy: Gold Medal, A. J. Turner; Silver Medal, B. F Halford; Certificates: 3. W. A. Gostling; 4. W. H. Evans. Clinical Medicine.—Fellowes Medal: Gold, J. E. Hine; Silver (equal) L. C. Ponsford and A. E. Buckell; Certificates: 4. M. F. Sayer; 5. J. I. Paddle; 6. W. W. Colborne. Junior Class.—Fellowes Medal: Silver, H. M. Murray; Certificates: 2. A. J. McC. Routh; 3. (equal) A. Atmaram and S. H. Henty; 5. J. E. Squire; 6. A. E. Permewan; 7. F. W. Mott; 8. (equal) W. Chisholm and D. T. Hoskyn. Bruce Medal: Gold, Bilton Pollard. Cluff Memorial Prize, S. H. C. Martin. *Summer Session.*—Midwifery: Gold Medal, Angel Money; Silver Medal, James I. Paddle; Certificates: 3. F. B. M. Wohrnitz; 4. Henry Maudsley; 5. P. E. Shearman. Junior Class: Silver Medals (equal) C. Stonham, A. A. Carr, and J. E. Squire; Certificates: 4. C. Vise; 5. Frank Quick; 6. Elias Keys; 7. S. R. Lidiard; 8. J. S. M'Donagh. Practical Chemistry, Senior Class: Gold Medal, H. H. Crawley; First Silver Medal, A. H. Mason; Second Silver Medal, F. H. Lane; Certificates: 4. W. D. Halliburton; 5. (equal) J. E. Walker and J. H. Vinrace; 6. (equal) W. H. Horrocks, E. O. Croft, and C. J. Pike; 7. (equal) J. R. Day and E. W. von Tunzelmann; 8. (equal) J. S. M'Donagh and E. A. Dingley; 9. (equal) A. J. G. Barker, S. H. C. Martin, R. P. Roberts; F. Knight, and P. R. Griffiths; 10. (equal) F. de C. Skeete and W. H. Evans. Junior Class; Gold Medal, E. Skipper; First Silver Medal, W. A. Gostling; Second Silver Medal, R. H. Peck; Certificates: 4. Frank Hinds; 5. (equal) C. R. Elgood, W. P. G. Graham, E. R. St. Clair Corbin, and F. W. Cock; 6. (equal) S. F. Harmer and H. Duncan; 7. (equal) H. T. Bury, A. J. Turner, and J. R. Nunn; 8. (equal) E. H. Tenison, James Harvey, B. W. Thomas, J. S. H. Roberts, H. H. Williamson, and E. B. Parfitt; 9. (equal) F. W. Crowther and F. John F. Culhane: 10. (equal) E. T. Thring, H. P. Birch, and F. Heatherley; 11. (equal) Fred. J. Bollen, C. O. Fowler, Thomas Wilson, E. F. Ross, J. H. E. Brock, Albert Tarn, and F. B. Guthrie; 12. (equal) C. M. Foster; 13. J. W. Draper, J. J. Powell, F. E. Pearse, Wm. Hy. Brown, E. C. J. Devis, and H. G. Aubin. Practical Physiology: Gold Medal, R. Boxall; Silver Medal, E. Skipper; Certificates: 3. R. H. Peck; 4. W. D. Halliburton; 5. E. Hudson; 6. A. J. G. Barker; 7. (equal) F. H. Lane and E. T. Thring; 9. (equal) A. H. Mason and J. W. Walker; 11. (equal) W. H. Horrocks and C. J. Pike; 13. E. W. von Tunzelmann; 15. F. W. Cock and A. J. Grant; 16. J. E. Walker. Materia Medica: Gold Medal, E. Skipper; First Silver Medal, Eugene Laurent; Second Silver Medal, A. H. Mason; Certificates: 4. Evan Williams; 5. (equal) H. W. Newsholme and P. R. Griffiths; 7. S. H. C. Martin; 8. (equal) C. B. d'Eyncourt Chamberlain and A. F. Thomas. Pathological Anatomy.—Filliter Exhibition of £30, V. A. H. Horsley; Silver Medal, J. I. Paddle; Certificates: 3. P. E. Shearman; 4. S. H. Henty. Botany: First Silver Medal (equal) W. A. Gostling and E. W. von Tunzelmann; Certificate: 3. W. H. Horrocks. Medical Jurisprudence: Gold Medal, J. I. Paddle; Silver Medal, R. S. Walton; Certificates: 3. A. J. Harries; 4. N. Jean-Louis. Ophthalmic Medicine and Surgery: Silver Medal, F. W. Mott; Certificates: 2. G. F. C. Wright; 3. Walter Falla; 4. F. B. M. Wohrnitz. Hygiene and Public Health: Silver Medal and First Prize, J. Milkie Burman; Second Prize, John H. Vinrace; Certificates: 3. J. F. Easmon; 4. J. F. J. Sykes. Clinical Medicine, Junior Class: Prize, Henry Maudsley; Certificates: 2. Reginald Pratt; 3. C. Vise; 4. G. A. Branson; 5. D. Collingwood; 6. Chas. Stonham; 7. A. A. Carr.

WESTMINSTER HOSPITAL.—*Summer Session*, 1878.—Class Certificates: Botany—1. J. H. T. Walsh and F. Allwork. Practical Chemistry—1. F. Allwork and J. H. T. Walsh. Histology (1st Stage)—1. J. H. T. Walsh and F. Allwork; 2. W. H. Kempster, Jno. Hepburn, and A. de Courcy Scanlan. 1878-79. Entrance Exhibitions—(Fence) L. P. Mumby, £50; J. L. Hague, £25; C. H. Wise, £10. Mr. Gould's Prize for Practical Anatomy, G. E. Butler; Exhibition for First Winter Subjects, C. H. Wise; Scholarship in Anatomy and Physiology, F. Allwork and W. H. Kempster (equal); Frederic Bird Medal and Prize, W. H. R. Forsbrooke; Chadwick Prize, W. H. Quicke; Dr. Murrell's Prize for Histology, F. Allwork. Class Certificates: Senior Anatomy—1. W. H. Kempster and Jno. Hepburn; 2. F. Allwork. Junior Anatomy—1. C. H. Wise, G. E. Butler, and A. de Courcy Scanlan; 2. R. Sanderson, E. A. G. Doyle; R. Halpin, and P. MacDonogh; Senior Physiology—1. F. Allwork and W. H. Kempster; Junior Physiology—1. R. Sanderson, C. H. Wise, and A. de Courcy Scanlan; 2. R. Halpin, E. A. G. Doyle, and G. E. Butler. Histology—1. F. Allwork and W. H. Kempster; 2. A. de Courcy Scanlan and Jno. Hepburn. Chemistry—1. R. Sanderson and C. H. Wise; 2. E. A. G. Doyle and D. D. Dryden. Surgery—1. A. H. Bampton, A. Mercer Davies, and W. H. Quicke; 2. W. Garman. Medicine (no award).

BRISTOL MEDICAL SCHOOL.—First Year's Prize, Lawrence E. A. Salmon; Second Year's Prize, F. Tratman; Third Year's Prize, Thomas A. P. Marsh; Prize for Practical Anatomy, H. Visger. GENERAL HOSPITAL.—Sanders Scholarship, T. A. P. Marsh and W. B. Roué; Lady Haberfield Prize, F. T. B. Logan.

LEEDS SCHOOL OF MEDICINE.—*Winter Session*, 1878-9.—Hardwick Prize (Clinical Medicine), £10, Norman Porritt. Medicine—Medal, N. Porritt; Certificate, J. W. Oglesby. Physiology—Medal, F. H. Mayo; Certificate, J. W. Dearden. Physiology (Lecturer's Prize), H. Kershaw. Practical Physiology—Medal, F. H. Mayo. Anatomy, Senior—Medal, J. W. Dearden. Anatomy, Junior—Medal, J. Dacre; Certificates, Arthur Bowe and W. J. Waddington. Chemistry—Medal, J. H. Naylor; Certificate, A. A. Ward. *Summer Session*, 1879.—Thorpe Prize (Forensic Medicine): 2. (value £6), T. Hanson Smith; 3. (value £4), F. H. Mayo. Forensic Medicine—Medal, F. H. Mayo; Certificate, Joseph Harrison. Midwifery—Medal, J. W. Dearden; Certificate, J. W. H. Brown. Pathology—Prize, J. W. Dearden. Materia Medica—Medal, F. H. Mayo; Certificate, E. V. Sutcliffe. Botany—Medal, J. Dacre; Certificate, J. H. Naylor. Practical Chemistry—Medal, J. H. Naylor; Certificate, A. A. Ward.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—*Winter Session.*—Lyon Jones Scholarship—A. Barron, R. Honeyburne, and A. Wilson. Third Year Subjects (Medicine, Surgery, and Pathology)—Silver Medal, G. J. Jones; Bronze Medal, A. Houlgrave. Second Year Subjects (Advanced Anatomy and Physiology)—Torr Gold Medal, A. Barron; Bronze Medal, J. G. Brown; Certificates: 1. J. W. Ellis; 2. R. Williams. First Year Subjects (Elementary Anatomy and Physiology, and Chemistry)—Bligh Gold Medal, A. Wilson; Bronze Medal, W. C. Garman; Certi-

ficates: 1. J. R. L. Dixon; 2. S. G. Sharpe. Histological Prizes—A. Barron and J. G. Brown. Royal Infirmary Clinical Prizes—Surgeon's Prize, A. Houlgrave. Students' Debating Society's Prizes—Essay: 1. Alex. Barron; 2. Thomas Leicester; Debating Prizes: 1. A. Houlgrave; 2. Griffith Jones; Reports of Medical and Surgical Cases, William Renner.

QUEEN'S COLLEGE, BIRMINGHAM. — Medicine: Medal and First Certificate, Cornelius W. Suckling; Second Certificate, Felix C. Vinrace. Surgery: Medal and First Certificate, E. Augustus Harbord; Second Certificate, Felix C. Vinrace. Pathology: Medal and First Certificate, Felix C. Vinrace; Second Certificate, J. Benson White. Anatomy (Senior Division): Medal and First Certificate, Richard A. Fitch; Second Certificate, Arthur T. Holdsworth; (Junior Division): Medals and First Certificates, Frank Leslie Phillips and Septimus Sunderland (equal); Second Certificate, Henry Shillito. Practical Anatomy (Senior Division): Medal and First Certificate, Arthur T. Holdsworth; Second Certificate, Richard A. Fitch; (Junior Division): Medal and First Certificate, Frank Leslie Phillips; Second Certicates, Septimus Sunderland and Arthur H. Hart (equal). Physiology: Medal and First Certificate, Richard A. Fitch; Second Certificate, Arthur T. Holdsworth. Practical Physiology: Medal and First Certificate, Arthur T. Holdsworth; Second Certificate, William Richards. Chemistry: Medal and First Certificate, Frank Leslie Phillips. Botany: Medal and First Certificate, Frank Leslie Phillips. Materia Medica, Frank Leslie Phillips; Second Certificate, — Arblaster. Forensic Medicine: Medal and First Certificate, Cecil Birt; Second Certificate, Andrew Fuller. Midwifery: Medal and First Certificate, John Lloyd Thomas; Second Certificate, Richard A. Fitch. Practical Chemistry: Medal and First Certificate, Frank Leslie Phillips. Sands Cox Prize, Cornelius W. Suckling.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.—Tulloch Scholars, W. Robinson and C. H. C. Milburn. Charlton Scholar, Hugh T. Bowman. *Winter Session*, 1878-79.—Anatomy: Medal and First Certificate, W. Robinson; Second Certificate, C. H. C. Milburn. Dissections: Medal and Certificate, E. L. Prowde, M.A. Physiology: Medal and First Certificate, W. Robinson; Second Certificate, C. H. C. Milburn. Chemistry: Medal and First Certificate, S. Brookfield; Second Certificate, W. M. Buxton. Surgery: Medal and First Certificate, John R. Dodd. Medicine: Medal and First Certificate, John R. Dodd. Public Health (no Medal awarded).

ANDERSON'S COLLEGE, GLASGOW.—Anatomy, Senior—Certificates (in order of merit), G. W. Till, A. M. Murdoch, John M. Watson, Joseph Thornley, and William Jackson; Junior—£5 Prize, Herbert W. White; Certificates (in order of merit), H. W. White, George F. Edwards, Alexander H. Guest, Archibald B. Gemmell, Henry Oakes, Robert W. Lindsay, Victor E. Deacon, John Lyon, George B. Buttery, John Aitken, John S. Forrest; Second-Class Certificates (alphabetically), Colin Macdonald, Donald Maclachlan, Peter C. M'Niven, Robert Sinclair, Thomas Weir. Practical Anatomy, Senior—First-Class Certificates (alphabetically), Peter F. W. Bluett, A. W. Heron, William Jackson, Samuel M'Ilwrath, A. M. Murdoch, Robert Roberts, J. Thornley, G. W. Till; Second-Class Certificates (alphabetically), Frederick V. Adams, Shapurji de Bhabba, William Cruickshank, Donald Macnaughtan, Vincent A. Passanha, John Huntly Peck, John M. Watson; Junior—First-Class Certificates (alphabetically), G. F. Edwards, John S. Forrest, A. H. Guest, H. Jones, R. W. Lindsay, J. Lyon, P. C. M'Niven, Henry Oakes, T. Weir, H. W. White; Second-Class Certificates (alphabetically), J. Aitken, William Andrews, G. B. Buttery, Alexander Cameron, Samuel James Campbell, V. E. Deacon, James Hughes, C. Macdonald, Archibald L. M'Phail, Robert W. Sclater, William H. Seymour, R. Sinclair, Harry Lyon Smith, William M. Stuart. Chemistry—Laboratory Scholarship (£16 16s.), Ernest Lousley; Medical Prize (£5), H. Oakes; Certificates of Honour (in order of Merit), E. Lousley, James M'Arthur, H. Oakes; Second-Class Certificates (alphabetically), J. H. Allison, James C. Annan, John Lennox, R. W. Lindsay. Physiology—Prizes: 1. A. Murdoch and G. F. Edwards (equal); 2. G. W. Till; Certificates, A. M. Murdoch, G. F. Edwards, G. W. Till, J. Thornley, J. W. Watson, James Houston. Surgery—First-Class Certificates, G. W. Till, David Carruthers, C. M'Millan, David H. Kyle, J. Thornley, R. Roberts, W. Jackson; Second-Class Certificates, A. W. Heron, Shapurji de Bhabha, Frederick V. Adams; Honourable Mention, A. M. Murdoch, Donald Macnaughtan. Practice of Medicine—Certificates, David Carruthers and David H. Kyle (equal), Alexander D. Moffat, William Gill; Honourable Mention, Philip J. Brayne, W. C. F. Smith, V. A. Passanha, John H. Peck. Materia Medica—First-Class Certificates, D. Carruthers, W. C. F. Smith, D. H. Kyle. Midwifery—First-Class Certificates, J. Bradford, D. Carruthers, Marcus Calder, John Gunn, George Knox, Alfred Witham; Second-Class Certificates, Shapurji de Bhabha, H. A. Fraser, N. D. Talpede. Medical Jurisprudence—First-Class Certificates, Ralph Kinder, David Carruthers; Second-Class Certificates, W. Gill, John Bradford. Medical Scholarships, *Winter Session*, 1878-79—£20 Scholarship, David Carruthers and David H. Kyle (equal); £10 Scholarship, G. W. Till. Medical Students' Society—President's Prize, G. W. Till.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—*Winter Session*, 1878-9. Chemistry—Class Prize, Thomas R. Cowie. Chemical Division—Prize, Wm. S. Kilpatrick. Certificates—Edwin S. Anderson, Frank M. Allan, Hugh M. R. Ewing, George Steven. Medical Division—Prize, John S. Boyd. Certificates—Charles S. Young, Robert W. White, Thomas H. Williams, Henry Mason. Anatomy—Senior Division—1st Prize, Ernest A. Hyrons; 2nd Prize, Thomas E. Flitcroft; Certificate, Charles R. M'Lean. Junior Division—1st Prize, Charles S. Young; 2nd Prize, Thomas H. Williams; Certificates, Henry Mason, James Gilles, John Humphries. Practical Anatomy—Senior Division—Certificates (in alphabetical order), John T. Davies, E. A. Hyrons, John H. Jones, C. R. M'Lean, Louis X. Railton. Junior Division — Certificates (in alphabetical order), Sheridan Deans, James Gillies, John Humphreys, Charles Jackson, Henry Mason, John W. Owen, Thomas H. Williams, Charles S. Young. Class Prosectors, E. A. Hyrons and L. X. Railton. Physiology—1st Prize, E. A. Hyrons; 2nd Prize, T. E. Flitcroft. Certificate, C. R. M'Lean. Surgery—Prizes: 1. Owen Williams; 2. E. A. Hyrons; 3. T. E. Flitcroft; 4. John Garey. Certificates, John T. Davies, Charles R. M'Lean, Michael Keily. Practice of Medicine—Prizes: 1. Michael Keily; 2. John Garey; 3. John T. St. Anholm; 4. Arthur Jones. Special Prize, John W. Rowlands. Materia Medica—Prize, Owen Williams; Certificate, Arthur Jones. *Summer Session*, 1879. Practical Medical Chemistry—Certificates: 1. C. S. Young; 2. Thos. H. Williams; 3. James Gillies. Forensic Medicine—1st. Prize, Michael Keily; 2nd. Robert Wallace, John Jones, E. A. Hyrons (equal). Certificates, J. W. Rowlands, William Breadie, C. R. M'Lean, R. S. Howson. Midwifery—Prizes: 1. Michael Keily; 2. E. A. Hyrons; 3. Alex. H. Guest. Certificates, C. R. M'Lean, R. W. Stuart. Pathology—Prize, Joseph Sykes. Certificates, George Till and Ernest A. Hyrons (equal), Michael Keily, Robert Wallace.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE first of the above district meetings for the present session will be held at Guy's Hospital Medical School, on Wednesday, October 22nd, at 8 o'clock P.M.; Dr. HABERSHON (President-elect of the Branch), in the Chair. The following papers will be read.

1. On Double Extension in Diseased and Injured Spine and Pelvic Joints. By John Wood, F.R.S.

2. Pneumonia of the Apex. By F. T. Roberts, M.D.

3. An Unusual Sequela of Scarlatinal Dropsy. By J. F. Goodhart, M.D.

Members wishing to bring forward cases will please to communicate with the Honorary Secretary.

H. NELSON HARDY, *Honorary Secretary*.

The Grove, Dulwich, S.E., October 15th, 1879.

YORKSHIRE AND EAST YORK AND NORTH LINCOLN BRANCH.

A CONJOINT meeting of these Branches will be held in the Museum of the Yorkshire Philosophical Society, York, on Wednesday, the 22nd October, 1879, at 3 P.M.

Members intending to read papers are requested to forward the titles to either of the Secretaries.

After the meeting, the members will dine at 5 P.M. at the Station Hotel. Tickets (exclusive of wine), 6s. 6d. each.

W. PROCTER, M.D., York,
E. P. HARDEY, Hull, } *Honorary Secretaries.*

SOUTH MIDLAND BRANCH.

THE autumnal meeting of this Branch will be held at the Bedford Arms, Woburn, on Thursday, October 23rd, at three o'clock.

The President, Dr. Goldsmith, Dr. Macdonald, G. H. Percival, M.B., and others have promised papers.

At two o'clock, there will be a luncheon at the hotel. Tickets, 3s. 6d. each.

G. F. KIRBY SMITH, *Honorary Secretary*.

Northampton, October 14th, 1879.

WEST SOMERSET BRANCH.

THE autumnal meeting of this Branch will he held at the Railway Hotel, Taunton, on Thursday, October 23rd, at Five o'clock.

The following question has been settled by the Council as the one on which members should be invited to express their opinion at the said meeting after dinner:—"What is the use of Alcohol in the Treatment of Disease?"

Members having any communication to bring before the meeting are requested to send notice of its title; also to inform the Honorary Secretary before the day of meeting if they purpose being at the dinner. Dinner, 5s. each, exclusive of wine.

W. M. KELLY, M.D., *Honorary Secretary*.

Taunton, October 6th, 1879.

THAMES VALLEY BRANCH.

THE next meeting of this Branch will be held at the Griffin Hotel, Kingston, on Thursday, October 23rd, 1879, at 6 P.M. The following papers will be read.

1. Dr. Balmanno Squire: On the Treatment of Skin-Diseases, as practised at Leukerbad, in Switzerland.

2. Dr. Sealy: On Croup and Diphtheria.

The dinner will take place after the meeting, at 7 P.M.

FREDERICK J. WADD, *Honorary Secretary*.

Richmond, Surrey, October 7th, 1879.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 30th, at a quarter past Seven o'clock; J. BEDDOE, M.D., President.

R. S. FOWLER,
E. C. BOARD, } *Honorary Secretaries.*

Bath, October 5th, 1879.

SOUTH-EASTERN BRANCH: WEST SURREY DISTRICT.

THE next meeting will be held at the Surrey County Hospital, Guildford, on Friday, October 24th, 1879, at 3.30 P.M.; Dr. JAMES R. STEADMAN in the Chair.

Dinner will be provided at the White Lion Hotel at 6 P.M.: charge 5s. 6d., exclusive of wine.

The following cases are promised.

1. Dr. J. Morton: A Case of Scirrhus of the Rectum.
2. Dr. J. Walters: On Antiseptics in Country Practice.
3. Mr. C. J. Sells: Three Cases of Pleuritic Effusion of the Left Chest treated by Aspiration. And some cases of interest in the hospital.

A. ARTHUR NAPPER, *Honorary Secretary.*

Broad Oak, Cranleigh, October 16th, 1879.

STAFFORDSHIRE BRANCH.

THE sixth annual meeting of this Branch will be held at the George Hotel, Walsall, on Thursday, October 30th, at Three o'clock in the afternoon.

An address will be delivered by the President, Dr. J. H. TYLECOTE.

Dinner at 5.30. Tickets, exclusive of wine, 6s. each.

VINCENT JACKSON, Wolverhampton
J. G. U. WEST, Stoke-upon-Trent } *Honorary Secretaries.*

Wolverhampton, October 6th, 1879.

DUBLIN BRANCH.

NOTICE is hereby given, that a special general meeting of this Branch will be held in the King and Queen's College of Physicians, Kildare Street, on Monday, November 3rd, 1879, at 4 o'clock P.M., to consider a resolution adopted by the Council, proposing to increase the annual subscription to the Branch.

GEORGE F. DUFFEY, M.D., *Honorary Secretary.*

30, Fitzwilliam Place, Dublin, October 8th, 1879.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

A MEETING of the East Surrey district was held at the White Hart Hotel, Reigate, on October 9th, 1879: Mr. HALLOWES in the Chair. Thirty members and visitors were present.

1. Dr. D. W. Chas. Hood read a paper on Croup and Diphtheria.
2. Mr. Hallowes read a Clinical Report on an Outbreak of Enteric Fever at Redhill in the early part of 1879.
3. Dr. John Walters read a paper on the Treatment of *Post Partum* Hæmorrhage by Injections of Hot Water.

Twenty-nine members and visitors sat down to dinner.

EAST ANGLIAN AND CAMBRIDGE, AND HUNTINGDON BRANCHES.

THE Autumn Meeting of the above Branches was held at Tucker's Hotel, Cromer, on Friday, September 12th, under the Presidency of J. KILNER, Esq., F.R.C.S., of Bury St. Edmunds.

Report of Council: Election of President.—The Council reported the satisfactory state of the Branches, and proposed that J. Kilner, Esq., be re-elected President for the ensuing year, which was carried.

Next Meeting.—It was then proposed and carried: "That as the Annual General Meeting of the Association for 1880 will be held in Cambridge, there should be only one meeting of the East Anglian Branch in 1880, which should take place at Lowestoft the first Friday in October."

Papers.—An interesting paper on the History of Cromer was read by Dr. MACKELVIE, and after a vote of thanks, there was a general request that he would publish it.

Dr. BATEMAN'S paper on Certain Points in the Treatment of Glycosuria and Polyuria elicited a discussion in which Drs. Skrimshire, Latham, Kilner, and Amyot took part.

Excursion.—After the meeting, the members and friends were invited by Mrs. Bond Cabbell to Cromer Hall, where a very pleasant hour was spent in looking over the fine suite of rooms, library, and garden. Tea and coffee were provided for all visitors.

Dinner.—The members and friends afterwards dined at Tucker's Hotel, J. Kilner, Esq., in the Chair, and J. B. Pitt, Esq., Honorary Secretary, in the Vice-Chair.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.

A COUNCIL meeting of this Association was held on the 7th instant, at the rooms of the Association, 3, Bolt Court, Fleet Street. Dr. J. Rogers, who occupied the chair, submitted for consideration the propositions relating to an amendment of the system of medical relief in the United Kingdom, which were formulated by him in the paper read at the Association meeting at Cork in August last. After some discussion, it was moved by Dr. Burchell, seconded by C. Frost, Esq., and resolved unanimously: "That the Chairman be requested to bring the question before the Parliamentary Bills Committee of the British Medical Association, with the view to inducing that Association to take the subject in hand at as early a date as possible prior to the advent of the pending general election."

THE DIFFUSION OF SCARLATINA.

A REPORT of much value as showing the terrible mortality from scarlatina that may occur in dirty crowded mining centres when the disease once gets a foothold, has recently been presented to the Local Government Board by Dr. William Ogle. The male population in the registration subdistrict of Pontypool, in Monmouthshire, is almost exclusively engaged in the unhealthy occupations of mining and puddling, and one would therefore expect the death-rate to be high. As a matter of fact, the general rate of mortality has averaged 22.0 for the last eight years; and remembering that males (who have invariably a higher death-rate than females) preponderate largely in the population, this rate, though high, cannot be looked upon as excessively so. It appears, however, that certain special diseases of these have caused much more than their average proportions of deaths. For the last eight years, there has been but one quarter in which no death was registered from scarlet fever; in many quarters, the number registered has been very high; and in the last two quarters of 1878 was successively thirty-nine and thirty-eight. Moreover, in the twenty years 1851-70, the published statistics show, also, that not only scarlet fever, but also other catching disorders, as small-pox, measles, whooping-cough, have on an average of a long period of years destroyed more than their due share. Pontypool subdistrict is in this matter not exceptional among large industrial communities; and like causes contribute to swell the mortality from these diseases there as they do in similar communities elsewhere. First amongst the causes comes aggregation of the population within a narrow area. In the Pontypool subdistrict, a great part of the area consists of uninhabited mountain tracts, and the population, though in some parts scattered, is in great measure concentrated in densely populated spots, with as little free space and ventilation close about them as in the alleys of any large town. Some influence must also be attributed to the peculiar composition of the population as regards age. Scarlet fever and like diseases prey especially upon the young; and in this subdistrict, and probably in other places where the occupation is of the same character, the proportion of persons under twenty years of age is much above the average, this being due to the constant influx of young lads from rural places to the works. Again, the influence of unwashed bodies and clothes, and generally of filthiness, whether of persons or houses, in the propagation of infectious diseases cannot be questioned; and all our senses tell us how much more prevalent such dirtiness is in crowded communities than elsewhere. The Pontypool subdistrict is no exception to the rule, Dr. Ogle's report revealing a shocking state of personal uncleanliness amongst its inhabitants.

It cannot be doubted that the constant habituation to filthy surroundings breeds a reckless indifference to all evils, physical or moral; a recklessness with which the adoption of the most ordinary precautions to escape infection, or to avoid infecting others, is quite incompatible. Dr. Ogle was told again and again that, in the late outbreak, people behaved as though the disease were not infectious at all; that sick and healthy intermingled as freely as ever; that goods were sold in shops and delivered by persons still visibly in process of desquamation; and he was shown, in one instance, a little close room in which milk was kept and sold, while a lad lay all the time in it with scarlet fever, the scales detached from his skin, no doubt, floating in the air and dropping into the fluid. No serious attempt seems to have been made by the authorities to hinder the action of these and similar causes. No arrange-

ments exist by which the medical officer of health shall receive immediate, or any, information of a case of infectious disease; and should he by accident become acquainted with a case in sufficient time for intervention, there is no hospital at his disposal for isolation of the case. There is no oven for the proper and effectual disinfection of clothes or bedding; and, though a few houses may from time to time have been fumigated with sulphur by the inspector of nuisances, there can be no doubt that beds, clothes, and houses have been, and in many cases still are, charged with elements of infection. No precautions, again, appear to have been taken to prevent free intercourse between infected and sound. Dr. Ogle was told by the medical officers of health that they had urged the several school authorities to refuse admittance to all children from infected houses, unless furnished with a medical certificate, but that in only one instance had any attention been paid to the request; and it was their belief that one of the main agencies in the propagation of the pestilence had been the school. Under these circumstances, there can be no surprise that infection should have spread. The real cause for wonder is that an outbreak, left to burn itself out without let or hindrance, should have come to an end so soon.

SCHOOL DIPHTHERIA.

In our issue of July 26th last, we gave an abstract of a report made by Dr. Ogle into an epidemic of diphtheria in which the most active agent in the dissemination of the infection was the village school. Another epidemic at Holyhead has more recently been inquired into by the same investigator with very similar results. The origin of the epidemic can unfortunately be only a matter of surmise. It may have been imported from without; as in such a place as Holyhead, with its busy ports and its constant streams of passenger traffic, seems more than likely. Or it may have been generated on the spot; and if the belief entertained by many that, under certain conditions, diphtheria can be generated *de novo* out of filth be correct, then most assuredly Holyhead is the very place for its birth. Filth seems to reign there supreme. The privies are of the most abominable kind; and, as there is no system of scavenging, close to almost every cottage is a horribly fœtid quagmire of excrement. Added to these are innumerable pigsties and endless collections of all kinds of refuse, notwithstanding that there is a code of by-laws, full and precise, prohibiting the very things that are flourishing in such rank luxuriance. As regards the spread of the disease, Dr. Ogle traced the outbreak in the suburb where it was chiefly virulent to the influence of one particular school out of the four which are attended by children of that part of the town. This school was a small dame's school, and the disease was almost entirely limited to children in attendance at it. The normal attendance at the school was thirty, but this had fallen since the outbreak to ten. Of the twenty who had ceased to attend, Dr. Ogle could account for no fewer than nineteen as having had diphtheria, and, of those, six had died. From the description given of the school, one can hardly wonder that any catching disease, if once introduced into it, should spread. The single schoolroom, which accommodated before the outbreak an average of thirty children, was 8 feet high, 8 feet wide, 11 feet long, with one small window; thus the total space, even without making any deduction for the bodies of the children and mistress, was no more than 704 cubic feet. The children must therefore have been packed almost as closely together as had they been sleeping in the same bed.

THE VALUE OF HOSPITALS FOR INFECTIOUS DISEASES.

An important testimony to the value of infectious hospitals in preventing the spread of disease is afforded in the last annual report of Dr. Armistead on the Saffron Walden rural sanitary district. The authorities of this district have joined with the Saffron Walden Town Council in providing a small but efficient hospital, which has been in use since 1875. In July 1878, the contagion of small-pox was brought from London to a place called Wimbish by one of those very mild cases of modified small-pox, which, by being disregarded, are often the means of spreading the disease from one locality to another. In this case, a "humour on the face" showed itself on July 28th; but this "humour" was not believed to be small-pox until it was made clear by the history of cases which arose from it. On August 10th, another unrecognised case occurred in the same family, which ended fatally on August 16th, the cause of death being registered as "erythema rubrum". The medical attendant is now quite certain that this was a case of hæmorrhagic small-pox, in which death occurred before the eruption was fully out. About fifteen persons went to see this case; and, of these, all but two were taken ill in a greater or less degree on August 26th, 27th, and 28th. In three, the attack was slight; seven others had small-pox in the distinct form, and three others had severe confluent small-pox, which in one case ended fatally on the fifth day. One of the infected persons lived at a neighbouring village called Debden, and might have proved the centre of an outbreak there had he not, with nine of the worst cases from Wimbish, been removed to the infectious hospital. A trained nurse from the St. Alban's Training Institution at Witham was engaged, besides two women who acted as assistant nurses. The cases were kept in hospital, on an average, forty-eight days. The first case was discharged after being isolated twenty-six days, and the last after an isolation of seventy-six days; and the average cost of maintenance of each patient was £2 5s. The effects of this prompt action were at once apparent, as no fresh case occurred either at Wimbish or at Debden. It should be added that all the infected cottages were disinfected and afterwards lime-washed, all wall-paper being taken down and burned; and that the beds were emptied, and either destroyed or disinfected.

AN ARGUMENT FOR THE GERM-THEORY.

It is curious to note how often very unwholesome conditions are found to be coexistent in a district with a low death-rate and an immunity from fatal infectious disease. One such instance, at Lymington, we alluded to not very long ago (see p. 34); and two other cases of the same kind have been recently reported to the Local Government Board by Dr. Blaxall and Mr. T. C. Langdon, as existing at Okehampton and in the Wells Rural Sanitary District respectively. At Okehampton, the water-supply is exposed to pollution from the direct communication which exists between the mains of the closets, and the sewerage is most defective and imperfect. The sewers are unventilated, and the arrangements for flushing are for the most part unsatisfactory. The privies, which are used where sewers do not exist, are of the most objectionable description, differing only in degree of unwholesomeness. The contents are allowed to accumulate for an indefinite period, whilst the privy structures generally present every stage of dilapidation. Pigs are very commonly kept, often in unwholesome relation to dwellings, and usually in a very filthy and neglected condition. The floors of many of the dwellings are damp, which probably accounts for the exceptional prevalence of rheumatism in the town. Certain of the houses are very dilapidated, and most of them are surrounded by conditions greatly prejudicial to health. Yet the death-rate for the two years 1876 and 1878 was 17 per 1,000, and that for the intermediate year only 12.5 per 1,000, zymotic diseases being conspicuous by their absence. As Dr. Blaxall points out, however, this favourable result must not be allowed to lull the authority into a sense of false security, seeing that the conditions revealed as everywhere present in their midst are the very conditions which are recognised as favourable to the development and spread of infectious disease, especially cholera and enteric fever; and these diseases introduced into the town would be liable at any time, with the existing state of things, to become widespread and fatal. It behoves the authority at once to take Dr. Blaxall's report to heart, and, remembering that there is no real economy short of efficiency, to set earnestly to work to remedy the unwholesome conditions which he has pointed out.

In his report on the Wells Rural District, Mr. Langdon shows that, notwithstanding the low death-rate of the district (14 per 1,000) many unwholesome conditions exist that may foster the recurrence of preventable diseases. The water-supply of some parts of the district is much contaminated, and in others, so circumstanced that it is liable to pollution by means of excremental and surface soakage. Although there is in many places an abundance of water, yet it is often not available for the purposes of the population; and where springs are used, they are not sufficiently protected. Very generally, the means of sewage and drainage are defective. The privies are faulty in construction, and occasion much nuisance; and, indeed, the action of the sanitary authority seems to have been generally very imperfect.

An Overdose.—An inquest was held at Bromyard, near Hereford, last week, touching the death of Mr. Etheridge, surgeon. The deceased, it appeared, had been in the habit of taking chloral diluted with chlorodyne. On Friday night, he took a large dose, and, as he did not recover from its effects, three medical men were called in; but their efforts were unavailing. A verdict was returned of "Accidental poisoning".

Misadventure.—Last week, at Manchester, an inquest was held on the body of a schoolmistress named Emily Warwick, twenty years of age. She suffered severely from toothache, and on Sunday night took a dose of what she believed to be laudanum. She became unconscious immediately, and, on examination, the bottle was found to contain a mixture of aconite and glycerine. A verdict of "Poisoned by misadventure" was returned.

MILITARY AND NAVAL MEDICAL SERVICES.

GOOD SERVICE PENSION.

THE pension of £100 *per annum* for distinguished and meritorious service enjoyed by the late Surgeon W. H. Young, has been conferred by the Queen on Surgeon John Wyer, late 19th Foot, of Whitechurch Canonicorum, in the County of Dorset. Surgeon J. Wyer entered the Army Medical Department as hospital assistant in February 1811; and immediately joining the Forces in the Peninsula, was sent to Coimbra, where he attended the wounded from the battle of Busaco. He served on the Staff in the general hospitals, and at the head-quarters of the cavalry under Sir Stapleton Cotton at Salamanca and Vittoria, and in the Pyrenees, and was then appointed Assistant-surgeon to the 88th, with which regiment he was present at the engagements of Nivelle, Orthes, and Toulouse. He received the Peninsular Medal with five clasps. At the termination of the war, he embarked at Bordeaux with the 88th for Canada, for the struggle in America, and was present at the taking of Platzburgh. On returning to Portsmouth, in June 1815, the regiment received urgent orders to proceed immediately to Ostend, from which place it marched to Paris, missing the battle of Waterloo by a few days. The 88th formed part of the army of occupation, and was quartered at Montmartre (Paris), and Valenciennes; and, serving with it, Surgeon Wyer remained nearly a year in France. The first battalion was reduced, and he went on half pay until 1824, when he was ordered to the Cape of Good Hope as Staff Assistant-Surgeon, and employed as acting surgeon to the 49th, and subsequently the 55th. While in South Africa, he went as district surgeon to Simon's Town, and on detachment duty to Fort Wiltshire and Hermann's Kraal on the Zulu border, and was afterwards appointed district surgeon to Port Elizabeth, where he and the other officers of the detachment entertained the notorious Chaka, Cetewayo's predecessor, at dinner, that notability having been brought round by sea from Natal by Lieutenant King. After a service of six years in South Africa, Surgeon Wyer returned to garrison duty at Chatham; thence he proceeded to Ireland, where he was gazetted surgeon to the 74th Foot, and with this regiment he went to the West Indies; from it he was transferred to the 19th. Returning home in 1835, he was finally placed on reduced pay, on account of ill-health in 1840. Surgeon J. Wyer volunteered for the Crimea War, and appeared before a medical board for examination, but his proferred service was not accepted. Mr. Wyer commenced his professional studies under the care of Mr. Oakes, surgeon, of Cambridge, and from him went as pupil to Mr., afterwards Sir Anthony, White, residing with his family and attending lectures and other surgical work at the Westminster Hospital.

PUBLIC HEALTH.—During last week, 3,227 deaths were registered in London and twenty-two other large towns in the United Kingdom. The annual death-rate was 19 per 1,000 in Edinburgh, 18 in Glasgow, and 29 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Bristol 14, Wolverhampton 15, Leicester 15, Portsmouth 16, Birmingham 16, Hull 17, Newcastle-on-Tyne, 17, Bradford 18, Oldham 18, Brighton 18, Norwich 18, Sheffield 19, Leeds 19, London 20, Nottingham 20, Plymouth 20, Sunderland 22, Salford 23, Manchester 24, and the highest rate 25 in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 0.7 and 1.2 in Wolverhampton and Norwich, to 5.0, 5.3, and 5.8 in Sunderland, Salford, and Liverpool. In London, 1,366 deaths were registered, being 51 below the average; and the annual death-rate from all causes was 19.7 per 1,000. The 1,366 deaths included 30 from measles, 66 from scarlet fever, 17 from diphtheria, 28 from whooping-cough, 29 from different forms of fever, 60 from diarrhœa, and not one from small-pox; thus to the seven principal diseases of the zymotic class 230 deaths were referred, which were 33 below the average, and were equal to an annual rate of 3.3 per 1,000. At Greenwich, the mean temperature of the air was 51.5°, and 1.0° below the average. The general direction of the wind was north-easterly, and the horizontal movement of the air averaged 5.6 miles per hour, which was 4.5 below the average. No rain was measured during the week. The duration of registered bright sunshine in the week was equal to 19 per cent. of its possible duration.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 9th, 1879.

Hearnden, William Frank, Sutton, Surrey
Jackson, Mark, Great Torrington, Devon
Lavies, Joseph W. Y. H., 96, St. George's Road, S.W.
Moore, Thomas George James, Reading
Oglesby, Joseph William, Micklegate, York

The following gentleman also on the same day passed his primary professional examination.

Hurtley, William Maw, Leeds Hospital

UNIVERSITY OF CAMBRIDGE.—The following candidates have satisfied the Examiners in Sanitary Science.

In both Parts of the Examination.—J. W. Burman, M.D.; W. Collingridge, B.A., M.B.; C. C. Gibbs, M.D., M.C.; R. B. Low, M.D.; and H. M. Page, M.R.C.S.

In Part I.—G. G. Tatham, M.D.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

DORE UNION—Medical Officer for Workhouse and Kentchurch District. Salary, £80 per annum. Applications on or before October 20th.

*EVELINA HOSPITAL FOR SICK CHILDREN—Physician to Out-Patients. Applications on or before November 6th.

*HOSPITAL FOR WOMEN, Soho Square—Assistant Physician. Applications to the Secretary on or before November 12th.

*KENT AND CANTERBURY HOSPITAL—Assistant House-Surgeon and Dispenser. Salary, £50 per annum, with board, lodging, and washing. Applications on or before October 30th.

*MACCLESFIELD GENERAL INFIRMARY—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications on or before Oct. 27th.

*NORTHAMPTON GENERAL INFIRMARY—Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, attendance, and washing. Applications on or before November 3rd.

QUEEN'S COLLEGE, Belfast—Professor of Chemistry. Applications to be forwarded to the Under Secretary for Ireland, Dublin Castle, on or before October 18th.

*ROYAL FREE HOSPITAL, Gray's Inn Road—Assistant Surgeon. Applications, with testimonials, on or before November 26th.

*ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Applications on or before November 5th.

*WESTMINSTER HOSPITAL—House-Physician. Applications not later than October 18th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—House-Surgeon. Salary, £80 per annum, with board, lodgings, and washing. Applications on or before October 25th.

*WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—Two Physicians. Application on or before October 25th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*BUCK, W. Elgar, M.A., M.D., appointed Physician to the Leicester Infirmary and Fever House, *vice* J. W. Crane, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

EALES.—On October 3rd, at 56, Francis Road, Edgbaston, Birmingham, the wife of Henry Eales, M.R.C.S., of a son.

PEARSON.—On September 24th, at Stella House, Kingswinford, Staffordshire, the wife of Alfred W. Pearson, L.R.C.S., of a daughter (Mabel Rogers).

LAST Sunday being Hospital Sunday at Gravesend, collections were made at the churches and chapels in Gravesend and Milton, in aid of the funds of the local Dispensary and Infirmary.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Mr. R. M. Williams has obtained the Entrance Science Scholarship of £60, and Mr. B. Relton that of £40.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Messrs. G. W. Hill, and V. H. Veley, B.A., have gained the Open Scholarships in Natural Science.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30; Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. The President (Dr. John Cockle) will deliver an Opening Address. Dr. B. W. Richardson, "On the Sphygmophone in Diagnosis".

TUESDAY.—Pathological Society of London. 8 P.M.: Exhibition of Specimens. 8.30 P.M.: 1. Mr. Butlin: Growth in Left Ventricle, with Embolism of the Brachial and other Arteries. 2. ———: Mollities Ossium, with Myeloid Tumours. 3. Mr. A. Barker: Caries of Spine, affecting the Hip-Joint and Aorta. 4. Mr. Walsham: Small Round-celled Sarcoma. 5. Mr. A. Doran: Papilloma of Fallopian Tubes. 7. Dr. Moore: Disease of both Suprarenal Capsules without Bronzing. 9. Dr. Moore: Calvaria of Congenital Syphilis. 8. Dr. F. Taylor: Lymphadenoma. 9. Dr. Greenhow: Rupture of the Aortic Valves. Dr. Eve: Congenital Hernia, with undescended Testicle. 11. Dr. Eve: Syphilitic Disease of the Testicle. And other Specimens.

FRIDAY.—Clinical Society of London, 8.30 P.M. 1. Dr. Southey: Two Cases of Acute Rheumatism. 2. Mr. Lawson: Cancer of the Breast following upon Eczema of the Nipple of long standing. 3. Dr. Wilks (Ashford): Case in which a man was struck by lightning.—Quekett Microscopical Club (University College), 8 P.M. A. Martinelli, Esq., "On the Germination of a Seed".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

MEDICAL ETIQUETTE.

M.D.—If a friendly arrangement exist between A. and B., and A. is called to see B.'s patient, A. ought not to ask the patient whom he wishes to attend him. He ought to explain why he has called, and desire the patient to look to B. for his subsequent attendance. A. should not charge the patient. If he expect payment for his visit, he should arrange privately with B. In the case of a confinement, it is usual to tender at least half the fee to the friend who has attended as a substitute. The medical man who was engaged to attend the case should conduct the after-treatment. If the confinement have taken place at night, or if it have been accompanied by much delay or serious difficulty, a larger proportion of the fee should be tendered.

SIR,—Will any correspondent kindly inform me whether vaccinating with calf-lymph is attended with greater constitutional disturbance than vaccination performed in the ordinary way, from arm to arm?—I am, yours truly, STOCKPORT.

XANTHELASMA PALPEBRARUM.

SIR,—In reply to "Follicle" as to the treatment of xanthelasma, I can assure him that there is no really reliable medical treatment for the above affection, careful removal with the scalpel being the only radical cure. For references to the literature of the subject, see Gräfe and Sämisch, *Handbuch der gesammten Augenheilkunde*, vol. iv, part ii, page 425, *et seq.* As there seems to be some connection between the causation of this disease and a morbid state of the hepatic functions, cholagogues would probably tend to minimise the chance of recurrence after removal.—Faithfully yours, CHAS. ED. GLASCOTT, M.D.
11, Saint John Street, Manchester, October 1879.

PRELIMINARY EDUCATION.

SIR,—In answer to "Paterfamilias", let me call his attention to Queen Elizabeth's Grammar School, Cranbrook. My eldest son was there for six years, and, without any other tuition, passed in the first division at the recent matriculation examination of the London University. I have another son there preparing for the same examination. The tone of the school is good, and its reputation for results beyond dispute. The very moderate terms can be obtained from the Rev. C. Crowden, M.A., Head Master.—Yours obediently, HENRY LEWIS, M.D.
Folkestone, October 11th, 1879.

THYMOL.

SIR,—I shall be obliged if any of your correspondents will kindly inform me concerning thymol: 1. Whether it has proved as efficacious an antiseptic as carbolic acid in the treatment of disease—*e.g.*, ozæna, sore-throat, ulcers, etc. 2. The usual strength for application externally or within the mouth. 3. The best formula for prescribing it, as it is almost insoluble (1 in 1000) in water.—I am, etc., ?

CONVICT SERVICE.

SIR,—Will any of the numerous readers of the BRITISH MEDICAL JOURNAL be good enough to enlighten me on the following subjects, as regards the treatment of assistant-surgeons in Her Majesty's Convict Service, and oblige. 1. What is the scale of pay to assistant-surgeons on entering the service, and the mode of annual increment? 2. What is the length of daily duty, and that of recreation? 3. Are they supplied with quarters, rations, washing, fuel, etc.—Yours, ANXIOUS.

CIDER AND RHEUMATISM.

THE member who wrote from Belfast on the 22nd ultimo may possibly get some information on the subject about which he asks from Dr. T. H. S. Pullin, Medical Officer of Health for Sidmouth, Devonshire. In the course of an interesting report on the mortality in his district during 1878, Dr. Pullin refers to the high proportion of cases of rheumatism and heart-disease, and observes: "There is a local conventional idea that the use of cider as a beverage is directly the cause of rheumatism, and thus indirectly of heart-disease. Careful statistical observations, however, completely disprove the fact, but point strongly to the absence of flannel next the skin, and the presence of damp feet and damp outer clothing as the cause."

CONDENSED MILK FOR INFANTS.

SIR,—Will you allow me to corroborate the observations of "A Member" in your last impression on the subject of condensed milk for infants. In opposition to the opinion of Mr. Laing, who writes to the JOURNAL of September 27th, I beg to state that I have recently had under my care several cases of infantile diarrhœa, in which condensed milk had been the only food. The last case was a very obstinate one, accompanied by much wasting. The usual remedies failed to do any good; but the child at once improved on changing its diet, and is now thriving well.—Yours faithfully, W. WHITFIELD EDWARDES.
1, Oakley Square, N.W., October 11th, 1879.

SCIENCE IN OUR PUBLIC SCHOOLS.

SIR,—In one at least of our public schools—one celebrated for the liberty given to its pupils—the boys have applied their knowledge of anatomy and physiology in a very practical manner. A pretended feeling of illness has been so often disbelieved in by the doctor after recourse to the pulse, that these ingenious scholars have devised a means to overcome this little drawback. They arrange a pad, which they place in the axilla, and easily influence the brachial artery by pressing the arm against the side when the pulse is under examination.—I am, etc., E. NOBLE SMITH.

MAGNETIC BELTS.

SIR,—Mr. Fendick, whose letter appears in the BRITISH MEDICAL JOURNAL of to-day, had the vendor of the magnetic belt under his thumb. He should have refused to certify, and the local registrar would not have registered the death of "Mr. F." One inquest would go far towards carrying out the desired object.—I am, etc.,
Bristol, October 11th, 1879. A MEMBER.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN SEPTEMBER 1879.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health.

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.		Hardness. (Clark's Scale.)	
			As Nitrates,&c.	Saline.	Organic	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	20.00	0.148	0.126	0.000	0.009	14.1	3.6
West Middlesex..	20.40	0.159	0.106	0.000	0.010	14.1	3.3
Southwark and Vauxhall	20.20	0.155	0.105	0.000	0.009	13.2	3.7
Chelsea.....	20.00	0.089	0.108	0.000	0.009	15.2	4.6
Lambeth	20.70	0.148	0.120	0.000	0.011	14.7	3.3
Other Companies.							
Kent	26.70	0.014	0.390	0.000	0.001	18.8	6.5
New River	20.70	0.094	0.132	0.000	0.004	13.7	3.3
East London	20.80	0.062	0.126	0.000	0.009	13.2	3.7

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours.

SIR,—Would you or any of your readers kindly inform me where I may obtain "carferal" water-filters, which have been recently recommended for adoption in the navy, and where I may find any information as to this substance?—Yours obediently.

CARBO.

HOW TO FORM A METEOROLOGICAL STATION.

MR. H. A. HUSBAND.—*Instructions in the Use of Meteorological Instruments*, by R. H. Scott, M.A., F.R.S., is sold by Potter, 31, Poultry, and Messrs. Stanford, Charing Cross, price 1s. 6d.

THE HOSPITAL FOR DISEASES OF THE HEART, SOHO SQUARE.

SIR,—Dr. V. Ambler having forwarded you an explanation why he refused to give a certificate of the cause of death in the case referred to by me in your issue of the 4th instant, perhaps you will permit me to supplement my letter by additional facts.

On the refusal of Dr. Ambler to give a certificate, the man went to the beadle of his parish, who took him to the Registrar of Births and Deaths. On that official hearing the statement, he recommended them both to come to me. Before taking any other action in the matter, I directed the beadle to call on Dr. Ambler and ask his reason for refusing. He shortly returned, and stated that Dr. Ambler declined to afford him any explanation. Thereupon I told him to go to the coroner, who gave as his opinion that, under the circumstances, no inquest was necessary. On this being reported to the Registrar, he gave a certificate, "Referred to coroner; no inquest necessary". On this the body was buried.

I have since seen this man. It is true he keeps a wine-shop; but his means have been so impoverished by the long illness of his wife and child, both of whom died, that he is in arrears with the landlord and wine-merchant; he has parted with all his valuables, in confirmation of which he showed me a bundle of pawn-tickets. He told me "that the sole reason why he had not applied to his former medical attendant was, that he had ceased all attendance on his wife for three weeks"; that the dispenser had visited his wife three times; and he positively re-asserted that Dr. Ambler would have given a certificate if he had complied with his demand of a fee of a guinea. I have no other comment to make.—I am, sir, yours obediently,

Dean Street, W., Oct. 14th, 1879. JOSEPH ROGERS.

IS SYPHILIS FOUND IN CATTLE?

SIR,—The above question, placed at the head of a brief letter in your issue of October 11th, will probably be answered by most veterinary pathologists in the negative. Bovine animals are, however, not uncommonly affected with a disease the chief symptom of which is a purulent discharge from the lining of the urethra and prepuce, or vagina, and which is usually called gonorrhœa. This is always accompanied by congestion and swelling of the parts, and occasionally by chancres or chancroid ulcers, when, as is not surprising, the malady is often named syphilis. The chancroid sores probably occur sometimes in subjects who are not suffering from a purulent discharge.—I am, sir, yours sincerely, FRANCIS VACHER.

Birkenhead, October 13th, 1879.

THE MILLERCHIP FUND.

SIR,—The following additional amounts have been forwarded to me, and the donors have requested an acknowledgment in the medical journals.

T. White, Esq., Belgrave Road, W.	£1	1	0
Sundry sums collected by W. Hyman, Esq., Guildford Street..	2	15	0
D. B. Balding, Esq., Royston	1	1	0
J. Bridger, Esq., Cottenham..	1	1	1
Dr. Archer, Royston	0	10	6
Dr. Anningson, Cambridge	0	10	6
Dr. P. French, per D. B. Balding, Esq.	1	0	0

The total sum received amounts to £71 6s. 6d., of which £60 has been paid over.—I am, sir, yours obediently, JOSEPH ROGERS.

33, Dean Street, Soho, October 8th, 1879.

SUBSCRIBER.—In order to practise legally in Paris, permission must be obtained from the Minister of the Interior: or an application be made to the Faculty of Paris University through Dr. Vulpian, the Dean, stating the diplomas of the applicant, and asking to be admitted to the final or clinical examination of the Faculty for the Paris M.D. The application to the Minister of the Interior should be made through our Foreign Office.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

THE TREATMENT OF RINGWORM OF THE SCALP.

IN answer to Mr. Jeffreys' letter, in the JOURNAL of October 11th, on the treatment of obstinate ringworm of the scalp, we have received the following communications.

MR. JAMES STARTIN has found the following treatment most successful in a large number of cases. 1. Well wash the parts affected with just enough soft soap to make a wash; thoroughly dry, and then apply with a thick camel-hair brush some blistering fluid. 2. After a few days, when the inflammation has subsided, use alternately the following applications: ol. cadini, creasote, and tincture of iodini in equal parts, and a lotion of hyposulphite of soda, two drachms to the ounce of water, with a little compound tincture of lavender. 3. If the skin should be sore from the use of the above applications, then the use of the white precipitate ointment of the *British Pharmacopœia*, diluted with equal parts of vaseline, will prove most beneficial. Mr. Startin does not think we can ever give a prognosis of complete cure of these cases of obstinate ringworm under three months; but he has never found the above to fail.

MR. J. NAISH SMART (Bedminster, Bristol) thinks that Mr. Jeffreys will find a very effectual remedy in perchloride of mercury, in solution of two grains to the ounce of water, with the addition of a little spirits of wine or ether, to make it soluble. This solution, carefully applied with a camel-hair pencil two or three times a day, Mr. Smart has never known fail even in most stubborn cases, where the usual remedies have been used.

MR. G. WELLER (Wanstead) recommends attention to the general health of the children. Plenty of fresh air, liberal diet, great cleanliness, together with tonics, iron, and especially cod-liver oil, will do much to improve their condition. Having a large public school under his charge, Mr. Weller finds that when he gets such cases as are described, the children are mostly of a strumous class; and by letting them have the run of the grounds, also of the kitchen, they soon get id of their troublesome ailment.

MR. FRANCIS TOULMIN (Upper Clapton) has for many years been in the habit of using a solution of creasote in glacial acetic acid—one drachm of the former in seven drachms of the latter. The parts affected are painted with a stiff camel-hair brush. A crust is formed, which should be allowed to remain until the new hair raises it from the scalp. He cannot call to mind any case in which this remedy has failed to perfect a cure.

SIR,—Can you kindly give me the name of any institution, private or public, where a little girl eight years of age, who has had infantile paralysis on both sides, with imperfect recovery, and is now aphysic, could be educated? She is by no means idiotic.—Yours faithfully. J. BATTEN COUMBE, M.D., etc.

Twyford, near Reading, October 8th, 1879.

PAYMENT OF MEMBERS OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—Your correspondent Mr. Woodman has misunderstood my letter and drawn a wrong conclusion therefrom. I neither said nor wished to imply that there was any change in the morality of the workers. Changes of morality, its attributes and its sentiments *per se*, are uncertain and difficult of proof. Let me be more explicit, and, for the sake of Mr. Woodman, add to the quotation he has made from my letter to the President and Council of the Royal College of Surgeons, "affects injuriously the workers" in their material interests. Money payments cannot cancel medical and surgical debts: the profession is much imposed upon. Many members in it have to struggle hard for a subsistence: it suffers from combined causes, which have led to insufficient remuneration and its consequences in both public and private practice. It is noble to work benevolently for nothing for good and proper objects, but not indiscriminately, at the expense of wives and families.—I am, sir, your obedient servant, JOHN POSTGATE.

Birmingham, October 6th, 1879.

A RARE MONSTROSITY.

SIR,—On the morning of the 30th of July last I was called to a labour. On examination, I found the presentation natural, and labour progressing favourably. On the birth of the head, there was a cessation of pains for a longer period than usual. When the pains recommenced, I found the child did not make any progress. I accordingly used gentle traction, and, after a sudden jerk, the child was easily expelled, when I discovered that the cord was ruptured: fortunately, sufficient length of it was left on the child to ligature it effectively. After removal of the placenta, the cord was found to have broken at its base, so that it could not have been longer than six inches. The attachment of the cord to the body of the child was remarkable, as it was inserted by a broad expansion of the size of the palm of the hand under the skin of the abdomen, the expansion being of the same colour and texture as the cord itself. The skin was wanting for some distance around the cord, and seemed to be reflected upon this expansion. Immediately under the insertion of this base of the cord, and separated by a thin belt of true skin, a raw bright red surface was exposed, very irregular, looking as if the anterior wall of that part of the abdomen were wanting. At the right of the base of this surface was a letter S shaped appendage, which at a first glance I supposed to be a penis, but on more careful examination I found to be the end of the rectum, as the child evacuated by means of it. It had a perfect sphincter. The meatus urinarius was found higher up and more to the left, as an almost imperceptible fissure, with no signs of either penis or vagina. The anus was imperforate. The right leg was normal. The left femur seemed reversed, so as to lie over the abdomen from left to right. The tibia on this leg was very rudimentary, being only one inch long. No fibula could be felt. This tibia was only about the thickness of a pencil, and simply covered with skin. The foot was fixed by a tendon and skin only to that part of the hip rather behind the great trochanter; the toes pointing downwards and backwards, with their dorsal surface to the hip. This foot had only two metacarpal bones and toes, and could be wrought from the hip as motion was excited by tickling the sole.

In addition, the child had a spina bifida about the size of its head, the tumour seeming to arise from the left laminæ of the second and third lumbar vertebræ. The child was quite perfect above the diaphragm. It voided both stools and urine, and cried and suckled like any other child. The head only gave indications of a seven months' child. It lived eight days; and as no *post mortem* examination was allowed, further examination could not be made. On inquiry, the mother said she knew of no cause that could account for such abnormality.—I am, etc.,

Fairfield, September 1879. ALEX. D. PITHIE

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

TREATMENT OF SICKNESS DURING PREGNANCY.

SIR,—In reply to "A Member", who desires to know how pepsine wine of a reliable quality may be prepared, I would state that it is indispensable to obtain fresh calves' stomachs: these should be opened and cleaned of any contents by simple removal. The ends of the stomach are rejected, as affording little or no pepsine; the mucous membrane is then scraped, and the scraped material added to marsala or sherry of good quality, and allowed to digest for some days. If the addition of the mucous material dilute the wine and render it liable to decomposition, it requires to be fortified by the addition of a little old French brandy. The quantity of calves' stomach and wine used can easily be estimated after a little practice. This is the process followed when a really good pepsine wine is desired: the usual plan of adding dried pepsine powder to wine and filtering off the undissolved starch does not yield a result worth much.

In recommending a fair trial of pepsine wine in repeated small doses for relieving different forms of nausea and vomiting, the mode of giving chicken-broth or jelly with it (referred to in my article in the JOURNAL of September 20th) must be remembered—that is in small quantities at regular intervals, to the exclusion of all other drinks and food. This will be found of special advantage in the gastric affections of infancy and childhood, and seldom fails to relieve the distressing vomiting of pregnancy. In the latter condition, attention should be paid to the state of the bowels, which may require purgation. I do not recommend the pepsine and chicken-broth treatment as infallible, or the complete exclusion of other remedies; but it will often render all other treatment needless.—Yours faithfully,

Bournemouth, Sept. 30th, 1879. WILLIAM FRASER, M.D.

P.S.—If the process indicated be considered too troublesome, Mr. Allen, a pharmaceutical chemist, of Henry Street, Dublin, can be relied on for supplying a really good wine, very different in its action from most of the common preparations sold under that name.

RECEIPTS FOR CHEAP DISHES.

SIR,—I have seriously taken in hand preparing the penny cookery book you suggested in a recent article. I find I have about twenty tried receipts available; but it has occurred to me that by making known what I am engaged in through your correspondence column, I could get assistance from many of your readers. I shall be much obliged, therefore, for tried receipts for cheap dishes, formed either entirely of vegetable productions, or into which flesh-meat enters in very small proportion. I want especially some good receipts for soups, stews, and mixtures to be fried by dipping in a deep frying-pan of melted fat; also for puddings to be made without eggs. Can any of your readers inform me what is the real nutritive value of Australian and American potted meat? I have a strong suspicion that the muscular fibre has been so altered in the process that it passes undigested through the alimentary canal. If your readers will help me in this project, I think I shall produce an unique cookery book.—Yours, etc., ALEX. W. WALLACE, M.D.

Parsonstown, Ireland, September 30th, 1879.

AN ADVERTISEMENT.

SIR,—I wish to have your opinion of the propriety of the enclosed advertisement, which has appeared in the local paper during the last four weeks.

"To the Poor of Hyde.—Reduced Medical Charges.—Advice and medicine, 1s.; visit and medicine (day-time), 1s.—Dr. Anderton, Surgeon, Great Norbury Street, Hyde."

Mr. Anderton is a member of the Royal College of Surgeons of England and a Licentiate of the Apothecaries' Society of London, and has been practising here some years.—I am, sir, yours truly, T.

*** There can be only one opinion: and the opinion of the profession is so well known, that to pronounce its condemnation is unnecessary, and to publish it in a professional journal is a painful task.

COLONIAL QUALIFICATIONS AND PRACTICE.

SIR,—Would you kindly inform me through the columns of the JOURNAL whether a medical man possessing a colonial medical and surgical qualification, and two medical ones of this country, would render himself liable to any punishment by law if he practised surgery in this country in a general practice, or whether it only disqualifies him from recovering his surgical fees by law? Also, if you know whether the possession of an English qualification entitled the holder to practise in the province of Ontario, Canada, without re-examination before the College of Physicians and Surgeons of Ontario?—Yours faithfully, MEDICUS.

London, October 3rd, 1879.

*** The law as to the query in the second part of the letter has been fully set forth in our JOURNAL already. As to the first part of the letter, "Medicus" would, we suppose, be doing what, till further legislation thereon, many singly qualified practitioners are now doing.

MEDICAL CERTIFICATES.

SIR,—Mr. Nourse attempts to solve the difficulty as to payment for certificates of death by recommending us never to fill one in until we have paid a visit to the house of our late patient and satisfied ourselves by personal observation that death has really taken place: we can then charge for the visit. But it seems to me that this mode of escape is provided against by the Registrar-General's later forms of certificates, where a blank space is left for the words "as I am informed", where the medical attendant does not personally know that the patient has really died.—I am, yours faithfully, G. P.

CORONERS' INQUESTS.

SIR,—Not long since, I was called from my bed to visit a little child who had been taken suddenly ill. It died before my arrival. A coroner's inquest ensued, and a verdict of "Death from natural causes" was returned. The coroner knew of the death within a few hours of its occurrence, and after three days a form of inquest took place. The jury were taken from a cricket-field, and entered the poor woman's house without any previous information. No medical evidence was called, though some of the jury expressed a very decided wish that I should have been present; the constable saying to one of the jurymen, "We can do without the doctor", and the coroner quietly settled all inquiries, saying "I have heard from Dr. C." After the inquest, the coroner was good-enough to call upon me, and I was surprised by some of his remarks. "Medical men often expect to be called on inquests when they are not. He had lately a very broad hint—in fact, a rap on the knuckles—regarding expensive inquests. It was the duty of the coroner to use his discretion in the calling of medical evidence, so as to avoid expense, there being nothing suspicious regarding the case, as the parents were very respectable, fond of the child, and properly cared for it, and that the child died of natural causes."

I was afterwards greatly blamed by the child's relatives in that I was not present, and for the inquest not taking place earlier. We, I presume, have no protection.—I am, sir, yours faithfully, J. B. C.

HYPODERMIC INJECTION OF MORPHIA.

DR. H. H. Kane of New York City, who has for some time past been collecting statistics on the hypodermic injection of morphia, would consider it a great favour if members of the profession who see this and have had experience with the instrument will answer the following questions. 1. What is your usual dose? 2. Do you use it alone or with atropia? 3. What is the largest amount you have ever administered? 4. Have you had inflammation or abscess at the point of puncture? 5. Have you had any deaths or accidents caused by this instrument? 6. Do you know of any cases of opium habit thus contracted? Where there has been a necropsy (5), please state the fact and the results obtained therefrom. All communications will be considered strictly confidential, the writer's name being used only when he gives his full consent thereto. Address all letters to Dr. H. H. Kane, 366, Bleecker Street, New York.

THE TREATMENT OF POST PARTUM HÆMORRHAGE.

SIR,—I would like to mention one way of applying cold in the treatment of *post partum* hæmorrhage that I have found most useful—namely, by the stomach—a most effective way. A tumblerful of cold spring-water, with perhaps a flavouring of brandy, will be most agreeable to the patient, especially just after the second stage is completed, and will act like magic. If the uterus have become filled with clots, they will quickly be expelled. If hæmorrhage be expected, I give this immediately the child is born, and at the same time open the window for two or three minutes, and even take off some of the bedclothes: this adds greatly to the patient's comfort and safety. In the cold stage of collapse, hot water and brandy with egg would be better. I would be glad to know how much pure ether should be given hypodermically in collapse; and also what is the proper hypodermic dose of Langenbeck's solution of ergotine; and whether chloroform tends, as I think, to cause *post partum* hæmorrhage.—Yours, etc., THOS. M'CLURE, F.R.C.S.I.

Worle, Weston-super-Mare, Oct. 1879.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. J. J. Charles, Dublin; Dr. C. J. B. Williams, London; Dr. James Sawyer, Birmingham; Dr. Markham, London; Dr. W. Fairlie Clarke, Southborough; Mr. Jessop, Leeds; Dr. Fergus, Glasgow; Dr. Wade, Birmingham; Dr. Collie, London; M.D., Manchester; Mr. John Glaister, Glasgow; Mr. H. Morris, London; M.B., M.A.; Juvenal; Mr. John Postgate, Birmingham; Dr. Rutherford, Edinburgh; Dr. Sheen, Cardiff; Dr. Knox, London; Mr. R. W. S. Barraclough, Herne Hill; Mr. R. Barwell, London; A Member; Mr. W. Reynolds, Southampton; Dr. E. Williams, Wrexham; Mr. J. H. Wolstenholme, Rhyl; Dr. T. C. Leah, Hyde; Dr. E. C. Seguin, New York; Mr. W. J. Mackie, Bedford; An Associate; Dr. R. Maclaren, Carlisle; Mr. W. T. Grant, Birmingham; M.B.; Dr. C. Meymott Tidy, London; Dr. Lombe Atthill, Dublin; Mr. Wm. Adams, London; The Secretaries of the Medical Society of London; Mr. Morton Smale, London; Mr. Teevan, London; Mr. W. G. Clements, Rochester; Dr. T. S. Dowse, London; Subscriber; Dr. Miller, Dundee; J. M. S.; Dr. Mackenna, London; Dr. H. W. Boddy, Manchester; Dr. J. B. Gill, Hastings; The Secretary of Apothecaries' Hall; Dr. Alfred Carpenter, Croydon; Dr. J. Dougall, Glasgow; Dr. Rabagliati, Bradford; Mr. J. Brown, Bacup; The Senior Physician to One of the London Hospitals; Dr. H. Hastings, London; Mr. J. Naish Smart, Bristol; G. P.; Dr. W. G. Smith, Dublin; Dr. J. H. Chapman, Dublin; The Registrar-General of England; Mr. Skelding, Reigate; Dr. De Chaumont, Netley; Dr. H. Lewis, Folkestone; W. G.; The Registrar-General of Ireland; Mr. A. D. H. Leadman, Boroughbridge; Mr. L. S. Thorn, Abergavenny; Mr. R. Lloyd, St. Albans; Mr. M. R. J. Behrendt, Doncaster; Dr. Clifford Allbutt, Leeds; Dr. Elder, Nottingham; Mr. C. Pridham, London; Mr. F. Toulmin, London; Mr. S. Campbell, Devonport; Mr. F. W. Lowndes, Liverpool; Dr. Alexander, Hull; Carbo; Dr. J. B. Pitt, Norwich; Dr. A. Duncan, Glasgow; Mr. F. Vacher, Birkenhead; Mr. J. Startin, London; Mr. Weller, Wanstead; Mr. G. E. Stanger, Nottingham; Dr. C. E. Glascott, Manchester; Mr. P. H. White, London; Mr. J. Blackett, London; Dr. H. Dunbar, Greenock; Mr. F. R. Fisher, London; Dr. Vallance, Stratford; Mr. C. H. Hough, Derby; Dr. Bernard Roth, Brighton; The Secretary of the Quekett Microscopical Club; Dr. Shorthouse, Croydon; Mr. R. Bowes, Richmond, Yorkshire; Dr. Tripe, London; Mr. E. Nettleship, London; Mr. Lawson Tait, Birmingham; Mr. F. J. Gant, London; Our Glasgow Correspondent; W. H. D. B.; Dr. Hoggan, London; Dr. Litton Forbes, London; Alpha; Mr. F. W. Jordan, Heaton Chapel; Librarian; Dr. A. M. Cash, Torquay; Dr. E. M. Skerritt, Clifton; Mr. Brodhurst, London; Dr. Woodward, Worcester: Dr. S. H. Munro; etc.

BOOKS, ETC., RECEIVED.

The French Exhibition of Horrors: a Sermon on the Sin of Torturing Animals. By the Rev. John Moffatt. Toronto: Hunter, Rose, and Co. 1879

Color-Blindness: its Dangers and Detection. By B. J. Jefferies. Boston; Houghton, Osgood, and Co. London: Trübner and Co. 1879.

REMARKS
ON
THE FIRST PRINCIPLES OF SANITARY WORK.

Being the Address in Sanitary Science and Preventive Medicine, delivered to the Sanitary Institute of Great Britain, at Croydon, October 22nd, 1879.

By ALFRED CARPENTER, M.D.Lond., C.S.S.Camb.,
President of the Section.

THE subject of my discourse is sanitary science and preventive medicine; although "as old as the hills", it is, as a science, of modern growth. In no other branch of science have we so few landmarks, and so few charts upon which the rocks and quicksands are fairly laid down. In no other science are there so few recognised dicta which can be accepted as axioms or dogmas, or acknowledged as postulates upon which a more elaborate fabric may be erected. This paucity of material does not arise from its absence, but because the axioms have to be agreed to and complied with by the masses before their truth can be ascertained. The results of the applications are too often marred or rendered nugatory by the independent action of a free people; whilst, if the axioms be applied to a people who are not free, there is a similar result; for it is impossible to obtain a compliance with sanitary law in private among those who do not know the reason why such commands are issued, however much a despotic authority may be able to control and to direct public actions. Thus it happens that sanitary science must be the outcome of a clearer knowledge; and its perfection can only be brought about by a judicious instruction of the people in the fundamental principles upon which, as a science, it naturally depends.

The foundation of local self-government is based upon the knowledge of the majority of the electors; and it is certain that the elected will not (except in a few instances) proceed much in advance of the intelligence of those who elect them. I hail, therefore, the opening of a congress such as this as a step in the right direction, because its object is to interest and instruct the people in those first principles of sanitary work which will enable the electors to choose the good and refuse the evil, with more discrimination, from among those who wish to take part in the noble art of local self-government; and by that means enable them to check the consummation of some of those gigantic jobs which are sometimes carried out in the name of sanitary science, but which are only started for the purpose of benefiting some private individual.

The first principles of sanitary law are so often in antagonism to private interests, so often opposed to the pecuniary advantage of the few—who are also at times themselves the mainsprings of local authority—that it is not surprising to find unsparing efforts constantly made by interested individuals to show that the first principles are wrong. These efforts may be made in good faith, one or other of the fallacies of induction which Lord Bacon describes as "idols of the understanding", blinding the judgment, and causing the opponents of right principles to delude themselves into the belief that they are public benefactors, by reason of their antagonism to the proposed change. These and other kindred causes tend to keep the science of disease-prevention on the threshold of that domain which a more perfect knowledge will accord to it, and which is only to be obtained by a generous instruction of the people in those axioms which are already established as scientific facts, and which, as such, are bases for future work. This science is destined to alter the whole field of medical practice; to render obsolete much of our present knowledge as to the natural history of disease, and the measures which are now required for its treatment. The inquiry must come as to how the incidence of disease is to be prevented, rather than, having arisen, how it is to be cured. This will apply to every kind of complaint, and will not be limited to the zymotic class. Recent observations have shown that there is not much difference, except in degree, between tuberculosis and pyæmia; and that all the class of so-called strumous or scrofulous maladies, including consumption, are as capable of prevention as is ordinary blood-poisoning. The inquiry must be made, therefore, why phthisis appears so often in our death-lists, as well as scarlatina or typhoid fever. Nearly all the diseases which are fatal to young people are amenable to prophylactic measures, and capable of diminution in their fatal effects. If these deaths can be diminished—and of this there can be no reasonable doubt—it is probable that they may be altogether prevented by a right application of knowledge; and then pneumonia, bronchitis, mesenteric disease, and other causes of death among young people, will cease to be common among us, as well as those deaths which are produced by enthetic disease. Many of those evils which affect bony tissue, and which now give occupation to the surgeon, will then become diseases of the past. Those ailments which disfigure the human form will then be found more often in fiction than in fact among civilised people. It is a glorious field, and opens out to our view magnificent prospects. The death of the child will be the exception, and not the common end of more than half the human beings which are brought into the world. It is a serious thought that the majority of the population of the kingdom are deprived of their natural birthright, viz., "health and life", by the ignorance of sanitary law which now prevails. When a more perfec knowledge obtains, we shall not be able, as now, to say with Pope,

> "As man, perhaps, the moment of his breath,
> Receives the lurking principle of death;
> The young disease, that must subdue at length,
> Grows with his growth and strengthens with his strength."

Disease in the young now strengthens with his strength, because we live in unnatural states, because we breathe impure air, drink foul water, use corrupt food, and disobey the laws of nature:

> "Where order in variety we see,
> And where, though all things differ, all agree."

There is no occasion for the idea expressed by Pope that hereditary disease must run its fatal course. There is a power in the human frame to throw it off. That power is stronger in youth than the tendency to decay. It is seen in all families. Healthy children are born to unhealthy parents. There is a constant struggle in the human economy to recover its position, and remove from its tissues those matters which are unnecessary, and which are foreign to its requirements. The elements of disease are not parts of necessary tissue. If the efforts for their expulsion be made through channels which are capable of acting as exits for excreta, they will be successful, and the intruder will be expelled; but if they be made by organs whose daily perfection is necessary for the continuance of life or the performance of some endowment of the body, disease arises which may or may not end in health. If, then, we add to the troubles of the system more work for the diseased organ to do, health cannot be the outcome of the action. If we, by our social and moral customs, increase the quantity of morbid matter in the blood, we lessen the chance of health to the individual.

I have come to the conclusion that there is no truth in the theory which I once heard propounded by an eminent sanitary authority: "That sanitary science was responsible for the propagation of a weakened race of beings, and was therefore tending to people the earth with a debilitated race of men." This is not the effect of sanitary science, but a consequence of a neglect of it. There is no occasion whatever for tissue or matter which is not required for the perfection of the human economy to be propagated for generation after generation, "growing with its growth, and strengthening with its strength", if the laws of nature be obeyed. The sequences of a disobedience to these laws are seen for three or four generations; but if the errors of the fathers be not followed by the children, there is sufficient power in the human frame to throw off the burthen, and to reclaim its birthright of good health. The gouty great-grandfather has the dyspeptic and rheumatic grandfather, the hysterical and neuralgic father, whose children throw out the mischief by some skin eruption or other evacuation; and the evil which the great-grandfather induced by his indulgence in the pleasures of the table, the bottle of port, and general laziness is lost sight of. Let his progeny do right, and obey God's laws, and, at the end of three or four generations, there will be a removal of the gouty diathesis or the tubercular constitution. An observation of several generations in numerous families is convincing me that this is a right deduction. It must be so, otherwise there could not be a single healthy person among our English people. If we follow backwards the connections of each one of us, in five generations there have been sixty-two stocks, and, in six generations, a hundred and twenty-four individuals, from each of which every person has had the chance of inheriting disease, if inheritance were a progressive law. The chance of escape would be infinitesimal, and no healthy person could be found among us at all. True, it is a common thing for diseased children to be born of diseased parents, and for these children to die of that inherited disease in their infancy. It is uncommon, even if it ever occur except from accident, for the offspring of healthy people to be diseased at their birth; whilst delicate fathers and mothers very often produce sturdy children, who grow up without a particle of disease about them.

However much, therefore, it may take the fancy of those opposed to

sanitary work to support the idea that it would be better for the human race if insanitary conditions were allowed to hold sway among us, there is no real truth in the statement. It is contrary to our experience in nature for such a clumsy contrivance to exist, by means of which the human family would long ere this have been like the extinct monsters of former ages. We may banish the idea, then, that sanitary work promotes the growth of a diseased race and tends to weaken the whole human family. The natural tendency of disease is either for it to destroy the blighted being, or for the diseased material to be expelled from the body. If a few generations could be brought to obey the laws which common sense and sanitary science have already pointed out as necessary to be observed, hereditary disease might become a thing of the past, as much as some of those maladies which used to be common among us, but are now altogether lost sight of. But hereditary tendencies are of great importance at the present time, and must be carefully studied by the student in preventive medicine. If we consult any treatise upon medical practice published in the early part of the century, we find that the most learned physicians of those days taught that diseases had various names which distinguished them from others, and which were mainly derived from the particular organ affected. Thus inflammation of the lung was described as a disease completely separated from inflammations of other organs. It was regarded as an entity in itself, which must be discovered early and treated *secundum artem*. Pneumonia was pneumonia, and nothing more. Now, however, physicians who are not routinists have discovered that pneumonia is more often the local manifestation of a general malady than a disease limited to a particular locality. The physician now tries to find out whether the disease has a zymotic or malarious origin, in which case he knows that it is only the point at which the fever is more active in its effect than at other parts of the body. If not zymotic, it may be gouty in its character. He has then to inquire whether that gout has been inherited, or has been obtained by the manner in which the patient has been accustomed to live. Or he may find that it is tubercular in its origin, or due to infection from pyæmia or septicæmia. It may be syphilitic in its character, or be due to a malignant diathesis. These particular observations are of much more importance than the mere fact of there being local disease. They are tending to reduce to very moderate dimensions the classes of disease which affect the human frame. The registration of deaths in its present form is of no scientific value; and, except the inference which may be drawn from the total number of deaths as compared with those which are produced by zymotic causes, is useless for scientific purposes. It will be observed that deaths registered as caused by pneumonia may have had an origin in some constitutional condition of the system, which, if it were tabulated, might give valuable information. The table as at present constituted places deaths, which have had a similar origin, in every part of the list. I would suggest, as a necessary alteration of the law regarding registration of deaths, that the certificate which details the cause should be transmitted direct to the registrar; that it should be a confidential document, the nature of which the registrar should be prohibited from disclosing; and that it should be the property of the State alone. I make this suggestion because a large portion of the deaths which now arise are due to causes which are not, and cannot be, registered. I especially refer to those which have had a syphilitic origin, or which have been caused by continuous indulgence in intoxicating drinks. A very large portion of the diseases which affect particular organs, and in which the first starting-point is a kind of fatty degeneration of tissue, have their origin in the habitual use of intoxicating liquors. Head, heart, liver, kidney, lung, are all subject to this change, and the consequences are diffused over the whole list. The Registrar-General's returns, as at present constituted, give but little real insight into the habits of the people.

It is necessary for every family to have some knowledge of their hereditary tendencies, before they can take the best measures for the removal of such tendencies from their own persons. The prevailing diatheses and the hybrids which arise from intermarriage must be recognised and treated accordingly, if good health is to be obtained. Treatment must not be limited to those times at which there is a local manifestation of disease. Prophylactic measures are necessary in apparent health, as well as during actual illness. It is a mistake to suppose that the date at which a given illness has apparently commenced is that at which it really began. In the case of pneumonia, for instance, it may simply announce the moment at which the mischief has reached the boiling point; it may be the evidence of an attempt on the part of nature to rebel at the treatment to which the body has been subjected, rather than to be the actual commencement of ill-health. It is an effort of the system to throw off morbid matter, and to commence its active removal. A dwelling-house is not a comfortable place to live in whilst repair and redecoration are being carried out. The necessity for repair and redecoration commenced some time before the workmen were actively set to work. It is not less so with the human frame. Illnesses are the means which nature sets up to throw out morbid or used-up material. It is generally the patient's fault, either from ignorance or wilful disobedience to law, if an organ become damaged in the operation. I wish particularly to dwell upon inherited tendencies, because it is often said that they belong to the inevitable, and families subject to them have to submit. This is not so; they can be removed. There is no reason why delicate parents should bring up delicate children, provided they are brought up in obedience to the laws of health; but, if they be coddled because they are said to be delicate, if they be removed from all those influences which make people strong and healthy, especially if they be made to take intoxicating drinks as a matter of course, they will be like to a naturally hardy shrub which has been kept in a hothouse and not allowed to experience the changes from heat to cold, or to feel those winds and storms which rivet it more strongly in the soil. If afterwards it be planted in the open, it dwindles or remains a poor looking shrub, liable to be acted on by blight, and is easily broken down by a moderate tempest or destroyed by a cold night. So it is with human beings if they be not in due time exposed to the changes which arise from heat and cold, to drought and moisture, to exercise and proper changes of food, and kept from stimulants. It is impossible for them to reach a healthy and vigorous manhood, or to go to the grave without the infliction of organic disease.

It is all-important for individuals to be aware of the tendencies which they may have inherited. He who has a gouty constitution or a tendency to fatty degeneration from indulging in excess of certain matters, may live quite differently from one who has a tubercular diathesis; whilst the man who is more easily affected by malarious disease should avoid conditions which scarcely affect the former at all.

The time has not yet arrived at which it will be possible to speak with much advantage in a public assembly regarding general diseases. Our work, as far as this congress is concerned, is to deal with those causes which produce malarious or zymotic disease, and lessen the general health of the people. The incidence of the malarious class does fall more heavily upon some families than upon others; and some suffer much more fatally than others, as if they were predisposed to become its victims. At present, we have no certain knowledge as to the reason for this. The class itself is quite capable of prevention. The causes which lead to it are produced by circumstances which are absolutely removable, either by the State or by individual action. I have been accustomed to treat this part of my subject in the light of an algebraic equation, in which I assume that enthetic or zymotic disease is made up of members represented by x y z, the problem being to find the value attaching to each member of the formula x y z. By enthetic or zymotic disease I mean any of those diseases which belong to the zymotic or infectious classes, and which are dependent for their increase upon matter which has been in contact some time or other with another and a similar case. I will explain the value which I apply to each member in the formula. x represents the human body as it should be in health. Each function or endowment of the body as performed leads to the production of some used-up material. This is represented by y; it always exists more or less in the blood, or is stored up as formed material, and cannot be used again for the same purpose. It is always in course of removal by the excretory organs of the body. It should be kept down to a normal standard, otherwise the natural balance is destroyed, and something goes wrong. z is matter from without. It is upon y that z increases and multiplies. If the quantity of y be normal, there is nothing for z to grow upon, for it will not flourish in the blood and juices of a healthy person. If, therefore, every function of the body be properly performed, if every endowment be naturally used, the introduction of z is comparatively harmless. It is only upon excreta or used-up matter, either in or out of the body, that z can grow. If y in any shape be abundant in the blood, and not removed as fast as it is formed, z increases and multiplies in that blood, and induces changes in it which may be incompatible with life. If there be little pabulum, the case is a mild one; and, if that pabulum be of very slow growth, it may be a long period before the patient can be liable to a similar attack again, and it may induce such conditions as may render a recurrence an impossibility. Two members of the formula x y z cannot produce a case of disease. The whole three must be present. x and y alone cannot produce it, neither can x and z if y be kept at a natural standard; for, if z happen to be introduced into the body, there is nothing for it to grow upon, and it aborts. We cannot keep out y altogether, for it is formed in the very act of living. It is a sequence of life. If, therefore, any special endowment of the body be not sufficiently exercised, or any function not properly performed, there

is an alteration of the balance, and pabulum is provided, of a debased character, for morbid matter to run riot in. Thus it is that diseases of the enthetic class are epidemic at some times, and not at others, and among some people, and not among others, fatal effects more certainly following in those whose blood or other juices contain particular forms of impurity.

Each type of disease requires a different kind of pabulum for its production, just as wheat grows better in some soils than in others, whilst there are soils in which it will not grow at all, but where water-grasses flourish. So we have scarlatina abounding among one set of people, typhoid fever among another, and dysentery among a third. There is nothing more curious or out of the wayin the rise and fall of epidemics than there is in the abundance or scarcity of certain forms of vegetable life, according as the season is dry or moist, or hot or cold, and according as the material required for its nourishment is abundant or the contrary. At any rate, *z* is required for the production of a case. You ask as to its nature. *z* belongs to the vegetable kingdom; it may be very close to that part of the organic world which Dr. Allman recently described at Sheffield as the starting-point for both vegetable and animal. On the nomination of Mohl, he has styled it protoplasm. Mr. Huxley calls it "the physical basis of life". Dr. Allman says it is a liquid. I join issue with him upon this point; it is not liquid, it is not volatile, but it is particulate; and, although he calls it liquid, his own admissions imply a belief in its particulate character. Those granules to which he alluded so forcibly in his address at Sheffield are solids, however much liquid they may have attached to their constituent substances. They are totally destitute of structure, as far as our finite appliances can make out, but they are possessed of contractility, and are endowed with some vital principles quite beyond our microscopical powers to discover. It is not possible for any one to say that they are really structureless, because we cannot see their parts. They are differentiated in their functions and in their powers, and must therefore be differentiated in their matter, which could be seen if our powers were equal to their minuteness. To assume that our knowledge is final; to conclude that they must be structureless, because we cannot see their structure by our present microscopical aid, is as unsound as for anyone to declare his disbelief in the planet Neptune because he cannot see it with the naked eye. It is one of the weak parts of Dr. Allman's address in which he concludes that we have reached the limits of our powers, and that protoplasm must therefore be structureless. I consider *z* to be a particle of protoplasm altered in its functional power, so that it is capable of development only when it comes into contact with used-up matters which are the proper excreta of humanity; and just as the germ of the common mushroom cannot germinate unless in contact with the excreta of some of our domestic animals, so the germs of enthetic disease fail to multiply if used-up matter in its proper form be not provided for it. $x\,y\,z =$ a case of enthetic disease; the problem is how to prevent its extension. *z* is thrown off in abundance from every case. It increases and multiplies out of the body as well as in it. It is an organic living particle which can flourish and propagate its kind, if pabulum be provided for it, but which cannot do so if the requisite matter be absent. The great work which the sanitarian has to perform is so to dispose of excreta that the human body shall not return within its own economy the used-up matter upon which it has fed, and which has resulted from the performance of its proper endowments, nor yet keep within reach any of the same materials by means of which *z* may be allowed to multiply, and at some future time be introduced into the system of another person, and so reproduce the disease. *z* is neither liquid nor volatile, but is a solid particle, which in some forms can be seen and weighed, and is as much a living particle as is the germ upon which the dry rot in wood or potato-blight depends. Its position in the organic world is now definitely established to be vegetable; and, reasoning from analogy, there are some facts which are proved regarding some members of the family which it is fair to assume as applying to all. I am not going into the moot point of germ-theory as opposed to glandular theory regarding the production of disease. It may be that the truth lies between the two, and that the fatal result arises from the secretion of the vegetable germ, rather than from the speck of albuminous matter of which it consists. It may be that these growths produce a poison similar to snake-poison or woorara in its effects, and which kills by its action upon the nerve-cells of the body. It may also be that the eruption of scarlatina or measles may be caused by an acid produced by the micrococcus upon which the disease depends, allied to formic acid in its chemical characters, but which is so evanescent in its nature that the chemist cannot catch it any more than he can catch the poison which kills in a case of cholera. These are at present only speculations; but they are lines upon which it is probable that future discoveries may be made.

There are four distinct and specific forms of infectious fever in which it has been proved that, coincident with the disease and accompanying it through its stages, there are forms of vegetation in the juices and tissues of the body which decidedly differ from normal states, and which are always associated with the disease in question. The pathology of these infective processes has been thoroughly worked out by Dr. Burdon Sanderson; he has, guided by the work of eminent continental pathologists, himself verified the facts, and they come before us with great authority. It seems to be fairly proved that small-pox, sheep-pox, splenic fever, and relapsing fever are propagated by vegetable organisms. They were made out by Dr. Keber of Dantzic in 1868; and Dr. Sanderson tells us that Professor Cohn of Breslau has also made out that the organisms which are present in vaccine lymph are also found in the lymph of variola, so entirely similar as regards form and development that it is impossible to draw any distinction between them. Professor Cohn gives a graphic description of these appearances, which is published in Mr. Simon's report to the Privy Council on Scientific Investigations for the year 1874. The same paper contains an account of the investigations of Dr. Weigert of Breslau as to the existence of micrococci in the lymphatics of the skin in persons who had died of small-pox. Dr. Sanderson says (page 32): "That organisms of a particular form existing in the lymph of small-pox, taken in connection with the occurrence of similar organisms in the channels of absorption leading from the pustules, suggest the probability of these having to do with the morbid process, but cannot be accepted as proof that they possess the property of propagating the disease. For the establishment of such proof, it would have to be shown either that, when deprived of its organisms, though otherwise unaltered, it is deprived of its activity; or that, when the organisms are introduced alone, they manifest the contagious property of the liquid or tissue from which they are derived." It has been shown that many contagious liquids lose their activity when they are deprived of their suspended particles. This has been shown over and over again in the case of vaccinia; but the *per contra* must be regarded as impossible, because the bodies themselves are so minute that there is not the slightest prospect of any one being able to separate them from the containing liquid in anything like a state of freedom.

There are methods of investigation which approach very clearly to the required conditions, and which enable us to assume with some degree of certainty that the organisms, if not themselves the cause of the disease, are always the vehicle by means of which the cause is carted about the country. We cannot investigate the pathological condition under which small-pox is produced in those stages in which it is most important to gain information, but comparative anatomy enables us to bridge over the chasm. Sheep are subject to a disease which is the exact counterpart of small-pox. It is precisely similar in its origin, its progress, and its manifestations. Dr. B. Sanderson tells us that the virus contains organisms similar to those of small-pox and vaccine. The result of the investigations which were carried out by Dr. Klein can leave no doubt in the mind of any reasonable man as to the connection between the vegetations and the disease. He describes them as necklace-like filaments, of jointed structure; in some they are granular, which, under the highest possible microscopical powers, are seen to be highly refractive spheroids; in others, the filaments were so dense as to present the aspect of a felt-like mass, such as is seen in similar growths. He concludes that the highly refractive spheroids are the forms which are characteristic of the lymph in sheep-pox in its active condition. He was able to trace separate conidia in a state of germination, and, by their life-history, to connect them with vegetable matter.

There is another disease to which animals are subject, called splenic fever, or Milzbrand. It is sometimes called splenic apoplexy. It occurs in the horse, as well as in the ox, and was the first disease with which a specific organism in the blood was clearly associated. The peculiar staff-shaped bodies which are always contained in the liquor sanguinis in this disease were first made out in 1855. The most striking feature of the disease is its rapid progress; it runs its course in a few hours. In the horse, it is often called acute splenic tumour; it is accompanied by carbuncular infiltrations of the mucous membrane lining the alimentary canal. The carbuncles are not so often met with among cattle as they are in horses. The discovery of the rod-like bodies which always accompany the disease was made by Pollender. A year or two afterwards, Dr. Brauell confirmed Pollender's discovery (Virchow's *Archiv*); he considered them to be diagnostic of the disease. Other physiologists have corroborated these observations, and have shown that the rod-like bodies are from $\frac{1}{3600}$ to $\frac{1}{2000}$ of an inch in length, the width scarcely admitting of measurement. Although the evidence was much doubted at first, it is now agreed by all physiologists who have inquired into it that the rods are living organic bodies, and can communicate the disease to apparently healthy animals. The activity of

the rods is dependent upon their vital functions; and, whether the rod is the absolute cause of the disease or not, it is always present, and the disease cannot be propagated without it. A curious fact has been established regarding it. The rods do not pass through the membrane which separates the mother from her offspring; and, when pregnant animals are affected by splenic fever, the blood of the embryo is not contagious, and does not contain the staff-shaped bodies.

There are two other points which have been also proved regarding splenic fever. The contagious property as it exists in the circulation is only temporary. Dr. Brauell tells us, through Dr. Sanderson, that the moment the blood shows signs of putrefaction, it loses its infective power. The motionless rods give place to actively moving bacteria, which are not capable of spreading the disease. This point is an important one with regard to the incidence of other and similar diseases. It has been shown, also, that the actively moving bacteria are not the progeny of the splenic rods, but appear rather to have eaten them up, and to have acted upon the dangerous organisms much as the infusorian animalcules and entomostracean crustaceans do in impure water, viz., remove the *materies morbi* from the liquid, and are friends and not enemies. But the contagium has also a state of existence in which it is highly resistant. Bollinger tells us of ten cases which occurred in one stable near Zürich, between August 1868 and February 1872; there were no other cases in the neighbourhood; other horses and cattle surrounded the stable. The contagious agent must have been latent in that stable during the period in question. Each case appeared to arise independently of the preceding one, and indicated a form of contagion quite different from the staff-shaped bodies which disappear so soon from an acute case of the disease.

Some of you may ask the question as to what splenic fever in the horse has to do with the prevention of disease among human beings. I say much, because these same rod-shaped bodies have been discovered in the blood of human beings who have died of fever. There is a disease not unfrequent upon the continent, which is termed by Buhl of Munich "mycosis intestinalis"; intense infiltrations occur in the mucous membrane with extravasations of blood. It was known in some of the cases that there had been communication with animals similarly affected. The tissues of the infiltrated parts were infested with the staff-shaped rods. These discoveries give us a clue to the causes of those infiltrations which arise in the course of other fevers. The rods are not there, but there are myriads of microzymes which have superseded some forms of life which corresponded with the rods. They may also explain to us the causes of those congestions which frequently arise in the ordinary fevers of this country, and which are followed by hæmorrhages, abscesses, and enlargement of glands. The congestions may be caused by a mycosis, which is a colony of vegetable organisms, but they became changed in their character before it is possible for them to be examined by the microscopist. "It may be that the presence of these bodies is as much a part of the process as the emigration of the colourless corpuscles from the blood-vessels is a part of ordinary suppuration."

The fourth form of disease which has been clearly associated with living organisms is relapsing fever. It was first proved in Berlin by Dr. Obermeier, who unfortunately died of cholera whilst making his investigation, and probably lost his life by his devotion to science. The presence of the organisms in the blood, and their association with the fever, were clearly made out. They disappeared as the fever subsided, reappearing when a relapse took place. The morphological and botanical characters of the organisms were subsequently determined by Professor Cohn, and a place found for them in the vegetable kingdom. They are proved to be spirilla, belonging to the group spiro-bacteria of the natural order *Schizosporeæ*. This genus he has placed in the family of Oscillatoriaceæ, of the class *Algæ*, or seaweed. By means of this classification, we are able to see daylight, as regards these forms of disease. Another eminent botanist, Dr. von Naegeli, has classified micrococci under the name of *schizomycetes*, and connected them with the great family of fungi. There is much to favour this notion; but the aerial nature of the fructification of fungi, as opposed to the aqueous forms under which the algæ flourish, leads me to conclude that the micrococci are algæ rather than fungi, especially in those forms of disease which are propagated by the agency of water.

The spirillæ of relapsing fever are always present during the hot stage. They cease to be visible after the temperature has fallen. They can be kept alive for a short time out of the body, and there is evidence enough to show that they can propagate the disease. The contagiousness of the fever, the tendency to recur which its name indicates, and the coincidence of living organisms pathognomonic of the disease, are clearly established. The number of the organisms increases with the increase of temperature, and seems to point out that the rise has something to do with the vegetable growth, somewhat after the course which follows during the germination of ordinary seeds. The rapidity with which the multiplication goes on in a congenial soil; the fight which takes place between the natural order of things and the unnatural; the effort to throw out the foreign material, all have their significance and find their analogy in all the class of enthetic diseases, from plague and cholera at one end of the list, to a simple ague fit at the other.

Besides the four diseases I have mentioned, some observations have been made regarding the communicability of diphtheria. Cryptococci, or cacozymes, as I prefer to call them (to distinguish from the microzymes which are derived from healthy protoplasm), are found in the diseased tissue, and are said to spread the complaint. Diphtheria has been propagated by taking diphtheritic exudation from a case, and inoculating animals with it; a similar disease has then been set up. Similar processes could not be induced in the animal organism simply by putrescent or decomposing material. Dr. Sanderson does not consider that this has been satisfactorily proved, but others have thought the evidence fairly sufficient. It would be inexpedient, even if it were possible, to prove it conclusively. To inoculate a human being with matter from a diseased animal is an experiment which is not likely to be made, but the facts deposed to by Dr. Oertel of Munich have their significance.

The certainty with which glanders can be propagated from animals to human beings is well known, as also in the case of malignant pustule or "charbon". The alliance of the latter disease with carbuncle, and the connection which may be traced between it and diffuse cellular inflammation, erysipelas, and hospital gangrene, are also well known facts. Thus we have connecting links with numerous diseases which are infectious, and which are propagated by morbid matter from man to animal and from animal to man. But the operation is not limited to its effects upon animal life. Rust, smut, and their allies among fungi, bring occasional ruin upon agriculture. The *Peronospora infestans* is likely to remove the potato from our list of common foods. Another form of the same family, the *Botyritis bassiana*, is the terror of the silkworm grower. The salmon fisheries have been seriously damaged by the ravages of living vegetable organisms; whilst, at this present time, the vine grower is in intense alarm on account of the ravages of *Phylloxera vastatrix*. The aspect of the vegetable kingdom is sometimes changed by parasites. The potato blight has an ordinary fructification, which is aerial, and can only be produced under special circumstances. There must be an excess of carbonic acid in the atmosphere, something not very considerably above the four hundred parts in a million which naturally belong to it. There must also be an excess of moisture and an absence of sunlight. These adjuncts are required for the rapid production of the ordinary fructification of the peronospora. If a bright sun and a drying wind arise at the proper time, the loss of a particular crop may be averted. The ordinary fructification, and even the mycelium or root-matter, are evanescent; but it is not so with another form of fruit, which is found among the *débris* of the damaged crop, and sometimes in the rotting tuber. The resting spore continues to live; it is enclosed in a material capable of resisting the action of heat and cold, of sunshine and of rain, and has even germinated after being in boiling water for a short time. These spores probably exist in the soil, ready to spring up into activity whenever the necessary meteorological conditions arise, and continue long enough to allow of their germination. The genus Peronospora has a wide distribution, and it affects a large portion of the vegetable kingdom. How far it is possible for the protoplasm from which it springs to change its character—say, from bassiana to infestans, according as it attaches itself to the caterpillar or the potato-haulm—is one of those problems which some physiologists say to be contrary to nature, but which I consider to be within the range of probability. One thing is certain, that the same parasite can equally affect both classes of organic nature. It is thought by some that fungi only attach themselves to, and can only subsist upon, those plants which are weakened by some causes. This would only be following the rule which I believe to apply to human beings; but then the parasites themselves, by their irritating secretions, are able to induce a condition which allows them more play, and by producing debility enables them to take possession of their victim with greater rapidity. There is a second problem which requires solving; it is of great importance, viz., how far vegetable tissues which are diseased by fungous growth are capable of affecting the animals which feed upon them; and again, how far animals which have become affected with disease are able to spread that or some other form of disease, not only among their own species, but to other animals and to man himself, if he feed upon their diseased flesh.

I have mentioned the experiments which indicated the possibility of diphtheria being propagated from man to animals. Glanders can arise in both classes. Vaccinia is a disease common to both. There seems to be no difference between small-pox and sheep-pox. The transmission of trichina from animal to man is undoubted, and the communication

of tapeworm is not uncommon. Cases of malignant pustule are obtained by infection from animal to man. There are several other diseases which arise either from contact, or as a sequence to the consumption of diseased meat or bread; and gangrene is not an uncommon result of the consumption of spurred rye in those districts upon the continent in which rye-bread is used. The secale or spur of ergot is a mass of fungous growth belonging to the class *Claviceps*, a genus of ascomycetous fungi. Its consumption is followed by a condition of the tissues which produces gangrene. There are some curious facts connected with the fructification of this plant; there is the production of a multitude of spermatia and so-called stylospores, which have active movement in air; they are motionless in water, but they soon germinate and emit filaments, and are ready for action in congenial soil.

We cannot look upon the diseases of organic nature with perfect complacency; we must not consider that they only affect our pockets, and not our health. Before English people can have that perfect health which is the birthright of every child born into the world, it will be necessary to alter our plans regarding the breeding of cattle, and the methods of housing and feeding them. Our domestic animals fall an easy prey to every kind of epidemic. For all sanitary law is, as a rule, ignored by the farmer. Knowing something of the customs of the country, I was not surprised when I heard an inspector from the Metropolitan meat market declare upon oath, in Croydon police-court, that 80 per cent. of the meat which was sent to the London market was the subject of tubercular disease, and that, to exclude it from the market, would leave London without a meat supply. The foul air in which animals are often kept, the foul water with which they are supplied, and the musty food which is given to them to eat, easily accounts for the readiness with which they fall victims to every kind of malady. The deaths among cows during the calving process is very great, and is one of the reasons why meat continues dear. Such deaths ought not to occur at all. We cannot remove disease from our midst, or reduce our death-rate much below 17 in the 1,000, until we can ensure a more healthy progeny among our domestic animals. To do this, something more is necessary than to insist upon measures for the prevention of disease among men.

I have mentioned the position that organisms producing relapsing fever occupy in the vegetable kingdom. The spirilla belongs to the class *Algæ*. Professor Cohn has placed in the same class all the germs which give rise to epidemic diseases among men. It has been proved that bacteria are not the actual producers of these diseases; Cohn places them, however, in the same list, under the name of *microbacteria*, in a class by themselves. The micrococcus is grouped under the name of *sphærobacteria*, and divided into three classes, viz.: 1. Those which give rise to colour like to that which causes "red snow"; 2. Those which cause a certain class of ferments; and 3. Those which produce pathological changes in the blood. I should alter this classification into micrococci and cacozymes—the harmless and the hurtful forms. I must, however, refer you to the list for the complete classification.

The peculiarities of fructification which belong to the Oscillatoriaceæ in which we have an evanescent and also a persistent form of germ, and with the evanescent an extraordinary power of motion, by means of which they are enabled to insinuate themselves deeply into living tissues (especially if those tissues are not normally healthy), is one of the wonders of their mission. Having found entrance within the portals of a living thing, they assert their individuality, and soon produce a new crop of similar material, provided there is pabulum suited to their requirements; this pabulum appears to be used up matter of different kinds. It may be that different forms of disease are produced from similar germs, according to the position the germ attains to, or the food it has to assimilate; just as the head of the tænia becomes by transposition a hydatid cyst in the human liver, or gives rise to the staggers when it affects the brain of the sheep. It may be also that there are forms of vegetation induced by transplantation which can only be produced in that way; just as the common mushroom spore cannot germinate unless it has come into contact with the excreta of some domestic animals, so it may be possible that some of our diseases can only arise by the introduction of a proper germ at a time when it can come into contact with some other agent which is as yet unsuspected of having anything to do with the process. The large class of gregarina which exist as parasites within the bodies of animals from the highest to the lowest forms, having vibratile cilliæ and capable of much active movement, multiplying with extreme rapidity, have functions which are not yet determined. It may be that these parasites are powers in the equation $x\ y\ z$=enthetic disease; some of them or their allies may be necessary to enable the particle z to increase and multiply, and may account for their fertility in one person who has been infected, whilst another escapes.

This is not a far-fetched and chimerical idea, for Professor Dodel Port of Zürich points out that the fructification of the *polysiphonia subulata* (one of the red sea-weeds of our coasts) is completed through the agency of the beautiful little vorticella. A ciliated infusorium occupies the same position in the process that the bee occupies in the fructification of the willow catkin. But these are points which botany has not yet determined, and I must leave a very enticing subject for more important and more practical work.

I will now go on to what I call the canons of sanitary work. The basis upon which preventive medicine stands as a science is that of the *particulate nature of contagia*. It is the first canon law. We know that zymotic disease will not arise if the particle z is kept out of the process. Again, z cannot increase and multiply unless the material which has been used up in supporting the functions of the higher forms of life be also present. There are, therefore, two manifest duties for the sanitary authority to perform; first, to remove the pabulum y, upon which z is able to increase and multiply, from its neighbourhood to man; and also, so to alter its character that it is no longer able to nourish z if the particle should be imported; second, to prevent the importation of z, or if it be in our midst, so to alter its nature that it cannot fructify. These duties can be performed if the laws which regulate the introduction and the growth of z are well understood and counteracting agents regularly employed. There are two forms of germ, the evanescent and the persistent. Measures which may be successful against the former and may limit the spread of a present epidemic, will not necessarily prevent its recurrence in the future at the same place unless both kinds of germ are considered.

There are several ways by means of which the natural order *schizosporeæ* may make itself felt, viz., by the air, the water, the earth, or the food. The contamination of the air in the neighbourhood of our dwelling-houses both above and below the level of the ground must be counteracted. This contamination is effected in two ways: 1. By the ordinary processes of decay which are always going on in organic nature; and 2. By the aggregation of living creatures. Both give rise to excess of carbonic dioxide; without the latter, it is probable that fungi could not flourish, but it is animated nature which introduces myriads of the germs of debased protoplasm which is food for z to flourish in.

The higher the animal life is in the scale of creation, the more injurious is the excreta of such animals, and that of man most of all.

The remedy for these evils is *ventilation;* anything which impedes it is contrary to sanitary law. *Motion* is the second most important fact, and is the *second law* of sanitary work. Currents of air must be established to lessen the quantity of carbonic dioxide to something less than four hundred and fifty parts in a million; and by introducing a fresh supply of oxygen, the albuminoid matters which living creatures give out may be altered in their chemical characters, and by that means they will no longer give renewed life to z. Motion of both air and water is a principal law of sanitary work. Air in motion is soon deprived of those organic matters which allow the growth of z, and the latter, as well as the food upon which it feeds, being very evanescent in its character, are soon changed into innocuous and even into useful material. This was very forcibly impressed upon my notice in the year 1854, when I ventilated the soil-pipe of my own house by extending it upwards between the sewer and the trap; my successor in that house took away the soil-pipe, and in a few weeks a death from typhoid fever occurred in that house. Stagnant air in the house-drains of this town produced more or less evil in almost every house in the place, until our local senators were convinced of the evil. It was in Croydon that the law for ventilating sewers was first put into operation by a local authority. But the local authority were then in advance of the intelligence of the people; and, although the command was issued, the work was not generally done until much more proof of its necessity was afforded. Now, the ventilation of the sewer and of the house-drain is required by the law of the land, but it is not nearly so general as it should be. Those openings into sewers, were at first called stink-pipes, and were sometimes taken away because they gave evidence that the law of motion was not complied with. The foul smell which came out, showed that the sewer was a sewer of deposit, that it contained stagnant sewage; and the neighbour, like the ostrich of the desert, who when danger threatens hides its head, takes away the safety-valve and tries to smother up the evidence which the stink-pipe gives out, and sends it into somebody's house, instead of insisting upon the removal of the foul sewage from the sewer. No smell will ever arise from a properly constructed sewer, and if there be such smell, it is conclusive proof that there is deposit either in that sewer or in some other in close communication with it, or in the soil around it. No stagnation, either of air or of sewage, should be possible in any sewer.

Assuming that sewers are necessities in a thickly peopled neighbourhood, they must not be allowed to ventilate into houses; and now a

third law comes into operation, viz., that it shall not be possible for air to pass directly from a sewer into any house until it has been diluted by pure air and has had time to have its albuminoid matters oxidised. *There must not be any communication directly between the sewer and the interior* of the house.

There is no occasion for any departure from this law, and it should never be allowed in practice.

There is another danger which arises from sewers if they are not constructed of impervious materials; brick sewers are open to great objection when they pass through pervious soil in close proximity to houses. Unless they are very freely and efficiently ventilated, they contaminate the air of the subsoil of a town until it becomes a perfect hotbed of mischief. This is a frequent cause for the continuance of enthetic disease in districts in which the water-line rises and falls at distinct intervals. The way in which gases travel long distances underground is sometimes shown by the distance which coal-gas travels when a fracture has taken place in a gas main. Sewer-gases, which only form in badly constructed sewers, are just as penetrating. The products of decomposition find their way through the bricks into the soil, and then into the foundations of the houses. There are some houses in this town which are built over sewers, and which must sooner or later be dangerous to the occupants. The builders of such houses ought to be compelled to notify the fact to every incoming tenant. Ventilation should be provided in every case in which a trap has been fixed, otherwise stagnation must arise. This is another fundamental law.

The next *law is that sewage must be utilised.* It must be conveyed as soon as it is formed away from the neighbourhood of human beings. *z* is found to flourish most luxuriantly in sewage which is about to undergo putrefaction, but in which putrefaction is not actually established.

The safety, as far as it is safe, of the old-fashioned cesspool out of doors arises from the fact that putrefaction is rapidly set up, and with it all danger from the multiplication of *z* it removed. This is also seen in the dissecting-room, or at *post mortem* examinations. There is much danger from dissection-wounds for a few days after a death; but if a student cuts his finger whilst dissecting a body in which putrefaction is advancing there may be an ugly sore, but there will not be a poisoned wound. In the cesspool, *z* may be indefinitely multiplied before putrefaction is established, and germs of mischief may find their way out of cesspools into wells and water-courses, and may do much mischief. No sanitary authority ought on any pretence to allow a cesspool to exist within its jurisdiction.

If there be no sewers, and I contend that they are not necessaries in a thinly peopled district, excreta should be reserved in some utensil in contact with earth or some other deodoriser able to arrest the changes which otherwise must take place, and before the power of change can reassert itself the material should be taken away and utilised in the ground. The pail system is far safer and far more economical for a village population than a system of sewers, and it is a serious blunder to introduce into small places the works which thickly peopled cities require; but then the work of collection must be controlled by an efficient local authority. Sewage which has been removed from the town by water-carriage must be applied at once to the land by means of surface-irrigation. This subject has been repeatedly mooted at congresses, and by inquiries made by Royal Commissioners and Committees of both Houses of Parliament, and the general conclusion which has always been arrived at by unbiassed witnesses has been similar to that which was agreed to at the first sanitary congress ever held in this kingdom. In October 1866, the Leamington Sewage Congress, after a long discussion in a large assembly of scientific and practical men, agreed to the following resolution: "That the system of irrigation, when carried out in a scientific manner, removes the difficulty which now arises from the present noxious plan of polluting the rivers of England." A rider was added, which caused it to be unanimously accepted, viz.: "But that there are circumstances in which other systems may be applicable." Thirteen years have passed away since that time, and I am still more convinced than ever of the truth of the following conclusions.

1. Sewers are necessities for crowded populations.
2. Having sewers, they are silent highways along which human excreta may be safely and efficiently removed by water-carriage.
3. Sewer-gases and smells from decomposing sewage are not necessities of the system.
4. If sewage be judiciously applied to land, the spread of enthetic disease by its means becomes an impossibility.
5. After a proper application by surface-irrigation, the effluent water may be safely discharged into the nearest water-course.
6. The application of sewage to land must be conducted on scientific principles; otherwise failure, first financially, and then by producing nuisance, will arise.
7. A local board is the worst possible body to have the management of a sewage-farm. The management requires an intimate acquaintance with several sciences, with agriculture, with sale and barter, and an immediate personal command of capital: without these powers it cannot become a financial success. The manager of a sewage-farm must be an autocrat and not be liable to those attacks which are certain to be the lot of active members in a popularly elected local board. The Croydon Local Board, with the best intentions, will have to reap the harvest which is sure to follow from the farm having too many masters; and the ratepayers of the parish who did not know when they were well off, and who are primarily responsible, will have to pay the ultimate cost.

The eighth conclusion at which I have arrived, is that a local authority, in providing for the utilisation of sewage by irrigation, must be prepared to pay the difference in value between the price of the land and its ordinary agricultural worth. One penny in the pound on each rate, or at the most threepence for the year, ought to be amply sufficient for this purpose, as well as for the payment of interest on money sunk in unexhausted improvements. The Beddington farm, which has now been in operation more or less for twenty years, costs more than this; but if the farm had to be formed now, the experience which has been gained (if it were available, and if members of a local board could condescend to think that anybody else knew what was wanted better than themselves), would enable the board to carry out the work at a much less cost. I say if that experience were available; but, unfortunately, local self-government tends to scatter experience to the winds. Those works, upon which considerable sums of money have been sunk in as yet unexhausted improvements, are not followed up, because present managers do not know anything about them.

The ninth conclusion to which I have come is, that although sewage should be conveyed to the soil as rapidly as possible, *rainfall* should go to *river*. It is a wrong thing to conduct rainfall into sewers, as by this means a sewage-farm is swamped with unnecessary water. Not that storm-water from the streets of London should be sent into the Thames, or the washings of thickly peopled cities at once into the water way, but ordinary surface-water should be strictly excluded, and when possible, the rain-water from house-roofs should go the water-courses. This is a good reason for excluding sewers from thinly peopled districts; ordinary sewers will only drain the subsoil, empty the water courses, and dry up the smaller sources of our rivers, and produce as much evil in the subsoil as cesspools now do. They are serious blunders too often perpetrated for the personal benefit of private individuals.

The sixth great law of sanitary work is for sewer and water services to be decidedly separated, so that no interchange of either liquid or gases should be possible. It was shown not long since, that just where a water-pipe passed over a sewer, there the pipe was defective, and as a consequence a serious epidemic arose. Sewage soon decomposes iron; and if water-pipes be allowed to lie in sewers, and to occupy portions of cesspits on the roadside, or to be in communication at those points at which water is delivered into a house and slops and sewage removed, there can be no real safety for the people. I am sometimes astounded when I hear men who put themselves forward as sanitary authorities utterly ignore this fundamental law.

The seventh law is that the *individual house* is the unit of sanitary work, that it is in each house, and it is with each individual that the first action must be taken to diminish the power of *z* to grow and produce its kind, whilst should *z* be introduced, it is the *individual case* which is the unit of repression. But all these canon laws have their foundation upon the particulate nature of contagia, and it is by bearing this one fact in mind that sanitary work can produce sufficient fruit to be successful.

VACCINATION.—Dr. Williams, of Mold, North Wales, has received a first class Government grant of £40:6 for efficient and successful vaccination in his district (third time).

HOSPITAL SUNDAY IN BIRMINGHAM.—The subcommittee appointed to consider and determine upon the division among the various charities of this year's Hospital Sunday collections at Birmingham have decided to make the following apportionments: General Dispensary, Children's Hospital, and Eye Hospital, 45 per cent.; Women's Hospital, Homœopathic Hospital, Orthopædic Hospital, Institution for the Blind, Deaf and Dumb Institution, and Sanatorium, 46 per cent.; Lying-in Charity, 5 per cent.; and Dental Hospital, 4 per cent. The collections which will be made next Sunday are this year for what is known as the amalgamated charities, which come in turn with the separate annual collection for the General and Queen's Hospitals.

ENLARGEMENT OF THE BRONCHIAL LYMPHATIC GLANDS, WITH RELATION TO WHOOPING-COUGH.

By NOËL GUENEAU DE MUSSY, M.D.,
Honorary Physician to the Hôtel Dieu, Paris.

I READ, in the BRITISH MEDICAL JOURNAL of January 25th, that the Pathological Society of London did me the honour of discussing my opinion on the cause of spasmodic symptoms and of the peculiar character of the cough in whooping-cough. From the objections which were brought forward, I infer that my statements were not correctly understood; and therefore, with due deference to Dr. Barlow, I believe that the case by this eminent physician, in which the vagus nerve was found almost crushed by enlarged bronchial lymphatic glands without spasmodic cough during life, does not afford any evidence against my theory.

I stated that the compression and irritation of the vagus nerve produced by the enlarged tracheo-bronchial lymphatic glands were the cause of the spasmodic cough observed in this disease, and considered as characteristic. The following are the facts and arguments which led me to form this opinion. 1. In all the cases of whooping-cough observed by me, since my attention has been called to this point, I ascertained during life the clinical signs which I described as belonging to tracheo-bronchial adenopathy. In all the *post mortem* examinations made to my knowledge in the Children's Hospital in Paris, this enlargement was found when sought for. Dr. G. Simon, physician at the Enfant Jesus Hospital, told me, some time since, that he never saw it fail, and that he was convinced of the accuracy of my theory. The same glandular enlargement was also constantly observed by Dr. Archambault; and the reason for which my learned friend hesitates to adopt my opinion, is that he has found the same enlargement in several other diseases: an objection which is quite similar to that of Dr. Barlow. I will answer both by-and-bye.

I should request, before modifying an opinion sustained by so many clinical and necroscopic observations, that positive facts of whooping-cough well characterised, in which this glandular enlargement was not found after death, should be opposed to me. I cannot be satisfied with the somewhat vague assertion that this adenopathy is not as constant as I have said.

The pneumogastric nerve is an assemblage of nervous cords, which have many different destinations; I never asserted that all compression of this nerve, whatever may be the compressed point or whatever the degree of compression may be, was always attended by spasmodic cough. I have seen a great many examples of the contrary; and I have said this openly. But, on the other hand, is it not granted by all pathologists that the enlargement of the tracheo-bronchial lymphatic glands is in some cases attended by a cough so like whooping-cough, that I have seen the physicians who have most experience in diseases of children hesitate when called on to give a diagnosis?

It is also in accordance with observations that in other diseases habitually complicated by tracheo-bronchial adenopathy, such as measles and consumption, the cough takes sometimes a spasmodic character, which renders it very like that of whooping-cough. Patients have often said to me: "I cough as if I had the whooping-cough"; and in these cases I have found by auscultation and percussion the signs of enlargement of the bronchial glands.

From these facts, however, I never pretended to infer that compression of any part of the pneumogastric nerve must produce a cough like that of whooping-cough. In many cases one can observe, in accordance with this adenopathy, fits of coughing without the wheezing inspiration and without vomiting; and nothing proves that the irritation which occasioned this cough did not proceed from congested bronchial tubes by a reflex action rather than from altered lymphatic glands. I have even met with considerable enlargement of these glands without any cough. Is this strange? Is not a similar divergence in the expressions of the same lesion to be observed in the greater number of organic alterations? All that can be concluded is, that compression or irritation of the pneumogastric nerve may provoke a cough like whooping-cough under certain determined circumstances; that is to say, when the compression acts on certain points of the nervous cluster, when it acts in a certain degree, when it produces a certain kind of stimulus, which may depend on the nature of the morbid process. There is nothing in these restrictions, in this necessary intervention of certain determined conditions, which is inconsistent with the data furnished by pathology and by physiology. Because certain tumours in the skull produce epileptic convulsions, will one conclude that every tumour connected with the encephalon must necessarily give rise to epilepsy? May not these tumours be developed slowly and insidiously, to a certain degree, without causing any serious disturbance? And in other cases, may they not produce alteration of mobility and sensibility or other functional anomalies before the explosion of eclamptic fits?

In physiological experiments, we see that artificial excitement of the nerves may produce different phenomena according to the degree or mode of excitement. Pricking, pinching, stretching, burning, will not always act in the same way. A certain degree of pressure will provoke an increase of the nervous action; a more energetic pressure might produce an anomalous action; and if this pressure be still exaggerated, the nervous action may be interrupted or destroyed. Moreover, as I already pointed out, the peculiar kind of nervous excitement, the morbid process from which it is derived, may influence the result.

To come back to the enlargement of the bronchial lymphatic glands, is it not clear that the incitation provoked by a chronic process will not be the same as that which succeeds an acute congestion, which expresses a violent morbid activity, a pathological course of rapid evolution? My theory is not therefore counterbalanced by examples of bronchial adenopathy without cough like whooping-cough; but it would be overthrown by one single case of well characterised whooping-cough without any enlargement of the bronchial lymphatic glands ascertained by *post mortem* examination or investigations during life. I wait for that example, which up to this moment has escaped my own and my friends' attention.

In the *post mortem* examinations which I witnessed, the pneumogastric nerve, and principally its recurrent branch, were surrounded, tightly enclosed, by enlarged lymphatic glands; and I am inclined to suspect, without being able to affirm it, that irritation of the inferior laryngeal branch has the main share in the production of cough like whooping-cough.

I believe I have answered Dr. Barlow's objections. I will briefly record the reasons which appear to me to sustain my theory.

1. There is a close resemblance between the fits of cough in some cases of bronchial adenopathy and the fits of whooping-cough.

2. The persistence of whooping-cough, during months and years, as quoted by all pathologists and observed by myself, is easily to be understood if this spasmodic cough be consecutive to the enlargement of the bronchial glands; but it would be difficult to explain if it is to be considered as the continuation of the primary disease. Whooping-cough, according to many physicians, and I consider this statement as correct, has a great affinity with eruptive fevers, and consequently would be incompatible with chronicity. Nothing, on the other hand, is more common than to see the enlargement of lymphatic glands outlive the irritation which provoked it, and subsist by itself as a distinct disease under the influence of constitutional or external conditions.

3. Admitting my theory, one can easily account for this circumstance, that all irritation of the respiratory organs, occurring after the apparent cessation of whooping-cough, may bring back seemingly new attacks of it, by adding a fresh congestion to that which had not thoroughly disappeared, or to a congestive disposition left by the whooping-cough in the glandular tissue. Everyone knows that a cold, or the bronchitis connected with measles, may provoke this return of fits of whooping-cough in a patient recently cured.

4. The appearance of the spasmodic so-called characteristic cough only in the second or even in the third week of the disease, is easily to be understood if it succeed an enlargement of the bronchial lymphatic glands, which is evolved more or less slowly, and only produces irritating action on the inferior laryngeal or on other parts of the vagus nerve when it has acquired a certain degree of development.

5. It is yet to be understood that this characteristic cough may be wanting in the case of persons who, living in the midst of whooping-cough patients, and not having previously themselves been affected with that disease, present a cough which persists during several weeks—a sort of mitigated whooping-cough, pointed out by many physicians and observed by myself—when the glandular enlargement was little developed.

6. There are other symptoms connected with whooping-cough which can be attributed to the same morbid condition, and amongst them vomiting, which may be traced to an irritation of the pneumogastric nerve. According to my own observation, vomiting is more frequently provoked by adenopathy of the left than of the right side. This prevalence of vomiting in the enlargement of the left lymphatic glands may be explained by the greater share which the left pneumogastric nerve has in the innervation and consequently in the motricity of the stomach. I observed some cases of unrestrained vomiting, of which one lasted several years, the cause of which I could trace to an enlargement of the left lymphatic tracheo-bronchial glands, and which ceased

with the physical signs of this adenopathy under the influence of proper treatment.

7. The compression of the laryngeal nerve by enlarged glands explains the cases of aphonia, generally transitory, but which I have seen to persist more than four years after an attack of whooping-cough in the case of a lady, who exhibited all the signs of an enlargement of the left bronchial glands, and I had made the diagnosis of paralysis of the left vocal cord before it was ascertained by laryngoscopic examination.

I will conclude by relating a case which seems to me strong evidence in favour of the theory of which I undertake to be the champion. A physician presented to me one of his children affected, he said, with whooping-cough recurring for the third time in the space of one year. I immediately suggested a doubt of its being a true whooping-cough. The child was attacked for the first time in a country residence on the Seine; the place was very damp. At the end of four months, the cough had lost nothing of its violence and frequency. The child was sent to the bracing air of St. Germain; and after a few weeks the cough had completely disappeared. One month after his cure, he returned to his country place, and soon he began again to cough and to vomit. Having tried in vain a great many modes of treatment, his father decided on sending him back to St. Germain, where he was cured for the second time as rapidly as the first. After some months spent in this wholesome locality, the young fellow went to Rouen to a house built on piles on the bank of the river. There again, under the influence of damp (which is known to be favourable to glandular affections), the child had again all the symptoms of whooping-cough; and after these symptoms had continued for several months, the father brought back the patient to Paris, that he might be examined by me. I perceived a dull sound in the region corresponding to the bronchial glands; I found at the same time that, at the apex of the chest, the inspiratory murmur was rough, weak, acute, followed by a protracted blowing expiration, particularly near the spine. I sent the boy to a place where he could enjoy dry and pure air; I prescribed applications of tincture of iodine in the upper part of the thorax near the median line. He was ordered to take alternatively Bourboule water and syrup of bark with iodide of potassium; and to have exercise and good food. In a very short time, the child was thoroughly and definitely cured.

It is very probable, not to say more, to the persistence of bronchial adenopathy that must be attributed those relapses of whooping-cough, not less than the whooping-cough lasting an unusual time. If such be the case, those false whooping-coughs must not be contagious. Trusting in the accuracy of my views on this point, I allowed a child of my own family affected with one of those protracted whooping-coughs, lasting over six months, to remain with her newborn sister, for whom the disease would have been very probably fatal had it been contagious. However, I do not pretend to represent my conduct in this case, which was determined by particular circumstances, as a rule to be followed. It must be remembered that, if contagious diseases rarely return in a short space of time, this relapse is not absolutely impossible; it is sometimes observed in eruptive fever, and I could not affirm that in whooping-cough this exception may never occur.

ON SOME POINTS CONNECTED WITH THE DIAGNOSIS AND TREATMENT OF SCABIES.

By ROBERT LIVEING, M.D., F.R.C.P.,
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Of all the diseases of the skin, scabies is the one most frequently overlooked in *private practice*. Amongst the poor, we always expect to meet with it, but it is otherwise when we have to deal with the upper classes, and much more conclusive evidence of its nature is required than would be readily accepted in the case of a pauper or hospital patient. The medical man not expecting to meet with it is, so to speak, off his guard; moreover, even if he suspect scabies, he is naturally disinclined to tell a lady, for example, that she has the "itch", and consequently he too frequently gives her, if I may use the expression, the benefit of the doubt, and treats as simple eczema what really is scabies. The complete absence of any history, or, indeed, any likelihood of contagion, deters him from forming a right diagnosis. The social position of his patient is his stumbling-block. I refer, of course, only to those cases where the diagnostic signs of the disease are not well marked.

In order to avoid mistakes, it is well to know the circumstances under which the disease is generally contracted. Every medical man knows that it is most frequently introduced into families by one of the servants, and in any suspected case he always very properly examines all the servants; but if he fail to find any scabies amongst them, he is generally unable to account for its appearance. Now, I wish to point out a fact which I have noted for a long time past, and that is, that every autumn I have an unusual accession of patients suffering from scabies, and that these patients have usually been travelling on the Continent. I am now quite satisfied that the disease is not unfrequently caught in this way. I am not able to offer any information in detail as to how it is contracted abroad, but of the fact I am quite sure.

There are certain mistakes often made with regard to the *diagnosis* and *treatment* of scabies, which I find repeated with great regularity, and which I propose to point out. With regard to the diagnosis, errors often occur under the following circumstances. 1. A person, we will suppose, has suffered from time to time from attacks of eczema of the hands or elsewhere, and his medical adviser knows the fact; this person contracts scabies; what can be more natural than that his medical attendant should overlook it? The patient himself believes that he has, perhaps, a more obstinate attack of eczema than usual, but nothing more, and he is at first not surprised that he does not get well under the usual treatment. 2. In children, scabies in an early stage is often masked by a copious eruption of urticaria, and attention is naturally drawn to the more striking features of the eruption, the cause being overlooked; this mistake may be made by anyone, even the most careful, but it is generally soon corrected. 3. It is not very uncommon to meet with well-marked cases of scabies in which the hands and wrists are free from eruption; and, if the medical man be not aware of this, he is apt to be misled by it. I attribute this occasional freedom of the hands from eruption to the present very common use of more or less medicated soaps. In nearly all the instances of the kind that I have met with, I have been able to trace the cause to this source. In the case of hospital patients, the same results have been produced by certain occupations. In all doubtful cases of scabies in males, the *lower part of the abdomen, buttocks, and penis* should be examined; the appearance on the skin of the penis is very characteristic. In women, where a thorough examination is more difficult, we should especially look out for eruption about the mammæ and axillæ. In young children, the hands sometimes escape for a time, while the feet and buttocks are early attacked. 4. A very common error occurs in the following way. A patient suffering from an eruption consults a medical man, who believes it to be the itch, and orders accordingly the sulphur ointment of the *Pharmacopœia* to be well rubbed in; the patient, wishing to get rid of his trouble as fast as possible, carries out the treatment very vigorously; he is probably much better after the first and second application, but he soon begins to get, as he thinks, worse; the eruption extends and becomes more copious, and the more he applies the ointment the more he suffers; after a time, he returns to the medical man, who finds him covered with an irritable eczematous eruption; and, as he now fails to find anything distinctive of itch, he is apt to think that he has made a mistake. But the fact is that he has probably made no mistake, except that of prescribing a very strong ointment, which his patient has used too freely, and thus, while he has cured the scabies, he has produced a great amount of artificial eczema by the process of cure.

With regard to the *treatment* of scabies, errors sometimes occur. The one which is by far the most common, I have already indicated above, namely, that of using a sulphur ointment too strong, and of continuing its use too long. Of all remedies, not one is so effective as sulphur ointment properly applied. An ointment half the strength of that of the *British Pharmacopœia* is quite strong enough, and the best time to use it is at night, when it should be rubbed all over the body, except the head, but especially on the hands, buttocks, and lower part of the abdomen, and then the underclothing used during the previous day, namely, socks, gloves, drawers, and jersey should be worn during the night; this thoroughly disinfects the clothes, and at the same time keeps the ointment well applied to the skin. In the morning, a warm bath may be taken, and no treatment followed during the day. For three nights the process should be repeated, but never longer; subsequently a little ointment should be well rubbed on the hands, wrists, and buttocks for a few nights. All treatment should then be discontinued for at least a week, when, if necessary, it may be repeated for one or two nights, or a milder ointment might be used. It is sometimes difficult to say whether a case of scabies is cured or not; under these circumstances, it is very convenient to use an ointment which does not irritate or annoy the patient by its disagreeable smell, and which at the same time will complete the cure. A most excellent ointment of this kind is made with balsam of Peru (℥ij ad ℥j). The styrax ointment is also thoroughly effective, but less agreeable.

With regard to sulphur baths, I would say that they are not nearly as effective as sulphur ointments. I lately ordered sulphur baths (as being more agreeable than ointment) for a pupil of my own who was suffering from scabies; he took six or seven, and then came to me much better,

but not cured; I advised more baths, but did not see him again. He had in all about fifteen baths, and then went home to the country thinking himself cured; unfortunately he was not, and he conveyed scabies to his family. This is not the first time that I have found sulphur baths fail. They are, however, useful under certain circumstances; it may, for example, be very inconvenient to apply sulphur ointment at night. Again, in cases where there is much secondary eczema set up with extensive excoriations, the application of sulphur ointment is very irritating. Under these circumstances, it is very useful to begin with a few baths, which generally produce an excellent effect; this may be followed up by the application of ointment to those regions known to be specially affected.

Lastly, with regard to disinfecting outer clothes and bedding, it can be easily done by sulphur fumigation or baking. In all cases of long standing, the clothes and blankets, etc., should be disinfected, but it is never necessary to extend this to the bed itself.

COLOUR-BLINDNESS: ITS EXAMINATION AND PREVALENCE.

By HERBERT W. PAGE, M.A., M.C.Cantab.,
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I MUCH regret that I could not be present at the meeting in Cork to hear or take part in the discussion on colour-blindness, which was opened by Mr. Swanzy in a paper "On Examination for Colour-blindness", published in the JOURNAL of October 4th. In this paper, Mr. Swanzy refers to a short communication made by me to the *Lancet* of January 13th, 1877, "On the Prevalence of Colour-blindness", and he says: "Mr. Herbert Page does not specify the method he used in making his investigations; but it is evident from his general remarks, that it is some plan by which the individual is called on to give the correct name to a colour placed before him, and I have shown how completely unreliable any such method must be."

My paper was written after the occurrence of a terrible accident on the Great Northern Railway, which gave rise to a correspondence in the daily press as to the probability of that and many other accidents having been caused by some one individual having been colour-blind. As often happens under such circumstances, some of the writers expressed what I believed to be exaggerated notions of the frequency of colour-blindness. The object of that paper, therefore, was to point out how essential it is in examination for colour-blindness to pay due regard to the wondrous ignorance of the names of colours which prevails amongst uneducated persons, and that there is great risk, indeed, of including examples of simple ignorance of names amongst cases of colour-blindness when they are really not so. On this ground, I saw very grave reasons for doubting the statistics of Professor Wilson; for it seemed to me impossible, and indeed it seems so now, for anyone to run, as he did, through a large number of persons, unable, as he said, "to make other than a rapid examination of each individual", and not avoid making many mistakes.

I entirely agree with Mr. Swanzy, that the method of examination by making an individual give the correct name to a colour placed before him is "completely unreliable" for the discovery of true colour-blindness. Such was the method which, up to the time when I wrote in the *Lancet*, I had very largely—though not exclusively—employed, having supplemented it in doubtful cases by confronting the individual with more than one example or shade of a particular colour. It is my belief that no one of those thus passed by me into the railway service was not perfectly and safely competent to appreciate the colours ordinarily used as signals. Certainly "no one would desire to travel by a railway train, the engine-driver of which was red-green blind"; but I, for one, should have no objection whatever to travel with a colour-blind engine-driver, so long as he knew and could recognise—no matter by what sense—the colours indicative of danger, of caution, or the reverse. Fog may come and snow may fall, and the lights are hidden from the man with normal vision as from the colour-blind. Colour-signals are altogether inadequate on such occasions, and therefore "fog-signals" are adopted which appeal to the sense of sound. It is, indeed, a question whether, in foggy weather, some such signal as the "fog-horn", with which Professor Tyndall made experiments, might not with advantage be employed.

During the last two years, while additional interest has been shown in the investigation of colour-blindness by numerous observers, I have altogether disregarded names, and have required the candidate to group together, in my presence, a small number of coloured cards, in all twenty-two, comprising five shades of blue and violet, seven of red and orange, six of green, and four of yellow and buff. This method, closely allied to that of Holmgren, is adequate, I think, to detect any case of real colour-blindness, and fulfils, it seems to me, the conditions of a good test which Mr. Swanzy has laid down. I have further examined every doubtful case with Stilling's coloured letters and grounds. By this double method I have examined exactly two hundred men, devoting to each doubtful case periods of time varying from ten to forty-five minutes, and sparing no pains to eliminate all cases of mere ignorance of names, and of another class about which I have here more to say. In these two hundred, I have found one case, and one only, of true colour-blindness, and that red-green.

Another and not lesser danger—not absent even from the admirable and popular method of Holmgren—in an examination, is that it may attempt far too much, and that there may be included amongst the colour-blind those who lack nothing more than the sense and power of appreciating colours, never having taken the trouble to observe them. Over and over again, persons with an extensive vocabulary of names, which they shoot at random at particular colours, have been unable to match colours—for this simple reason, as they have said, that they have "never had anything to do with colours", or "have never taken notice of them", or "have never thought of them": regardless or utterly unobservant of the colours on all sides around them, or even of the colour to be found in their own dress. To expect such persons to sort delicate tints of saffron, puce, lavender, or salmon, would be as absurd as to expect an untutored ear to appreciate and distinguish all the subtle varieties of note and tone which combine to make the richest melodies of Beethoven or Wagner. I have known instances where this want of appreciation, amounting to almost total blindness to colours, has been very quickly overcome by a little attention to them. A lad could not name the coloured squares; he could not sort the coloured worsted; but, after four weeks' self-education, he was able to do both perfectly well. Because uneducated and unlearned men cannot sort Holmgren's skeins is, to my mind, the very poorest evidence of their being colour-blind. Not three weeks ago, a man was before me who had a defect of this kind in an extreme degree, made evident by an examination of thirty-five minutes. Had he been left to himself to sort Holmgren's worsted, how great is the chance that he would have been regarded as colour-blind! Investigators seem agreed that colour-blindness is much less frequent amongst women. Why? Because from their youngest days women have "had to do" with colours in the petty adornments of millinery and dress; and it is only from lack of the same opportunities of cultivating it that men's sense of colour is inferior to theirs.

Within the last three years, the London and North-Western Railway Company has instituted an annual examination by district inspectors of all its engine-drivers as to sight and colour-blindness. Doubtful cases are sent for closer examination to the various surgeons of the company. In those so sent to myself, I have found one case of red-green blindness. This I detected by Stilling's tests, before I adopted the double method which has been described. The man had been an engine-driver for very many years. He persisted in his knowledge of the signal-colours; but he was obviously red-green blind. When discharged from his place, he admitted he was perfectly unable to distinguish these two colours.

Not less strongly than those who have expressed their views on the subject, am I convinced of the vital moment of examining railway-servants and sailors for sight and colour-blindness; but I would again lay stress upon the importance of duly recognising the two classes of persons whom I have named, who may easily vitiate any statistics. So numerous are they, and so much time and care are requisite for their discovery, that I look with more than suspicion upon all statistics which have been drawn from the examination of hundreds of persons in a short space of time; and I still hold to the opinion which I expressed, that "true colour-blindness, such as Dalton had, is but very rarely to be found among males in this country".

If we are to arrive at any right estimate of the average of true colour-blindness, our examinations must be made amongst those who neither by lack of education nor by want of observation and cultivation can be included in the classes to which I have specially referred. The meeting of the British Medical Association at Cambridge next year will draw together from all parts of the kingdom about 1,000 or 1,500 members of our profession. Let each one of these be examined with every precaution that science can command or experience suggest, and let us see what proportion of this large body is really colour-blind.

FATAL RESULT FROM SWALLOWING A HALFPENNY TO A BOY AGED TEN, SIX MONTHS AFTER THE ACCIDENT.

By KEITH NORMAN MACDONALD, M.D., F.R.C.P.Ed., etc.

MOST works on the practice of medicine are singularly barren of information on the subject of foreign bodies in the stomach; hence the notion is very prevalent that, when an obtuse body like a small coin finds its way into that viscus, it need give rise to little anxiety, as it is generally passed *per anum* without giving further trouble. It ought, however, to be borne in mind that fatal results do occasionally ensue from the presence of even small coins in the stomach; and that the practitioner should be upon his guard not to grant a clean bill of health until the foreign body has been extruded, nor to lessen his exertions towards attaining that object, however favourable the case may appear. Numerous cases have been recorded of children swallowing coins without producing much inconvenience; and I have got a case myself at present of a boy aged 9, who swallowed a penny on October 28th, 1878, which has never since given rise to the slightest inconvenience.

In Dr. Neale's *Medical Digest*, I find an excellent index to a great variety of foreign bodies which have found their way into the human stomach, and which have been recorded in different periodicals; the most common being buttons, nails, coins, pins and needles, stones and fruit-stones, pencil-case, bars of iron, brass buckle, spoons, knives and forks, portion of horse-shoe, dominoes, door-key, slugs, fish-bones, rosary with seven medals attached, false teeth, etc.; and, of all such substances swallowed, small coins appear to be regarded as the most harmless.

The following case, however, proves an exception to the rule, and may, on that account, be worth recording.

J. M. W., aged 10, a robust little boy, of healthy parents, accidentally swallowed a halfpenny while playing on January 9th, 1879. It stuck in the pharynx for a short time, but slipped down during his efforts to get it up again before I arrived, about half an hour after the accident. At first, he complained of pain at the pit of the stomach, a metallic taste in his mouth, with loss of appetite, and afterwards of pain on taking food, which now and then was rejected about an hour after his meals. He was immediately ordered to have a diet of porridge and milk, which was varied from time to time with bread and milk, rice, and suet-pudding, with occasional doses of castor-oil, which, however, failed to carry off the foreign body. On January 30th, all uncomfortable symptoms ceased, and he appeared to enjoy tolerably good health; his appetite returned, but it was observed that he was gradually losing flesh, and never regained his former vigour, though he had recovered so far as to be able to return to school, and to appear as if nothing were the matter with him.

On July 15th, however, I was hastily summoned at 8 A.M., as an alarming attack of vomiting of blood had come on without any warning. This hæmorrhage had evidently come from the stomach, as it was dark coloured and coagulated; and the absence of chest-symptoms and melæna left little doubt as to its source. The hæmatemesis was easily subdued by the internal administration of ice, gallic acid, aromatic sulphuric acid and ergot, the diet being restricted to occasional tablespoonfuls of nearly equal parts of milk and lime-water.

On the morning of the 16th, at the same hour, the hæmorrhage recurred; and, as it was now evident that complete rest for the stomach was indispensable, all fluid and solid nourishment by the stomach was prohibited, and the strength supported by nutritive enemata, ice only being allowed by the mouth. During this time, the pulse continued quick and thready, 104 beats per minute, falling to 88 in the afternoons; but the temperature remained normal, and, singularly enough, no pain or uneasiness was complained of anywhere, except slight restlessness a few minutes before each hæmorrhagic attack.

He was treated in this manner up to the morning of the 22nd, with the exception of very small quantities of ice and milk. On that date, he was allowed a little gruel in addition, as he was to all appearance making rapid progress, and spoke quite cheerfully, complaining of no pain or uneasiness, but feeling very hungry. At five o'clock on the evening of the same day, while drinking a small quantity of milk out of a cup, his hand suddenly became unsteady. He remarked that he felt queer, and shortly afterwards fell back pale and pulseless, and died in a few minutes of syncope from internal hæmorrhage, the fatal termination having been preceded by a few convulsive twitches.

Unfortunately, a *post mortem* examination could not be obtained. Consequently there is no certainty as to the exact pathological changes which took place; but, reasoning from the history and symptoms of the case during life, and the mode of death, I am inclined to believe that the coin never left the stomach; that its continuous presence and pressure in the folds of the mucous membrane caused softening and ulceration; and that death took place before complete perforation had been accomplished.

Now, as regards treatment, it must be admitted that our best efforts must be more or less of an expectant nature. I would entirely deprecate the use of emetics. In this case, free emesis took place without dislodging the foreign body. At the same time, in similar cases, I would be inclined, if ever I should happen to have another, to continue the soft diet for a prolonged period, placing the patient in a prone position for a couple of hours after each meal, for the purpose of causing the foreign body to gravitate towards the pyloric orifice of the stomach, with a gentle inclination towards the right side; and, when hæmorrhage occurred, as in this case, not to permit any food, fluid or solid, by the mouth, but to support life entirely by nutritive enemata.

MEDICO-LEGAL MEMORANDA.

FATAL RUPTURE OF COLON, WITHOUT EXTERNAL BRUISE.

THE following notes of a case may render it interesting, medico-legally, by showing that rupture of the intestine, as a result of external violence, may occur and prove fatal, without being accompanied by any outward evidence of injury.

W. S., aged 32, was, about 4 P.M. on April 24th, kicked by a horse on the left side of the abdomen, the force of the blow being such as to throw him three or four yards from the spot on which he stood. After several hours of waiting, he was conveyed, a distance of over ten miles, by railway, and afterwards walked nearly a mile to the local hospital, whence, temporary treatment having been administered, he painfully dragged himself (with the assistance of his brother) a further distance of two miles to the Union Infirmary, where, on his arrival at 2.30 A.M. on the 25th, he received every attention from a skilled nurse. Perfectly sensible, complaining but little of pain, and being almost free from vomiting, he gradually sank at 9.45 A.M., nearly eighteen hours after the receipt of his injury. When seen by me at 11.45 A.M., the body showed cadaveric lividity at the back of the neck; but over the chest and abdomen there was not the slightest appearance of discoloration.

On the 26th, at 4 P.M., the face was much swollen and discoloured, bloody fluid oozing freely from mouth and nostrils. The abdomen was much distended, and there was discoloration from the neck to the fusiform cartilage.

On the 28th, at 1.15 P.M. (seventy-five hours and a half after death), a *post mortem* examination was made. With the exception of the presence of an ounce of sanguineous fluid in the pericardium, nothing abnormal was observed in the chest. The stomach was much distended by gas. The liver, spleen, kidneys, and bladder were normal in appearance. A rupture, about the size of a florin, was found on the posterior aspect of the descending colon, about one and a half inches above the sigmoid flexure. There was observed in the peritoneal cavity (left) a small quantity of uncoagulated dark blood, and as slightly rejected from the colon and omentum. With the exception of the jejunum, in which there were several small lumps of food, the intestinal canal was devoid of contents more solid than flatus.

Comment upon this case is unnecessary, beyond what has been made by Mr. Tompsett upon a somewhat similar case recorded by him in the JOURNAL of October 4th.

WILLIAM HAINING, M.D., Chester.

KICK FROM A HORSE: RUPTURE OF THE SMALL INTESTINE, WITHOUT MARKS OF EXTERNAL INJURY.

ON Saturday last (April 19th), I was hurriedly called to go to a stable and see a man who had been kicked by a horse. The history was that the man had been engaged in shoeing the animal, and that the brute—alive evidently to the fact of its being subject to somewhat coarser treatment than usual, on account of the man's being partially intoxicated—showed resistance, and flung out its hind legs, both of which, according to the statement of a companion, struck him on the abdomen.

I found, on arrival, the man lying on his right side on some sacks placed on the ground, under the influence of shock, with a pale and anxious face; his thighs were flexed on the abdomen. He complained of severe pain in the abdomen, mostly on the left side, and had vomited twice, once before and once after my arrival. Suspecting the possibility of rupture of the bladder, which at that time I ascertained to be requiring depletion, I asked the patient to micturate, which he did

freely and copiously. Examination of the abdomen revealed no marks of injury.

He was conveyed home, and I saw him in the evening. Abdominal pain was then very severe; pulse 96; the temperature was a little above normal, and the skin comparatively cool; decubitus was dorsal; the thighs were flexed on the abdomen, the legs on the thighs. Half-grain suppositories of morphia and fomentations were administered. August 20th. I saw him in the afternoon. The pulse could not be counted; temperature 106° F. The walls of the belly were unmoved during respiration, and he complained of excruciating pain in the right iliac fossa. The urine was drawn off by the catheter. Vomiting was frequent. No marks of injury were developed on any part of the abdominal walls. He was ordered to take ice and milk, and a mixture containing forty-minim doses of liquor morphiæ hydrochloratis, every two hours, and to continue fomentations. He was found dead at 4 A.M. on the 21st. A *post mortem* examination was made on the 22nd. The belly only was examined. Peritonitis was generally present in the abdomen, together with a free effusion of serous fluid. In the small intestine, corresponding in position to the site of pain complained of during life, was found a knuckle of bowel, highly red and congested, in the centre of which was found a rupture, about one inch in length and ragged at the edges; and round about which there was freely deposited lymph. The bowels were otherwise healthy.

REMARKS.—The interesting point in this case, and that from a medico-legal point of view, is the presence of a rupture in the intestine from injury without corresponding marks on the abdominal walls externally. I am aware that there have been similar cases to this, but they are rare; and it is to strengthen the position of those who hold that injury to the abdominal viscera may be produced without the presence of any lesion externally, that I now publish this case.

These remarks were penned before I observed Mr. Tompsett's case in the BRITISH MEDICAL JOURNAL for October 4th, so that the cases may be almost considered as parallel.

JOHN GLAISTER, M.B.,
Physician to Anderson's College Dispensary, Glasgow.

RUPTURED JEJUNUM FROM A BLOW.

I WAS called one day at 12.10 P.M., to see Frederick Williams, aged 27, stonemason, a strong and muscular man, who, about fifteen minutes previously, had received a severe blow upon his belly. He was cleaning a gun, which contained an old charge, a portion of which he withdrew; on attempting to fire off the remainder, he found that the powder had clogged in the touchhole, to remedy which he placed some fresh powder on the nipple, his brother applying a match to it. A smart explosion was the result, the gun recoiling, striking him violently in the region of the stomach, about an inch to the left of the median line. Whilst manipulating the gun, he was sitting on a chair, his arms resting on his thighs, holding the weapon in such a position that the butt-end would be about a foot from him. He was collapsed, suffering great pain in the region alluded to, breathing with difficulty, the pulse being irregular and jerking. He had vomited a little, rejecting a small quantity of warm brandy and water which had been given him.

On examination, no trace of the blow could be discovered, but he pointed accurately to the injured spot, pressure increasing the pain. Flannels wrung out of warm water were immediately applied to the abdomen, and hot-water jars to the feet. A draught containing ten minims of tincture of belladonna with thirty of chloric ether was given, with instructions that he was to keep perfectly quiet, and nothing more to be taken until he was seen again. At 2 P.M., reaction had fairly set in; the breathing was easier, but the pain and vomiting had increased, with slight thirst; pulse 90. Turpentine stupes were now applied; one grain of opium was given, and ice to suck at. At 6 P.M., the case continuing to present a serious aspect, Dr. Edwards saw him with me about 8 o'clock. At this time, he had perfectly rallied from the collapse. The face was a little flushed; the breathing chiefly thoracic; he vomited occasionally. The abdomen was slightly rigid; the pain much the same. Pulse 110. Half a grain of morphia was given hypodermically, and half a grain of opium ordered to be taken every two or three hours throughout the night if restless and in pain; small lumps of ice to be swallowed to allay the thirst and sickness. The abdomen, in consequence of the irritation produced by the turpentine, was ordered to be washed with soap and water, and covered by a light linseed poultice. Perfect rest was strictly enjoined.

The next day, at 9 A.M., he had passed a tolerable night, the morphia having soothed the pain and produced some sleep; one only of the pills containing the opium had been taken. The breathing was more natural; the vomiting and thirst less. Pulse 120. The state of the abdomen was much the same. He felt some inclination to evacuate his bowels, and a frequent desire to pass urine. One of the pills was again given, and the poultice changed. At 12 P.M., Dr. Edwards visited him with me. In contravention of our injunctions, he had been assisted up to the commode. Nothing, however, passed except a little urine. The exertion greatly increased the vomiting, which now for the first time presented a stercoraceous character. He was partially collapsed; the pain was intense; breathing was purely thoracic and hurried; pulse over 150, scarcely perceptible. The abdomen was rigid, but not tympanitic. The injection of half a grain of morphia was repeated. At 3 P.M., the morphia had greatly subdued the pain; but the evidence of approaching dissolution was conclusive. He died about 6 P.M.; consciousness being retained to the last. A necropsy was made twenty-three hours after death. The abdomen was much distended. No trace of the blow could be distinguished externally or internally on the abdomen. About a pint of grumous fluid occupied the left and about half a pint the right side of the abdominal cavity. Diffuse peritonitis existed; the omentum and the whole of the small intestines being slightly glued together, covered with recent lymph. The stomach and colon were intact; but on tracing up the ileum and jejunum, a rent about an inch in length, with everted edges, was discovered in the latter, just at its junction with the duodenum. The exterior of the intestine presented a sloughy condition. In all probability it had been ruptured by being impinged against the spine by the butt-end of the gun. No further examination was made, all the other organs appearing healthy.

In a medico-legal point of view, considerable interest is attached to the case, inasmuch as the colon and stomach, situated immediately in front, escaped all injury.

MAURICE G. EVANS, M.D., Cardiff.

CLINICAL MEMORANDA.

COLLOID CARCINOMA.

SARAH C., aged 55, first came under my care in April 1878. She complained of a swelling in the lower part of her bowels, which she first noticed in September 1877. She was then an out-patient at the Northampton Infirmary for an ulcer of the leg. She was told her liver was out of order, and was given some medicine; but, as it did her no good, she did not go again. She did not complain of pain, but of a sense of heaviness and dragging from the weight she carried. Breathing was short, and she complained of a cough. Her bowels acted regularly. She had lost some flesh; no appetite. On examining her bowels, I found ascites, and also some hard substance in the lower part of the right abdominal region. The heart was healthy. The lungs were resonant on percussion, with harsh respiration. The liver was pushed up by the ascites, but it seemed of the usual size. The urine was acid, but no albumen. She continued under my care until July 31st, 1878, when she went into the Northampton Infirmary. The ascites had now increased, and also the tumour. She had lost more flesh, but was in no pain. I lost sight of her until January 1879, when I again saw her. She seemed greatly emaciated, with a haggard face and cheeks drawn in. The ascites seemed to be in much the same quantity, but the tumour had greatly enlarged; it seemed to fill up the abdomen. She was in no pain, but was troubled with a cough, and expectorated a quantity of thick mucus. She went into the infirmary in August, and was tapped. She remained there six weeks, and then came out. She went in again, and was tapped once more; on which occasion she stated that, in the evening of the day she was tapped, she noticed a dripping on the floor, and found that fluid was oozing from her; it was of a sanguineous colour; the point of the trocar probably touched the tumour. She became very faint, and was for some time in a critical state. The glands under her arms were enlarged to the size of marbles. On February 8th, she was in much the same state. She could take nothing but a pint of milk a day, with two ounces of brandy. There were small tumours in both breasts. On April 1st, she was becoming gradually weaker, but was in no pain. She could walk from one room to the other without any assistance. On May 9th, she was gradually becoming weaker. She was obliged to have assistance in going from one room to the other, where she sat in a chair the whole day; she said she breathed more easily. Œdema of the feet and legs was present. She died June 9th. Up to the day before her death, she was moved from one room to the other. A *post mortem* examination was made seven hours after death. The body was emaciated. The skin of the whole of the right abdominal region was cancerous. The peritoneum covering the whole of the small and large intestine was infiltrated with cancer. There were two large growths from each ovary. The one on the right side was very much larger, and was adherent to the abdominal wall; it was full of small cysts, containing, some a dark coloured fluid, others a yellowish fluid. The tumour presented the

usual appearances of colloid cancer. The tumour in the left region contained one large cyst full of yellow fluid, and a large soft cancerous mass about the size of a cricket-ball. There was about half to three-quarters of an ordinary bucketful of fluid in the abdomen. The lungs were emphysematous; there were several nodules of cancer in the lower lobes. The heart was healthy; the left ventricle firmly contracted. The liver was congested, and in the upper part of the right lobe was a substance about the size of a small egg, which, on section, was found to consist of an outer shell of calcareous matter, and within it was full of a soft glutinous substance; it was adherent to the peritoneum. The spleen was of the normal size, and there was one nodule of cancer in it. The right kidney had been pushed against the spinal column by the tumour; it was congested, the surface being granular. The left kidney was granular and cystic, but there was no cancer in either kidney. The uterus was normal; the peritoneum covering it was cancerous and adherent to its upper surface. The brain was not examined, as the friends objected.

J. Howell Thomas, L.R.C.P., Wellingborough.

SURGICAL MEMORANDA.

ON THE CAUSE OF THE EVERSION OF THE LIMB AFTER FRACTURE OF THE NECK OF THE FEMUR.

The criticisms of Professor Spence and of Mr. Davies-Colley on the epitome of the paper, which I lately read upon the eversion of the limb after fracture of the neck of the femur, enunciate views so directly opposed to each other that compromise is fortunately out of the question. To Professor Spence I would submit that it is probably a matter of little moment whether I considered the theory which I supported at Cork to be new or not; the question is rather, "Is it true?" With Professor Spence, Mr. Erichsen, Mr. Gamgee, and others, I consider that the gravitation-theory perfectly explains the eversion of the limb. M. Maunoury, alluding to the paper in a recent number of the *Progrès Médical*, hints that the theory of muscular action as influencing the position of the limb has long since been exploded in France. In Holmes's *System of Surgery*, however, the eversion of the limb is described as "given to it by the powerful rotator muscles of the thigh", the natural inclination of the extremity being spoken of only as "aiding". To Mr. Davies-Colley I would reply that, as the Editor of the Journal has kindly promised an early insertion of the paper in full, I will content myself with calling his attention to these two facts. Firstly, eversion of the limb is also the characteristic feature of the fracture, which is situated below the level of the lesser trochanter; in which case, the psoas and the quadratus and its neighbours are manifestly without influence upon the version. Secondly, in the case of ununited fracture of the neck of the femur, the patient has the power of rolling inwards the shortened and everted limb. In conclusion, I would remark that the surgical secretaries attributed more support to my views on the part of Mr. Cooper Forster and Mr. Mac Cormac than their observations literally conveyed. But then generosity characterises all the dealings of the Irish members with their visitors.

Edmund Owen, F.R.C.S.,
Senior Assistant-Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital.

TREATMENT OF SPINAL CURVATURE BY THE PLASTER-OF-PARIS JACKET.

The article under the above heading in the Journal of October 11th would, if critically read, require no comment; but a cursory perusal by those who have not paid much attention to the subject may fail to show the inaccuracies it contains, and prevent them from pursuing a treatment of the efficiency of which many surgeons of intelligence are convinced. It is but reasonable to suppose that, before Dr. Ormsby attempted so forcible a condemnation of Dr. Sayre's plan of treating spinal disease, he had read and fully comprehended such method. A short analysis of his communication will show that the conjoint process was not fully completed at the time he wrote. Dr. Ormsby seems to confound Pott's disease and lateral curvature, and to apply the same treatment to each. It is not surprising, therefore, that his results have not been very successful. He says: "Suspension alone without the plaster is the only important part of his (Dr. Sayre's) suggestions." By referring to Dr. Sayre's book, he would have seen that he has stated, "In cases of incipient lateral curvature, daily exercise by suspension alone is all that is required"; but Dr. Ormsby continues in his next sentence: "Even this means should be most guardedly applied in the cases of structures ankylosed from previous or progressing disease", etc.; clearly showing that he has applied the same treatment in cases of Pott's disease. If he had referred to Dr. Sayre's book, he would have again read that it should never be applied in such cases. The writer next states "that it is a dirty, unyielding, and uncomfortable case, likely to produce pressure-sores; and it has a great tendency to induce the generation of vermin". It is neither dirty nor uncomfortable, unless badly applied. It is meant to be unyielding, and therein its virtue lies, and its superiority to such substances as leather, Cocking's felt-poroplastic, or other materials which do not possess that quality. It will not produce pressure-sores if intelligently adapted. They have occurred in my own practice, but it was previous to my acquiring a thorough knowledge of details in its application. I am not aware that plaster-of-Paris has a "tendency to generate vermin". I rather think the vermin must have existed on the body before the plaster-jackets were applied by Dr. Ormsby. Presuming that any intelligent surgeon would have his patient clean before applying a jacket, I do not suppose Dr. Sayre anticipated that objection. He goes on to say: "You must at times expect serious and alarming consequences. This is absolutely impossible if the rules laid down are strictly followed. "To say that Sayre's treatment is as sound in principle as it is effective in practice, is only now to utter a truism." Such is the extract from another page of the same journal, which I entirely endorse; and if, indeed, the system have a merit, it would be far from right to hesitate to expose inaccuracies advanced as arguments against it. Deductions only deserve a careful hearing when drawn from sound knowledge and reasoning.

Robert L. Swan, Fellow and Member of Surgical Court of Examiners, Royal College of Surgeons in Ireland.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.

HIGH TEMPERATURE IN ACUTE PULMONARY PHTHISIS: SUDDEN DELIRIUM FOLLOWING THE USE OF SALICYLATE OF SODA.

(Under the care of Dr. Goddard Rogers.)

I am indebted to Dr. H. S. Gabbett, who has been for some weeks our acting house-physician, for the following notes. I should like briefly to remark that, since Professor Köhler's statement as to all the remote therapeutic effects of salicylic acid being obtained by the administration of salicylate of soda, there has, perhaps, been a tendency to overlook the well-tested antipyretic virtues of quinine, and to make indiscriminate use of the new remedy. The sudden onset of toxic symptoms in the appended case makes it of considerable interest, and may serve to remind some enthusiastic votaries of every new preparation that it is only quietly and by degrees that innovations in remedies obtain the full confidence of the profession.

F. B., painter, aged 21, married, an ill-nourished, extremely anæmic young man, was admitted into the Royal Chest Hospital on September 9th, under the care of Dr. Goddard Rogers. Ten days before admission, he had been attacked with rather profuse hæmoptysis, which lasted, with intermissions, for three days. He denied having suffered from cough previously, and could assign no cause for the attack. His family history was good.

On admission, the skin was hot and dry; complexion dusky; tongue brown; pulse small and rapid; respirations frequent. His intellect was perfectly clear, and he complained of nothing but troublesome cough with copious purulent expectoration. There was dulness on percussion all over the right lung, with increased tactile vocal fremitus, bronchial breathing, coarse crepitation, and bronchophony: signs of consolidation were most marked at the apex and in the lower lobe. There were no physical signs of disease in the left lung. The heart's action was feeble; no murmur. The abdomen was normal; the urine was healthy. He was confined to bed, and ordered small doses of quinine (one grain three times a day); diet, beef-tea and milk, with eggs; and three ounces of port wine.

This treatment was continued for a week, during which time the symptoms and physical signs remained almost unchanged. He suffered from night-sweats; which, however, were not very profuse. Cough troublesome; a little blood in expectoration on one occasion. Appetite good. During these seven days, the evening temperature ranged from 102.6 to 103.6 deg.; the morning temperature standing at 101 or 102 deg.

On September 16th, he was ordered twenty grains of salicylate of soda every fourth hour. (Diet and stimulant as before.) After three doses, there was a marked fall in his temperature, the thermometer registering 99.4 deg. in the evening; and for the three following days, under the same treatment, the evening temperature never rose above 101 deg., while that taken in the morning varied from 99 to 100.4 deg. Thus the effect of the salicylate seemed to be to reduce the range of temperature by about two degrees, without causing any change in the course of evening aggravation and morning remission. There was no noticeable effect on the pulse or respiration. The signs of disease in the lung indicated progressive disorganisation. The patient perspired more profusely; he said he felt better; he slept well. During this period, he was carefully watched for any unpleasant symptoms due to the drug; but he distinctly denied having headache or buzzing in the ears. There were no tremors, no deafness, and his intellect was quite clear.

On September 20th, the dose was altered to thirty grains three times a day, thus reducing the quantity of the salt taken in the twenty-four hours. On the same evening, without the slightest warning, toxic symptoms suddenly showed themselves; he became wakeful, restless, and slightly delirious, fancying there were people under his bed, etc. There were muscular tremors, and he complained of extreme deafness. He answered questions slowly and with effort, but to the purpose. No headache. The evening temperature was, as on the three preceding nights, 101 deg.; no alteration in pulse. The skin was moist. During the night, delirium increased, and he was rather violent till 6 A.M., when he fell asleep.

September 21st. The salicylate was stopped. The patient was drowsy and heavy, but without delirium. There was no marked change in the physical signs to account for the above symptoms. He had been passing very little urine for the last twenty-four hours (sweating profusely). Evening temperature 102.2 deg.

September 22nd. He was still rather deaf. Temperature rising; morning 101.6 deg.; evening 104.6 deg.

September 23rd. Morning temperature 102.8 deg. He was ordered eight grains of quinine three times a day. Evening temperature as on previous day (104.6 deg.).

September 24th. The temperature was falling rapidly; morning and evening, 101.4 deg.

September 25th. Morning temperature 100.6 deg.

Salicylic acid was detected in the urine passed forty hours after discontinuing the drug; no blood or albumen at any time.

WEST NORFOLK AND LYNN HOSPITAL.

CHRONIC INTESTINAL OBSTRUCTION: A LOOP OF SMALL INTESTINE STRANGULATED BY THE VERMIFORM APPENDIX ADHERENT TO THE ILEUM: PERFORATION OF THE BOWEL: FÆCAL EXTRAVASATION: DEATH.

(Under the care of Dr. DALE.)

FOR the notes of the following case we are indebted to Mr. BLOMFIELD, house-surgeon to the hospital.

Louisa S., aged 20, married, one child, was admitted into the hospital on July 9th, 1879, with obstruction of the bowels of ten days' duration. She had always enjoyed good health until about a year ago, when she had a somewhat similar but briefer attack of obstruction of the bowels. Purgatives were administered by the friends; and, when she was seen by a medical man, enemata were given, and the obstruction for the time was overcome. Ten days before admission, while about her house-work, the patient was suddenly seized with violent pain all over the abdomen, followed by faintness and the vomiting of bilious matter, attended with obstinate constipation. She was seen by a medical man in the country, and enemata were given; without, however, giving relief. Three days after the first attack, the vomited matters were very offensive.

On admission, the abdomen was distended; gurgling was marked everywhere; pain was complained of on pressing in the left flank, but was not great. The distended coils of small intestines were visible on looking at the abdomen, especially around the neighbourhood of the umbilicus, becoming more marked when the hand was applied over the abdomen. There was no external rupture, nor could any tumour be detected on examination *per rectum* or *per vaginam*. The tongue was red and dry. Morning temperature 99.6 deg.; evening 100 deg. Pulse feeble, 80. She had no sickness. She was ordered half a grain of powdered opium and a quarter of a grain of extract of belladonna in pill every two hours, linseed poultices to the abdomen, and to take iced milk.

July 10th. She vomited, for the first time since admission, a thin yellowish fluid with offensive odour. She was ordered to take tincture of belladonna in fifteen-minim doses every two hours, and to continue the pills. Morning temperature 100.6 deg.; evening 100 deg.

July 11th. She was sick once in the night. There was very little pain over the abdomen. Morning temperature 99.6 deg.; evening 98.6 deg.

July 12th. She had slight bilious vomiting at 6 A.M. The tongue was red and slightly furred in the centre. She complained of but little pain in the abdomen. The face was flushed at times. The abdomen was equally distended. She had pain on pressure in the left flank. The abdominal walls were marked by furrows corresponding to the distended small intestines. She slept fairly well. She was ordered yesterday to have one-fiftieth of a grain of atropia sulphate in two drachms of water every three hours, and to discontinue the tincture of belladonna.

July 13th. She was restless, complaining of great pain over the abdomen. There were marked gurgling and tympanites. The pupils were dilated. An enema of gruel and castor-oil was given, but with no result. She complained of nausea.

July 15th. The enema brought away a few scybala from the lower bowel. The abdomen was greatly distended.

July 18th. She was sick once.

July 21st. There had been no sickness since the 18th. The enemata had been given every day since July 13th, and the dose of atropia had been increased to one-forty-fifth of a grain every three hours. The patient had paroxysms of very severe epigastric pain, but her strength was somewhat remarkable. This morning, Dr. Dale punctured the distended small intestine with an aspirator-needle; no flatus, however, escaped. The temperature since July 17th had been 99 deg.

July 23rd. She complained of nausea, but no actual vomiting. The abdomen was in the same condition. The temperature was normal.

July 26th. She was ordered to take one-forty-fifth of a grain of atropia sulphate every four hours, and a pill of opium and belladonna three times a day; and to continue poultices sprinkled with tincture of belladonna.

It is not necessary to report the daily progress of the case further. The atropia was continued day and night. A large enema of gruel (three to three and a half pints) was administered daily; milk and beef-tea and four ounces of wine were given during the day and night; and it is noteworthy that throughout the case the appetite of the patient continued good. Although several of the enemata brought away small quantities of fæcal matter, the symptoms remained unrelieved. She vomited about every two days—sometimes only the contents of the stomach, and at other times matter having a fæcal odour. The abdomen became enormously distended, pushing up the diaphragm and contents of the chest. The small intestines could be seen, during the frequent spasmodic action, twisting about like so many snakes beneath the abdominal walls; and she died, after a sudden access of great abdominal pain, on August 17th, having had obstruction of the bowels for seven weeks.

From the fact that there was but little vomiting—always fluid, and only occasionally fæcal in character—with the large coils of small intestines to be seen beneath the abdominal walls, the obstruction was thought to be in the commencement of the large intestine, and at or near the ileo-cæcal valve.

POST MORTEM EXAMINATION.—On opening the abdomen, the small intestines were seen to be greatly enlarged and congested, being quite as large as the colon in its normal state. There were several ounces of thin yellow fæcal matter in the abdominal cavity, and the ileum was seen to have given way in two places just above the point of obstruction. The appendix vermiformis was firmly attached at its free extremity to the ileum, forming a band under which a large loop of ileum had slipped and become obstructed—giving rise, in fact, to a state of things exactly similar to that in which a band of false membrane ties down the bowel. It is worthy of notice, that a large probe could be passed from the cæcum through the adherent appendix into the ileum; and in all probability, when the bowels were obstructed a year previously, some foreign body had passed into the appendix, and, ulcerating its way out into the ileum, had set up inflammation, by which the former became firmly attached. The appendix was fully three inches long, and its attachment to the ileum was very firm.

The *post mortem* examination in this case may be contrasted with one recorded by Mr. Jessop of Leeds in the BRITISH MEDICAL JOURNAL for September 27th, 1879, where the apparently useless vermiform appendix, by forming adhesions to the neighbouring bowel, was the cause of an acute obstruction, which terminated fatally in thirty-seven hours. In the case above recorded, death did not occur until the unusual period of seven weeks from the commencement of the illness.

REVIEWS AND NOTICES.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSSEN, Professor of Clinical Medicine in Munich, Bavaria. Vol. XVII. General Anomalies of Nutrition, and Poisons. Translation. Edited by ALBERT H. BUCK, M.D., New York. London: Sampson Low and Co. 1878.

SECOND NOTICE.

PROFESSOR NAUNYN of Königsberg devotes about one hundred pages to the metallic poisons and their salts; and he includes arsenic and phosphorus. Lead, copper, mercury, and antimony are the four principal metals which are here considered, chiefly in their physiological and pathological relations. The tests for the metallic salts, and the chemical processes for the detection of the metals in the tissues, are nowhere described.

Chronic lead-poisoning occupies a large space in the chapter on this metal. Its causes, symptoms, and treatment are well delineated, and several pages are devoted to the theory of the action of lead as a poison. The author has industriously collected and summarised what is generally known on this subject; but we find nothing new for extraction, unless it is in relation to the comparative diffusion of this metal throughout the body. In the blood and all the organs, lead is found in combination with albumen; and there is no doubt, as the author suggests, that it is absorbed in this form. This is shown by the fact that it cannot be detected by chemical tests without the previous destruction of the organic substances. The amount of lead accumulated in the different organs varies greatly, according to the experimental researches of Herschel. In four experiments on dogs poisoned by the administration of the acetate of lead for several weeks, this physiologist found by far the largest amount in the bones (about 0.025 per cent).: a part of the body, it may be observed, which is rarely examined for lead by English chemists. The next largest amount was in the kidneys (0.012 to 0.02 per cent.) and liver (0.01 to 0.016 per cent.); then in the spine, 0.006 to 0.01 per cent.; the brain, 0.004 to 0.005 per cent.; the muscles, 0.002 to 0.003 per cent.; in the coats of the intestines, 0.002 per cent.; and, lastly, in the lungs and blood, as a rule, no traces could be detected. (P. 586.) It would appear from these results that the localisation of lead-poisoning in the intestines and muscles is not caused by the deposition of the lead directly in these organs.

We were well aware of the numerous channels by which lead may find its way into the system; but we were scarcely prepared to hear of chronic lead-poisoning as a result of sleeping on horsehair mattresses dyed black by lead-compounds and imperfectly cleansed (Hitzig), or of the truly remarkable case of a proof-reader who was poisoned by reading printed proof for many years (p. 561). Unless the reader also handled the type, we do not see how he could possibly have received the lead-poison into the system.

The author deals briefly with the subject of Copper-poisoning. Our readers will remember that during the last year many prosecutions were instituted under the Adulteration Act against grocers and others for selling preserved peas containing small quantities of copper. Referring to pickles and articles of food coloured with copper, Naunyn tells us that "it should be especially mentioned that all these poisonings may become dangerous to life, even when the amount of copper is not large enough to be clearly perceived by the taste". This is an important observation, which we believe to be strictly correct. Our author dwells particularly on the danger arising from the use of copper culinary utensils either not tinned or badly tinned; and he attributes the greater number of cases of copper-poisoning to this simple cause. "In the Vienna General Hospital, there were one hundred and thirty cases of poisoning caused in this way, nine of which were fatal" (p. 590); and yet there are some English who ask us to believe that copper is *not* a poison under any circumstances! In the "preserved peas" cases, the magistrates were sorely puzzled how to deal with the accused. Some physicians of repute came forward to defend the grocers and their adulterations, on the ground that the quantity of copper present was too small to do harm; and others on the bolder ground that the salts of copper were not poisonous. It is clear that these views derive no support from the most recent authorities on toxicology, as represented by Dr. Naunyn.

Under Arsenic, the different questions regarding the acute and the chronic forms of poisoning are fairly considered. "The so-called cumulative action does not exist, on account of its very speedy elimination with the urine. The experience of habitual arsenic-eaters goes to show that, in the case of this poison, habit affords a tolerably good protection against its action." (P. 648.) We are further informed that "it is a well-established fact that in Styria and other places there are persons (the so-called arsenic-eaters) who from early youth take arsenic in amounts of even six grains daily, or very often at least, and yet survive to an advanced age and remain in good health. The doses which in other cases produce severe chronic poisoning are evidently much smaller, yet the above mentioned amount of the poison is within the limit of a single fatal dose. It is everywhere stated that horses bear large doses of arsenic, and that it is often given to them to impart a well-nourished appearance." (P. 654.) We should have been glad to receive from a German toxicologist some more precise information regarding the Styrian arsenic-eaters. Why such an extraordinary practice, if attended with any benefit, should be limited to Styria, we are at a loss to conjecture. There must be something peculiar in the climate or in the Styrian constitution; for it is quite certain that in this country no such effect of habit in the use of arsenic has been observed by those who have largely employed it medicinally. As to horses, its fatal effects on these animals have been so frequently observed, that an Act of Parliament has been passed rendering it penal to secretly administer arsenic or other noxious drugs to these animals.

Dr. Naunyn properly calls attention to the illegal use (in Germany) of arsenical pigments for colouring children's toys; the dust of arsenical colours, as in green tarlatan dresses; the use of arsenical colours in the manufacture of artificial flowers; the colouring of wall-papers, etc. "There are", he tells us, "a sufficient number of cases known in which chronic poisoning has been produced by living in rooms furnished with such papers, and still more surely by living in rooms the walls of which are painted with arsenical water-colours. I myself saw two years ago a case of this kind, where three persons employed in the Court House at Königsberg suffered with undoubted symptoms of chronic poisoning." (P. 653.) It appears that in this case the walls were covered with a green-coloured dust, which was found to contain 8.32 per cent. of arsenious oxide. He believes that, in all such cases, it is in the form of *dust* that the arsenical compound produces chronic poisoning.

The external application of arsenic to the normal skin has caused acute poisoning in a severe form. "The very frequent use, especially in patent medicines, of arsenical ointments and lotions for benign and malignant ulcers, has resulted in several fatal cases of poisoning" (p. 647). Arsenic is well known to be a favourite quack remedy for the local treatment of cancer; it has thereby led to many deaths in England. Among other practical observations on arsenical poisoning, we note the following. "The urine is sometimes albuminous or bloody. The perspiration is said sometimes to have an odour like that of arsenuretted hydrogen." "The appearance of the cutaneous eruption in many cases is very peculiar; an eruption like that of eczema and urticaria has been observed after both the internal and external application of the poison." (P. 649.) "Arsenic can be detected in bodies which have been buried many years. Bodies do not absorb arsenic from the earth even when that of the grave contains it, as it sometimes does. The tissues of the normal human body contain no arsenic." "The usual results of the long-continued action of arsenic are angina, above all also conjunctivitis and chronic gastric and intestinal catarrh; the latter characterised usually by constipation, but sometimes by diarrhœa." "True arsenic-oxide does not possess any corrosive action. Its powerful local inflammatory action upon the mucous membranes, as well as upon the skin, has not been sufficiently explained." (P. 657.) "An important part of the action of arsenic is to diminish the elimination of carbonic acid and urea; *i.e.*, to diminish tissue-metamorphosis.....The temperature of the body is lowered by taking small doses of arsenic.....In animals, its use causes the speedy disappearance of glycogen from the liver." (P. 656.) "The treatment of chronic arsenic-poisoning can only be prophylactic. If anything shows the importance of sanitary laws, it is this fact, that, up to the present time, arsenical clothing, wall-papers, etc., are daily sold in the shops." (P. 657.) We have no properly constituted Board of Health to deal with cases of this kind in England; and sanitary laws in reference to arsenical clothing, wall-papers, etc., are practically in abeyance. "The symptoms of poisoning by arsenuretted hydrogen consist of vomiting, with pain in the region of the stomach, headache combined with prostration, and abundant hæmoglobinuria. The last symptom must be due to the power of the arsenuretted hydrogen to decompose the blood-globules. The *post mortem* examination leads to negative results. Nothing is known concerning treatment." (P. 658.)

These few extracts will give to our readers a fair idea of the mode in which the subject of poisoning with arsenic and metallic poisons gene-

rally is treated by Dr. Naunyn. He has shown great industry and skill in collecting and combining recent physiological and pathological discoveries for the full illustration of his subject.

NOTES ON BOOKS.

Journal of Mental Science: Index to vols. 1 to 24. This useful little Index has been prepared by Dr. Blandford, who, when President of the Medico-Psychological Association in 1877, offered to mark his year of office by undertaking this work for the Association. The annual meeting very gratefully accepted Dr. Blandford's proposal; and it is now published, with an interesting historical sketch of the history of the Association by Dr. Hack Tuke. A general index is an extremely valuable supplement to any series of transactions, or, indeed, to any serial publication whatever; and, in the present accumulation of material, it becomes more and more necessary that such general indices should be prepared from time to time of any series of volumes. The appearance of this useful Index on our library table reminds us that we have already expressed a hope of being enabled to lay before our members a general Index of the BRITISH MEDICAL JOURNAL since it appeared in its present enlarged shape in 1866. This proposal has been favourably received by the Journal Committee; and there is reason to hope that steps will be taken in the course of the ensuing year to carry it into effect.

Treatise on Chemistry. Vol. ii: Metals. Part 2. By Professors ROSCOE and SCHORLEMMER. (Macmillan and Co.)—This volume completes that which will deserve to be ranked for many years as among the best treatises on chemistry in the English language. The contents of this volume include the metals of the iron group, the Cronian group, and the tin and gold groups, together with chapters on the classification of the elements, on spectrum-analysis, and on that most recent of great chemical achievements, the condensation of the so-called permanent gases. Considerable attention has been paid in this volume to technicological processes; and the authors refer with just confidence to the chapters on the soda and glass manufactures, and on the metallurgy of iron, as illustrating the pains which they have taken to illustrate metallurgical processes, and to assist the description by drawings of the most modern forms of apparatus and plant. It will be out of our province to enter upon any minute review of the chemistry of the metals here treated; but we can speak of this volume with unreserved praise.

Proceedings of the Medical Society of London. Vol. iv.—We are glad to see that the Medical Society keeps up its record of the abstracts of its proceedings, together with a short note of the discussions to which the principal medical and surgical contributions gave rise. The volume is not a very extensive one, but its value need not be measured by its size. The papers of Mr. William Adams, on Infantile Paralysis, and on Injuries of the Nose; of Dr. Cobbold, on the Filaria Sanguinis; of Dr. Kelburne King, on Aortic Aneurism, may be mentioned as especially interesting. The records, however, are very meagre; the best papers are not given in full; the illustrations, for the most part, are bad, and badly printed; and, on the whole, we cannot but point out that there is considerable room for improvement.

Revue Philosophique, August and September, 1879 (Paris: Germer Baillière et Cie.). The numbers of this useful review for the past two months are before us, and contain some papers of interest. The August number opens with an excellent article from the pen of M. Nolen upon "Kant as a Pupil of Newton", in which he traces carefully the course of the metaphysician's early physical studies and the strong influence which Newton's writings had upon him, especially in modifying his views of Leibnitz and the old ontology. There is also an interesting criticism of the peculiar Theism of J. S. Mill, as expressed in his later essays. An elaborate study on "Error and Selection", by M. Paulhan, runs through both numbers, but will not add much to the sagacious reader's previous knowledge of the subject. The important and valuable paper, however, in the *Revue* for September is a long and powerful review from the celebrated hand of M. von Hartmann on the congenial subject of "Religious Philosophy and the Neo-Hegelian School". This remarkable essay is devoted to the exposition and criticism of what he calls "the speculative Protestantism" which has arisen in Germany among the more heterodox followers of Hegel. M. von Hartmann deals with it trenchantly, explaining to its professors that they are indeed laying the bases of a religious future, but that their own pretensions to be considered themselves as orthodox are a delusion, if not a hypocrisy. The whole paper is well worth reading, as a clear and just exposition of the last stage of German heterodoxy, which now, as always, raises the fundamental question in a manner wholly different from ours, and therefore all the more instructive.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, OCTOBER 21ST, 1879.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

ON taking the chair, the PRESIDENT congratulated the members of the Society on the commencement of its twenty-sixth session. He reminded them also that the new rule had come into force by which specimens could be exhibited with a written description only. It was expected that not only these, but specimens to be described orally, should be placed upon the table not less than half an hour before the commencement of the meeting.

Growth in the Left Ventricle, with Embolism in the Brachial and other Arteries.—Mr. BUTLIN showed this specimen, taken from a man aged 31, admitted into St. Bartholomew's Hospital with dry gangrene of two fingers of the left hand, apparently due to frost-bite. A few days afterwards, he suffered from pain in the abdomen, followed by vomiting of blood. Death resulted from collapse. A clot was found in the left brachial artery, extending into the radial and ulnar arteries. There was acute diffused peritonitis, traceable to perforation of the jejunum, which was throughout in a gangrenous state. The gangrene was due to a clot in the superior mesenteric artery. There was also a clot in the hepatic artery. The heart contained a growth in the interventricular septum, projecting into the left ventricle, composed of ordinary fibrous tissue. The growth was covered with old clot, parts of which had broken away. Mr. Butlin considered the growth to be analogous to ordinary fibrous patches in the heart, and to have no connection with syphilis. Cases somewhat similar had been described by Dr. Greenfield and Dr. Pye-Smith.

Mollities Ossium associated with Myeloid Tumours.—Mr. BUTLIN showed some bones from a man aged 50, who had had two myeloid tumours of the lower jaw some years previously. He died from the effects of a fracture of the femur, which had been produced almost spontaneously. For some months before death, he had had pain in various parts of his body. After death, a myeloid tumour was found on a rib, and a fibrous tumour in connection with the periosteum, covering a dorsal vertebra. All his bones were softer than normal; the medullary cavities contained yellow and red fat. There were two cysts in the head of the left femur, and a third in the head of the right humerus. The cortical part of the bone was almost cancellous. Under the microscope the tumour on the rib was found to be composed partly of myeloid cells and partly of spindle-cells; the red fat contained fat-cells, round cells, myeloid cells, and elongated cells almost spindle-shaped. Mr. Butlin thought the case showed the relationship between inflammatory products and new formations; the latter have a constant tendency to increase, to invade neighbouring tissues, and to be carried by the blood and lymphatics; the former have no such tendencies.—In reply to Mr. WALSHAM, Mr. BUTLIN said that he had not found any dilatation of the veins of the bones; neither had the urine of the patient been examined.—Mr. ADAMS remarked that he had made a *post mortem* examination in a case of mollities ossium, reported by Mr. Solly in the *Medico-Chirurgical Transactions*. In this case also there was a cyst in the head of one femur.

Papilloma of Fallopian Tube.—Mr. ALBAN DORAN exhibited a specimen of papillomatous growths in the Fallopian tube. The growths, together with the ovary (which was quite healthy), had been removed by Mr. Spencer Wells from a single lady aged 50. About twenty months before operation, she had been under the care of Mr. Bickersteth of Liverpool, with symptoms of inflammation in the neighbourhood of the right ovary. In a few months, effusion into the right pleura took place, followed by ascites. The pleura was tapped twice, the abdomen four times. The fluid from both cavities was highly albuminous, and contained clusters of large vacuolated proliferating cells. A tumour was detected in the right iliac fossa; this was removed, and, in the course of the operation, no secondary deposits could be found in the abdominal cavity. The patient recovered. Ascites had not recurred; but she suffered from pleurisy last August, when no evidence of intrathoracic tumour could be detected. On examination, the pelvic growth proved to be a mass of papillomata, growing from the interior of the right Fallopian tube, the fimbriated extremity of which was patent, and through it a mucoid secretion was discharged into the peritoneal cavity. The free surfaces of the papillary outgrowths were invested by a single layer of columnar epithelium; the stroma was almost universally made up of connective tissue cells, but poorly supplied with blood-vessels. Cyst-formation, by the fusion of the apices of contiguous growths, was pro-

gressing actively; some of the cysts were large, projecting beyond the longest papillæ. Microscopic sections of the papillæ and of secondary growths from the interior of the cysts were exhibited. The entire growth did not appear to be cancerous nor œdematous; it was probably the product of inflammatory changes in the tube, beginning with the symptoms of oophoritis. The patent condition of the tube—very rare when that canal is diseased—caused ascites, by allowing the morbid secretion of the growth to escape and irritate the peritoneum. It resembled cases of papillary outgrowths from the surface, or from the interior of ruptured cysts of the ovary, associated with ascites; such cases have occurred in the practice of Wells, Gusserow, Eberth, and Durham.—Mr. KNOWSLEY THORNTON believed the case to be one of cystic disease of the broad ligament, with the subsequent production of papillomata. He thought that this cyst had fungated through into the Fallopian tube, giving rise to the symptoms. It was not rare to have distant organs affected in fungating disease of the pelvic viscera. He had recently seen ascites, associated with a tumour of this kind, in the case of a lady who had been tapped for cystic disease when nineteen years old. At twenty-one, she married and bore nine children. Seven years after the birth of the last child, she began to have ascites, which disappeared with copious diuresis. This recurred several times. On operating, a small ulcerated opening into the Fallopian tube was found, which allowed the fluid to flow from the tumour into the peritoneum. In nearly all these cases, as soon as the tumour was removed, the ascites ceased. He should judge, from the recurrence of the pleurisy, that the present case was malignant.—Dr. DAY believed that, in cases where fluid in the pleura was associated with abdominal tumour, it almost always disappeared after the removal of the tumour. It was rarely necessary to draw it off, unless it were purulent.—Mr. DORAN had observed that, in Mr. Thornton's cases, the papillomata were not localised. In his case, they were very localised, and did not involve the broad ligament.

Two cases of Disease of the Suprarenal Capsules.—Dr. NORMAN MOORE showed these specimens. In the first case, the capsules were taken from a man aged 25, who had died of tubercular phthisis; both capsules were in a state of advanced caseous degeneration. In the second case, the patient had died of sarcoma of the pericardium. The capsules were affected with a similar growth. In neither case was there any bronzing of the skin.—Dr. COUPLAND asked whether the abdominal sympathetic had been examined, because it was generally believed that the bronzing depended upon disease of this nerve. In cancer of the capsules, it was very rare to find the nerves affected; hence it was rare to find bronzing in these cases.—Dr. MOORE replied that, in the second case, the semilunar ganglia had been examined roughly. In reply to the President, he stated that he had no knowledge how long the patients had been ill.—Dr. WILKS said that what Addison included in his definition of the disease was a slow idiopathic inflammatory affection of the capsules leading to their gradual destruction; and he did not believe that any sort of affection of these organs would lead to the peculiar phenomena described by him. Addison did not consider them as vital organs; and he thought that this particular kind of disease led to death, probably through involvement of the sympathetic.—The PRESIDENT thought that the explanation of the absence of bronzing would be found in the shortness of the illness in Dr. Moore's cases.

Fresh Specimen of Sarcoma of the Pericardium.—Dr. MOORE showed this specimen, which was the one referred to in the last case. The growth started from the base of the pericardium, and involved the bronchial and mediastinal glands. The brain contained several tumours, which had not, however, given rise to symptoms. One of these tumours was in the third left frontal convolution.—Dr. PYE-SMITH asked for further information regarding the position of the tumour in the third left frontal convolution. It was the back part of the convolution and the insula which constituted the speech-centre. The anterior part had been often found quite destroyed without the occurrence of aphasia.—Dr. MOORE believed the tumour involved the anterior half of the convolution.

Xanthelasma Multiplex.—Dr. WICKHAM LEGG exhibited a patient who had come to him for jaundice in 1873. In 1876, he presented well marked patches of xanthelasma on the eyelids, palms of the hands, soles of the feet, nates, and elsewhere. Since that time, all of these patches had disappeared, except those on the eyelids. Dr. Legg thought that the fact of this disappearance would help to explain the pathology; for, were the patches due to fatty degeneration, no such disappearance would take place.—Dr. PYE-SMITH had also seen a case where the patches had disappeared. The disease was undoubtedly due to fatty degeneration. He did not see why the fat should not be absorbed.—Mr. HOWSE thought that probably, if the skin were examined microscopically, it would be found to have undergone a sclerotic change.—The PRESIDENT inquired whether there had been any changes in the patient's health while the eruption was disappearing. The skin-phenomena were only symptoms of a general state, and were variable. Multiplex xanthelasma was only a more severe form of the eyelid-affection. He had never seen the patches on the eyelids disappear, though they had often become stationary. The disease might come on without either sick-headache or hepatic disturbance. He believed that any state of health which tended to cause pigmentation might lead to it, more especially pregnancy.—Dr. CHURCH had carefully examined the patient, and, so far as could be judged by the naked eye and the feel of the skin, it was perfectly normal. He had seen at least two sets of cases where xanthelasma had been hereditary, and had not been associated with either sick-headache or hepatic disturbance.

The following specimens were exhibited by card:

Congenital Hernia with Undescended Testicle. By Dr. EVE.

Syphilitic Disease of Testicle. By Dr. EVE.

Caries of Spine, with Affection of the Hip-joint and Aorta. By Mr. BARKER.

Syphilitic Disease of the Lung. By the PRESIDENT.

Alternating Calculus; old nucleus encrusted with oxalate of lime. By the PRESIDENT.

Gumma of Testicle in Congenital Syphilis. By the PRESIDENT.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, OCTOBER 1ST, 1879.

ALFRED WILTSHIRE, M.D., Vice-President, in the Chair.

Cholera in the New-born.—Mr. J. C. LUCAS read a paper on this subject. He gave two cases in which women suffering from cholera were delivered prematurely of children, both of which died a few hours after their birth with characteristic choleraic symptoms.

Cæsarean Section.—Dr. BRAXTON HICKS exhibited, for Dr. R. P. HARRIS of Philadelphia, photographs of a dwarf upon whom the Cæsarean section had been performed during her labour, and who had died three days after of peritonitis.

Deficient Development.—Mr. ALBAN DORAN read notes of a case of deficient development of the uterus, atresia of the os externum, atrophy of the ovaries, and insanity. The patient, aged 30, died in Bethlem Hospital of bronchitis. She had only menstruated once, at the age of nineteen. She became masculine in appearance, and repulsive-looking, and finally insane. Dr. Savage made a necropsy, and gave the generative organs to the Royal College of Surgeons, where Mr. Doran examined them. The orifice of the vagina was circular, and measured three-quarters of an inch in diameter; the canal widened to an inch and a half in the middle, after which it rapidly contracted to an apex marked by a pin-hole aperture, which was impervious, and represented the os uteri. The uterus measured two inches from the fundus to the rudimentary os uteri. When fresh, the uterus felt like a flaccid thin-walled cyst. The cavity contained about half a drachm of a white, semifluid, sebaceous-looking matter. The walls of the uterus only measured one-eighth of an inch at the thickest part.

Congenital Double Inguino-Ovarian Hernia.—Dr. THOMAS CHAMBERS read notes of this case. E. D., aged 24, had a lump in each groin as long as she could remember. She had never menstruated. The mammæ were well developed. The tumours were acutely sensitive to the touch, movable, and oblong in shape. Hair was absent over the pubes. No uterus or ovaries could be discovered in the natural situation. The swellings, presumably ovarian, were removed by incision. The patient made a complete recovery. Drs. John Williams and Galabin examined the tumours, and were of opinion that the bodies were testicles, the glandular structure of which had not undergone its normal development.—Dr. WILTSHIRE said cases of true hernia of the ovary were rare, and that some supposed instances of it were examples of imperfect male creatures.—Dr. GALABIN said that the microscopic structure of the organs resembled that of fœtal testicles.—Dr. JOHN WILLIAMS said that hernia of the ovary was undoubtedly met with, but it was nearly always acquired. There was no case recorded of congenital hernia of both ovaries in which the evidence could be trusted.—Dr. ROUTH would have liked to know if the size of the mammæ was due to obesity or not.

Acoustic Sign after Death of Fœtus.—The PRESIDENT communicated for Dr. HARVEY a note on an acoustic sign heard after the death of the fœtus. He heard a peculiar rustling sound over the whole uterine tumour. This has been described by Stoltz as due to gaseous decomposition of the liquor amnii after death of the fœtus. The sound was between large and small crepitation, and the diagnosis based upon it was correct.—Dr. J. BRUNTON thought the sound due to contraction of the muscular wall under the stethoscope.—Dr. JOHN WILLIAMS could not understand how the bubbling of air could be heard after the escape of the liquor amnii.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

RICHARDSON'S THYMOL SOAP.

THE agreeable character of this vegetable antiseptic naturally recommends it for use as an ordinary compound in soaps and solutions by which it is desired to exercise an antiseptic influence in the sick room, for toilet purposes, or for use by surgeons or nurses after contact with patients. The thymol soap of Messrs. Richardson is very well made, pleasantly perfumed, effective in removing from the hands any odour which may cling about them after necropsies or other occupations which render such disinfectants desirable, and no doubt it will come to be a popular and useful article.

NEAVE'S FOOD FOR INFANTS AND INVALIDS.

IT has been objected to many of the varieties of food put forward as suitable for infants and invalids, that they are so deficient in proteinaceous and flesh-forming ingredients as to be really unsuitable for the purpose. This is especially the case with all the varieties of starchy foods recommended for this purpose. In Neave's food, on the other hand, there are 14.7 per cent. of proteinaceous matters and 1.2 of mineral salts, including phosphates; and Dr. Bartlett and Dr. Cameron, who have given considerable attention to this subject, both speak of this food with great favour, as being abundant in albuminoids and in the percentage of fat-producing materials. It has long been favourably regarded by persons who have had experience of it in the nursery as being an agreeable article of diet, and one well adapted for the use of children and of aged people. It is also much used by mothers nursing and by invalids; and its constitution scientifically supports the favourable conclusions which have been attained by common experience.

KEPLER'S MALT-EXTRACT.

THIS improved malt-extract, which is brought out under the specific designation of *Extractum Malti* (Kepler), has now been under trial for some time in this country, where malt-extracts are coming into use, and is very favourably spoken of by physicians both in respect to its nutritive and digestive properties and as being of very agreeable flavour. It is prepared from barley, wheat, and oats, cereals of which the two latter stand in the first place in respect to their richness in nutritive elements, and is concentrated *in vacuo*. Being prepared at a very low temperature, its qualities are not deteriorated or its flavour spoiled in the preparation. The malt-extracts have long enjoyed a very considerable reputation in the treatment of phthisis and of atrophic disorders in Germany, Switzerland, and America; and it is probable that, as English practitioners become more familiar with them, they will to a considerable extent take the place of animal oils, such as cod-liver oil, which are not always easily borne by the stomach, and which it is difficult to render palatable. Combined with cod-liver oil, malt-extract appears to increase the nutritive powers of the oil and to render it more easily digestible. We can recommend the Kepler Company's malt-extract, as being of a very high quality indeed. The Kepler Company, 8, Snow Hill, Holborn Viaduct, London, have a list of other combinations, of which they furnish formulæ on application.

DR. FELTON'S INHALER (PATENTED).

THIS consists of a three-ounce glass bottle furnished with a wide mouth, closed by a vulcanite India-rubber stopper perforated by two holes, into one of which is inserted a glass tube, which is connected by vulcanite tubing with a glass mouthpiece. Into the other is placed a smaller glass bottle, which hangs down in the larger one. This latter is intended to hold absolutely pure muriatic acid, whilst the larger contains a solution of liquor ammoniæ. By an ingenious arrangement of glass tubes, difficult to describe, the two preparations are kept distinct until suction is made by the mouthpiece, when immediately a dense white cloud of nascent chloride of ammonium is generated. We have personally tried this inhaler for postnasal catarrh, and we are pleased to state that we have derived much benefit from its use. Its construction admits of other medicinal agents being administered as well.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, OCTOBER 25TH, 1879.

UNIVERSITY FACILITIES FOR ENGLISH MEDICAL STUDENTS.

THE discussion which has recently developed itself in our columns, as the sequel of our comments in reprobation of the refusal of the privilege of granting medical degrees to the Victoria University, will not have failed to attract the serious attention of medical authorities and of the profession at large. It will further, we may perhaps expect, have some sort of influence in bringing under the notice of the Government the state of facts as to which they may be supposed not to have had as complete information at the time of coming to the resolution to refuse that privilege, for the moment at least. It will, of course, not be fair to assume that that refusal of the Government was meant to be more than a temporary decision, pending the reorganisation of medical examinations and diplomas which is likely to follow the investigations of the Select Committee of the House of Commons on the subject. The letter from Dr. Banks, who may be taken as the official representative of the Liverpool School of Medicine, and therefore of the late opposition to granting powers of medical graduation to the Victoria University, and the introductory address of the lecturer at Leeds, expressed clearly also the view taken there in opposition to such powers, and disclosed the main grounds of opposition. It will be noted that they are, in fact, very much what we anticipated, and that no new phase of the question has been opened beyond that in which it presented itself to us when we commented, with strong disapproval, on the wording of the memorial presented to the Government and on the results of that memorial. Notwithstanding the fact that this memorial presented to the Privy Council was signed by a great array of influential names, and that it appeared to be a manifesto conclusive on the question of professional opinion, we did not hesitate at once to challenge its disinterestedness, its reasonableness, and its right to be considered as a document expressive of professional interests in a large sense, or as recognising the just demands of those rising students who are about to enter the profession.

The sequel has fully justified, we think, the judgment which we were called upon to pronounce upon this hastily written, hastily signed, and most unlucky paper. Its most able defender, Dr. Banks, plainly admits that which we surmised from the first, that this document proceeded from a particular provincial school, and that although, on the face of it, it alleged universal interests as being on general grounds opposed to the granting of new university facilities, there must also be read between the lines an opposition which would at once be quenched if arrangements could be made by which the privileges which the Owens College would acquire under the new charter should be equally and equitably distributed amongst other provincial schools. If the document had stated this explicitly, we should have been able to accord to it a complete support, and we believe that it would have achieved a great progress for the profession and the public, which is now, we hope only for a time, postponed. Dr. Banks fairly admits that the reason which prevailed among those with whom he acted for the late opposition to the proposed medical degree of the Victoria University was, that the details of the scheme would have favoured exclusiveness in favour of the Manchester centre and to the detriment of other provincial schools. Mr. Atkinson, speaking at Leeds, was still more candid and

explicit. He admits that the want of facilities for university graduation under which the English medical students labour is a very serious grievance. It was pointed out by Mr. Ernest Hart, in his evidence before the Select Committee, that only five per cent. of metropolitan students are enabled to take an university degree, and that, of the students who graduate in the Scotch Universities of Edinburgh and Aberdeen, there are more English than Scotch. It follows naturally that in Scotch towns there may be found something like seventy per cent. of university graduates, in England not more than fifteen, and of these three-fourths are either Scotch or Irish graduates. Mr. Atkinson endorses, in his Leeds address, all that we have said of the undue difficulty of the University of London examinations regarded as pass examinations; nor can any reasonable person doubt that there must be a serious defect in the graduating facilities in England, when we see that Scotland has four universities with graduating powers, turning out each its hundreds of graduates, while England has practically only two medical graduating universities; for at present neither Oxford nor Durham affords any efficient help towards graduation; and the total number graduated in London annually does not exceed eighty-nine, while Cambridge barely suffices to make up the hundred. The annual number of medical graduates turned out at Oxford, with its income of £10,000 or £15,000 a-year for biological and medical sciences, amounts we believe to not less than four, mainly educated elsewhere! The allegation put forward, therefore, by the memorial, that it was undesirable to add a twentieth graduating body to the nineteen which already exist, was one which served a momentary purpose, but which, we pointed out at the time, had no serious meaning when duly analysed in relation to the proposition to confer degrees-giving powers on a new university, situated in the centre of at least two million of souls who were devoid of graduating facilities. Dr. Thorburn suggests pithily that, having served its purpose, this argument need not any longer be treated seriously; but, indeed, the purpose it served was not a good one, and we cannot but regret that an argument which, if used at all, should only have been put forward seriously, and after thorough analysis of its meaning, should have been used to defeat a measure to which the efficient and main objections were of quite a different nature. If it had been equitably stated that the diploma-giving power in medicine was objected to on the ground that the facilities for graduation which the Victoria University proposed were too limited in character, and did not provide facilities for graduation of students of the other surrounding medical schools, the objection would have had our entire sympathy. Indeed, we ventured to point out from the first, and we warned the supporters of the Victoria University, that, unless this rock were removed, on it their vessel would split. We are sorry to have been prophets of an evil fate.

It may be hoped now that a calmer review of the position will lead to a judicious understanding, by which the difficulties of both sides may be cleared away. On the one hand, it will be advisable for the authorities of Owens College and for the supporters of the Victoria University to make it clear, as we feel sure they will have no difficulty in doing, that they do not propose that the M.D. of the Victoria University should be conferred, except under safeguards of the most entirely satisfactory character as to the soundness and thoroughness of the examination and of the curriculum. As Dr. Thorburn hints, they would probably have no objection to provide that their medical degrees qualifying to practise should not be conferred, until after the candidates had passed an examination from one of the existing registrable bodies, or until he shall have passed the Conjoint Board examination, when such Board comes into operation. Or another plan might be, to which no doubt they would assent, that assessors of the examiners should be appointed by the General Medical Council or by the Privy Council, on the same principle as the Assessor Examiners of the Universities of Edinburgh and Glasgow, but with the additional safeguard, to which probably also those universities will willingly submit in the future, as the result of the action of the Select Committee of the House of Commons, that such assessors shall be appointed from an official Government centre. Either arrangement would remove the objection against possible competition downwards. It has never been the idea of those who have worked for conjoint minimum examination that development upwards should be prevented. The theory has always been to establish a minimum, and to allow the freest possible local initiation and development, according to the recognised necessities, in the upward direction. The establishment of a good medical graduation diploma in the Victoria University would be a considerable progress in an upward direction. There can be no doubt it would lead to university graduation and to higher studies amongst an immense number of medical students who are now satisfied with inferior diplomas, and who would remain satisfied with the conjoint minimum examination, unless reasonable facilities for university graduation should be placed within their reach.

We shall touch only cursorily on the question of the modification of the London University examinations. We have so often expressed the opinion that the London University has failed and is failing in its duty to provide reasonable facilities for medical graduation to students of the metropolis and affiliated colleges, that we need not now go over that ground again. It may, however, be worth while to answer one or two obvious fallacies in the letters of those who, following a time-honoured custom, object to the removal of any difficulties or disabilities under which they themselves in earlier life have laboured, and which they think ought, in justice to them, fairly to be imposed on those who follow them in the race. No one, of course, would desire to see the London University cease to maintain a high standard of examination; but it is perfectly obvious that, if the Edinburgh University can, by a more reasonable adjustment of examinations, attract so vast a mass of graduates to itself, it must be because it has a more reasonable adaptation to the wants and capabilities of ordinary students than the London University. No one will deny that the degree of the Edinburgh University is an eminently respectable diploma. Many are of opinion that it is quite equal in value to that of the University of London; and it is certainly one with which any man may be satisfied to commence practice, trusting to his further professional work to secure for him special distinction. To assume that any university pass-degree is in itself to be a special distinction, indicating the person who has taken it as specially fitted for the highest offices of his profession, is a misapprehension of the object of university degrees. It is to apply to the ordinary pass-examination of an university a standard which should only be applied to the honours examinations. Let the University of London place its honour standard as high as it reasonably and fairly can; let its gold medal be in medicine what the senior wranglership at Cambridge is in mathematics, and the classical tripos at Oxford is in classics; but to seek for the university a fictitious celebrity and a glittering lustre by reason of the extreme difficulty of its pass-examinations, is to exalt that body at the cost of the profession which it was instituted to serve. One radical defect we may at once point out in the constitution of the University of London, which has probably led to its present aberrations, and which may likely serve to maintain them until it is corrected. The Senate of the University of London is far too august a body; it dwells like a star apart from its constituencies. It consists too largely of nominated members and elected members, whose recollections of the schools are dim and distant; whilst the schools themselves are not represented in it with so much directness, in such force, as to enable them to have anything like the proportionate voice which the constituent bodies of an university ought to have in its management. If we look to the University of Edinburgh, we shall see a body which has learned perfectly to adapt itself to the requirements of medical teaching, medical examination, and medical practice, because it consists essentially of the teachers who are actually and daily in contact with the classes of students rising into practitioners. In order that the Senate of the University of London should thoroughly reflect the wants of the students, and the feelings of the schools, and comprehend its own strength and its own weakness, every affiliated school or college should have at least one representative in the Senate. This radical change would, in our

opinion, be the first step towards a salutary revolution. Nearly every one admits now that the degrees of the University of London are conferred upon unsatisfactory conditions. No one can look at the figures which Mr. Ernest Hart quoted to the Select Committee without surprise and pain; they appear to have struck the attention of the medical world with something like painful astonishment. It is probably impossible that a state of things so anomalous should be much longer continued, now that the attention of Parliament and the profession has been called to the extremely incomplete way in which the University of London fulfils its duties to the medical profession.

Unfortunately, circumstances have prevented the still more glaring case of the University of Oxford from being adequately brought to the attention of that Committee. We trust the opportunity will still be found, at the next sitting of the Committee, for bringing before that body the lamentable state of things which exists in that University in relation to medical education. It is grievous to think that the noble endowments, the vast capacities, and the elevating influences of that University are practically lost to the profession by the policy of those who have so arranged its classes and its teaching, as to make them additions to and not part of any medical curriculum. Reform comes slowly in England, but it comes surely; and we write these lines with a full assurance that the anomalies to which we have pointed cannot endure for any considerable length of time, but must be remedied. It is for thoughtful men to anticipate the inevitable; it is for those to whom large interests are intrusted, to rise above considerations of selfishness or of prejudice, and to see things from another point of view than that of the centre in which their official occupations place them. When the respective cases of the Victoria University, the London University, and the Oxford University, are regarded from these outer standpoints, which are those of the public and of the profession, it will, we believe, inevitably follow, first, that the Victoria University, having modified its plan in such a manner as to include all affiliated schools, and having defined the conditions under which it will safeguard its medical diplomas, will receive the power of conferring medical degrees, without which it is a maimed and imperfect body. Next, we hold it for certain, that the Senate of the University of London will come to see that a system under which they are unable to attract more than five per cent. of the whole body of metropolitan medical students is one which does justice neither to the objects of its founders, to the wants of the profession, nor to the interests of medical teaching in the metropolis; and, finally, that those who are intrusted with the management of the great forces available in Oxford for medical training will cast away from them the reproach of having perverted great endowments, of having resisted just applications for assistance, and of neglecting and rejecting their duties to the profession which may fairly claim to have added in past centuries something to the glory of the University, and to have a right now to look to that University for its fair share in the educational advantages which the benevolence of past founders and the enlightenment of the present century obviously design for it.

THE REGISTRATION OF INFECTIOUS DISEASE.

THE publication of the Annual Report for 1878 of the Medical Officer of Health for Huddersfield enables us to fulfil, as regards that town, the promise contained in our issue of the 28th June last of giving, from time to time, the experiences of different places with regard to the notification of cases of infectious disease to the sanitary authority. It may be premised that Clause 67 of the Huddersfield Waterworks and Improvement Act, 1876 (39 and 40 Vict., c. 100), enacts that, in order to secure due notice being given to the Corporation of any inmate of any inhabited house who is suffering from "small-pox, cholera, or any contagious or infectious fever of a dangerous character, and *who is without proper lodging or accommodation, enabling the case to be properly isolated, so as to prevent the spread of the disease or the proper treatment thereof*", every medical practitioner called in to such inmate shall forthwith fill up, sign, and deliver to the occupier of the house a certificate or a form to be provided gratuitously by the Corporation, stating the name of such inmate, the situation of the building, and the name of the occupier. The latter is at once to deliver this certificate at the sanitary office or police-station of the Corporation; and, in the event of no medical attendant being called in to an inmate who is suffering from infectious disease, the occupier, or person having charge of the building or room, must himself give notice of the existence of the case to the sanitary authority. A fee of half-a-crown is payable by the Corporation for each certificate given by a medical man, and a penalty of five pounds is imposed upon every one offending against the enactment. The Huddersfield Act was the first which contained a clause providing for the notification of these cases; and it will be observed that the clause differs from some others passed subsequently in (1) not particularising all the diseases to be certified, but including all dangerous fevers; in (2) requiring notice only of those cases which ought to be removed; in (3) throwing the onus of giving the information always upon the occupier; and in (4) only obliging the medical man to give the certificate of disease to those who called him in. The last portion was so framed as to get rid of the opposition of the medical men of the town, who objected to being obliged to make known the affairs of their clients to a third party. The portion of the clause limiting its action to cases without proper accommodation was not suggested by the medical men, but was accepted by them. When the section came into force, a book of forms with duplicates, and a copy of the medical clauses of the Act, were sent to every practitioner within the borough. At first, a large number of certificates were received, but it was found that the cases had been several days or even weeks ill. The Town Clerk thereupon sent a letter to every medical man in the town, stating that fees only would be paid where certificates were sent at the beginning of the illness.

Some little difficulty also arose as to the proper definition of the term "proper lodging or accommodation". Whilst none of the medical men in the town were absolutely averse to giving the certificate in proper cases, there seemed to be considerable difference of opinion as to what were proper cases. Under these circumstances, and in view of the difficulty that might arise through the practitioner being sent for who was least likely to take an unfavourable view of the accommodation for isolation, it was deemed expedient to get an authoritative opinion on the subject from the Medical Officer of Health (Dr. Spottiswoode Cameron). In his definition of the phrase in question, Dr. Cameron gave it as his opinion that, where scarlatina broke out in one member of a family, and such member could not be furnished with a separate apartment, he was without proper accommodation; indeed, he went further, and said that such a patient should be kept to a separate apartment until the skin had ceased to peel off. Even where a separate room could be had for the patient, he thought the "accommodation" was not sufficient unless the person nursing the sick one either kept entirely to the sick-room or changed his or her dress, and was careful about washing on leaving the room. A patient was without "accommodation" if there were not sufficient provision for ventilating the sick chamber from the outside; and the amount of fresh air supplied per hour should not be less than two thousand cubic feet for an adult man, though the patient would be better to have three thousand. What held of the isolation of scarlet fever held as strongly of small-pox, and nearly as strongly of typhus and relapsing fevers. The necessity for fresh air was even greater in typhus and typhoid fevers.

Since the issue of this circular, the clause has worked better, though there can be no doubt that the authorities are still very far from being acquainted with every case that occurs. No details are forthcoming as to the number of cases reported under Clause 67 prior to October 1st, 1877, when Dr. Cameron took up the duties of Medical Officer of Health; but, since that time to the end of 1878, 199 notices were received under the clause, the majority of them being cases of scarlet fever. The proportion of cases reported to deaths from the same diseases was, for the fourth quarter of 1877, 152 to 100; and in the four quarters of 1878, 275, 200, 282, and 223 to 100 respectively. The clause seems, therefore, to have been more carefully complied with

during 1878 than during that part of 1877 for which detailed information is available. This inference is borne out by the fact, that a much greater number of cases were treated in the Borough Infectious Hospital, during 1878, than during previous years; and that this is due to the greater number of cases reported, rather than to the greater number of cases occurring, is rendered probable from the diminished mortality from these diseases which has existed, along with the greater number of cases within the cognisance of the sanitary officials.

On the whole, the provision is considered to have operated with substantial advantage to the public health, by affording to the officers of the authority, in the instances that more particularly need their intervention, early information of outbreaks of infectious disease; and thus enabling them either to secure the removal of the patient to hospital, or to advise as to means for isolation at home; to prevent, as far as possible, other members of the family from carrying the infection abroad in their clothes, and especially to restrain parents from sending children to school in cases where they would be likely to spread the disease; to secure the due use of requisite processes of disinfection; and to remedy sanitary faults in drainage, water-supply, or the disposal of refuse. As an illustration of one kind of advantage thus gained, Dr. Cameron refers to an instance in which three certificates were nearly simultaneously received, notifying outbreaks of typhoid fever in various parts of the town. Examination of the residences of the patients failed to show any grave sanitary defects, nor could the origin of the outbreak be traced, until it was observed that all three persons were employed in one of the local public offices; and, on this office being inspected, it appeared that its sanitary arrangements were seriously defective, and that a fourth person engaged there had been also attacked. As the patients all recovered, it is quite possible that, but for the system of notification, the attention of the authority might not have been called to the outbreak at all; and that the unwholesome condition of the public office in question might have escaped attention, and have remained unremedied.

Again: the information obtained under the clause in one case has often led to further inquiries in a neighbourhood, and the discovery of other cases of which the Medical Officer of Health had no information. These unreported cases have been chiefly those in which no medical man has been called in, or in which medical advice has not been sought in time. It is here that the working of the clause is most defective. The medical men practising in the borough are generally most prompt in sending notice; but in very many cases they are not called in till one child is dying, and a second or third has taken the disease.

Every case reported has been entered into a book, with such particulars as can be obtained as to the extent of accommodation and number of inmates in the houses; the condition of the drainage and privy accommodation; the water- and milk-supply; the probable source of infection; the school or workplace frequented by the patient and other members of the family; the date of attack; and other matters likely to be of importance. The same particulars are obtained in all cases of death from the more important zymotic diseases, such as fever and scarlet fever; and entered, with a mark to distinguish them from the others, in the same book. This book thus contains a permanent record and important details of a large proportion of the infectious fevers that have occurred in the borough. It has already proved of great service in tracing out cases of disease; and will, as time goes on, become increasingly valuable as showing the localities of these diseases, and the local conditions associated with them. Its value will also be greater from the fact that the cases reported under the clause, being those in which the accommodation for isolation was deficient, occur mostly in those localities to which the efforts of the sanitary staff, in trying to prevent the spread of these diseases, must be most strenuously directed.

THE American Neurological Association held its fifth annual meeting in New York City, on Wednesday, June 18th, continuing three days.

THE number of first year's students this session, at Owens College (Manchester) Medical School, is sixty-four.

WE have much pleasure in announcing that Dr. Samuel Wilks, F.R.S., Physician to Guy's Hospital, has been appointed Physician to their Royal Highnesses the Duke and Duchess of Connaught, in place of the late Dr. Murchison.

MAJOR BERTIE HOBART, R.A., Military Secretary to the Duke of Buckingham, has given Rs. 2,500 to the Madras University to found a scholarship to promote the study of medicine and surgery among the Mussulman population of Madras.

THE Earl of Bradford has offered to present, on certain terms and conditions, which have been agreed to, forty-six acres of land at Reed's Wood, near Walsall, for a public recreation-ground.

A DISEASE is prevalent in the Garo Hills, known by the name of kala hizar, and is said to be depopulating the lower hills. Dr. Cooper is investigating the malady, and his researches seem to show, according to the *Times of India*, that kala hizar is an affection of the spleen.

A ROMAN cloaca has been unexpectedly found at Ratisbon, near the spot where the Roman Palatium stood. It is a colossal piece of masonry, firmly constructed, one *mètre* and a half (nearly five feet) in height, and sixty *centimètres* (about two feet) in breadth.

UNDER the name of *Droit des Pauvres*, *l'Assistance Publique*, the administration of Paris hospitals levies a tax upon theatres, balls, and concerts; and that, not upon their profits, but upon their gross receipts. It has only just published the account of what it received in 1878. The amount was close upon £160,000 sterling. This was chiefly owing to the great influx of foreigners and country cousins, during the Exhibition; and this year the estimates are only £109,000. There has been much agitation for the repeal of this tax; but there does not appear to be any intention of interfering with it any way, as it figures for this same sum in the budget of 1880, which has just been submitted to the Paris Town Council.

SIX months ago, a letter was published about the mortality by cholera on board the steamers carrying coolies on the Brahmaputra. Since then, some stringent orders were issued by Government in reference to this matter, and the result has been very satisfactory. Although the present year, owing to the prevalence of cholera in the province, has been the most deadly on record in Assam, there has been no epidemic amongst the coolie passengers on the river steamers provided with the improved arrangements for water-supply.

IN the twenty largest English towns, scarlet fever last week showed the largest proportional fatality in Newcastle-upon-Tyne, Liverpool, Leicester, Manchester, Sheffield, and Sunderland. The deaths from measles were also numerous in Leeds and in Liverpool. The mean temperature of the air at Greenwich last week was 6.3° below the average. The deaths in London referred to diseases of the respiratory organs rose from 190 in the preceding week to 318 last week, and were 46 above the average. The deaths in London last week were 1,499, and 43 above the average. The annual death-rate from all causes, which had been equal to 17.2, 19.0, and 19.7 per 1,000 in the three preceding weeks, rose last week to 21.6, a higher rate than has prevailed in any week since the middle of May. During the past three weeks of the current quarter, the death-rate has averaged 20.1 per 1,000, against 18.3, 19.8, and 20.2 in the corresponding periods of the three years 1876-7-8.

AN OUTBREAK OF DIPHTHERIA.

A FURTHER outbreak of diphtheria has occurred at Bedford. Particulars as to the number of cases are not yet available; but the medical officer of health has ascribed the outbreak to imperfect disinfection of the houses after the epidemic of last year, which was so extraordinarily fatal. Information has also reached us of a very serious outbreak of

diphtheria at the small village of Swanscombe, near Dartford, where something like thirty cases and twelve deaths have occurred since the beginning of August last. This outbreak is receiving minute investigation at the able hands of Dr. Thorne Thorne of the Local Government Board.

THE MEDICAL ACT (1858) AMENDMENT (NO. 3) BILL.

IN a blue-book of 442 pages, published this week, are printed the minutes of evidence taken by the Select Committee of the House of Commons on this Bill, together with the proceedings of the Committee.

CINCHONA CULTIVATION IN BRITISH COLONIES.

THE acting-Colonial Secretary of Jamaica has published an interesting statement, showing the value of the cinchona bark cultivation in that colony. The following is the substance of Mr. Walker's memorandum, which is accompanied by an account of sales, proving the realisation of the profits mentioned. In continuation of Government notice, dated December 12th, 1878, the Lieutenant-Governor directs the publication, for general information, of the following account sales in respect of six bags of cinchona, forwarded to the Crown agents from this colony in April last, being the produce of trees ten years old on a little over a third of an acre of land. The Lieutenant-Governor thinks it desirable, at the same time, with the view of giving the public an idea of the productiveness of the cinchona, to state that, from one hundred trees cut down indiscriminately, old and young, in the early part of this year, 1,660 lbs. of green bark were obtained, which, when perfectly cured, gave 515 lbs. of dry bark, or about 5 lbs. to each tree; and as these trees were planted at distances which gave three hundred and two trees to the acre, it may be estimated that an acre of such trees would yield 1,500 lbs. of dry bark, which, at the price obtained for the cinchona last shipped, would realise the sum of £300.

MORTUARIES IN TOWNS.

THE necessity of the provision of a proper mortuary in all populous districts has recently received a striking exemplification at Milton-next-Sittingbourne. The corpse of an unhappy youth who died in a barge from typhoid fever, contracted through drinking polluted water, was brought to his parents' house through the streets in an open van. On the arrival of the body, the coffin was unscrewed, and remained so for two days before the burial. An outbreak of typhoid fever, confined to the street in which the body lay, has since occurred, and it is quite conceivable that it may have been due to the shocking recklessness and callousness of those in charge of the body. Cases such as these make one regret more and more the omnipresent "may" in the Public Health Act, which, as regards mortuaries at least, should be substituted by "shall" at the very earliest opportunity.

DR. SAMUEL SMILES.

AN interesting notice of this accomplished and most useful writer, to whom the literature of this and all other countries is indebted for the "Self-Help" series, mentions that he entered the medical profession and practised (if we may use the inappropriate word) among the obstinately healthy population of two thousand vigorous Scots, watched by eight vigilant physicians. It is not to be wondered at, if the eighth and youngest of the medical band found it not *mal à propos* to turn his professional studies to more than local account by a little tentative authorship. At twenty-four he produced his first book, *Physical Education*, which did not give hopeful financial results. The young doctor published it at his own expense, and lost upon it. A *History of Ireland*, published some years later, at Leeds, brought him hardly better fortune. At Leeds, he dropped the prefix of "doctor" to resume it with a very different meaning, and under very different circumstances, when, in 1878, the University of Edinburgh conferred on him his present degree. The works of Dr. Smiles have been translated into every European language, and have earned a popularity in Italy and Russia such as has rarely been achieved by any author, even of the highest genius.

DEATH OF INSPECTOR-GENERAL DR. DOMVILLE, C.B.

WE deeply regret to have to make the painful announcement that Inspector-General William Thomas Domville, C.B., M.D., Honorary Surgeon to the Queen, died at his official residence, Royal Hospital, Haslar, on the evening of the 21st inst. Our previous notices have informed our readers of the serious nature of this distinguished officer's illness. We are informed that the first indications of fever occurred on the 25th ult., though slight indisposition, with diarrhœa, had been experienced for about ten days previously. His official duties at this time were unusually arduous, and entailed exposure to the inclement weather prevalent at that period; he, however, continued at duty until the evening of September 26th. The disease was at first mild, and of a remarkably remittent type; so much so, that though its character was suspected, and the treatment regulated accordingly, hope was entertained that the fear of enteric fever might prove illusory. On the twelfth day of illness, however, the appearance of the characteristic eruption established the diagnosis. The enteric symptoms were remarkably mild, and the fever-temperature low during the first fortnight; while on the fifteenth and sixteenth days, the morning temperature was normal, and encouraged hope that the disease was terminating favourably. During the sixteenth day, a marked accession of fever, with pain along the course of left femoral vein, indicated phlebitis. From this date, the fever ran high, though the local signs were never urgent, and the patient ever took fluid nourishment and stimulants well. On the nineteenth day, a severe rigor with intense fever and sweating occurred; these rigors recurred at intervals of twelve and twenty-four hours on six occasions until the morning of the twenty-third day; the evening temperatures on the twenty-second, twenty-third, and twenty-fourth days being 105.8°, 106.4°, and 107°. Subsequently, the temperature had a daily range between 104° and 105.6°. No pulmonary symptoms arose until a few hours before death, though the circulation was very feeble during the last few days of the illness. At no time were there any evidences of peritonitis or local suppuration, and only one black hæmorrhagic motion was passed—on the twenty-fifth day. The body was well nourished, and the patient's strength good until the end. The fatal issue is attributed to septicæmia following phlebitis; it occurred on the twenty-seventh day of the disease. The funeral will be a military one, and in accordance with the rank of the deceased. The Admiral Commander-in-Chief has issued the requisite instructions. The funeral takes place at 2 P.M. on Friday, at Haslar; the flags of the ships in harbour being hoisted half-mast during the day.

DEATH OF MR. A. H. GARROD, F.R.S.

WE regret to hear of the death, on Tuesday last, at the early age of thirty-three, of Mr. Alfred Henry Garrod, eldest son of Dr. Garrod of Harley Street. Mr. Garrod was a gentleman of high scientific acquirements; and had obtained, like his father, the fellowship of the Royal Society. He was for some time Professor of Comparative Anatomy and Zoology in King's College, and Fullerian Professor to the Royal Institution; and was the author of a paper on the Pulse and Body Temperature in the *Proceedings of the Royal Society* and of numerous contributions to the *Proceedings of the Zoological Society*.

DR. LEARED, F.R.C.P.

THE death of Dr. Arthur Leared, which has been this week announced, will have been received with great and general regret. Dr. Leared was apparently in the prime of his working life. He was an active and intelligent physician, well known in metropolitan professional circles; a frequent contributor to our pages on subjects connected with his principal lines of medical study—the sounds of the heart and the disorders of digestion. Dr. Leared was a great traveller, and had published pleasant and valuable accounts, especially of his Icelandic studies and of his journeys in Morocco. He never travelled without bringing his medical knowledge to bear; and his studies of cystic disease in Iceland, and plans for its prevention, made him well known in that country. His medical experiences in Morocco were interesting; and he brought home contributions from the native materia medica. He had

always at heart the development of the resources of the countries in which he travelled, and the amelioration of the position of the people. Dr. Leared held the office of Physician to the Great Northern Hospital for many years, as well as other professional posts, and was well known as an useful contributor to the transactions of the societies. Many will regret in him the pleasant, kindly, genial, and scholarly companion, as well as the travelled man of the world, and ingenious and thoughtful physician. He had been in Tangiers, where he caught typhoid fever. On his arrival home in London, he was seen by Dr. Bristowe, who found him suffering from a diarrhœa of a typhoid nature. This disappeared, and he seemed to be slowly convalescing, when symptoms of uræmia set in, which ended in death. He had been suffering for the past five years from albuminuria due to a gouty granular kidney.

A DANGEROUS NUISANCE.

A VERY unpleasant difficulty under the Drainage Act has arisen in Liverpool, and is justly arousing a good deal of comment. It has been found that the builders of some of the numerous small houses in the neighbourhood of Everton have been extensively using a mortar composed of a small quantity of lime mixed with street sweepings, the latter being largely made up of manure. This material is used for plastering the inside walls of the houses. Dr. Taylor, the medical officer of health, has announced that, under the existing law, he has no power to put a stop to this practice, as no nuisance is actually experienced at present, but he states that a nuisance will arise very soon after the mixture has been plastered on walls, and that then he will take legal measures to repress it.

OUTBREAK OF TYPHOID FEVER.

A SERIOUS outbreak of typhoid fever is reported to have occurred at the Cheshire County Lunatic Asylum, at Upton, near Chester. About three weeks ago, Dr. Lawrence, the house-surgeon, was attacked with the disease. He is still confined to his bed, and some days must elapse before the crisis of his illness will take place. Since then, the Rev. R. Congreve, the chaplain, and his wife, and several of the warders and patients have been attacked with the disease. Four cases from the asylum have already been removed to the Chester Infirmary. The suffering inmates have been strictly isolated. About twelve persons are suffering from the disease.

THE BLACK TONGUE.

IN the light of the recent investigations of Mr. Butlin, to which we have referred, a communication made by Dr. Hirtz to the Medical Society of the Upper Rhine, and reported in the *Gazette Médicale de Strasbourg* (1879 : No. 10), may be of some interest. Dr. Hirtz's observation, like that of Mr. Butlin, deals with the black tongue, or nigrities of the tongue, apart from any febrile state. The patient was an infant aged six years, the tongue being absolutely black, but there being no other morbid symptom than a slight gastric obstruction. He was assured that the child had not at its disposal any colouring matter, and he tried washing with solutions of all sorts; but, to his great astonishment, this black coloration persisted for about six weeks. A short time afterwards, it chanced that a similar case presented itself to his observation. The parents, it was true, this time thought that the child, left alone, had blackened its mouth with ink ; but the peculiar aspect of the coloration, which recalled that which he had seen previously, made him at once think that these spots were of quite a different character, and he warned the parents that their washing would remain without effect, and this was what happened ; for at the end of a month the coloration still persisted. He then employed some sublimate lotion, which very quickly brought about another state of things. This singular manifestation induced him to make some researches ; and he found noted in science a certain number of facts of the kind, and a recent and detailed description given by M. Dessois (Paris, 1878). In 1855, M. B. de Germain had described, under the name of nigrities of the tongue, an affection characterised by the black coloration of the superior surface of the tongue, such as is observed in the normal state in the paroquet and the giraffe, and accidentally in patches in the ox, sheep, and the dog. M. de St. Germain has observed it four times, and the duration of this condition was from forty to sixty days. The discoloration disappeared little by little, and in the opposite direction from that of its propagation. The subjects of it only complained of an unusual dryness of the mouth. In his article in the *Dictionnaire Encyclopédique*, M. Gubler suggested that this coloration might be due to the presence of a parasite. At the same period, in *l'Union Médicale* (July 1st and 3rd, 1869), M. Maurice Raymond, in a note read to the Medical Society of the Hospitals, described, in a case of black coloration of the tongue, the presence of a vegetable parasite. Microscopic examination enabled him to discover spores, which he likened, without being able to establish an identify, to the spores of the microphyte of the *tinea tonsurans*, of herpes circinatus, or of mentagra. Nevertheless, the existence of these spores was shortly afterwards called in question by Dr. Féréol, and, in a communication made to the Society of the Hospitals, he concluded by saying that the presence of the microphyte seen by Dr. Raymond must be considered as accidental, and that the lesion seemed to him to consist in a piliform epithelial hypertrophy. But, in 1876, M. Lancereaux, in a communication on a case of black tongue, also pointed out spores. Finally, M. Dessois, by his own observation, and by microscopical examination made at the laboratory of M. Malassez, definitely concluded as to the existence of an essential vegetable parasite. He did not decide as to its nature, but he inclined to think it was always the same, and that the difference of size which has been observed is only a question of the territory on which it is found, rather than of its nature. According to the experiments made, the transmission of this parasite from the mucous membrane to the skin, or to another mucous membrane, was not possible. According to M. Dessois, a special predisposition was necessary for the development of the parasite ; a dyspeptic state producing a slight general hypertrophy of the tongue, and especially of the mucous membrane and its papillæ, being a favourable condition. The treatment is simple enough: scraping the tongue with a spatula, combined with very weak lotions of sublimate (1 to 500), sufficed to effect a cure.

UNREGISTERED BABY-FARMING.

AT Wandsworth Police Court, Clara Tensey, a cook, in service at Putney, attended with a baby in her arms to make a statement to the magistrate. She said she placed her baby at an orphanage in Putney, but it was now in a terrible state. Two months ago, the child was covered with sores, but the lady in charge of the orphanage would not suffer her to take it away. Mr. Runcieman, of the Wandsworth Union, said that Miss Hall, a benevolent lady, had charge of the orphanage. Girls left their children in her care, and she did the best she could with them. It was not an uncommon occurrence for children taken from their mothers to suffer from mesenteric disease. The applicant said a pint of milk was given to seven children. She paid for the child, and she could not go out very often to see how it was getting on. Randall, an officer of the court, informed the magistrate that similar applications had been made. In the case of one girl, the child died two days afterwards. The house was not registered. A charge of four shillings a-week was made for each child. The applicant said none of her other children had ever been in that state. Her husband was abroad. Mr. Paget directed Inspector Bond to cause inquiry to be made.

ALCOHOLIC STRENGTH OF BEER AND WINES.

THE very wide range of alcoholic strength of beers, wines, and spirits in ordinary consumption undoubtedly prevents consumers from easily forming any idea of the amount of alcohol which they are consuming in their daily beverages. It would, we think, be well worth considering whether means might not be taken by Act of Parliament to require all persons selling any alcoholic liquor to mark upon the vessel in which they sell it the alcoholic strength in ounces—that is to say, state in what quantity the beer, wine, or spirit sold is equivalent to one ounce of alcohol. An ounce of alcohol seems to be now accepted as a sort of rough conventional standard, as a maximum which might be consumed in health by persons desirous of avoiding excess ; and as a first

step towards the avoidance of excess, it would be desirable that any man drinking his daily claret or beer or sherry, should know what is the equivalent of alcohol which it contains; and in order that he may understand the statement, it is desirable it should not be stated as percentage, but plainly in a manner readily comprehensible by the statement of the quantity equivalent to an ounce of alcohol.

CONSULTATIVE COMMITTEE OF HYGIENE FOR FRANCE.

A DECREE just published reconstitutes the Consultative Committee of Public Hygiene belonging to the Ministry of Agriculture and Commerce. This Committee is charged with the study of all questions transmitted to it by the Minister, and especially of those questions which concern quarantine and the services attached to it; the measures which are to be taken for preventing and combatting epidemics and for improving the sanitary condition of the manufacturing and agricultural populations; the propagation of vaccine; the improvement of thermal establishments, and the means of rendering their use more and more accessible to the necessitous or working classes; the examination of the titles of candidates for the offices of inspecting physicians of mineral waters; the institution and organisation of councils and commissions of public health; medical and pharmaceutical police; the health of factories and workshops, etc. It is the business of this Committee also to indicate to the Minister questions which should be submitted to the Académie de Médecine. The official members of the Committee are: the Director of Consulates and Commercial Affairs in the Foreign Office, the President of the Council of Health of the Army, the President of the Council of Health of the Navy, the Director-General of the Customs, the Director of the Administration of the Public Hospitals, the Director of Internal Commerce in the Ministry of Agriculture and Commerce, the Inspector-General of Health Services, the Inspector-General of Veterinary Schools, the Inspecting Architect of the External Works of the Ministry of Agriculture and Commerce. In addition to these, are certain nominated members as follows: The President of the Council, viz., Dr. Wurtz, Member of the Institute and Honorary Dean of the Faculty of Medicine of Paris; Drs. Brouardel, Gavarret, Peter, Gallard, Proust, Liouville, Dubrisay; MM. Tirman, Garnier-Baillière, Chatin. The Secretary is M. Vallin, Professor at the School of Military Medicine, Val-de-Grace, and editor of the new monthly *Revue d'Hygiène*.

SMALL-POX AND SCARLET FEVER.

SMALL-POX last week caused 14 more deaths in Dublin, and one death —that of an unvaccinated male, aged twenty-three years—in London; but not one in any of the nineteen large provincial towns. The Metropolitan Asylum Hospitals contained 46 small-pox patients on Saturday last, against numbers declining steadily from 111 to 42 in the seven preceding weeks. The number of new cases of small-pox admitted to these hospitals, which had been but 4 and 5 in the two previous weeks, rose to 18 last week, a higher number than in any week since the end of August. The fatal cases of scarlet fever in London last week were 73, being a further increase of 7 upon recent weekly numbers, although still 24 below the average. The Metropolitan Asylum Hospitals at Homerton and Stockwell contained 251 scarlet fever patients on Saturday last, against 265 and 254 at the end of the two previous weeks; 32 new cases were admitted during the week.

MEDICAL REGISTRATION.

WE would call the attention of all registered medical practitioners who have, since registration, changed their address, to the importance of at once sending notice of their change of abode to Mr. Miller, the Registrar of the General Medical Council, at 315, Oxford Street, W. It may be well to remind the profession that, if their correct addresses do not appear in the *Medical Register* for 1880, they are, by Section 14 of the Medical Act (1858), liable to the inconvenience of having their names erased from it, and will incur the further penalty, according to Sections 31 and 37 of the said Act, of losing the right to hold certain appointments, to give valid certificates, or "to recover, in any court of law, charges for professional aid, advice, and visits, and the cost of any medicines or other medical or surgical appliances rendered or supplied by them to their patients". The same recommendation may be noted by those gentlemen possessing registrable qualifications who have not already registered them. If they do not take this precaution before January 1st, 1880, their names cannot, by Section 27 of the Medical Act, be inserted in the *Register*. A post-card to Mr. Miller will obviate the unpleasant consequences which may result from the neglect of a very simple professional duty.

LEEDS MEDICAL STUDENTS' DEBATING SOCIETY.

THE third session of this useful Society was inaugurated on Wednesday, the 22nd instant, when the President (Dr. T. Churton) gave an introductory address, and Mr. Husband read a paper on the Conjoint Scheme of Examination. The subjects which are proposed for discussion at the fortnightly meetings during the present session are various, and give promise of being very interesting and attractive to the students of all years at the Leeds School.

THE PARIS SURGICAL SOCIETY.

AT the first meeting for the winter session of this Society, M. Tarnier (the President), after having formally opened the sitting, officially announced to his colleagues the death of M. Chassaignac, one of the original members and former President of the Society. He pronounced a brief eulogium on this eminent surgeon, who, he said, would be inscribed in the *fasti* of the history of science amongst the glories of the nineteenth century. He then, with the unanimous approval of all present, adjourned the meeting as a mark of sorrow.

THE MANCHESTER AND SALFORD SANITARY ASSOCIATION.

THE last report of this useful Association shows that, during the year 1878, its beneficent labours were continued with undiminished assiduity. The new department for the sanitary inspection of houses is referred to in hopeful terms; and the action taken by the Association with regard to the application of the Artisans' Dwellings Act to Manchester is also discussed. During the year, a series of eight lectures were delivered by well-known sanitarians, and have become very popular. The work of the Association has unhappily been much cramped for want of sufficient funds, which, considering the benefit that has been derived by the community from its labours, is somewhat of a slur upon the local residents.

STATISTICAL TABLES OF ST. BARTHOLOMEW'S HOSPITAL.

THE Statistical Tables of St. Bartholomew's Hospital, for the year 1878, have been prepared by the Medical and Surgical Registrars, and show a very large amount of good work done. The form of the tables is similar to that used in previous years. In looking over the long columns of statistical figures of the various diseases, arranged according to nosological classes and results, we cannot but wish that, over and above these details, some summary and averages had been appended, from which some general results might have been more readily gathered. Of the 5,653 in-patients under treatment, 527 died; and of these, in 525 cases *post mortem* examinations were obtained—a fact which has doubtless added much to the efficient working of the hospital. There were 167 cases of enteric fever, with a mortality of about 12 per cent.; the neighbourhoods from which the cases were admitted are indicated, and, as in other sets of statistics, it was found that the number of admissions per month rose rapidly in August, not markedly declining again till December. Of diphtheria, there were 10 cases; of these 8 died. Tracheotomy was performed in 3 cases; all proved fatal. In one fatal case, there was double pleurisy, with lobar pneumonia; and false membrane was found to extend as far as the second bifurcation of the bronchi. In another fatal case, extensive sloughing about the fauces occurred. There were 160 cases of acute rheumatism; 6 died and 30 presented signs of heart-disease. It would have been interesting to have known the effects of treatment, in this large group of cases, in preventing the development of heart-disease. There were also 10 cases of gonorrhœal rheumatism. Ten cases of empyema came under treatment; 4 were fatal. One of the fatal cases had bilateral empyema, the right side being

affected secondarily. In cases not fatal, the left side was affected in 5; these were encysted. In the surgical wards, 3,225 patients came under treatment, and 153 died. There were 6 cases of aneurism; all recovered. Two cases of popliteal aneurism were cured—one by digital compression, the other by application of Esmarch's bandage. During the year, anæsthetics were administered 1,876 times: chloroform, 794 times; ether, preceded by nitrous oxide, 1,009 times; other anæsthetics, 73 times. A boy aged 11 died of syncope after the administration of chloroform; a man, 40 years of age, died when under the influence of ether, administered for the performance of lumbar colotomy. Simple erysipelas occurred in 15 surgical cases in the hospital, and, in 15 cases, erysipelas occurred after operations. Pyæmia carried off a case of fractured ribs, and another of extravasation of urine; it also proved fatal in 4 cases after operation.

DOMESTIC CISTERNS AND FILTERS.

At the recent meeting of the Health Section of the Social Science Association, Dr. Macadam of Edinburgh made some very pertinent observations on this question. He said that they had got into the system of lead-cisterns, and he did not think they should easily get rid of them. Slate-cisterns would, no doubt, be preferable. He did not approve of zinc-cisterns for containing water for drinking or culinary purposes. As to earthenware-cisterns, if they were glazed with common salt they would be safe, but if they were glazed with lead they would be prejudicial to health. Hard water might be rendered soft by Dr. Clarke's process of adding lime to it. He did not think it would be safe for any chemist to say that by any process of filtration or chemical treatment a contaminated and unwholesome water could be rendered safe. He was altogether opposed to filtration. Filters were sources of contamination. When a couple of gallons, say, of water were passed through a filter—be it charcoal, a sponge, or any other material—the intention was that all impurities should be left in the filtering material. This went on day by day, and in the course of a short time the suspended matter in the filter would be in a state of putrescence. People went on for years without paying any attention to the state of the filter, and the results could only be very serious.

PUERPERAL MORTALITY.

Mr. Benjamin Scarf, having lost his wife soon after her confinement, is moved by a noble ambition to reform the medical profession. The object specially in view is the grand one of saving the lives of some of the many women who die in connection with lying-in. The method of attaining the object is to have a law passed to carry out the wishes of the national association he is struggling to form, and which he calls the National Association for prohibiting Medical Practitioners engaged in Hospital Practice or the treatment of Contagious Diseases from attending Women in Confinement. The medical profession has, for many years past, distinctly, and for the first time, taken up the subject of the terrible mortality of lying-in women, its causes and prevention. It has made great progress in these very difficult inquiries; and, while it will not desist from its pursuit of them, it will thankfully receive assistance from any quarter. How much assistance it is likely to receive from a national association, we leave our readers to judge. The sympathy and approval of such a body will at least be valuable. There has been hasty and violent talk and action in this matter: and great severity to midwives, of the propriety of which there is much reason to doubt. We fear lest a national association should foster panic and its great attendant evils. We deprecate the appeal to Parliament in a matter of this kind, believing that the proper care of lying-in women will be more efficiently and speedily secured by the spontaneous action of the medical profession; by persuasion, not by compulsion. This action will be taken as soon as the profession has acquired a sufficient basis of knowledge of the subject. The profession has, indeed, shown anything but tardiness to act in the matter. In the various documents of the proposed national association, we find no trace of the sources of knowledge on which its proceedings are to be based. We give it two great facts: one practical, one theoretical. In every great city in the world, hospital physicians, surgeons, and accoucheurs are those most celebrated, and most trusted by those best able to judge of them. It has been ascertained that, when scarlet fever is raging, the deaths of lying-in women from puerperal fever are not increased. When the association gives us a glimpse of its views, we may recur to this subject; meantime we do not see our way to encouraging its promoters. We shall strive to further its objects, but not by its plans. If it achieve any kind of success in improving the condition of lying-in women, we shall be astonished and delighted. Before we conclude, we suggest an entire omission of the third of the objects of the association,—"to afford assistance in prosecuting cases of serious malpractice ending in the physical injury or death of the patient". Such a clause casts a disgraceful air over the whole benevolent aspect of the proposals. It is not justified by the state of the law, by the facts of the case, nor by the character and attitude of obstetricians. If the association otherwise succeed, the maintenance of this as one of its objects will only mar its proceedings.

THE CÆSAREAN OPERATION IN LOUISIANA.

Dr. R. P. Harris has recently collected, with much care and trouble, records of all the operations of gastro-hysterotomy that have occurred in Louisiana, and the statistics give a very favourable showing for that State. Nineteen cases are reported. Of these, 73 $\frac{13}{19}$ per cent. of the women and 42$\frac{2}{19}$ per cent of the children were saved. In six instances, the operation was performed early, and here all the women and four of the children recovered. In ten cases, where labour was prolonged, three women and all the children died. These statistics are particularly valuable in showing the real mortality of the operation, because they include all the cases, and not those alone which had previously been published. The danger in drawing conclusions from the cases voluntarily put on record is shown by the fact, that of the 108 collected cases in the United States, only 62 have even been published; the remaining being, of course, often fatal ones. The statistics given show that about three-fourths of the women and two-fifths of the children recover; also, that the early operation is very much more favourable both for mother and child.

DEATH UNDER CHLOROFORM.

The following is a fuller note of the case of death under chloroform to which we last week referred.

"An inquest was held at Guide Bridge, on the 13th instant, on the body of Miss Mary Handford, who died whilst under the influence of chloroform administered for the purposes of a surgical operation. The deceased had been suffering from a tumour on her right breast, and she consulted her regular medical attendant, Dr. Gardiner of Ashton, and Mr. Lund of Manchester. Both these gentlemen were of opinion that an operation should be performed, and the deceased decided upon undergoing it at once. On the morning of the 11th instant, Dr. Gardiner and Mr. Lund attended at her residence, the latter having undertaken to perform the operation. Dr. Gardiner administered chloroform. Soon the deceased's pulse began to fall, and, in spite of efforts made to restore animation, she died, as the medical men said, from the effects of the anæsthetic. Dr. Gardiner, in his evidence, said chloroform mixed with ether was used in Austria and some other places, and was supposed by some authorities to be much safer than chloroform simply; but it had not been used in this country to any extent. Bichloride of methylene was sometimes used as an anæsthetic, but with what results he did not know. He had administered chloroform many times during the past twenty-seven years, but he never had a fatal case before this. Mr. Lund said he made an examination of the patient, and thought her a proper subject for chloroform, which, in his opinion, was the best anæsthetic. The verdict was one of 'Death by misadventure'."

It will be remembered that we reported in our last issue this and another case of death under chloroform. In neither instance, however, did any of the particulars reach us from the gentleman who gave the chloroform, or any of the attendants. We may, therefore, take this opportunity again to express the opinion that it is of great importance to surgical science that the records of death under chloroform, or any other anæsthetic, should be maintained with regularity and completeness. We endeavour to do so in these columns, and have now for some years

published a complete record of these deaths, as far as we could ascertain them. It appears to us to be a duty on the part of any administrator of chloroform, to whom the misfortune happens of seeing a patient die under an operation, or even of seeing any serious result, to put the fact on record, together with such clinical details or such reports of the necropsy as may afford as complete information as possible of the circumstances under which the misfortune happened. We have repeatedly asked that we may be favoured with such information; and we regret that in neither instance has either of the gentlemen concerned in these cases thought it well to forward particulars. The reasons why chloroform is considered the best anæsthetic, in the face of the numerous fatalities which attend it, and the reputed greater safety of ether, are not apparent on the surface.

THE PHYSIOLOGICAL ACTION OF IODOFORM.

A. HÖGYES describes, in the tenth volume of the *Archiv für Experimentelle Pathologie*, some experiments which he has made with iodoform on herbivora and on carnivora. He finds, with Binz, that iodoform given in poisonous doses produces fatty degeneration of the liver, heart, and kidneys, and that the animal dies with symptoms of general paralysis; that it has a narcotic action on dogs and cats, but not, even when given in lethal doses, on rabbits and frogs. He disagrees, however, from the view of Binz, that the iodoform enters the circulation in the form of a fatty solution—whether introduced by inunction or dissolved by the fat of the part where it is applied; and that it then undergoes disintegration in the blood, the nascent iodine seizing on the albumen of the cells. From experiments on the changes which iodoform underwent when it was introduced into the blood through various parts (the intestinal canal, skin, subcutaneous connective tissue, serous cavities, etc.), and when the iodine appeared in the urine, he finds that, when a solution of iodoform is carefully injected by a Pravaz's syringe into the abdominal cavity of a rabbit or a cat, care being taken that none of it escapes into the abdominal wound, neither the sweat nor the urine, nor the expired air after tracheotomy, contains any iodoform—provided that the atmosphere be kept free from it. In the blood of dogs and cats, taken from various parts of the arterial system or from the right auricle, after narcotism had been produced by iodoform, there was no odour of this substance. According to Högyes, iodoform enters the solution in the form of a compound of iodine with albumen; that is to say, when iodoform is applied while undissolved, it is dissolved in the fatty materials of the parts. From this solution, or when it is applied in combination with fat or oil, the iodine is set free and combines with the albumen of the tissues of the part. Iodine-albumen, made by adding iodine dissolved in a little iodide of sodium to the white of hen's eggs, produced narcotic symptoms in dogs and cats, but not in rabbits. In the latter, the fatty degeneration of the liver and kidneys was less marked. A similar formation of iodine-albumen takes place, according to Högyes, when a solution of iodine is injected under the skin or into the serous cavities; the general effects, however, are those of simple poisoning by iodine, nausea, and general emaciation. There is no narcosis, even in cats; and the advanced fatty degeneration characteristic of iodoform poisoning is absent.

PATHOLOGICAL SOCIETY OF LONDON.

IN order to facilitate the exhibition of specimens, and to save the time of the society's meetings, it was decided by the council during the past session, that arrangements should be made under which preparations, drawings, etc., may be shown without any oral communication. The following are the conditions under which such exhibitions may be made. *a*. The specimens or drawings must be ready for inspection in the society's rooms not later than 8 P.M., and must remain on the table until ten minutes after the close of the meeting. *b*. A card, provided by the society, must be placed with the specimen, and on it must be clearly written a short account of the specimen, comprising all the particulars intended for publication. The exhibitor (or his representative) must be present at the meeting, and be willing to furnish additional details if asked for. *c*. At every meeting of the society, the rooms will be open for the inspection of specimens, etc., at 8 o'clock; the chair will be taken as usual at 8.30 P.M. *d*. The list of specimens exhibited by card will be read to the meeting by the President; and such specimens will be taken for consideration and discussion in the course of the meeting, alternately with other specimens, at the discretion of the President.

TYPHOID FEVER IN ADVANCED LIFE.

THAT typhoid fever is mainly a disease of early life has been confirmed by every observer; but youth is by no means necessary for the development of the disease, as Louis (*Recherches sur la Fèvre Typhoïde*, vol. ii, p. 353) was inclined to think. The recent melancholy death from typhoid of Dr. Gibson Fleming of Glasgow, at the ripe age of 70, and that of Inspector-General Domville of Haslar Hospital from the same cause, recall the previous experiences on the subject of the investigators who have published their researches. Most observers have noted the rarity of the disease in persons above fifty years of age; but Dr. Murchison records that of 1,772 cases at the London Fever Hospital, 26, or 1.5 per cent., exceeded that age—a proportion which is larger than at first appears, when it is remembered that less than one-seventh of the entire population of England and Wales is constituted by persons above fifty, and that many who survive that age have acquired an immunity from the disease by a previous attack. Nine cases were noted at the Fever Hospital above sixty; one of them, a man, had rose-spots, and called himself seventy-six, but did not look more than sixty. Trousseau records the case of a woman aged sixty-four, in whose body the characteristic abdominal lesions were found after death. These lesions have also been found by Wilks, in a woman aged seventy; by Lombard, in a woman aged seventy-two; and by M. d'Arcy in a woman aged eighty-six.

THE HOSPITALS OF PARIS.

THE 9,310 beds in the Paris hospitals are absolutely insufficient. It is the same with the 9,940 beds which are in the refuges for old people, and also with the 650 beds which the Hospital Administration can at most offer in the establishments kept up by the particular foundations which it administers. There are in the garrets and streets of the capital 340,917 poor and infirm persons. In 1859, there was one hospital-bed to each 164 inhabitants; and, since the annexation of the suburbs in 1860 and a considerable increase of the population, there is only at the present time one bed to each 231 inhabitants. Six thousand beds at least are wanted both in the hospitals and refuges. There is not only an insufficient quantity; there are also dilapidation and want of neatness. Thus the Hospital Administration has prepared substitutes which have cost the sum of 16,462,720 *francs*, which it has required at the hands of the Municipal Council to put the hospitals and refuges at present existing into proper order. A judgment may thus be formed on the expenses necessary for the French hospital service which will fulfil all that is needed. Amongst the projects in progress, we will point out those which are more particularly interesting from a hygienic point of view. At La Charité, the reconstruction of the *post mortem* theatre and of the mortuary is put down amongst the costs of construction, which amount to 70,000 *francs*. The Laennec Hospital is the old temporary hospital, and amongst the numerous works necessary here are the reconstruction of the *post mortem* theatre and the mortuary; the baths; the creation of a lecture-theatre, a reservoir of water-works; which will amount to the sum of 600,000 *francs*. At the Hospital for Sick Children, the construction of isolation for women and a house for the staff are amongst the works greatly required, and of which the total sum amounts to 1,180,000 *francs*. St. Eugénie Hospital requires reconstruction to the amount of 173,000 *francs*, including isolation for women. At La Pitié, the construction of large buildings and internal and external baths is amongst the number of reconstructions necessary, which will cost 1,400,000 *francs*. Amongst the projects for reconstruction of the Cochin Hospital, we find some changes and improvements in the water-service and the construction of temporary buildings for small-pox and

contagious diseases, which were estimated at the sum of 960,000 *francs*. At St. Louis, the reconstruction of external baths, the construction of a second amphitheatre in the grand court and temporary buildings for small-pox and contagious diseases, are amongst the works to be constructed, the total sum for which is estimated at 1,373,000 *francs*. At the hospital for old women (Salpêtrière), amongst the important works, were noticed the construction of buildings for the staff and for the house-surgeons, for clothing, stores, pharmacy, lecture-theatre, baths, and hydropathic apparatus; also for the construction of class-rooms. The sum to be expended here is estimated at 2,900,000 *francs*. At the hospital for old men (Bicêtre), the improvement of the water-service, the enlargement of the baths, the construction of a building for idiotic and epileptic children, are amongst the number of projects, which are estimated at 2,520,000 *francs*.

SCOTLAND.

THE first meeting of the Glasgow Clinical and Pathological Society for the present session was held in the Faculty Hall on the evening of Friday, the 17th instant, when an address was delivered by the President, Dr. Alex. Robertson.

FIRE AT WOODILEE LUNATIC ASYLUM.

LAST week, this asylum, situated about eight miles from Glasgow and only opened four years ago, was threatened with destruction by fire. Fortunately, however, the fire was confined to one of the two central towers which form so prominent a feature in its architecture. There were four hundred and thirty patients in the asylum at the time. Dr. Rutherford, the superintendent, had them placed in safety; and this was managed so successfully that no pause occurred, and meals went on much as usual. The fire lasted several hours; the local fire-brigade, and ultimately the Glasgow brigade, being employed. The building cost about £150,000, the two towers costing £10,000 each. It is estimated that damage to the amount of £6,000 was done by the fire; but this is covered by insurance.

LOCH KATRINE WATER.

THE monthly report of the quality of Loch Katrine water, prepared by Professor Mills, has been issued. The results are returned in parts per 100,000: Total solid impurity, 3.06; organic carbon, 0.15; organic nitrogen, 0.028; ammonia, 0.000; nitric nitrogen, 0.007; total combined nitrogen, 0.035; chlorine, 0.6; hardness, 1.18. The water, when sampled, was light brown in colour, and contained very little suspended matter. The quantity of organic nitrogen was exceptionally great.

EDINBURGH NEW INFIRMARY.

PREPARATIONS for the opening on the 29th are now being actively pushed on. It was at first hoped that some of the Royal Family would perform the ceremony, but their engagements elsewhere rendered this impossible. It was proposed at one time that the Duke of Buccleuch should be asked; but this project also fell to the ground. It has been finally decided, therefore, that the Lord-Provost, T. J. Boyd, Esq., is formally to declare it open on the date which has been already given. A sum of upwards of £400 towards furnishing the new infirmary has been subscribed by the inhabitants of Orkney and Shetland.

UNIVERSITY OF EDINBURGH.

THE session opens on Tuesday, October 28th. The address by the Principal, with which it was formerly opened, has (as was the case last year) been abandoned. The dissecting-rooms have been opened since October 1st, and are well filled. At the recent preliminary examination, within a fraction of three hundred candidates appeared; and for the first professional examination at present going on, about two hundred have appeared. At a recent meeting of the University Court, Mr. Dittmar, Ph.D., was reappointed examiner in Chemistry for a year till 12th October next. The resignation of Professor I. Bayley Balfour as examiner in Botany was accepted, on the understanding that a substitute be provided in the meantime. Notice was given that, at the meeting of the Court in January next, there would be appointed examiners in Practice of Physic in succession to Dr. Dyce Duckworth, in Natural History in succession to Dr. Macintosh, and in Botany in succession to Professor Bayley Balfour. The appointment of Dr. D. J. Cunningham as assistant to the Professor of Anatomy was confirmed.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

DR. ANDREW WOOD has again been elected representative of the Royal College of Surgeons of Edinburgh at the Board of the General Medical Council. Mr. Francis Brodie Imlach has been elected President of the College for the ensuing year.

ABERDEEN UNIVERSITY COURT.

AT a meeting of the Aberdeen University Court, held last week, on the motion of Dr. Webster, a letter from Sir Robert Christison, referring to the proposed alterations in medical ordinances in Aberdeen University, was remitted for consideration to the Senatus. At the same meeting, Robert W. Reid, M.D., of London; Robert Smith, M.A., M.D., of London; T. Jeffray Parker; T. J. Maclagan, M.D., of London; David Grey, M.D., of Dundee; and Clement Gordon, M.D., of London, were appointed additional examiners in Medicine. The following assistants to professors were appointed: Chemistry, Henry Thomas Jones; Anatomy, Thomas Needham, M.B.; Materia Medica, John George Hall, M.B.; Medical Jurisprudence, Francis Ogston (junior), M.D.

TYPHOID FEVER AT AUCHMITHIE.

THERE is at present an outbreak of typhoid fever at Auchmithie, Forfarshire. At a meeting of the local authority of St. Vigeans, a report by the Sanitary Inspector was read on the condition of the village. The meeting was of opinion that immediate steps must be taken to put the place in a more satisfactory and sanitary condition, and appointed a deputation to wait on the Earl of Northesk, the proprietor, for that purpose.

HEALTH OF EDINBURGH AND GLASGOW.

THE mortality in Edinburgh last week was 16 per 1,000. The number of deaths was 66, as compared with 65 in the corresponding week last year; 17 deaths, or fully 25 per cent., were registered as phthisis. There were 10 deaths from zymotic diseases, which were equally contributed by the Old and New Town. In Glasgow, the mortality was 16 per 1,000, as compared with 18 last year, and 21 the three preceding years.

LECTURESHIP ON AURAL SURGERY AT ANDERSON'S COLLEGE.

A MEETING of the trustees of this institution was held on the 20th inst. for the election of a lecturer on Aural Surgery. There were several candidates, and the election was by ballot. The result of the voting was in favour of Dr. Thomas Barr, Fellow of the Faculty of Physicians and Surgeons of Glasgow, who was elected by a large majority. Dr. Barr also holds the post of Aural Surgeon to the Glasgow Western Infirmary.

WEST OF SCOTLAND CONVALESCENT HOME.

THE annual meeting of the subscribers to the Convalescent Home at Dunoon was held at Glasgow on Monday, October 6th; Sir Peter Coats occupied the chair. In the report submitted, it was stated that the new wing had been completed and furnished, and that the work of the year had been very successful. At the date of last report, 174 convalescents remained in the home; and during the year 2,337 had been admitted, of whom 1,125 were men, 984 women, 107 boys, and 121 girls, being 399 in excess of the number admitted during the previous year; 125 cases had been rejected as unsuitable. Of the total admitted, 2,059 were perfectly restored to health, 98 much improved, and 42 slightly so. The expenditure per patient had diminished by sevenpence per patient on a total of 7,552 weeks' residence granted; but the increased number admitted, and a falling off in the subscriptions, placed the pecuniary position of the institution in an unsatisfactory state, so that it will be

necessary to ask £12 per day of subscription instead of £10. A discussion took place as to the proposed regulations for allowing male and female patients, at different periods of the day, to go out of the home for some hours, as owing to the increased numbers, some of the outsiders at Dunoon had asked the directors to regulate the hours of liberty, and this they have done. As showing the value of the home to Glasgow and the West of Scotland, it may be mentioned that, during the ten years it has existed, 14,584 convalescents have been admitted.

PROSECUTION UNDER THE FOOD AND DRUGS ACT.

ON the 16th instant, an important prosecution took place under the above Act. A druggist in Glasgow was charged, at the instance of the Sanitary Department, with having sold a quantity of powders, prescribed by a medical man, in which the ingredients were defective in quantity to the extent of seven-eighths in each powder. The defendant pleaded guilty. The sheriff imposed a penalty of £5, and remarked that while he was satisfied there was no fraudulent intention on defender's part in dispensing these powders, it was quite clear that they were made up by a person in his employment ignorant of the medical formula, for whom he was not only responsible, but he was also bound to see that so important an article as drugs should be correctly dispensed at his shop. The practice was unfair to the medical men and dangerous to the lives of the inhabitants.

NEW DRAINAGE SCHEME AND WATER-SUPPLY FOR PAISLEY.

A NEW drainage scheme and a new water-supply for Paisley were inaugurated on the 16th instant. The former is to include about one-fourth of the town, and will cost about £10,000. The new water-supply is to be collected in Glenburn reservoir, which will cover forty acres, and will contain a month's supply for the whole town. The reservoir is calculated to cost £17,000, including the price of the ground. It is to be hoped that these new sanitary measures will tend to diminish the death-rate in Paisley, which has of late been excessive.

REGISTRAR-GENERAL'S RETURNS.

FROM the weekly return for the week ending October 11th, we find that the death-rate in the eight principal towns during that week was 17.3 per 1000 of the estimated population. This rate is 1.3 under that for the corresponding week of last year. The lowest mortality was recorded in Perth, viz., 7.8; and the highest in Paisley, viz., 21.3. The mortality from the seven most common zymotic diseases was at the rate of 3.2 per 1000, being 0.7 above that for the previous week. The increase was chiefly due to diarrhœa. A death from diphtheria was the only one which resulted from these diseases in Greenock. Acute diseases of the chest caused 66 deaths, being 10 less than the number recorded during the previous week. The mean temperature was 49.4°, being 0.5° under that of the preceding week.

IRELAND.

SCARLET fever has prevailed to a very unusual extent in Cork for some time past; and, out of 497 deaths registered during the September quarter, no fewer than 44 resulted from this disease.

SURGEON-GENERAL CRAWFORD, M.D.

THE officers of the Army Medical Department serving in Dublin entertained Surgeon-General Crawford, Principal Medical Officer for Ireland, at a farewell dinner on Tuesday last. Dr. Crawford, as we have previously announced, leaves Ireland this week to proceed, after a short leave of absence, to India, to assume the important duties of Principal Medical Officer of Her Majesty's British troops in that empire. In leaving Dublin, Surgeon-General Crawford carries with him the esteem and respect not only of the officers of his own department, but also that of a large number of his civil professional brethren who were privileged to make his acquaintance during his residence in the rish metropolis. Few army medical officers—especially of his high ank—have done so much as Dr. Crawford has to promote that *entente cordiale* between army and civilian doctors, the existence of which is so much for the interest of both classes. Dr. Crawford took a lively and active interest in all matters connected with the welfare and interests of the profession. He was a member of the Executive Council of the Dublin Sanitary Association and of the Royal Medical Benevolent Fund Society of Ireland, and was a regular attendant at the meetings of the Medical Society and of the Dublin Branch of the Association. We heartily wish Dr. Crawford a prosperous voyage to India, and trust he may return to his native country with unimpaired health and strength.

THE SCHOOL OF THE IRISH COLLEGE OF SURGEONS.

SEVERAL letters having appeared in the Dublin daily papers lately from medical students and others, complaining of the withdrawal of the prizes formerly given in this school, and it probably being also felt by the professors that, in the face of the large sums of money expended in scholarships and prizes in adjacent rival schools, such discontinuance of rewards might be a means of withdrawing some of their pupils, they have decided upon granting prizes to the amount of £60 yearly to the students.

ADDRESS TO DR. J. W. BRADY.

AN illuminated address will shortly be presented to this gentleman, who recently resigned the office of Medical Officer of Clara Dispensary District. Dr. Brady held the appointment for the past six years, and the address is a mark of esteem from the inhabitants of the district where he resided.

ZYMOTIC DISEASES IN BELFAST.

DURING the September quarter, the annual rate represented by the deaths from the seven principal zymotic diseases registered in Belfast was 3.4 per 1,000 inhabitants. Whooping-cough was very prevalent, and caused 53 deaths; fever, 35; diarrhœa, 55; measles, 6; and scarlet fever, 4. There was not a single death recorded from either diphtheria or small-pox during the quarter.

THE CATHOLIC UNIVERSITY.

THE Medical Faculty of this University presented an address last week to the Very Rev. Dean Neville on his appointment as Rector of the University. The address, after welcoming the new Rector, expressed the hope that the University would be now placed on a level in all the material of teaching with the State-endowed institutions of a similar kind. It eulogised the labours of its presenters (the Medical Faculty) in fulfilling their duties to the country and the State by educating for the public service at home and abroad, out of funds solely supplied by the voluntary contributions of the Catholics of Ireland, a very considerable number of highly trained medical officers, many of whom have achieved high distinction. This work, the address went on to state, "we have accomplished in the face of numerous difficulties, with inadequate means at our disposal, and under the serious disability that our students could not obtain degrees without passing through the portals of rival institutions. Whether the recent Government measure is to remove these difficulties and place us on an equal footing with other institutions depends, we are of opinion, on the constitution of the Senate and the practical working of the Act."

KING AND QUEEN'S COLLEGE OF PHYSICIANS.

THE annual stated meeting of this College was held on Saturday last, St. Luke's day. Dr. Henry H. Head was re-elected President; and the following Fellows elected by ballot as Censors: Dr. Churchill, Vice-President, and Examiner in Midwifery; Dr. Walter Smith, Examiner in Medicine and Therapeutics; Dr. J. Hawtrey Benson, Examiner in Medicine and Pathology; and Dr. Mac Swiney, Examiner in Forensic Medicine and Hygiene. Drs. Sinclair and Macan were re-elected Examiners for the Diploma in Midwifery. In accordance with the provisions of the Supplemental Charter of December 12th, 1878, the following Fellows, having been previously nominated, were elected additional Examiners to take the place of an absent Censor or Examiner: Dr. Duffey (in Medicine), Dr. J. W. Moore (in Forensic

Medicine and Hygiene), and Dr. Macan (in Midwifery); and as additional Examiners in the subjects of the First Professional Examination: Dr. W. G. Smith (in Anatomy), Dr. Duffey (in Chemistry), Dr. J. W. Moore (in Materia Medica), and Dr. Purser (in Physiology). Dr. Robert Travers was re-elected Professor of Medical Jurisprudence; and Dr. Aquilla Smith as representative of the College on the General Medical Council. The following Licentiates were elected to the Fellowship: Reuben Joshua Harvey, M.D.Dublin, 1873, L.K.&Q.C.P.I., 1876, Physician to Cork Street Fever Hospital, Assistant-Physician to the House of Industry Hospital, and Lecturer on Physiology in the Carmichael College of Medicine and Surgery; John Rutherford Kirkpatrick, M.B.Dublin, 1855, L.K.&Q.C.P.I., 1859, Ex-Assistant-Physician, Rotunda Lying-in Hospital; and Francis J. B. Quinlan, M.D.Dublin, 1862, L.K.&Q.C.P.I., 1859, Physician to St. Vincent's Hospital, and Professor of Materia Medica in the Catholic University.

THE IRISH PRISON SURGEONS.

THE Chief Secretary for Ireland received a deputation last week from the Surgeons of the Prisons in Ireland to hear their views as to the proposed scale of salaries under the new regulations. The deputation consisted of: Dr. Brunker (Dublin), Dr. Thompson (Omagh), Dr. Jacob (Maryborough), Dr. Kinkead (Galway), Dr. Middleton (Mullingar), Dr. Mayne (Longford), and Dr. Johnson (Kilkenny). Dr. Brunker laid before the right honourable gentleman the following resolutions adopted at a meeting of the Prison Surgeons of Ireland on October 7th: "1. That we respectfully ask the Government to reconsider the proposed salaries of the medical officers of prisons; as, considering the very great increase of duties to be performed at present, in many cases three or four-fold, we are of opinion that the salaries offered us are quite insufficient as remuneration for the greatly increased responsibilities and many duties we are called on to perform. 2. That, in the event of our reasonable request being conceded, then such surgeons as are unwilling to undertake the mechanical duties of compounding should be allowed either to employ a compounder, who should have access to the jail surgery when required, or be supplied with a suitable hospital-warder." Such an arrangement, Dr. Brunker said, would be most likely to smooth the compounding difficulties and induce most, if not all, the prison surgeons to meet the wishes of the General Prisons Board, and cheerfully assume the responsibility of superintending the compounding. He also referred to the expression of opinion on the same subject in the memorials presented to the Lord-Lieutenant by the King and Queen's College of Physicians and the Royal College of Surgeons. Further, he remarked that there were various provisions and rules which the medical officers felt as pressing hardily upon them, and which could be advantageously altered; but they would endeavour to meet the wishes of the General Prisons Board, as they are now announced, relying on the fair consideration of individual cases and remuneration. Dr. Jacob renewed the assurance of the readiness of the surgeons to carry out the rules of the General Prisons Board, as they now exist, cheerfully and to the best of their ability. It would not become them now to ask a reconsideration of those rules, although some of them were such as to lead to a great deal of hardship and unnecessary vexation. Their object in addressing the Chief Secretary was to ask him again to have the scale of salaries that was proposed to be offered to them reconsidered. Some of them felt that they were really insufficient. His own (Dr. Jacob's) was about the medium place on the scale. In his case, the salary offered him was 3s. 3d. a-day. In addition to all that had been stated, there were certain dangers surrounding their position. He himself had been threatened with assault several times by prisoners, both in the prison and after leaving the prison; and many others had been threatened. The Chief Secretary informed the deputation that the Government had decided to appoint a Departmental Committee to report upon the question, with a view of discovering how the matter really stood. He was glad to find that matters had advanced a great deal since he last met a similar deputation. Gentlemen then spoke of compounding as derogatory to the profession; but it seemed to him to be more a question of compensation than anything else. If, as was remarked by a member of the deputation, the rules of the College of Surgeons prohibited their Fellows from compounding, that would be a good argument to bring before the Council as to the advisability of having such a rule omitted. He thought, however, the probability was that the duties of compounding would have to be discharged. In reply to a remark that some men who had not been educated in the matter of compounding could not undertake the duties now, the Chief Secretary said he thought the course for such men to adopt would be to resign. He also stated that the Committee to which he had referred would consider each individual case on its own merits.

QUEEN'S UNIVERSITY IN IRELAND.

THE following is the report of the Committee of Convocation, which was unanimously adopted at a meeting of Convocation held on October 10th:

"The Committee during the past year, which has been the most eventful to the Queen's University since it was established, have endeavoured to attend to the duties entrusted to them. When it was reported that the Government were likely to propose a measure for filling the vacant seats in Parliament, the Committee sent a memorial to the First Lord of the Treasury, stating the grounds upon which the Queen's University sought representation. His Grace the Duke of Leinster kindly forwarded it; but, beyond the acknowledgment of its receipt, no result has ensued. When the Bill for changing a part of the Irish University system was introduced, the Commissioners forwarded to the members of the legislature a strong remonstrance against those clauses which affected the Queen's University, and proposed its dissolution. The Committee are happy to say they were not alone in doing so, as the Queen's College, Cork, the Queen's University Graduates' Association of London, and the Queen's University Graduates' Association of Belfast, published very important statements to the same effect; and the Committee beg to call attention to the four documents appended to this report as well worthy of careful consideration. The Committee are of opinion that the Queen's University has been successful in discharging its functions, and that it should not be dissolved, as proposed by the recent Act. In this opinion, the numerous graduates, who for the last thirty years have joined it, almost unanimously concur. They had no grounds for apprehending the dissolution of the University, there being no precedent for such a measure. If the recent Act, so far as it affects the Queen's University, is carried out, a serious injury will be done to the members of the University. The proposed University will differ altogether from the Queen's University, as it will be able to confer degrees upon mere examination, while the Queen's University has always insisted on proper collegiate training before conferring its degrees, and has intimately co-ordinated its examining and teaching functions. The Committee think it incumbent on them on this occasion to record their own unshaken adhesion to the principle of united education, which has been so repeatedly approved of by Convocation. The Committee, without expressing any opinion on the necessity for a new University in Ireland, think that the Queen's University ought to be left untouched; and they hope that, even yet, the first expression of the opinion of Convocation on the subject may have weight with Her Majesty's advisers."

HEALTH OF DUBLIN: QUARTERLY REPORT.

DURING the quarter ended September 27th, the births registered in the Dublin registration district amounted to 2,542, being equal to 32.3 in every 1,000 of the population; and the deaths to 1,970, or 25.0 per 1,000. Omitting the deaths (68) of persons admitted into public institutions from localities outside the district, the rate was 24.2 per 1,000. The deaths during the past quarter show an excess of 246, or 14 per cent. over the average for the corresponding quarter of the past ten years, and a rate of mortality in excess of that average amounting to 3.0 per 1,000. Zymotic diseases caused 383 deaths, being 47 under the average for the third quarter of the past ten years. Excluding deaths of persons admitted from places outside the district, the seven principal zymotic diseases caused 289 deaths; of these, 60 took place from small-pox, 29 from measles, 68 from scarlet fever, 14 from whooping-cough, 64 from fever, 49 from diarrhœa, and 5 from diphtheria. Bronchitis caused 228 deaths, pneumonia 48, and lung-disease unspecified 24. The mortality from convulsions was above the average, numbering 202, while of the deaths under five years 30.4 per cent. were ascribed to this

cause. To heart-disease, 92 deaths were credited; apoplexy, 23; liver-disease, 38; kidney-disease, 31; paralysis, 38; and brain-disease not designated, 24. Phthisis caused 220 deaths; mesenteric disease, 51; hydrocephalus, 40; cancer, 44; and dropsy, 21. The mean of the mean weekly temperature for the quarter was 55.3°; and the rainfall for the thirteen weeks measured 10.306 inches.

HOME FOR INCURABLES, CORK.

THE new Home for Protestant Incurables, situated at St. Luke's, Cork, was opened last week. Commenced about seven years since at Victoria Road, where the accommodation and the funds were limited, the institution prospered so rapidly that another site had to be selected; and the new home lately erected on the Military Road is truly a magnificent building, most thoroughly adapted for the objects for which it has been constructed. At first, owing to the scanty accommodation, it was found necessary to exclude male patients; but after some time the foundation of a male ward was proposed by the late Bishop of Cork, and owing to his exertions the suggestion was finally accomplished; and in memory of the deceased prelate the memorial wing which has been added to the institution was opened last week by his son the present Bishop of Cork. The home is two hundred feet long, three storeys high, the front being composed of red brick, while the windows and doors of the central part are dressed with Portland stone. It is divided into a central portion and two wings, the front consisting of board-room, nurses' dining-room, kitchen, etc., on ground floor; and on the upper floors are nurses' rooms and private wards. The east and west wings are for male and female patients respectively, and consist each of three wards on the two upper floors, and on the ground floor of day-rooms, dispensary, and lady superintendent's room. A matter of great importance in connection with the home is the training institution for nurses which is attached to it, and which must confer a great benefit on the public at large. The cost of the building will be nearly £12,000, of which about £7,500 has already been received or promised. There will be accommodation for one hundred beds, each of which will cost about £40 *per annum*, so that the expenditure must exceed £4,000 a-year. Part of the expense will, however, be contributed by paying patients, by donations, interest on bequests, etc., and the suggestion made that each congregation in Cork should endow a bed in the hospital is a happy one, and we trust will be accomplished. Considerable credit must be given to Miss Frances Gregg, the success of the undertaking being mainly due to her energy, courage, and ability. We trust that the necessary funds for completing and furnishing the building will soon be obtained, and that the managers of the institution will soon be in a position to enable them to remove the patients in the old home to the new hospital.

THE BRITISH MEDICAL ASSOCIATION AND THE UNIVERSITY OF CAMBRIDGE.

WE have great pleasure in announcing that, at the ensuing annual meeting of the British Medical Association, which will be held in Cambridge, under the presidency of Professor Humphry, F.R.S., the Address in Physiology will be delivered by Dr. Michael Foster, F.R.S., of Trinity College, Cambridge; the Address in Medicine by Dr. Bradbury, Physician to Addenbrooke's Hospital; and the Address in Surgery by Mr. Timothy Holmes, M.A.Cantab., F.R.C.S., Surgeon to St. George's Hospital. An additional Section will at the Cambridge meeting be added to those in which the proceedings have been heretofore conducted; viz., a Section of Pathology. Over this Section Sir James Paget will preside. Dr. Paget, the Regius Professor of Medicine in the flourishing School of Medicine of the University of Cambridge, who presided over the meeting of the Association when it on a former occasion met in Cambridge, will at this meeting occupy the chair in the Section of Medicine. Dr. Latham, Physician to the Addenbrooke Hospital and Downing Professor of Medicine, will, we believe, also accept office in the same Section.

THE DOCTOR IN THE KITCHEN.

V.

[THE rapid accumulation of more serious demands upon space warns me to depose from their original place of honour and to bring to a termination these short articles of holiday gossip about food and feeding. When I began them, I had no intention of writing more than the few desultory notes which constituted the first short article upon extravagance in feeding. The unexpected welcome, however, which they received in all parts of the kingdom, and the immediate signs of lively interest which they awakened, oddly enough, not only within and without the profession in England, but from more distant places, induced me to continue and to add to them from week to week, but always without any serious intention of prolonging the series, or without supposing that it was in my power to make any valuable contribution to a subject which demands for its proper treatment very carefully organised study and practical skill. I cannot pretend to bring either to the subject; and, moreover, I am afraid that the columns of this JOURNAL are hardly the proper place to continue at length a series of articles on food, cooking, and cookery. I wish, therefore, now, as briefly as possible, to respond to a few more of the great number of the letters which have reached me from my medical friends and readers and from persons whom these articles have reached and interested outside the usual circle of our readers; and, having done this, I must, I fear, notwithstanding the many invitations to continue them, for the present yield space to the more serious subjects which make such pressing claims upon us.]

The theory of the uses of soup as an aliment is of considerable interest and very imperfectly understood. On the one hand, people have been in the habit of attributing an exaggerated value to clear soups and beef-tea as an element of absolute nutrition; on the other hand, the peptogenic value of a *bouillon* at the commencement of a repast is not sufficiently recognised by doctors learned in diet. It is common enough to hear this first course of a dinner spoken of as being either superfluous or purely formal, or even mischievous, as it is sometimes said, in diluting the gastric juices. The fact is, however, that a good clear soup is scientifically as well as practically defensible on very solid grounds as an excellent introduction to any repast, and especially for persons of weak digestion. The peptogenic theory on which the physiology of clear soup as a first course is founded is very well explained by Budgé and Schiff. Schiff, in studying the influence of those special substances that Corsivart describes as peptogens, has shown that in order that the stomach, when empty of food and exhausted by previous digestion, shall recover the power of furnishing a complete gastric juice capable of transforming albuminoids, it is necessary that it shall first absorb certain aliments, which are changed into pepsine in the peptic glands. The absorption of these peptogens is the first step in the digestive process in the stomach. Dissolved by the purely acid liquor which they find in the stomach, they quickly pass into the blood, which they render apt to furnish pepsine to the glands, whose work of secretion is proportionate to the absorption of the peptogenic principles. The substances which appear to enjoy the most distinctly proved peptogenic power are, according to Budgé, clear soup, water containing the soluble principles of meat, and dextrine. Thus, the most recent theories of science afford an ample justification for the usage of commencing the dinner with soup. Schiff and other physicians, following him with success, erected this even into a therapeutic method, and have effected cure, within our knowledge, of certain cases of true dyspepsia proceeding from digestive weakness, from insufficiency of the gastric juice, by recommending to the dyspeptic a cup of clear soup an hour before principal meals. This use of soup, it will be observed, is quite independent of its misuse as a sole albuminoid element of nutrition, and depends upon its peptogenic power—a matter too often lost sight of by those who affirm that clear soup alone is valueless as an element of nutrition.

A few words are due here. Let me answer those who wish me to say a little more precisely how hominy is made. The hominy is soaked in cold water during the night, and thrown into boiling water and boiled for an hour for breakfast, being frequently stirred like any other porridge or "stir-about".

To persons, however, who find it more convenient to prepare breakfast rapidly, I may say there is a means by which any of the forms of hominy can be made ready in about ten minutes. There is an American company, which has an agency here, and which prepares what it calls steam-cooked and desiccated white wheat, oatmeal, maize, and barley, which require only about ten minutes' stirring in boiling

water to make them immediately ready for use. The porridge prepared either from the oatmeal, the white wheat, the maize, or the barley, of the Cereals Manufacturing Company—as they call themselves—is admirable, and, eaten with brown sugar and milk, makes a delicious breakfast at very little cost and very little trouble. It is one which a very great number of adults will choose for themselves, I think, if they try it, and which can hardly be too strongly recommended for children.

As to economy of fuel, a number of correspondents ask what is the actual economy of fuel by using furnaces such as those employed in French kitchens or such as the American stoves and ranges. Of course, I cannot here give all the details, but by way of example I may say that I ascertained the ordinary cost for kitchen fuel in a house in Paris, where the usual continental routine was followed of *café-au-lait* at 8, with a roll; a *déjeûner* of the usual three or four dishes at 12, and dinner at 6, for a household of twelve persons; and I found that the total annual cost there was £5. This was easy to calculate, because the fuel used is always of a special kind, viz., coke and compressed peat, coal being little or not at all used in French kitchens.

In an English household of which I have the particulars before me, I find, on the other hand, with a very careful and intelligent cook, skilful and yet economical, that for this household of two persons and five servants the annual expenditure for fuel in the kitchen is £12; but this does not include the gas used at a gas-cooking apparatus, which is a good deal employed throughout the summer, and as a supplemental stove at other times. In order to make the relative expenditure still more plain, it should be added that coke and common coal and fuel are used in the range, and that coke throughout the past year has been less than half the price in London that it has been in Paris. Therefore, in order to make a fair estimate of the consumption of one kind of range against the other, the expenditure in Paris should be halved, and it will be apparent that cooking in a French kitchen is effected at a quarter the expenditure of fuel which goes on in the English household before referred to, and which, I may venture to say, is by no means exceptional. It is quite possible, by selecting one of several kinds of American cooking-stoves which are now before the public, to effect almost as great an economy in fuel in the English kind of cooking-range as in the French. The great defect of all our English open ranges is the great size of the fireplace, the immense waste which goes on from the open faces of the fire, and the large amount of coals required to fill the fireplace and to get an incandescent mass sufficient for the purpose of roasting. Moreover, it will be noticed that, in the great majority of the modern ranges, large baking ovens are provided, one on each side—one for meat, and the other for pastry. Where the family is large, this apparatus is of such great size that an immense consumption of coal goes on, and a great waste of heat. It is impossible to maintain an uniform gentle heat over a considerable surface for a length of time; the heat in the centre is fierce and wasteful, while the sides are cold. A French cooking-range is all hot plate, with small apertures over the flat thin surface of fire, on to which the pot can be put for rapid boiling or frying. The greater part of the cooking is done by gentle heat on an extended surface of hot plate with little open gratings, in which small accessory charcoal fires can be lighted for special uses. It resembles, in fact, more a cooking-bench than a fireplace; and the real advance of cookery in this country will be made when we introduce that simple and economical form of applying heat to our food. Of the American stoves I shall not here go into any details, because any one who is really interested in the subject can for himself determine which stove he thinks most suited for the requirements of his establishment; but I may say that one of them which is coming into use claims, and I believe fairly claims, to consume from 50 to 70 per cent. less fuel than an ordinary kitchener; and that the whole secret consists in arranging the hot-water boiler and the hot plates in such a manner that a small amount of central heat radiates throughout the whole of the stove; the fire being, as in the French range, near the surface and nearly flat.

I should like to say a few words about the use of fat in cooking. I was very much struck with the strong objection which Dr. Yandell, writing home to his Louisville medical paper, entertained to the English cooking on the ground of the large exclusion from it of fat and oil in any form. Anyone who looks at an English table will indeed see that the meat is nearly always either roasted, or boiled in water; vegetables are cooked in water; oil is hardly used at all in ordinary English cooking, and butter is chiefly represented by that nauseous kind of bookbinders' paste, which is happily less universal than it used to be, but which, when served, is known under the name, at English tables, of melted butter. Dr. Yandell believes that this national defect in cooking has something to do with the prevalence of scrofula and atrophic diseases in this country. This may possibly be fanciful; nevertheless, we all know very well how valuable oily and fatty foods are to persons of scrofulous tendency, and it would be superfluous to dwell here upon the part which oil-globules play in the development of nascent cells in young tissues, or on the well known therapeutic value of oil in all its forms in the tubercular diathesis, and wherever there is a tendency to the defective nourishment of tissues. Hence it may at least be well worth our while to consider, from a medical as well as a gastronomic point of view, whether the introduction of a much more extended use of fats, butter, and oil into our cooking would not be as useful dietetically, as it certainly would tend to make our cooking more savoury and more nearly approaching the best standard of continental cookery, and especially those parts of it which are invariably highly appreciated by the Englishmen abroad. The art of frying is, as I have said, an almost unknown art in this country, except for that particular form of frying in a shallow pan, which is suitable for bacon, pancakes, and a few other articles of diet which are themselves rich in fat, and which are eaten in thin slices. Except for frying of this kind, the English frying-pan is a mischievous and valueless instrument. On the other hand, the deep dish, with its suspended wire cage, in which frying should be carried on to reach anything like a standard of perfection, is hardly to be got of any English ironmonger, and when one wants to get it, one must order it or bring it from the continent. It may, however, easily be made by any tinsmith; and whoever would popularise it, and teach our cooks to use it, would add a good deal to the value of our dietary. Anyone, however, who is accustomed to frying whitebait, or has seen whitebait fried as it should be fried, will know what is necessary. What is essential is, that the vessel containing the fat or oil should be deep and absolutely clean, and that in it should be suspended a wire tray or basket carrying the thing to be fried. Fish, vegetables, meat, fried in this way at a suitable temperature remain tender and juicy, while the exterior acquires a delicate uniform colour, and when withdrawn and put upon the strainer, they rapidly dry, so as to leave no impression of grease upon the palate. As to melted butter, the compound of flour and water, with a little butter or milk added to it, which used to be served under that name, is partially superseded, but as it still exists, it may be worth while to say that that barbarous product ought never to be served by any cook to a person who respects his palate or his digestion. Melted butter in its simplest form should consist merely of butter melted, without any addition of either flour or milk, but only with a little salt. To this may be added either anchovy paste, if it be desired to make the favourite old English sauce known as anchovy sauce, or of course it may be diluted with stock or beaten with yelk of egg, and various made sauces may be completed from it. Capers, with oil and vinegar, are much less used in this country than they should be where clean and palatable cookery is desired, and the whole class of cold sauces known abroad as *sauce vert* are neglected.

The art of dressing fish for summer use, and serving it cold with green sauces, is one which should be cultivated in every household where a reasonable attention to gastronomy and sound dietetic principles exist. Trout and salmon-trout are best served in summer cold, with either savoury jelly or a green sauce, consisting essentially of oil, vinegar, and chopped tarragon, with salt intimately combined, and left to complete their union during three or four days before they are used.

While I am on this subject, let me add a hint as to mint-sauce. This is essentially an English sauce, which is hardly ever seen except in this country, and when properly made, has its fairly good qualities, although it is puzzling to know why it should be eaten with lamb, from which it takes away a good deal of the delicacy. Mint sauce, however, is very rarely made in England with even an approximate attention to correct principles of cooking. Indeed, it forms one of the most striking examples of the elementary ignorance which dominates the English kitchen, and to which as a rule we submit uncomplainingly, because unthinkingly. Mint-sauce, as one gets it usually at an English table, consists of a combination of vinegar, white sugar, and chopped mint, most inartistically mingled, and in a manner defying all the principles of common sense. If you inspect it, you will generally see that an attempt has been made to supersaturate vinegar with sugar, and at the bottom of the sauce-tureen lies a quantity of undissolved white sugar, while in the vinegar float, "*nantes in gurgite*", are particles of chopped mint like broken tea-leaves, from which very little of the active principle has been extracted. The proper way to make mint-sauce—and this is the keystone of all this kind of sauce—is to rub the mint and the sugar together thoroughly in a mortar, adding a few drops of vinegar so as to incorporate them into a thick paste, and to let this be thoroughly pestled, the sugar serving then to extract from the bruised and broken mint-leaves all the essential oil. The vinegar should then be added slowly, fine white wine vinegar only being used. Mint-sauce thus made becomes a product not in itself objectionable, either to the discriminating palate or to the discerning mind. This cannot be said of the mint-sauce to which we are habituated by our cooks.

River-fish is much neglected in England—partly, perhaps, because we have so excellent a supply of sea-fish, but partly because our cooking does not make the best of it. I am told—and this is a hint which I got in England—that the main reason why coarse river-fish is so much more palatably prepared at French than at English tables is, that it is the custom always to boil it or stew it, as the case may be, in stock, and not in water. This adds the quality of richness and flavour, in which the albuminoid basis of the fish is otherwise deficient; and I am told that pike or carp prepared in this way will be found to be very much improved. This hint, however, I have from a correspondent; and, although it seems to me extremely probable, I cannot speak of it from personal knowledge. These details are not above, I think, the attention of the most reasonable persons; for, after all, in nothing is the saying more applicable than in cookery, that the secret of keeping a good table and of making good dishes is that they should be mixed with brains. The details of cooking and the general principles are certainly not beneath the consideration of any one who is at the head of a household or who has any responsibilities in connection with the direction of the feeding of other people. Dr. Johnson, no mean observer of human nature, said that he always had a bad opinion of a man at whose house he got a badly prepared, badly ordered, or badly cooked dinner. "Depend upon it," he said, "that such a man is slovenly in his mind." And it is not always possible to avoid applying in some way this rather tough saying of the great lexicographer to many gastronomic experiences in this country.

The recognised fault of dinners, especially of "dinner-parties", in this country is the length and monotony of the *ménu*. I have before me an excellent calendar which contains a different *ménu* for every day of the year, and I wish that it were in the possession of every British housewife. It is a characteristic fact, that a number of leading French journals publish each day a *ménu*. I should like to see this imitated by our English journals.—ERNEST HART.

BRITISH LYING-IN HOSPITAL, YORK ROAD, LAMBETH.

THIS ancient and valuable charity, established by Royal Charter, and which has had connected with it many illustrious names in the history of obstetrics, has recently undergone a complete reorganisation, both in its interior construction and in its staff. Differences among the staff, which were subsequently referred to the Royal College of Physicians and to a professional committee, led to the resignation of two of the medical officers; and, as these differences had arisen partly out of circumstances connected with the prophylaxis of puerperal disease, it became the duty of those entrusted with the administration of the hospital to make a thorough investigation of all the circumstances. Such an investigation, when it was carried out, showed the desirability of complete reorganisation. In place of the old management, a new Board of management was formed, including Mr. Bousfield as chairman; the Honourable A. Egerton as vice-chairman; Mr. Robert William Bell as treasurer; and, among the medical members of the Board, Mr. Ernest Hart; Surgeon-Major Elkington; and Dr. May; by whom it was decided to consult Professor De Chaumont of Netley as to the best means of putting the hospital into a thoroughly sound sanitary condition. With so ancient a building constructed upon lines not in accordance with the now recognised necessities of hospital sanitation, the task was one of no small difficulty. Dr. De Chaumont furnished a very complete report, including many recommendations, the chief of which related to the remodelling of the ventilation of the building; the removal of the closets from the inside of the building to its angles; the renovation of the water-supply; and the prevention of crowding in the wards. The services were then engaged of Mr. Eassie, C.E., the well-known sanitary architect, to prepare the necessary drawings and specifications, and to superintend the carrying out of the work. This has now been done with great completeness, and extensive changes have been made, introducing many modern improvements of interest. The artificial system of ventilation, which consisted of a complicated system of air-galleries and shafts, has been removed; the wards are now ventilated only by inlets direct from the outer air, at the floor level, and in the wall air-bricks have been inserted upon a system recently introduced into notice by Mr. Edison, and which appear to give free access of air without draught. The air thus admitted impinges in winter upon hot-air pipes, and is somewhat warmed before it reaches the body of the room. The assistant inlets are fixed at the ceiling level. The outlets are twofold—one leading to the flue by valves at the ceiling portion of the chimney, and the other by shafts passing from the ceilings to the outer air. Air is also led into the passages in large volumes, and discharged on the opposite side, cowls of the simplest pattern being employed on the upright shafts. The hot-water for the baths is provided, not by the old system of circulating cisterns in the upper rooms, but by a cylinder of an American pattern beside the kitchen fire, in which the boiler is placed. This avoids all chance of explosion, while the hottest water can at once be drawn off in the upper rooms. The floors have been dealt with on a plan which we have more than once recommended in this JOURNAL, and which was first carried out, we believe, in Southampton, at the South Hants Infirmary; it consists in planing the floors, staining them, and rubbing into them melted paraffin, whi renders the wood washable and waterproof. The doors, walls, and cielings have been treated with washable paint; so that, if needful, the whole room could be washed down with a hose. The disinfecting apparatus for the mattresses and linen is the well-known disinfecting furnace of Fraser, which has been found in many places to work very successfully, and which answered satisfactorily to experiment. A new storey has been added to each wing, for the accommodation of nurses; it being intended to combine with the in-patient treatment of the hospital a training school for midwives and midwifery nurses. The whole hospital may be said to have been completely renovated since it was closed, and opens under as satisfactory conditions as sanitary science and applied skill could supply. The new staff consists of Dr. Hayes and Dr. Fancourt Barnes, as physicians to in-patients; and Dr. Moullin as physician to out-patients. Dr. Playfair and Mr. Lister, of King's College, have accepted the offices of consulting physician and consulting surgeon. There is so much need in London of good obstetric accommodation, and good obstetric training and instruction for pupils and nurses, that the addition to the working resources of London of a training school at this hospital may be regarded with some satisfaction. There was a public opening last Wednesday, at which many persons interested in hospital hygiene viewed the hospital; and Mr. Lister, at the luncheon, took occasion to express the opinion, which is, we believe, generally entertained, that the general administration of the hospital is placed upon a satisfactory footing. Mr. Eassie's part of the work has been excellently done, and has given great satisfaction to the governors of the hospital.

DUBLIN ROYAL SANITARY COMMISSION.

IN continuation of our former reports, we append a *précis* of the most important remaining evidence since laid before the Commissioners.

Dr. GRIMSHAW, Registrar-General, was re-examined, and stated that the effective population of Dublin was rather in excess of that of London and Manchester, and about the same as that of Liverpool. The death-rate of the garrison was seven per one thousand. The death-rate for persons younger than five and older than fifty-five was higher in London than in Dublin. For the intermediate ages, the death-rate was higher in Dublin. An accurate registration of disease would show more exactly the state of the public health than the registration of deaths if it could be carried out. The registered birth-rate of Dublin was low as compared with English towns.

Mr. YOUNG, Inspector of Cleansing under the Corporation of Glasgow, who had been brought over to inspect the sanitary condition of the city by the Corporation of Dublin, said he was sorry to say that he had very little in the way of compliment to offer to the authorities who had brought him over. The sanitary condition of Dublin was almost as far as possible from what it ought to be. Many of the tenement-houses would elsewhere be at once condemned as uninhabitable; and it was absolutely necessary that they should be demolished. The back yards of those premises were in a most deplorable state. They required to be properly drained and paved; and it would not be possible to carry out proper scavenging of the streets until those which bore the principal traffic were paved; special attention being paid to the paving of side channels. As regarded street scavenging, there was much room for improvement. He considered the storing of the street mud in depôts, as was done at present, an objectionable practice. The domestic scavenging of Dublin was in a deplorable condition. He considered that it should be undertaken by the Corporation, and a rate made for the carrying out of it. Water-closets should be discouraged, and a system of pail-closets established, from which the refuse should be removed each day in covered vans.

The CHAIRMAN, Mr. RAWLINSON, remarked that the pail system for house-refuse was admirably carried out in Rochdale, but at an annual loss to the community of £12,000 *per annum*, notwithstanding that it was made into a manure worth from £3 to £4 per ton. He would not be prepared to recommend the pail system for Dublin, where it was possible to have good sewers and drains, and where there was such a water-supply as existed in that city, and where, also, good soil-pans and water-closets might be introduced. He had medical evidence elsewhere to the effect that the carrying of pails through dwelling-houses necessitated the leaving open of windows and doors for hours afterwards.

Mr. INGLIS said that, in consequence of the absence in Dublin of any sources of employment for women and children, the working classes had not enough of means to provide themselves with food, clothing, and fuel; and the result tended to depress their physical condition, and increase their receptivity to disease. He did not think the working classes of Dublin were particularly difficult to deal with. No doubt they were slovenly in their habits, and inclined to do as little as they could.

Mr. NORWOOD, LL.D., for a long time a member of the Corporation and of its Public Health Committee, stated that no doubt the dirty habits of the people gave rise to a great deal of illness; but their filthy condition arose in a great measure from their poverty. The charge of dirty habits did not apply, however, to the lower classes only. The owners of tenement-houses—many of which were a hundred and fifty to two hundred years old—should be compelled to pave the back yards of those houses, or cover them with concrete. The number of public fountains should be increased.

Mr. DAWSON, a member of the Town Council, concurred in the opinion that the great cause of the high death-rate was the condition of the tenement-houses. Another cause was that vaccination was not as effectually enforced in Dublin and in Ireland generally as in England. Hence the great mortality from small-pox. He was strongly in favour of the erection of model artisans' dwellings.

Dr. EMERSON REYNOLDS, Professor of Chemistry in the University of Dublin, drew special attention to the saturation of the naturally retentive soil of Dublin, by soakage with semi-stagnant water from the large number of wells throughout the city, which are now disused in consequence of the Vartry water-supply, as a cause of the general unsanitary condition of Dublin. The recognition of this factor was important; because any sewage-system that did not provide ample subsoil drainage would be likely to prove but a partial success.

Dr. FAUSSETT advocated utilising the sewage of the city for agricultural purposes on the lands adjoining the western suburbs of the city. The sewage of the western division constituted something like three-fourths of that of the entire city. He also recommended the admixture of sewage with peat, the fertilising as well as the deodorising properties of which commended it as a substance peculiarly adapted to form with sewage a valuable compost.

Dr. KENNY, Medical Officer of Health of No. 2 District of the city, stated that if all the causes of the high death-rate of Dublin were to be represented by the number seven, he would allot four to represent the mischief arising from the condition of the tenement-houses, two for that arising from bad scavenging, and one for the effect of the Liffey.

Mr. RAWLINSON said that, as a result of an inspection he had made of the Liffey at low water on the previous day, he was surprised at the small amount of mud that was deposited on the shores above the current that was flowing. He was also agreeably surprised at the apparent cleanliness of the water—the small amount of pollution in it. He was satisfied that, whatever it might be in a dry and hot summer, the amount of pollution in the Liffey was not anything like what had been represented to him, at least as far as he could see.

Dr. FITZGIBBON gave evidence as to the danger of allowing the washing of clothes to take place in a tenement where there was sickness. He had been called in to see persons ill of measles and typhus fever in crowded tenements where the women added to the subsistence of their husbands by washing clothes, and he had actually seen the clothes drying in the room where the sickness was. He had no doubt that disease had been spread in this way. If the Corporation were to provide washhouses in which the washing could be done at a small charge, it would facilitate the putting down of this objectionable practice.

Mr. GEORGE MOYERS (builder) said that the house-drainage in some of the best districts of the city, in which there were houses of large size, was very bad and insufficient. A great many old disused wells in the city contained stagnant water, and some of them acted as cesspools. He maintained that the sanitary authorities should have power to enter and examine every house for the purpose of seeing whether or not its drainage arrangements were sufficient.

Mr. RAWDON MACNAMARA recommended the provision of public washhouses and public baths.

Mr. RAWLINSON said the Commissioners would certainly recommend such a provision; and it would be for the Corporation to consider then what should be done.

A great deal of evidence not bearing exactly on the objects of the inquiry, and also repeating what had been previously tendered, having been given, and patiently listened to, the Commission concluded its public sittings amid a chorus of mutual compliments on the part of those engaged in it. The inquiry, which lasted twelve days, has certainly been conducted throughout with good taste and in good temper. Although it may not have brought any new or startling fact to light, it cannot fail to be productive of much benefit to the health and morality of the city. Mr. Rawlinson, by his practical common sense and keen judgment, has made a most favourable impression on the citizens of Dublin. And, although they must prepare themselves for an increased taxation in order to carry out any recommendations that the Chairman and his able colleague Dr. MacCabe may recommend, the public feel that nothing will be put forward by such eminent authorities which is not absolutely and essentially necessary for the health and welfare of the community. To the Dublin Sanitary Association is solely due the credit of having persistently urged on the Government the necessity of instituting an inquiry, from which we augur the most valuable results will follow.

A very sad feature in connection with the labours of the Commission is the sudden and unexpected death, from heart-disease, on Monday last, of its able Secretary Mr. William Jerrold Dixon. Mr. Dixon was a member of the English bar, and a son of the well-known author Mr. Hepworth Dixon. It is stated that he had not been in good health for some time, but had been ailing only for a few days. Two days before his death, on the occasion of the last public sitting of the Royal Commissioners, Mr. Dixon was thanked by the professional representative of the Corporation for the admirable arrangements which he (Mr. Dixon)—the right man in the right place—had made, whereby the inquiry had been much facilitated.

ASSOCIATION INTELLIGENCE.

SOUTHERN BRANCH: DORSET DISTRICT.

THE next meeting of the above Branch will be held at Weymouth, on Wednesday, October 29th, 1879. The business meeting will be held at the Royal Hotel, at 1.30 P.M.

Election of Officers for 1880. Election of New Members.

A Case by Mr. Parkinson.

Paper on Atonic Dyspepsia, by the President (Dr. Philpots), and discussion thereon.

Dinner at 3.30 P.M. Charge, 5s. each, exclusive of wine.

Members intending to be present are requested to notify the same to Dr. Lush, Weymouth, on or before October 25th, and will be expected to pay for dinner tickets, even if they cannot attend.

WM. VAWDREY LUSH, M.D., Weymouth
C. H. WATTS PARKINSON, Wimborne } *Hon. Secretaries.*

Weymouth, October 20th, 1879.

SOUTHERN BRANCH: SOUTH-EAST HANTS DISTRICT.

AN ordinary meeting of this District Society will be held at the George Hotel, Portsmouth, on Wednesday, October 29th, 1879, at 4.15 P.M.; J. R. KEALY, Esq., M.D., President, in the chair.

Pathological specimens, etc., will be exhibited; and the following papers are promised.

Some Thoughts on the Previous Medical Education of Students, by the PRESIDENT.

Aphasia, by Dr. W. H. AXFORD.

Gentlemen who are desirous of introducing patients, exhibiting pathological specimens, or making other communications, are requested to signify their intention at once to the Honorary Secretary.

Dinner will be provided at 6.30 P.M. Charges 5s., exclusive of wine. Members intending to be present at the dinner are requested to send their names on or before Monday, October 27th, 1879.

J. WARD COUSINS, M.D., *Honorary Secretary.*

DUBLIN BRANCH.

NOTICE is hereby given, that a special general meeting of this Branch will be held in the King and Queen's College of Physicians, Kildare Street, on Monday, November 3rd, 1879, at 4 o'clock P.M., to consider a resolution adopted by the Council, proposing to increase the annual subscription to the Branch.

GEORGE F. DUFFEY, M.D., *Honorary Secretary.*

30, Fitzwilliam Place, Dublin, October 8th, 1879.

BATH AND BRISTOL BRANCH.

THE first ordinary meeting of the session will be held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 30th, at a quarter past Seven o'clock; J. BEDDOE, M.D., President.

R. S. FOWLER,
E. C. BOARD, } *Honorary Secretaries.*

Bath, October 5th, 1879.

STAFFORDSHIRE BRANCH.

THE sixth annual meeting of this Branch will be held at the George Hotel, Walsall, on Thursday, October 30th, at Three o'clock in the afternoon.

An address will be delivered by the President, Dr. J. H. TYLECOTE.

Dinner at 5.30. Tickets, exclusive of wine, 6s. each.

VINCENT JACKSON, Wolverhampton
J. G. U. WEST, Stoke-upon-Trent } *Honorary Secretaries.*

Wolverhampton, October 6th, 1879.

PROCEEDINGS OF THE COMMITTEE OF COUNCIL.

AT a meeting of the Committee of Council, held at the offices of the Association, 161A, Strand, on Wednesday, October 15th, 1879—Present: Dr. CARPENTER (President of the Council) in the Chair; Dr. G. M. Humphry, President-elect; Mr. W. D. Husband, Treasurer; Dr. Clifford Allbutt, Dr. J. T. Arlidge, Dr. De Bartolomé, Mr. E. C. Board, Dr. L. Borchardt, Dr. J. B. Bradbury, Dr. C. Chadwick, Dr. J. Ward Cousins, Dr. A. Davidson, Dr. W. A. Elliston, Dr. Falconer, Dr. B. Foster, Dr. E. L. Fox, Dr. W. C. Grigg, Mr. A. Jackson, Dr. C. E. Lyster, Mr. F. C. Manby, Mr. F. Mason, Dr. E. Morris, Mr. R. H. B. Nicholson, Dr. C. Parsons, Dr. G. H. Philipson, Dr. T. L. Rogers, Dr. A. Sheen, Dr. R. C. Shettle, Dr. E. H. Sieveking, Mr. H. Stear, Dr. A. P. Stewart, Dr. W. F. Wade, Mr. C. G. Wheelhouse:

Surgeon-Major Reynolds, V.C., attended the meeting, and was introduced to the members of the Committee of Council.

Read letters of apology for non-attendance from Mr. Alfred Baker, Mr. Callender, F.R.S., and Dr. Edward Waters.

The minutes of the last two meetings were read and found correct.

Resolved unanimously: That the Chairman appoint a Committee of three to arrange the time and place for a dinner to be given to Surgeon-Major Reynolds, V.C., by the members of the Association, to be held in London.

The application of Surgeon-Major Reynolds, V.C., to become a member of the Association having been placed before the Committee, it was moved by the Chairman, seconded by Dr. De Bartolomé, and

Resolved unanimously: That Surgeon-Major Reynolds, V.C., be and he is hereby elected a member of the Association.

Read letter, of which the following is a copy:

The Wanderers' Club, Pall Mall, 11th Oct., 1879.

Sir,—I have the honour to acknowledge the receipt, through Sir W. Muir, of the Gold Medal of the British Medical Association, and its accompanying engrossed testimonial.

I beg to offer my sincere thanks, and to express my deepest gratitude to the members of the British Medical Association, for the high honour they have conferred on me.—I have the honour to be, sir, your obedient servant,

J. H. REYNOLDS, M.B., Surgeon-Major, A.M.D.

Read letter from Dr. Alfred Sheen as Honorary Secretary requesting that the South Wales and Monmouthshire Branch should have a representative upon the Committee of Council in addition to the Honorary Secretary.

The President of Council reported that he had replied to this letter, informing Dr. Sheen that the Committee of Council were desirous of having a second representative from the South Wales and Monmouthshire Branch, and a member of the Branch was nominated by the Committee of Council, but in consequence of his not being a member of the General Council of the Association he was ineligible for election.

Read letter from Adelaide, upon the formation of a new Branch in the Colony of South Australia, together with the by-laws of the proposed Branch.

Resolved: That the standing orders of the Committee of Council be suspended, and that the thirty gentlemen whose forms of application for election as members have been signed for by three members of the Association be and they are hereby elected members of the Association.

Resolved: That in recognising the intimation of the intention of members of South Australia to form a second Colonial Branch at Adelaide, the Committee of Council express their fullest satisfaction at such intention, and will gladly recognise such Branch when formed according to the laws of the Association.

Resolved: That the thirty-five gentlemen whose names appear upon the circular convening the meeting be and they are hereby elected members of the Association.

Read minutes of the Journal and Finance Committee and of the Printing and Office Subcommittee.

Resolved: That the minutes of the Journal and Finance Committee, together with the minutes of the Printing and Office Subcommittee, both of to-day's date, be approved and the recommendations carried into effect.

The minutes of the Journal and Finance Committee contain report of the examination of the accounts for the quarter ending 30th September last, amounting to £2,999 3s. 5d.

It was moved:

That the Annual Meeting of 1880 be held on the 3rd, 4th, 5th, and 6th days of August next.

Whereupon an amendment was moved:

That the Annual Meeting of 1880 be held on the 10th, 11th, 12th, and 13th days of August next.

The amendment having been put from the chair, the same was declared to be carried.

The amendment was then put as a substantive motion, and was declared to be carried.

Resolved: That there be three Addresses given at the Annual Meeting, viz., Medicine, Surgery, and Physiology.

Resolved: That Dr. Bradbury be requested to give the Address in Medicine.

Resolved: That Mr. Timothy Holmes be requested to give the Address in Surgery.

Resolved: That Dr. Michael Foster be requested to give the Address in Physiology.

Read minutes of the Arrangement Committee of to-day's date.

Resolved: That the minutes of the Arrangement Committee of to-day's date be approved, and the recommendations be carried into effect.

The minutes of the Arrangement Committee contain recommendations on the programme of the Annual Meeting to be held at Cambridge in August 1880.

Read resolution of the Council passed at the last meeting held at Queen's College, Cork, on August 6th last, of which the following is a copy.

That the Committee of Council be requested to take into consideration the propriety of permitting the Branches the alternative of electing one of their members in place of the Honorary Secretary to serve on the Committee of Council.

It was moved:

That notice be given for such an alteration in the rules to be made as to enable any Branch to elect one of its members to serve upon the Committee of Council in place of the Honorary Secretary of the Branch, should the Honorary Secretary decline to serve.

Whereupon an amendment was moved:

That every Branch be informed that it is competent to it to appoint more than one Secretary, and to prescribe the duties of each so that one may be required to discharge no other duty than that of representing the Branch on the Committee of Council.

The amendment having been put from the Chair, the same was declared to be carried.

The amendment then having been put as a substantive motion, the same was declared to be carried.

Read minutes of the Trust Funds Subcommittee of to-day's date.

Resolved: That the minutes of the Trust Funds Subcommittee of to-day's date be approved.

The minutes of the Trust Funds Subcommittee contain a report upon the consideration of the Stewart and Middlemas Trust deeds.

Resolved: That a Sub-Committee be appointed at the April Quarterly Meeting of the Committee of Council, to draw up the Annual Report. That such Report be presented to the July Meeting of the Committee of Council, and sent to each member of the Council at least two weeks before the Annual Meeting.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: AUTUMNAL MEETING.

THE Autumnal Meeting of this Branch was held at the Royal Gate House Hotel, Tenby, on Wednesday, September 24th; WILLIAM TAYLOR, M.D., President in the Chair.

Election of New Members of the Branch.—The following members of the Association were declared members of the Branch: Morgan Williams, Esq., Cardiff; M. Quirk, M.D., Blaenavon; P. James, Esq., The Pandy; John Evans, Esq., Canton, Cardiff.

Address to the late Secretary.—It was resolved that the draft of the address to Dr. Andrew Davies, late Senior Honorary Secretary, be prepared forthwith, and that Mr. Milward be invited to illuminate it.

The Committee of Council.—It was resolved, "That Dr. Sheen be requested to communicate with Dr. Carpenter on the question of a representative of the Branch on the Committee of Council, in addition to the Honorary Secretary."

Murchison Memorial Fund.—It was resolved, "That £2 2s. be subscribed to the Murchison Memorial Fund."

Papers, etc.—The following were read—Mr. GEO. MOWAT (Swansea): A Case of Congenital Jaundice in a child four months old.

Mr. JABEZ THOMAS (Swansea): 1. Malignant Tumour of Nares removed by Lister's flap. 2. Carcinoma of the Chest.

Dr. GRIFFITHS (Swansea): 1. The Use of Sclerotic Acid in Menorrhagia. Specimens of the acid in a crystalline form, and in solution with carbolic acid, prepared by Martindale of London, were shown. 2. Remarks on Application of Nitric Acid to Fundus Uteri. Instruments to facilitate its application were shown, as also one to introduce tents into the cervix uteri.

Vote of Thanks.—It was resolved, on the motion of the President: "That the best thanks of the meeting are due and be given to Messrs. Mowat, Griffiths, and Thomas, for their interesting papers and cases."

Dinner.—The members afterwards dined together.

Next Meeting.—The next meeting, in the spring of 1880, will be at Aberdare.

CORRESPONDENCE.

BEEF-TEA.

SIR,—In your last leader on wasteful, etc., cookery, you refer to beef-tea. I think you would do well if you were to ask generally of hospital authorities what is done with the meat from which the beef-tea is made. I can tell you the useful purpose to which it was put in the case of St. Mary's Hospital fourteen years ago, before the method of cutting it up and mixing it with the beef-tea, of which you make mention, was introduced. This method, I may say *en passant*, was brought about by myself and my then colleague the late Dr. Sibson. I found that the beef from which the beef-tea was made was sold for one penny or farthing the pound to an honest fabricator of meat-pies, who practised his calling in Praed Street, close to the exit from the Paddington Railway Station. That an excellent article could be made out of this "refuse", as it was and is still generally regarded, I knew. At my suggestion, the then cook of the hospital served up to the house-surgeons a most savoury dish, which was highly approved of. The main article was this rejected beef-fibre; and its toothsomeness was the result of the skilful manipulation of a willing and clever cook. When inquiring into this subject at the time referred to, I found that one hospital was then using about 1,000 lbs. of beef per week for beef-tea, at a cost of about £1,400 *per annum;* and that, in fact, almost the whole of this enormous mass of nutritious matter—*i. e.*, 50,000 lbs. *per annum*—was simply wasted. How the case stands at this time with hospitals generally I know not. But medical practitioners, with whom beef-tea may be called an universal prescription, can scarcely be unaware of the enormous meat-fibre loss which in this country attends its ordinary manufacture. The real value of beef-tea is truly stated in your article.—Yours obediently,

London, October 13th, 1879. W. O. MARKHAM.

MOUNTAIN AIR IN THE TREATMENT OF PHTHISIS.

SIR,—The paper of Dr. Sinclair in the JOURNAL of the 11th instant seems to call for a short reply.

For my part, I was really speaking of Davos only when I addressed the medical section at Cork. To the effects of mountain air in general as curative of phthisis, my attention was drawn by an intimate friend of Dr. Archibald Smith some fifteen years ago. To send patients to the highlands of Peru or of the Cape can rarely happen to any physician, and thus my experience did not grow much. To Dr. Hermann Weber, however, I owe my first serious impressions of Switzerland as a resort for *poitrinaires*; but my impressions were chiefly formed from parts other than Davos. I had noted several cases treated in the Engadine, Engelberg, Montreux, and elsewhere, and the drawbacks of these regions impressed me almost as much as the occasional brilliant cures. For nearly half my life I have been a frequent visitor to Switzerland, and for the last dozen years have scarcely ever failed to make my holiday there; but tourists do not go to Davos, and I carelessly assumed that Davos was not the same as other high tracts of Central Europe. Still, I read so often of this Davos in the German periodicals, that I determined to examine it for myself. Circumstances prevented this for several seasons, but when I reached it I found it had advantages which the other districts had not.

The chief of these is its *still air*. The bright invigorating air of the Engadine is as good as that of Davos—better it may be; but the Engadine, if I may use a small word for a large thing, is most horribly draughty. Of this Dr. Sinclair complains; and, as a summer visitor to the Engadine, I often cry out bitterly under the infliction of the chilling blasts which sweep the main valleys and its tributaries. Many a time I have descended from the higher peaks of the district, and have left very tolerable and even pleasant airs above to plunge below into an icy wind which threatens a pleurisy. Wrapped in a thick plaid or in our bivouac blanket, I have often trudged shivering to my hotel, reminded of the wind Mr. Leslie Stephen found on the top of the Rothhorn, which penetrated clothes like gossamer, rattled through the ribs, chilled down the viscera, and passed on with unabated vigour on the other side. Sils Maria is perhaps sheltered sufficiently, but would be a very confined spot for a long residence, and a walk beyond the gorge in either direction would land the traveller in one of these aerial glaciers. Now at Davos, a spacious valley is almost wind-free. To one accustomed to the Engadine, it seemed remarkably still; its stillness seemed accounted for by its natural surroundings, and I was assured that comparative stillness reigns in the valley almost at all times. This is an advantage which it would be difficult to exaggerate, and this advantage it was in the main which gave a practical reality to the hopes of success in the Swiss cure which my long experience of other regions of the same land had failed to give. What the precise curative agency may be is a matter of doubt; many physicians for many years have held that an antiseptic atmosphere might be an important means of cure. Dr. William Roberts of Manchester has, I know, long held some such opinion, and so doubtless have many others. Professor Tyndall, by his experiments at the Bel Alp, as I have often said, is the only person who has adduced facts to prove that the Alps have such an atmosphere; other experiments, I trust, may soon be forthcoming there, and, as Dr. Henry Bennet suggests, at Quito also. Till then, whatever be the explanation, the "cures at Davos are not to be got over". If medical men will be careful to send the proper cases (and Dr. Theodore Williams has set forth adequately and plainly what kind of cases are proper for Davos), they will, like Dr. Hermann Weber and those who have followed his lead in England, be convinced that the mountain cure of phthisis is a reality.—I am, sir, yours truly,

Leeds, October 13th, 1879. T. CLIFFORD ALLBUTT.

MR. SAVORY'S ADDRESS IN SURGERY.

SIR,—At the annual meeting in Cork, I had the opportunity of hearing the very admirable Address in Surgery by Mr. Savory. I not only admired the address, but also agreed with a great part of the views of this eminent surgeon; I beg to refer to my little paper on Antiseptic Treatment in Ophthalmic Surgery, published in my *Centralblatt für Augenheilkunde* (July 1878). But concerning the amusing anecdote of the German professor washing on operation morning (see BRITISH MEDICAL JOURNAL, p. 217), I may say that the story is very well known in Germany, only the washing was made with a carbolic solution, which is omitted by your eminent surgeon. You see, this omission takes away the point of the anecdote.

Very faithfully yours, F. HIRSCHBERG, M.D.
Lecturer on Ophthalmology in the University of Berlin.

Berlin, September 9th, 1879.

ANOTHER MEDICAL BENEVOLENT FUND.

SIR,—Is it not possible to establish, in connection with our great Association, a fund to be called (if it seem well) "The British Medical Association Benevolent Fund", for the relief of those of our Associates upon whom misfortune may have fallen, or whose health may have broken down, and for the help of their widows and orphans, for whom no provision may have been made?

I am aware that there exist certain societies for the relief of such cases, but their sphere of action is as limited as their support is indifferent. It is surely a reproach to our profession that, while we are ever ready to help to relieve outside distress, there exists no fund that would not only render unnecessary the appeals that are to be found in so many files of our JOURNAL, but would also be able to afford help to those too frequently occurring cases of distress that are never permitted to be made public. No nobler work could be found for our Association than the establishment and management of such a fund as I suggest; and, with the machinery at the command of the Association, I take it the work would be one of small difficulty.

I do not, in this communication, venture to indicate any details of the establishment of the fund; I desire rather to ask you to open your columns for the discussion of the subject, and to obtain your powerful help in bringing the matter to a satisfactory issue. I would, however, further venture to ask that the executive of each Branch of the Association cause the question to be brought forward at their next meeting with a view to its full discussion. For my own part, I pledge myself to press the matter upon the Branch with which I have the privilege of being connected, and to help in the work as far as my humble opportunities will permit.

I look forward with hope and much confidence to the time when every worthy member of the profession shall be a member of the British Medical Association, and when every member of the British Medical Association shall be a subscriber to and supporter of "The British Medical Association Benevolent Fund". And so shall a great reproach be removed from us.—I am, sir, your faithful servant,

GEORGE ARTHUR BROWN.

Tredegar, Monmouthshire, October 7th, 1879.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE Guildford Rural Sanitary Authority have been invested with urban powers in regard to the parish of Woking.

THE VALUE OF INFECTIOUS HOSPITALS.

As a corroboration of the usefulness of infectious hospitals, to which we alluded in our last issue, the following facts, reported by Dr. Seaton in his last annual report to the Nottingham Town Council, will be interesting. During the emergency created by the small-pox epidemic of 1871-2, eight huts or wooden buildings, capable together of accommodating about eighty patients, were hastily run up. They did extremely good service during the epidemic, and have since proved exceedingly useful in affording necessary isolation of first cases of small-pox introduced into crowded parts of the town. During the past two years, the disease has been stamped out on four separate occasions at its first appearance. In 1875, the necessity for provision of this kind was forcibly exemplified by the occurrence of an outbreak of typhus in the Irish quarter of the town, when the circumstances were eminently calculated to foster the spread of the disease. The early cases were all isolated, and the epidemic checked at its onset. During the scarlatina epidemic of 1875, and since that time, numerous cases of that disease have been received into the hospital. Many of these illustrate the advantages to be gained by early removal to hospital. Some have been from schools or hotels not provided with proper means for isolation, others have been domestic servants from houses where there were many susceptible children; others, again, from the crowded districts of the town, where the parents have understood and recognised the importance of isolating the first cases in their houses, in order to save their other children and those of their neighbours from the disease. If scarlet fever make its appearance in a crowded district, and if the patient be removed within twenty-four hours of the appearance of the rash, the bed, bedding, clothing, etc., disinfected, the chances, in Dr. Seaton's experience, are very greatly against a second case appearing in the neighbourhood, unless it be from the same source of infection as that which gave rise to the first. The advantages of a hospital which can receive such a case are, therefore, obvious.

POOR-LAW MEDICAL APPOINTMENT.

HUTCHINSON, J., M.D., appointed Medical Officer and Public Vaccinator to No. 2 District of the Lutterworth Union, *vice* W. Sharples, M.R.C.S., resigned.

THE TREATMENT OF STARVATION.

SIR,—As Surgeon to one of the Poor-Law Union Hospitals of the country, allow me to inquire of other surgeons holding similar appointments, whether they are at the present time being called upon to treat cases of starvation endangering the life or having a fatal termination; what are the indications of that pathological condition of the digestive organs which precedes death; and what treatment they have found most successful in extreme cases? In three cases now or lately under my care, I have met with the symptoms of great irritation of stomach, etc., as though it were produced by the continued action of the gastric juice on an empty stomach; and as tea is a common beverage taken by the poor in extreme circumstances, it seems worth while to inquire whether this is a proper thing to give in such a morbid condition of the stomach.

I find that in the only fatal case I have had, tea has been commonly taken during a lengthened period of privation. Boards of Guardians, when it is unpleasant to hear of a fatal case of starvation, sometimes try to make out that it was something else which caused the death, and do not object to tell the medical man he is mistaken, and that they know it. This kind of conduct has just occurred, after the man was buried, notwithstanding I had recommended that a coroner's inquest should be held immediately after death. There is ample proof come to light since the interment that starvation had been going gradually on for some time, and that the sufferer did not make his wants sufficiently known.—I am, sir, yours faithfully,

September 30th, 1879. MEDICUS.

CO-OPERATION FOR THE SUPPLY OF DRUGS.

SIR,—In these days of co-operation, and when economy has to be considered by medical men, especially in country practice, would it not be worth while for either the Poor-law medical officers of the country, or else for the British Medical Association itself, or those members of it who are compelled to dispense their own medicines, to associate themselves together for the purpose of supplying themselves with drugs, or else obtaining them at a greatly reduced rate from some particular existing firm? I throw out the hint, as it seems to me that a considerable saving might be thus effected.—I am, sir, yours very truly, COUNTRY DOCTOR.

*** The views of our correspondent are fully met by the General Apothecaries' Company, Berners Street, Oxford Street. The manager would doubtless forward a prospectus, if requested so to do.

MILITARY AND NAVAL MEDICAL SERVICES.

DR. ANDREW DUNCAN.

SEVERAL inquiries have been made as to which of the gentlemen of the above name, reported as "dangerously wounded" at Cabul, this is, as one of our medical contemporaries states there are three of this name in the *Army List*. The gentleman in question was educated at King's College, and on the completion of his studies was admitted a member of the Royal College of Surgeons of England in 1872, and a Fellow in 1876; he is also M.D.Lond., and a Gold Medallist in Medicine and Obstetric Medicine. He is the eldest son of Dr. James Duncan of Henrietta Street, Covent Garden; and was an universal favourite. Albeit the non-combatants in an army are honoured with but a slender modicum of glory, they very often come in for a lion's share of the danger. This, it has been observed, is notably the case in the second phase of our Afghan troubles. Three of the medical gentlemen employed have already fallen victims to their devotedness to duty. Dr. Kelly's fate at Cabul is as well known as it is deeply regretted. Surgeon-General Townsend had his jaw broken when with the generals in the Shaturgardan Pass; and Dr. Andrew Duncan is now the first officer wounded in Baker's first action. Bullets cannot discriminate between the fiercest of enemies and the messenger of balm and healing, and will tear through the middle of a gonfalon blazoned with the Geneva cross as readily as through a regimental battle flag. The surgeon, non-combatant though he be, requires a courage of a higher order than his fighting associate; he has to perform the most difficult and delicate of operations under fire, and has to preserve his coolness all the time. As a rule, he shrinks from no self-sacrifice; he works with quiet brave perseverance through the long watches of the night, while others are taking their repose; and in the heat of combat his conduct is generally like to that of the gallant Reynolds at Rorke's Drift. The Lieutenant Fergusson reported as slightly wounded is Charles Fergusson, the second son of the late Sir William Fergusson, Bart., and the intimate friend and companion-in-arms of Dr. Andrew Duncan.

OBITUARY.

JOHN GIBSON FLEMING, M.D., GLASGOW.

THE subject of this notice was descended from an old Glasgow family frequently mentioned in the annals of the city. Born in 1809, he was educated at Glasgow University, where he graduated in Medicine in 1830. After a session spent in studying anatomy and surgery in Paris, and a tour in Italy, he settled in Glasgow, and was appointed one of the parochial surgeons. In this service, he nearly succumbed to an attack of typhoid fever. He was for a number of years one of the surgeons of the Royal Infirmary. In his subsequent capacity of manager of that institution, he did valuable service to the charity. In 1870, he addressed to his brother managers a letter (which was also published in pamphlet form), advocating the abolition of the year of ineligibility after eight years' service, which had permanently lost to the Infirmary the services of some of its best medical officers. The letter also made a powerful appeal for "free trade" in clinical teaching, in opposition to the method of lecturing by rotation, which was then the rule. This appeal to the managers was irresistible, both these changes being given effect to. When the University moved to new quarters in 1874, it was on Dr. Fleming's suggestion that the managers took chartered powers to affiliate to the Infirmary a medical school; and up to his death, he superintended with unwearied devotion this department of the institution. To the Royal Infirmary, the death of Dr. Fleming is a loss altogether irreparable. In the business of the Faculty of Physicians and Surgeons, to whose Fellowship he was admitted in 1833, he took a prominent part. He was elected President in 1865, and the honour was repeatedly renewed. For a period of fifteen years, he represented the Faculty in the General Medical Council. In that assembly, he did not speak often, but his remarks were invariably listened to with respect.

Dr. Fleming had a large practice in Glasgow, a considerable part of

it being latterly consultative. He was chief medical adviser of the Scottish Amicable Life Assurance Society, the head office of which was in Glasgow. In 1862, he published a very able and accurate analysis of the experience of that institution for a period of thirty-five years, in a small work entitled *Medical Statistics of Life Assurance*.

Under a somewhat brusque and Abernethian manner, Dr. Fleming veiled the most generous sympathies, and a singularly tender heart. With the struggles of young practitioners no one was more sympathetic, and many was the occasion in which he threw work in their way. Of everything which affected the honour of Glasgow he was keenly sensitive. The death of such a man leaves a large gap in the profession in his native city, as it does in not a few aching hearts.

A few weeks ago, Dr. Fleming was seized with the premonitory symptoms of an illness which developed into typhoid fever. The rarity of such an attack in a man of seventy years of age, made the profession somewhat sceptical in regard to the first reports of the seizure. But, from the moment the diagnosis was made, it was never doubtful, and the illness rapidly assumed a hopeless character, terminating fatally on October 2nd. He leaves three sons, one of whom, Mr. W. M. J. Fleming, is Lecturer on Physiology in the Royal Infirmary School of Medicine.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF CAMBRIDGE.

EXAMINERS.—The following have been appointed: First M.B. Examination—Dr. Anningson, Professor Dewar; Second M.B. Examination—Dr. Watney, Dr. C. Creighton; Third M.B. Examination—Dr. Galabin, Dr. Cheadle; Medical and Surgical Degrees—G. W. Callender, F.R.C.S., Luther Holden, President of the Royal College of Surgeons. Dr. Bradbury is appointed Assessor to the Regius Professor of Physic.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 16th, 1879.

Hatton, George Stokes, Newent, Gloucestershire
Payne, John Wollard, 11, Finsbury Square

The following gentlemen also on the same day passed their primary professional examination.

Baines, Harold A., Charing Cross Hospital
Harrison, Charles, St. Bartholomew's Hospital
Knight, Alfred Osborne, Middlesex Hospital
Knight, George Henry, University College
Pitman, William Weston, Charing Cross Hospital
Shepherd, Timothy A. J., Guy's Hospital
Stuart, Sidney Offord, Guy's Hospital
Trapp, John Best, Guy's Hospital

The successful candidates at the competitive examination for the society's prizes in Materia Medica and Pharmaceutical Chemistry, held in August last, were—1. Clarence William Haigh Brown, of St. Thomas's Hospital, the Gold Medal; 2. John William Ellis, of the Liverpool School of Medicine, the Silver Medal and Books.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

CASTLEREA UNION—Medical Officer for Castlerea Dispensary District. Salary, £100 per annum as Medical Officer, with £25 yearly as Medical Officer of Health, together with Registration and Vaccination Fees. Election on Nov. 1st.

EVELINA HOSPITAL FOR SICK CHILDREN—Physician to Out-Patients. Applications on or before November 6th.

*HOSPITAL FOR WOMEN, Soho Square—Assistant Physician. Applications to the Secretary on or before November 12th.

KENT AND CANTERBURY HOSPITAL—Assistant House-Surgeon and Dispenser. Salary, £50 per annum, with board, lodging, and washing. Applications on or before October 30th.

*MACCLESFIELD GENERAL INFIRMARY—Junior House-Surgeon. Salary, £70 per annum, with board and residence. Applications on or before Oct. 27th.

NORTHAMPTON GENERAL INFIRMARY — Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, attendance, and washing. Applications on or before November 3rd.

ROYAL FREE HOSPITAL, Gray's Inn Road—Assistant Surgeon. Applications, with testimonials, on or before November 26th.

ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Applications on or before November 5th.

WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—House-Surgeon. Salary, £80 per annum, with board, lodgings, and washing. Applications on or before October 25th.

WEST SUSSEX, EAST HANTS, and CHICHESTER INFIRMARY AND DISPENSARY—Two Physicians. Application on or before October 25th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

HUTCHISON, G. Wright, M.D., appointed Certifying Factory Surgeon for the Chipping Norton District, *vice* John Farwell, M.R.C.S., deceased.

URQUHART, A. R., M.D., appointed Physician-Superintendent of Murray's Royal Asylum, Perth, *vice* W. Lauder Lindsay, M.D., retired.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

DEATH.

ARMISTEAD.—On October 18th, 1879, at Cambridge, of diabetes, in her 32nd year, Emily Agnes, the beloved wife of William Armistead, M.B.—Friends will please accept this intimation.

MR. M. DURLACHER has received a warrant from the Lord Chamberlain appointing him Chiropodist to Her Majesty the Queen.

UNIVERSITY COLLEGE, LONDON.—The Andrews Entrance Prizes (£20 each) have been awarded as follows: English and other Languages, to H. R. Williams; Science, to Arthur Berry and J. G. Pease. Three Medical Entrance Exhibitions, tenable for two years, have been awarded to S. C. Jones (£30); E. W. Emtage (£20); Conrad Pereira (£10).

LAW AND PHYSIC.—According to the *Calcutta Englishman*, the civil surgeon of Akyab has just recovered nineteen gold mohurs from a lawyer of Akyab for nineteen visits. The sum seems a large one; but the man of law forced the doctor to sue him, although the latter offered to reduce his bill, if required to do so.

PRESENTATION.—A copy of the *Bishop Auckland Times and Herald*, which has been forwarded to us, contains an interesting report of the presentation of a microscope to Dr. Hutchinson, in recognition of his services to the Volunteers of the district. On a previous occasion, a similar presentation was made by some working-men, for his kindness and attention to the poor during the cholera of 1855.

A PARAGRAPH which is circulating among the newspapers reminds whom it may interest that, among the many curious old works possessed by the Medical Society of London, is the remarkable picture, painted, it is believed, by Copley, illustrating the famous Dr. Lettsom presenting the deeds of some property in Bolt Court, Fleet Street, to the Society in 1775. The figures are all portraits, including the only known one of Dr. Jenner, together with those of Dr. Sims, Sir John Hayes, Babington, and others. The picture is often consulted by antiquarians, and is of much historical value. We may add, that the engraving of this picture by Medley (an ancestor of Sir Henry Thompson) is excellent.

PUBLIC HEALTH.—During last week, 3,412 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 21 deaths annually in every 1,000 persons living. It was 17 in Edinburgh, 16 in Glasgow, and 33 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Brighton 12, Portsmouth 13, Wolverhampton 14, Bristol 16, Newcastle-upon-Tyne 17, Birmingham 18, Leeds 18, Oldham 18, Sunderland 19, Nottingham 19, Leicester 20, Plymouth 20, London 22, Manchester 22, Bradford 22, Sheffield 23, Salford 23, Hull 23, and the highest rate, 26, both in Liverpool and Norwich. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 0.9 and 1.0 in Oldham and Brighton, to 5.3 both in Liverpool and Sheffield. In London, 1,499 deaths were registered, being 43 above the average, and equal to an annual death-rate of 21.6. The 1,499 deaths included one from smallpox, 31 from measles, 73 from scarlet fever, 14 from diphtheria, 27 from whooping-cough, 26 from different forms of fever, and 48 from diarrhœa; thus to these diseases 220 deaths were referred, against 227 and 230 in the two preceding weeks. These 220 deaths were 30 below the average, and were equal to an annual rate of 3.2 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 201 and 190 in the two preceding weeks, rose to 318 last week, and exceeded the corrected weekly average by 46. Different forms of violence caused 62 deaths; 55 were the result of negligence or accident. Five cases of suicide were registered. At Greenwich, the mean temperature of the air was 45.0°, and 6.3° below the average. The direction of the wind was variable, and the horizontal movement of the air was slightly below the average. Rain fell on two days of the week, to the aggregate amount of 0.02 of an inch. The duration of registered bright sunshine in the week was equal to 23 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. Royes Bell will show a Case of Old-standing Ununited Fracture of Patella treated by Incision into Joint and Wireing Fragments together; Dr. S. O. Habershon, "On the Passage of Gall-Stones"; Dr. Drysdale, "On the Mortality of the Rich and the Poor".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Report of the Committee on Suspended Animation, and the Comparative Merits of the Method used by the Royal Humane Society and that of Dr. Benjamin Howard. Dr. Miller Ord and Dr. Brodie Sewell, "On a Large Dermoid Cyst in the Abdomen of a Man"; Dr. Miller Ord, "On a Malformation of the Genital Organs of a Man"; Mr. W. Pye, "Removal of the Diaphysis of the Tibia for Acute Necrosis".

WEDNESDAY.—Hunterian Society, 8 P.M. Dr. F. C. Turner will relate a "Case of Myocarditis": Mr. Gilbert, "A Case of Fever"; Mr. G. J. B. Stevens will exhibit a peculiar Fœtus.

THURSDAY.—Harveian Society of London, 8.30 P.M. Dr. Hughlings Jackson, Intracranial Syphilis"; Dr. W. Squire, "The action of Salicine and Salicylic Acid in Rheumatism".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

MEDICAL ETIQUETTE.

EXPECTA ET SPERA.—If A. failed three times to meet B. in consultation, as agreed, an explanation and apology were certainly due to B., as a mere matter of courtesy. And if B., while he failed to keep his appointments with A., took other opportunities of seeing the patient, he laid himself open to a grave censure.

IOTA.—We shall hope to publish the paper in an early number.

THE IRISH COLLEGE OF SURGEONS.

SIR,—Dr. O'Leary recently stated in the House of Commons that the examinations of the above body were open to all practitioners, whether its own licentiates or not. Would the doctor kindly state if he still adhere to that statement?—I am, etc.,

October 20th, 1879. A PRACTITIONER.

W. H. WOODBURN.—We agree with our correspondent that he was not called upon to give a certificate in a case which was under the treatment of another person, and that person an irregular practitioner.

PRELIMINARY EDUCATION.

SIR,—For the benefit of "Paterfamilias", let me add to the information contained in Dr. Lewis's letter in last week's JOURNAL. At the Dover College, the boys are so well trained that they pass into the professions, the army, and the universities, without further preparation; whilst the terms are probably the most moderate to be found in the kingdom. It has been the object of the Council to provide the best education by university graduates at the cheapest possible rate, without regard to profit upon capital.

The head master, the Rev. W. Bell, will supply further particulars on application.

A cheap, but really good, education is a great boon to those of our profession who are blessed with large families and small means.—Faithfully yours,

CHARLES PARSONS, M.D.,
Honorary Secretary, Cambridge University Local Examinations.

2, St. James's Street, Dover, October 21st, 1879.

AN INQUIRY.

SIR,—I shall be pleased if any medical gentleman will inform me of a place suitable for the following case,

A gentleman aged 21 is now recovering from an illness brought on by intoxication, but a change is now considered necessary for him. The place must be in a healthy locality (the midlands preferred), and where he can associate with three or four gentleman resident in the same house. It will be required to keep him under control, as it is feared, if he be permitted to do as he likes, he will give way to drink again. He is not dangerous, either to himself or to others. His health is now good, but his mind at all times is not as it ought to be. The address of any place suitable for the above would be gladly received by—yours truly,

Narborough, Leicester. H. G. CARTWRIGHT.

THE NEW IRISH UNIVERSITY.

SIR,—Can you tell me if the new university in Ireland will grant M.D. degrees to non-residents? Or is it as yet an open question?—I am, yours very truly,

October 20th, 1879. X. Y. Z.

*** As the Senate for the new university of Ireland has not yet been constituted, the question of the degrees to be conferred by it cannot as yet have come under consideration.

INDIAN MEDICAL OFFICERS.

SIR,—In answer to "Junius'" inquiries in the JOURNAL of October 11th, I would beg leave to inform him that an Indian medical officer is always stationed in India; but as it is evident that he seeks information regarding members of the Indian Medical Service and not of the Army Medical Department, perhaps the following will suffice.

If a surgeon be appointed to the civil charge of a station, he is entitled to all the private practice, whether among Europeans or natives; and any surgeons who may happen to be in the same station in charge of native troops will only come in for casual fees for consultations or assistance at operations. In smaller stations, the practice frequently prevails of giving the civil surgeoncy (and consequent private practice) to the medical officer of one of the regiments stationed there. Of course, in many cases there will be but one surgeon in a place, and he naturally comes in for the private practice, though really holding a military appointment. With the exception of some few appointments in Calcutta, etc., to which men are supposed to devote their entire time, I do not think a medical officer is forbidden to take practice in any case. It would palpably be wrong for a military surgeon with a good deal of spare time on his hands to seek for practice in a station where there was a recognised civil surgeon besides, though in still larger places there might be enough for two or three to do, and in such cases doubtless amicable arrangements would be come to.

In answer to Junius' second query, there is no book which would give him the desired information. A book called the *Indian Medical Officer's Vade Mecum* was published some years ago, compiled by a Deputy Surgeon-General in the service, but it is already nearly obsolete, and is a guide rather to the mysteries which red-tape has thrown around such simple subjects as furlough, leave, pay, and pension. I shall be happy to furnish Junius with any information in my power if he write to me on the subject.—Yours obediently, I. M. S.

M.D. (Woburn.)—We are of opinion that the consideration of questions of difference on matters of medical etiquette between medical practitioners is a very useful function of Councils of Branches, and one which we endeavour to cultivate by advising reference of suitable cases when they occur; but it is always within the power of each Council to decide for itself whether it will or will not undertake any given reference or accept the duty of arbitration.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE MEDICAL ALLIANCE ASSOCIATION AND FOREIGN DEGREES.

SIR,—In my letter to you on the 20th ultimo, I stated clearly to you that I related facts; and, therefore, as regards these facts, I do not now feel myself called upon, under certain circumstances which have arisen since the publication of my letter, to do more than reiterate my statement, that I described *facts*.

Some of your correspondents, in noticing my letter, have referred me to published regulations for the admission of candidates to examination from which, they assert, the continental universities have not departed. In reply, I say that if this be true, the "regulations" must be exceedingly elastic, for not only have men been admitted to examination who know nothing of the language in which the "regulations" say they are to be examined, but, furthermore, they have not held even a *single British qualification in either medicine or surgery*. As an instance of this, and of the respectability (?) of the mode of practice of some of the holders of continental degrees, I now give, without comment, a translation of a diploma granted to one of our most notorious venereal quacks upon faith of his holding a degree from the Metropolitan College of New York only.

[Copy.]

"May the Supreme Being vouchsafe that this be prosperous and beneficial. On the authority granted to this University in the year 1857 by the German and Roman Emperor Ferdinand, and under the auspices of the Most Serene Grand Duke and Grand Dukes of Saxony, the most munificent supporters of the University of Jena, and on the concession of the most magnificent Rector of the University, the most potent and august Prince and Lord Charles Alexander, Grand Duke of Saxe Weimar, Prince of Elsenach, Landgrave of Thuringia, Margrave of Meissen, Count of Henneberg, ruler of Blankenhayn, Neustadt, and Lautenberg; and further, on the authorisation of the magnificent protector of the University, the most excellent and highly distinguished Ernest Ehrhard Schmidt, Doctor of Philosophy, Public and Ordinary Professor of Mineralogy: the Dean of the Medical Order, Diteric George Kieser, Doctor of Medicine, Surgery, Midwifery, and Philosophy, Prefect of the White Falcon order of Saxe Weimar, and of the Ernestine House Order of the Dukes of Saxony, Aulic Counsellor of the Grand Duke of Saxe Weimar, President of the Institution of Natural Curiosities at the Imperial German University of Vienna, Member of the most distinguished Learned Societies in Prussia, Hanover, Wurtemburg, Baden, Greece, Bohemia, etc.; Director of the Hospital at Jena, Senior of the Medical Faculty at that University, etc., has conferred, after the rules and forms sanctioned at this University, in the name of the Holy Trinity, the Degrees of Doctor of Medicine and Surgery, and all the honours, privileges, rights, and immunities of the same, on the most noble and learned gentleman X——— ———X of London, Member of the Reformed Medical College, New York, practising in ———, after his presenting a dissertation on Scarlatina, as a reward justly deserved for his medical exertions and attainments: and has made this publicly known by this Diploma, stamped with the Great Seal of the Medical Order of the University of Jena on the day of 18 . That this Diploma has been regularly conferred, is testified by the Great Seal of the Medical Faculty of University of Jena; confirmed, moreover, by the Autographs of his Excellency the Dean and the Assessors of the University.—(Signed) Dr. ——X, Dean, etc.; Dr. —— Q, Professor of Medicine."

So much for some of the continental degrees; and much more is in store for them upon the reassembling of the Select Committee.—I am, sir, your obedient servant,

130, Stockwell Road, Oct. 18th, 1879. R. H. S. CARPENTER.

MR. J. BERESFORD RYLEY, L.R.C.P.Edin., President of the Brussels Medical Graduates' Association, considers that it would be only fair on the part of Mr. Carpenter to bring forward something more than the bald statement of facts on which he has based his sweeping accusation against foreign universities. He says that he is prepared to adduce the evidence of at least thirty medical men, to prove that the examination for the M.D. of Brussels is more comprehensive, searching, exhaustive, and in every way better than those of the M.R.C.S. and L.R.C.P., London, and infinitely more so than that of the L.R.C.P. Edinburgh, or the Apothecaries' Hall. Even admitting Mr. Carpenter's statement to be correct, it only proves an exception to a rule, on which it would be most illogical to found such charges as he has made. An assistant not long ago obtained the L.S.A., and subsequently the L.R.C.P. Edinburgh, although his whole medical education consisted of a single six months' course at the Charing Cross School of Medicine.

A MEMBER OF THE BRITISH MEDICAL ASSOCIATION (Graduate of the University of Brussels) writes: I very well remember, when I was examined at Brussels three years ago, how severe a test it was, and I have remarked many times since among my *confrères* how very practical it was; indeed, this is what struck me the most. I am a M.R.C.S., L.R.C.P., L.S.A., but nowhere did I ever receive such a severe handling from any examiner as I did at Brussels. Take the examination at the bedside as an example. I was kept hard at work, diagnosing, treating, etc., the most difficult cases for fully three hours, and this included an examination in the *post mortem* room. The practical test in surgical operations was also very severe, and was only equalled by the F.R.C.S. and Army Medical examination.

Dr. V. POULAIN writes: "Home-keeping youth have ever homely wits." It seems to me that, if the gentlemen who have such contempt for everything not British, would have themselves crammed with French, German, and Latin, and then attempt to pass the examinations for the degrees they affect to despise, it would be better than indulging in a strain of bigoted, vulgar, "Rule Britannia" conceited national laudation, as unfounded in fact as it is unworthy of members of what ought to be an enlightened and liberal profession. Has all the world been standing still, while we alone have progressed?

Dr. JAMES ROBINSON, M.D. Brussels, writes: In whatever manner the examinations at this university may have been conducted in the past, I can confidently affirm that, at the present time, they will compare favourably in fairness, range of subjects, and thoroughness, with any in our own country. The examiners are all tried and eminent men in their profession, above suspicion: and to question their honesty and integrity would be a direct insult both to themselves and to the university with which they are connected, would be resented as such, and would recoil with redoubled force against the individual so devoid of principle as to offer it. Even admitting that, at some remote and indefinite period, which Mr. Carpenter fails to specify, admissions to the degree were easily obtained, is it fair and honourable that such evidence of misconduct in the past should be raked up and employed as a means to destroy the present deservedly high character the University of Brussels enjoys, when an abundance of recent and trustworthy proof of reformation might be easily and readily obtained, more particularly when we recall to mind the fact that some of our own universities and colleges had not always the high position they at present hold, and whose portals it was once, and that not very long ago, possible to pass by the aid of a golden key? I can most sincerely say that, when I graduated about a year since, the examinations were conducted with as much impartiality, and were quite as stringent tests, in many portions superior, as any I had undergone in my own country. They are three in number; the range of subjects is very wide, and the standard is high. The practical portions, *i.e.*, the hospital work, practical midwifery, operative surgery, and anatomical demonstrations, are especially severe, and unless a candidate shows an intimate acquaintance with the various subjects, he will most certainly be sent to the right about. In the middle of November last, I gave in your JOURNAL a full description of the examinations for the M.D. of Brussels, a copy of which I shall be glad to supply to anyone applying to me, and to that letter I can now only add, that the examinations are at all times open to any visitor who may choose to be present.

"F.R.C.S." writes: It is no more true that continental medical degrees can be obtained without examination, than that British degrees can be obtained without residence; whilst many foreign medical degrees are obtained upon far harder terms than many of those at home. It is true that many continental degrees were sold and bought at one time in a most disgraceful manner; but our own universities have been equally guilty of this sin. No university medical degree can be obtained in the present day, either in France, Germany, Austria, Italy, Switzerland, Holland, or Belgium, without an examination being first passed, equal in stringency to those required by our own average universities. There are, no doubt, some continental universities which grant degrees upon somewhat easier terms than others, exactly as there are some in our own country that do likewise. The degrees granted by the universities of Bonn, Heidelberg, Giessen, and Göttingen, though inferior degrees as compared with those of Berlin and Vienna, are yet highly estimable ones, and confer honour on those who possess them. If a medical practitioner, possessing (say, for illustration) the membership of a college of surgeons and the membership of a college of physicians, see an opportunity to augment his income by practising as a physician, after, perhaps, many years of honourable toil and small remuneration, it is quite reasonable that he should wish to obtain a degree in medicine in order that he may affix to his name the title "Dr.", without which title he would stand but a poor chance of success. Now, the prefix "Dr." in such a case cannot be obtained at all in this country without residing for six months at an university, or, in the case of Durham, undergoing an examination in classical subjects. The only alternative, then, is to graduate at some university abroad, which dispenses with these restrictions.

"B. B. J.", in regard to the question about the title of Doctor, endorses the statement that the marrow of this bone of contention is simply vanity. He has known some dozen or more men from his own hospital and elsewhere, who have thought it worth their while to cross the Channel, most of them having been plucked for one or more of their examinations, two for the L.S.A., and yet they every one of them came back with flying colours without a single failure. With regard to many of the smaller German universities, he thinks the possession of a little ready money is of much greater moment than that of medical knowledge. He would be very sorry to see the Victoria University empowered with a charter to grant degrees, as it would add one more to the too numerous portals of the profession. On the other hand, he would not like to see the London University lowering its standard in any way. It has ever been recognised as the best medical degree, and used to be called the Medical University. It was never intended that the mass of students should have its degrees, but has always made the examinations so thorough and searching, as to be beyond the reach of the ordinary student, and to be a professional distinction attainable only by those who have shown themselves by their study and perseverance to be worthy of the honour.

WHAT FEES SHOULD BE CHARGED FOR ATTENDING SERVANTS?

SIR,—I should be glad if you would allow the above question to be ventilated in your columns. Do, or should, physicians and general practitioners habitually make a reduction for attending servants employed in well-to-do families? and should this also apply where the family have not been attended themselves, and are utter strangers to the doctor at the time he is called in?

These points were forcibly brought home to me by having quite recently been called upon to attend the German maid of a lady (the wife of a wealthy Lancashire manufacturer), who was staying at a west-end hotel, and who was then quite unknown to me. The case was one of typhoid fever: and, as the patient did not speak a word of English and I am familiar with German, it was not feasible for me to hand the case over to any of my friends amongst the general practitioners in the neighbourhood. I suggested removal to the London Fever Hospital, to which the lady, however, objected. The husband telegraphed that everything that was necessary should be done for the girl. The case was a very troublesome one, and proved fatal in the third week of the disease. At the special request of the lady, I sat up with the patient the last evening and night, in order to personally superintend the measures which had to be used for preventing death; and I did not leave her till past 2 A.M., when she had drawn her last breath. In fact, I could not have given the patient throughout more attention if she had been a duchess.

The husband of the lady came to town a day or two afterwards, and asked me to name my fee, when I mentioned forty-two guineas for as many visits. Mr. —— appeared horror-struck at this; said that his "physician" at home saw his servants for five shillings each time; that he thought that a very fair remuneration; that he would not pay the sum I had asked for; and finally left me after having put on my table a most inadequate sum, which I have a great mind to hand over to the poor-pox of the nearest police-station.

I shall feel much obliged for your opinion on this case. No doubt many of your readers have met with similar instances in their practice at one time or another; and the whole question is well worthy of authoritative handling.

I enclose my card, and am, sir, your obedient servant,

THE SENIOR PHYSICIAN TO ONE OF THE LONDON HOSPITALS.

London, October 11th.

DIPSO.—The paper containing the division may possibly be had by application to Hansard and Co., the printers to the house; or if you apply to any member, he will be able to let you see them, as they will have been sent to him in his copies of daily journals of the house.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

THE TITLE OF DOCTOR.

DR. J. B. GILL (Hastings).—The immense mass of correspondence which we receive on the subject of the title of "Doctor" sufficiently proves that the subject is one which is considered by a great mass of practitioners to be a matter of very considerable interest and importance to them; and, for our own part, we are obliged to confess that so long as the unsatisfactory arrangements exist which are at present in vogue for conferring titles and for facilitating graduation at universities, we think there exists a grievance which is rightfully ventilated, and we are not disposed to unduly repress sentiments on this subject of so very large a number of our Associates.

SIR,—When "G. J. H." asserts that "The marrow of this bone of contention is simple vanity", he is more epigrammatic than courteous. When he states that the title was accorded to graduates only by the "*mos et usus* of centuries", he simply "draws upon his imagination for his facts". The College of Physicians of London had the sole power of admitting a physician to practise in country or town, whether a graduate of an university or not. This is proved by the action taken by the College against the University of Oxford, in 1553, in the matter of Simon Ludford, M.D., an account of which is given in the *Roll of the Royal College of Physicians*, vol. i, pp. 64-5.

William Eyre, M.D., Oxford and Leyden, anno 1620, was summoned before the College of Physicians for practising without a licence. They obtained a verdict against him *de praxi illegitimâ*, upon which he applied himself to the College, begged their friendship, and promised submission (*Roll*, vol. i, pp. 178-9). He was subsequently admitted as Licentiate.

When "G. J. H." talks about the *mos et usus* of centuries, he ought to have taken the trouble to inform himself that the faculty of physic has been in existence in our University for very little over a couple of centuries, and then subject to the College of Physicians.

Now, as regards the title of "Doctor", diplomates of the Colleges of Physicians have been accorded that distinction from their foundation. In the action at law brought by the University of Dublin against the College of Physicians of Dublin, the University sought to restrain the College from giving the title of "Doctor". The Master of the Rolls decided that there was no legal right to deprive it of that privilege, at the same time stating that a Licentiate of the College would not be justified in appending M.D. to his name. The very commonest rendering of the word doctor is a "healer of the sick—a physician". The College of Physicians have taken it in this meaning from the first, as they frequently, in their earliest documents, prefix "Mr.", *e.g.*, in a letter addressed to the College by Stanhope and Cecyll, from the Court at Oatlands, August 11th, 1602, we find: "To our very loving friends Mr. Dr. Forster, President of the Physicians in London, and to the rest of the electors." In the will of the celebrated Harvey, we find: "Item, I give my velvet gowne to my lowinge friend Mr. Doctor Scarborough." In fine, when Shakspeare says in *Cymbeline*—

> "By med'cines life may be prolonged, yet death
> Will seize the doctor too",

he clearly means a physician, the primary meaning of the word in English.—Your obedient servant,

J. F. M.

E. H. B. might perhaps obtain an authorisation to practise through our Foreign Office by application to the Minister of the Interior; or, failing this, he might obtain the permission of the Faculty of the University of Paris or of Belgium to pass the final clinical examination. He should state on his application for authorisation what are his diplomas, what is his reason for desiring to practise in a foreign country with a British diploma, and where he wishes to practise.

A CENTENARIAN.

F.R.C.S. writes:—Under this heading in the JOURNAL of July 12th, p. 78, I called attention to the death of Mrs. Hartshorne of Worcester, at the stated age of one hundred years and eleven months, in whose instance a very remarkable amount of bodily and mental vigour had been retained up to the time of her decease. In the JOURNAL of the following week, at p. 117, J. D., in a comment on the case, requested me to show where and when Mrs. Hartshorne had been baptised. I was not able to supply this information until a recent visit to Worcester gave me the opportunity of obtaining it from the late Mrs. Hartshorne's legal adviser, who kindly supplied me with the following note on the subject. "Some doubt having been thrown on the fact of Mrs. Hartshorne having attained her 100th year on the 12th of July, 1878, I called on the Rector of Shrawley, Worcestershire, where she was baptised, and obtained from him a certificate of her baptism. The following is a copy of it. 'Susanna, daughter of Robert Bourne and Sarah his wife, was baptised July the 25th, 1779. This is a true copy of the register kept in the parish of Shrawley, in the county of Worcester. Signed, W. F. Vernon, Rector of Shrawley, August 4th, 1878.' As this only made her to be 99 on the 12th of July, 1878, I called and pointed this out to Mrs. Hartshorne, and she then showed me a small memorandum-book of her father's, in which various family events were entered, and amongst them the following. 'Susanna, the daughter of Robert and Sarah Bourne, was borne (*sic*) July the 12th, 1878, at four in the evening.' As this memorandum was in her father's handwriting, and was made at the time of her birth, it would be evidence in courts of justice."

These particulars show that Mrs. Hartshorne was not baptised until a little more than a year after the date of her birth; and, as she died at the end of June 1879, they seem sufficiently to prove that her age was really what it was stated to be—viz., one hundred years and eleven months at the time of her death.

MR. THOMAS JONES (Brecon) writes that William Bevan, referred to at page 276 of the BRITISH MEDICAL JOURNAL for August 6th, as being 105 years old, was buried at Talgarth on September 16th.

BICYCLES AND TRICYCLES IN COUNTRY PRACTICE.

SEXAGENARIAN writes:—Since the discussion which took place in the early part of the year on this subject, I have tried a tricycle made by the Centaur Bicycle Company, Coventry, which, after sundry alterations and improvements which the company have adopted, quite answers my expectations. I can recommend it as safe and comfortable, equal to any other: at the same time, I cannot see that either the one or the other is any saving of horse-flesh to a country practitioner, as much depends upon the weather and state of the roads. The machine which I have selected has these advantages: the seat or saddle (I prefer the latter) can be adapted to any height of the rider, and the same with the treadles. The two side wheels are fifty-two inches in diameter, with the steering wheel in front. On the right is a handle for steering, which acts in a tooth-rack; the left handle is for the brake. I can with comfort and very little exertion progress, on level ground or a slight ascent, at the rate of seven or eight miles an hour. At anything like a hill, it is better to get off and push it up. Downhill it requires checking, but I have now perfect control over the machine. My weight is 12 stone; height, 5 feet 7½ inches, and I am a sexagenarian. The bicycle is certainly more handy, and will go where a tricycle could not, as you have only one track; but I have known several severe accidents lately, and one death, whereas in the tricycle one is comparatively safe. I would not, however, advise their use as a saving, lest it should lead to disappointment and useless expense.

Mr. C. TERRY of Newport Pagnall writes:—I have, for the last three years used a bicycle very extensively in carrying on my practice. I can speak in the very highest terms as to its great utility and adaptability for country practice, both by night as well as by day. Possibly by night its advantage is more conspicuous than by day, as it saves all trouble and loss of time involved in the harnessing or saddling of one's horse. Formerly, my practice required two horses. Now, my country rounds are much longer, but I am able to work them comfortably with one horse and my bicycle. Any further information "Country Practitioner" may require, I shall gladly give him, if he will communicate directly with me.

SALUS ET VELOCITAS writes:—I obtained about a year ago one of Starley's Salvo quadricycles from Coventry as the one which, of all others, was best adapted to my wants for safety, elegance, and rapid locomotion. I have never once regretted the purchase; indeed, it has more than paid its cost in the saving of horse-flesh, wear and tear, and time. It works easily, is a most elegant machine, is perfectly safe, rapid in action, carries lamps, umbrella, and valise, all of which may be detached when not wanted. It is ready at any moment, night or day, without preparation, and gives to me almost the speed of a race-horse, with the endurance of the camel. I can go anywhere in an instant, make the longest or the shortest journey without a farthing of expense, and make my journey fees all profit, and return home not more tired after a run of ten miles than I should have been had I walked two, or ridden on horseback five. I am quite sure that many practitioners may, by means of this elegant machine, effect a saving of from £50 to £100 *per annum* in working expenses, besides getting rid of the annoyance and anxiety of the stable. I tried the Salvo for a run of about three miles up a gradually ascending road, got over the ground in about twenty minutes, and subsequently trotted a good sized pony over the same ground as fast as he would go for comparison, and he was about two minutes more in reaching the same destination. Even as a collateral means of locomotion for evening and night use, or to save keeping a second horse, the "Salvo" is well worth attention.

MR. J. A. E. STUART of Dunse writes:—The first day on which I mounted the "Salvo", I felt quite at ease on it, and in ten days could drive it on a good road at the rate of eight miles an hour. Now, after a month's practice, I can do about ten miles an hour. I have taken the machine over some of the roughest roads in the district, and find it a delightful companion. The exercise is not at all violent; in fact, since riding it, I have felt my muscular power and wind greatly improved, without being at all tired out by its use. At first, the smallest rise in the ground was a difficulty, but now I can ascend very considerable hills, and where the hill is great its weight is so little that to get off and push it up is a pleasant change, and then you make up for lost time by going over the other side of the hill at a tremendous speed, if you like, or at a mere snail's pace, for you have complete control over it by the powerful brake. I have gone over a very steep hill at one pace, and yet had no fear, as I had it completely in command. After a little practice, it is quite an exceptional hill where you require to alight and push it up, for, by relaxing the brake at the proper point on the previous hill, you are half-way up the next before you know where you are, and, leaning well forward and putting your full strength to the cranks, you are at the top in a few strokes. On the level, after you are once started, the exertion is simply *nil*, the mounting and alighting are no trouble, an umbrella can easily be carried held up during a shower; in short, it is a machine thoroughly adapted to country practice. When the roads are heavy after rain, it makes very little difference; the only disagreeable thing being when the dust is not thoroughly soaked and the mud is greasy and claggy; but this is exceedingly rare. After a little practice, one never tilts it back so as to bring the fourth wheel into contact with the ground, and the "Salvo" is thus a tricycle with a fourth safety wheel. It is easily cleaned, and with constant oiling is kept in perfect order. The district over which I have ridden it is an excellent one for testing it, for we have to the east, west, and south excellent turnpikes, certainly undulating considerably, but scarcely ever presenting a hill where a "Salvo" rider requires to alight, while to the north and among our intersecting or parish roads, even in the previously mentioned directions, are to be found some of the hilliest roads one could wish for. On all of these the "Salvo" is, as its name proclaims, perfectly safe and even swift. I am quite convinced that anyone getting one will not regret it. The bicycle, I should think, would not suit with any considerable weight, but to the "Salvo" any amount of instruments or medicines, etc., could be attached. If any practitioner is anxious for special information regarding it in addition to what I have stated, I will be only too happy to afford it to him. [P.S.—In ten days, I was able to do a mile in less than six minutes, showing the rapidity with which the "Salvo" is learned by a beginner.]

MR. E. PEACOCK of Nuneaton writes:—I ordered one, some five months ago, from Starley Brothers of Coventry, called a salvo-quadricycle. It has proved so useful that I have been able to dispense with the use of one horse; and although the country is hilly and the roads bad, I have had no difficulty in doing my rounds. It is easy to work, and comparatively so even up steep hills. It is a handsome carriage, being propelled with rubber rotatory pedals and an endless chain. In going round corners, owing to a patent arrangement of cogs, it is perfectly safe, and turns in its own length. There is a clip-break, and by a touch of the left hand the machine is under the most perfect command. The steering apparatus, acting on the front wheel, cannot, in my opinion, be improved. I have travelled some hundreds of miles upon my "Salvo", and beyond a few minor repairs being done to it, it is as good as new. It is remarkably convenient for mounting and dismounting, which in a country practice is important; whereas, in a bicycle, the

constant trouble and exertion become irksome. The "Salvo" is particularly adapted for night work, and renders one independent of groom and horses. With regard to pace, one can do, taking roads as they come, on an average of between seven and eight miles an hour; but on a good straight road, ten and twelve miles in the hour can be accomplished. My fastest time has been six miles in half an hour, and that at night. Other machines may be a little faster, being lighter, but for rough wear and tear, I think the "Salvo" far superior, and more adapted for the requirements of the country practitioner, than any other I am acquainted with. With a valise behind, some pounds of luggage can be carried. The day is not far distant when tricycles will be in great request by practitioners, and the cost and keep of horses and carriages, which is such a heavy item in practice, will be materially lessened, and in some instances be done away with altogether.

Hospital Advertisements.

SIR,—I enclose two consecutive advertisements from to-day's *Times*, in which it will be seen that a new feature of hospital advertising has been introduced in the addition of the names of the medical and surgical staff. It happens that the same names appear in both advertisements, and I think it may be fairly asked whether the staff of King's College and the General Lying-in hospitals have given leave for their names to be thus publicly paraded.—Yours obediently,

October 20th, 1879. A HOSPITAL SURGEON

*** The advertisements enclosed are those of King's College and the General Lying-in Hospitals, in which, contrary we think to what is usual or desirable, the names of the hospital staff are presented in the course of appeals for funds. The staff may be beforehand assumed certainly to have no part in this administrative advertisement; but their attention being called to it, they will, we expect, request that the practice be relinquished.

The Victoria and the London Universities.

SIR,—Why is it that writers of letters on the above subject, in considering the question of the number of universities, divide them into English, and Scotch or Irish? It is a sentimental division only. We should not look at the number of medical schools in any part of the country, but rather at the whole number in Great Britain, and then judge whether that is sufficient for the necessities of the nation. If, in former times, one part of the country deemed four universities requisite, such a fact proved the superior education of the mass of the people of that country, which was at that time too a separate nation. I was amused to read a letter in the JOURNAL of October 11th, written by "M.B.Lond.", in which he was pleased to class the diplomas of Apothecaries' Hall and the London College of Surgeons in the same category with the degrees of the Scotch universities, insinuating that the latter were as easily obtained as the former, but intimating that the degree he himself held was worth considerably more than any or all of these. Beyond a sweeping condemnation of Irish and Scotch degrees (and, since he makes no exception, I suppose he includes them all), this "London M.B.'s" letter only contains a kind of autobiographical sketch, doubtless highly interesting, of his own studies. The letter, moreover, displays a great want of knowledge of the ways of the universities he condemns. I am not concerned to defend Irish universities or Scotch colleges, nor even Scotch universities, except one. They are perfectly capable of defending themselves against much more powerful assaults than that of "M.B.Lond." I must protest, however, against the ignorance that would class the University of Edinburgh with those schools which are supposed to grant "easy Scotch degrees", as "M.B.Lond." styles them. I am quite ready to admit that the preliminary examination of Edinburgh University (and it is entirely one in arts) is not so stringent as the preliminary of London University; but I maintain that no one can obtain the M.B. and C.M. of Edinburgh without steady, hard, assiduous work. It is well known that Edinburgh University is the largest medical school in the kingdom, whose students, I believe, at present number more than 1,200. Each year there are about 300 fresh matriculations, and 100 graduates, sometimes fewer. Now what becomes of the other 200, who never obtain the M.B. and C.M. degrees? Some fail at the examinations, others disappear from want of perseverance, all are deterred by the rigour of the curriculum or the examinations. Surely this fact is not a proof that the Edinburgh degree is easily obtainable. The *alumni* of the University of Edinburgh, notwithstanding the facility with which they are told they graduated in years past, have often become the leaders of the profession in every department, and they still worthily sustain the fame of their renowned Alma Mater. The roll of her illustrious graduates could be excelled by no university in the world. I am not comparing Edinburgh University with that of London. The latter has granted its degrees to men who have become celebrated; but it is only a modern institution, and not an university in the usual acceptation of that term, being an examining without being a teaching body. I have nothing to say regarding the other universities attacked by "M.B.Lond." I have already occupied too much of your space; but it is certainly commonly believed that the M.D. of St. Andrew's was too easily conferred in former years, and probably there is some ground for that belief.

Let "M.B.Lond." in future, however, before he attempts to teach your readers the value of "easy Scotch degrees", learn a few facts about them first.—I am, sir, yours faithfully, M.B.EDIN.

October 14th, 1879.

ENQUIRER, M. W.—1. By writing to the Secretary of the Manchester Medico Ethical Society. 2. Carpenter *On the Microscope* (Churchill); Schäfer's *Practical Histology* (Smith, Elder, and Co.). 3. Pillischer's International Microscope (New Bond Street, (W.) is an exceedingly convenient instrument for students and biological writers, and is as much approved by excellent judges abroad as it is in England.

Condensed Milk for Infants.

SIR,—I am glad to see the letter of "A Member" in your impression of October 11th, p. 602, asking the profession to express an opinion as to the value of this article of food in the rearing of infants. My own experience has been, that while in many cases of diarrhœa it is an extremely valuable medicinal agent, yet, as a daily article of food, it proves most deleterious, the infants often appearing to thrive while taking it; but this is true only as far as fat is concerned, for the bones too often become rickety, the skin covered with eczematous and other eruptions, and, if attacked with severe illnesses, the little patients quickly, and often suddenly, succumb. That many children are brought up on the condensed milk to the satisfaction of their parents cannot be denied, but that the consequences are often such as I have described I feel sure many can affirm.—Yours truly,

October 15th, 1879. RICHARD NEALE, M.D.Lond.

Water-Closets.

R B. asks:—What is the best and most useful water-closet? Will cast-iron pipes answer in the place of lead as the soil-pipe?

*** If the water-closets be for use inside the house, one of Bolding's or Underhay's London valve-closets will be found perfect, but care should be taken to see that the waste of the traps or safe are taken into the outer air, and that P or S and not D traps are used for the traps of the closets. Under special circumstances, even these traps can be dispensed with; but this should be done only under the advice of sanitary engineers versed in the matter of utter disconnection. Mr. Geo. Jennings' closet is a very cleanly contrivance, and is made of one piece of earthenware, and leaden traps are dispensed with. Any closet will work safely if the soil-pipe be properly ventilated, with a full-bore diameter ventilation-pipe, carried up to the roof, discharging its air remote from windows and chimneys. If the closet be a servants' closet, Bostel's pattern will be found to meet every necessity, especially if out of doors or in an area-vault. We should by no means recommend iron soil-pipes outside the house; and if used even there, the joints should be specially attended to. Lead soil-pipes of the drawn and not soldered kind are the best; and these should be tested, after fixing, by allowing them to stand for twenty-four hours full of water, when, if no leakage appear, they may remain. Iron soil-pipes inside a house are opposed to all ideas of sound hygiene.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. Alfred Carpenter, Croydon; Dr. A. T. H. Waters, Liverpool; Mr. Brodhurst, London; Dr. Lowe, Lynn; Mr. A. Napper, Cranley; Dr. Shepherd, London; Dr. Norman Kerr, London; Dr. Trollope, St. Leonards-on-Sea; Mr. H. Davies, Morriston; R. N.; Dr. Thorburn, Manchester; Dr. Roberts, Manchester; Our Dublin Correspondent; Dr. Elgar Buck, Leicester; Dr. Brodie, Liberton; Dr. Galabin, London; Dr. Neale, London; Mr. P. J. Hayes, Dublin; Mr. Treves, London; Dr. Corbett, Cork; Z.; Dr. D. Brodie, Edinburgh; Dr. R. L. Swan, Dublin; The Secretary of the Harveian Society; Iota; Dr. Louis Henry, Melbourne; Mr. A. Morrison, Melbourne; Dr. J. C. Gooding, Cheltenham; Mr. Costello, Oxford: Mr. Lennox Browne, London; Observer; Mr. Price, Merthyr Tydfil; Dr. Lush, Weymouth; The Secretary of Apothecaries' Hall; Dr. W. L. Lane, Edinburgh; M.; Dr. J. Walters, Reigate; Mr. W. Whitehead, Manchester; The Registrar-General of England; Mr. R. H. S. Carpenter, London; The Registrar-General of Ireland; Dr. F. Barnes, London; The Secretary of the Hunterian Society; Mr. G. Eastes, London; Dr. J. W. Moore, Dublin; The Secretary of the Medical Society of London; Dr. Mead, Whitby; Dr. J. B. Ryley, London; X. Y. Z.; Dr. W. Thomson, Peterborough; Mr. J. Wilson, Stockton-on-Tees; Dr. Sheen, Cardiff; Mr. E. H. Rusch, London; F. G. D.; Dr. T. C. Fox, London; Mr. J. S. Cocking, Plymouth; A Hospital Surgeon; Dr. J. W. Hamill, Manchester; Mr. J. Longstaff, London; Dr. J. M. Finny, Dublin; Dr. Clement Godson, London; The Secretary of the Royal Medical and Chirurgical Society; Dr. W. H. Day, London; A Constant Reader; Mr. W Wilson, Bristol; Mr. W. A. Macnaughton, Southsea; Our Glasgow Correspondent; Dr. Nason, Stratford-on-Avon; Mr. John Brown, Bacup; Inquirer; Mr. P. S. Hill, London; Dr. A. S. Taylor, London; Dr. E. Seguin, Paris; Dr. Ll. Thomas, London; G. F. D.; Mr. Batterbury, Berkhamstead; R.; A Dissenter, Manchester; Dr. Gorham, Galway; A Member; Dr. Foster, Birmingham; An Associate; Mr. William Harvey, London; Dr. Smart, Edinburgh; Dr. Parsons, Dover; Dr. J. Rose, Chesterfield: Mr. Peacock, Darlington; Mr. A. D. Leadman, Boroughbridge; Mr. W. H. Woodcock, Broughton-on-Furness; Mr. W. G. Cartwright, Leicester; Mr. J. Ewart, Brighton; Mr. A. R. Manby, East Rudham; Dr. E. W. Kerr, Bundoran; Mr. T. Dutton, Holsworthy; Mr. C. Feldmann, Dalston; Dr. F. Evans, Cardiff; etc.

BOOKS, ETC., RECEIVED.

A Treatise of Physiology and Hygiene. By G. Holmes. London: J. and A. Churchill. 1879.

Clinical Medicine. By A. Flint, M.D. London: J. and A. Churchill. 1879.

Observations on Contraction of the Fingers. By W. Adams. London: J. and A. Churchill. 1879.

Ocular Therapeutics. By L. de Wecker. Translated and Edited by Litton Forbes, M.D., etc. With Illustrations. London: Smith, Elder, and Co. 1879.

Outlines of Medical Treatment, intended as a Companion to the Student's Guide to Medical Diagnosis. By S. Fenwick, M.D. London: J. and A. Churchill. 1879.

New Remarks on the Reduced Rate of Mortality in Glasgow. Glasgow: R. Maclehose. 1879.

The Deeds and Death of Patroclos; Book XVI of the Iliad; with Copious Explanatory Notes and Index and a Literal Translation. By Henry Dunbar, M.D. Glasgow: A. Stenhouse. 1879.

A Treatise on Chemistry. By H. E. Roscoe, F.R.S., and C. Schorlemmer. Volume II: Metals. Part 2. London: Macmillan and Co. 1879.

OBSERVATIONS
ON
THE DIGESTIVE FERMENTS, AND THEIR THERAPEUTICAL USES.*

By WM. ROBERTS, M.D., F.R.S.,
Physician to the Manchester Royal Infirmary; Professor of Clinical Medicine to the Owens College.

You all know that before food can be absorbed into the blood and made available for the nutrition of the body it must first be digested. By digestion, the albuminous and collagenous constituents of our food are liquefied and converted into diffusible peptones; the starchy matters are converted into sugar, and the fats are emulsified and partly saponified. Cane-sugar is also changed into glucose. Native glucose, which exists in abundance in all our sweet fruits, is absorbed unchanged, and may be regarded as a ready-made digested food, or rather as a starchy food predigested for us by the agency of plants. The digestive processes are all of a purely chemical and mechanical nature; and they can be imitated successfully in the laboratory, and even in the sick room and nursery.

The agents concerned in these processes are the several digestive juices: saliva, gastric juice, pancreatic juice, bile, and the intestinal secretions. These juices owe their activity to a very remarkable group of bodies, called soluble (or unorganised) ferments; and it is to these ferments—to certain points in their modes of action and mutual relations—that I propose to direct your attention.

In the annexed table I have arranged, in the first column, the digestive juices in their natural order of succession; in the second column are indicated the ferments proper to each of them; in the third column, the nature of the action of each ferment on food-stuffs; and in the fourth column are placed the various medicinal preparations, which are the equivalents or substitutes available for administration to patients in whom this or that digestive juice may be supposed to require artificial assistance.

Table of the Digestive Juices and their Ferments.

Digestive Juices.	Ferments contained in them.	Action on Food-Stuffs	Medicinal Substitutes.
Saliva.	Diastase.	*Amylolytic*, changes starch into sugar.	Various preparations of malt; extracts of malt; malt flour; extract of pancreas.
Gastric juice.	*a.* Pepsin.	*Proteolytic*, changes proteids into peptones in an acid medium.	Various preparations of pepsin; pepsin-wine; liquor pepsiniæ: lactopeptin, etc.
	b. Curdling ferment.	Curdles the casein of milk.	Rennet.
Pancreatic juice	*a.* Trypsin.	*Proteolytic*, changes proteids into peptones in an alkaline medium.	Pancreatine.
	b. Curdling ferment.	Curdles the casein of milk.	Glycerine extract of pancreas.
	c. Diastase.	*Amylolytic*, changes starch into sugar.	Liquor pancreaticus.
	d. Emulsifying ferment.	Emulsifies and saporifies fats.	Pancreatic rennet.
Bile and intestinal juice.	?	?	o

An examination of the table shows that a complicated series of ferment-actions is required to complete the digestion of our food; and it is certain that our information is still imperfect on several points, especially in regard to the uses of the bile and the intestinal secretions. It is no part of my purpose to attempt a general account of the digestive processes, but only to pick out certain points in regard to which I may have something to say, which is either novel or has a practical bearing on the treatment of our patients. Of the bile and succus entericus I do not propose to say anything. I shall divide my remarks under the three headings of saliva, gastric juice, and pancreatic juice; and shall conclude with some observations on the preparation of peptones, and the feeding of patients on peptonised food.

1. SALIVA.—Saliva has but one ferment—namely, diastase, or, as it is sometimes called, ptyalin—and its sole action is to convert starch into sugar. Saliva acts with energy on gelatinised or cooked starch, but with extreme slowness on the native unbroken starch-granules. This is the reason, or necessity, for the practice which has arisen and become universal among mankind, of cooking farinaceous articles of food before they are eaten.

The action of saliva on starch goes on in the mouth and gullet, and for a while after the morsel has reached the stomach; but the action is arrested as soon as the meal is thoroughly permeated by the gastric juice. In the case of a meal of farinaceous food, this arrest occurs long before all the starch is digested; and the work is taken up and finished, after the food has passed the pylorus, by the pancreatic juice.* When the digestion of starchy matters is at fault—or supposed to be at fault, for we really possess little exact knowledge of the indications of such a condition—we resort to one or other of the preparations of malt which contain diastase. At the present moment, the most popular of these preparations are the malt-extracts; and, to judge by the scale on which these extracts are advertised in the medical journals, they are very popular indeed. Several of these preparations are on the table before you; and I think they are likely to prove a valuable addition to our stock of remedies. They resemble a thick brown treacle in appearance, and their taste and smell are not unlike treacle. The statements made in the advertisements as to the nutritive value of malt-extracts are preposterous exaggerations; they are little better, merely as food, than so much syrup. Their real value lies partly in the diastase they contain, and partly in the important pharmaceutical uses to which they may be put as vehicles for other drugs, especially cod-liver oil. If properly prepared, malt-extract is rich in diastase, and has a high power of digesting starchy matters. But you will be surprised to learn, as I was, that a large proportion of the malt-extracts of commerce have no action on starch. This is owing to a too high temperature having been used in their preparation. Any heat above 158° Fahr. is destructive to diastase in solution; so that if the extract be evaporated, as is directed by the German *Pharmacopœia*, at a temperature of 212° Fahr., it is necessarily inert on starch. Out of fourteen trade samples of malt-extract examined by Messrs. Dunstan and Dimmock, only three possessed the power of acting on starch; all the rest were inert.† I myself examined three brands of malt-extract in regard to this point, and found all three very active.‡ But even the most active of the three was feeble when compared with an extract of pancreas which I shall show you presently.

It is important to choose the right time for giving preparations of diastase, otherwise you may obtain little or no help from them in the digestion of the starchy constituents of the meal. The labels on all the malt-extract bottles I have examined direct a dose to be taken after meals. This is evidently a mistake. I told you a while ago that the action of diastase is arrested in the stomach; and I have reason to believe that this arrest is permanent, and that, under the ordinary conditions of digestion, not a particle of active diastase escapes through the pylorus. If, therefore, you wish to get a full amount of work from a dose of malt-extract, you should administer it, like the natural saliva, with the food; or, better still, mix it with the food beforehand. The malt-extracts lend themselves exceedingly well to this latter mode of administration. They have a sweet agreeable flavour, and a teaspoonful or two may be added as a sweetener, and mixed with tea, cocoa, coffee, arrowroot, sago, or any other farinaceous dish. The only precaution to be observed is that the food should be sufficiently cooled down to be endurable in the mouth before the malt-extract is added. I have found on trial that you cannot eat or sip, even in teaspoonfuls, any substance which has a temperature above 150° Fahr., and, at this heat, diastase not only remains uninjured, but is highly active.

2. GASTRIC JUICE.—Gastric digestion has been the subject of numerous and successful studies in times past, and our knowledge thereof to-day is little in advance of what it was when most of us were students. For this reason, it will not detain us long.

* This paper is the substance of an address delivered before a meeting of the Lancashire and Cheshire Branch of the British Medical Association, at Northwich, on April 26th, 1879.

* It is generally stated in text-books of physiology that the digestion of starch is only suspended in the stomach, and that the saliva resumes its activity in the duodenum. I greatly doubt this. In observations on artificial digestion, I found that both saliva and malt-diastase became permanently inert after a comparatively brief (thirty minutes) contact with artificial gastric juice—even when greatly diluted, and when the proportion of hydrochloric acid did not exceed 0.05 per cent.

† *Pharmaceutical Journal*, March 8th, 1879.

‡ These three brands were: Corbyn, Stacey, and Co.; Kepler Malt-Extract Company; and the "maltine" of the Maltine Manufacturing Company. The activity of Trommer's malt-extract is vouched for by Professor Redwood.

Pepsin.—The special ferment of the gastric juice is pepsin, and its office is to digest the albuminous and the gelatigenous constituents of our food. Pepsin is only active in the presence of an acid; and the normal acid of the stomach appears to be hydrochloric acid; other acids, however—lactic, phosphoric, citric, etc.—render pepsin active, but not so energetically as the hydrochloric.

Under the influence of pepsin proteids are changed into peptone, or peptones. The word is often used in the plural number, because the products arising during the digestion of proteids show considerable variation *inter se;* and this has led physiologists to conclude either that there are several varieties of peptone evolved in the process, or that the same body is encountered in different stages of transformation. The change impressed on a native proteid by its conversion into peptone is probably simply a hydration—a change similar in character to the hydration undergone by starch when it is changed into sugar by diastase. That the change does not involve a profound disturbance of the molecular constitution of the proteid, would seem to be indicated by the fact that the first thing that happens to peptone when it has been absorbed into the blood-current is to be immediately depeptonised—that is, to be again restored to the condition of a native proteid (serum-albumen). So quickly does this re-transformation take place, that no peptones can be detected in the lacteals, nor in the blood of the portal vein.

The Curdling Ferment of the Stomach.—Everybody knows that one of the most striking properties of the gastric juice is its power of curdling milk. This property is quite independent of the acid of the gastric juice, and is effective in neutral and even in slightly alkaline milk. Under the name of rennet, which is simply a brine-extract of the calf's stomach, this property has been known from time immemorial, and has been utilised for the making of cheese. Until quite recently, it was not doubted that the curdling power was an essential attribute of pepsin; but, in 1876, Brücke published a process by which he obtained a pepsin which was strongly proteolytic, but which was powerless to curdle milk. Quite recently, Mr. Benger has made an observation which may be regarded as the complement of that of Brücke. He finds that a concentrated brine-extract of calf's stomach has intense curdling powers, but is almost devoid of proteolytic powers. On the ground of these observations, we are justified in concluding that two distinct ferments have been heretofore included under the old term pepsin—namely, a proteolytic ferment, which peptonises proteids in the presence of an acid, to which the name pepsin should in future be confined—and another ferment, of which the only property now known is that of curdling the casein of milk.

The Medicinal Equivalents of Gastric Juice.—These are so familiarly known as the various and numerous preparations of pepsin, that I need not linger over them. There is no doubt that formerly a number of inert preparations were sold under the name of pepsin, and dispensed to a confiding public; but matters have improved since then; and I have authority for saying that now all the leading brands of pepsin are reliable. Pepsin preparations are especially suitable for administration by the mouth immediately after a meal. Those of you who, from past experience, have lost faith in pepsin, may be encouraged to try again the more active preparations which are now within our reach. A *liquor pepsinæ* prepared by Mr. Benger, of which a specimen is on the table, is a digestive agent of extraordinary power. A teaspoonful of this preparation in six ounces of acidulated water dissolved an ounce of chopped white of egg completely in three hours.

3. PANCREATIC JUICE.—Formerly, the pancreas was held in little esteem as a digestive agent; it was not thought to have any function except to assist in emulsifying fats. But of late, through the researches chiefly of Corvisart and Bernard in France, and Kühne and Haidenhain in Germany, our estimate of the pancreas has been revolutionised. The pancreas is now known to be rich both in the quantity and variety of its digestive ferments. Extract of pancreas—and we may presume also the natural pancreatic secretion—has at least four distinct kinds of action on food-stuffs, namely: 1. It converts proteids into peptones in alkaline media; 2. It curdles the casein of milk; 3. It transforms starch into sugar; and, 4. It emulsifies fats. I shall have a word to say about each of these modes of activity.

Proteolytic Ferment of Pancreas.—This has been named trypsin by Kühne. It differs from pepsin in requiring an alkaline (instead of an acid) medium for the exercise of its powers. Although the action of pepsin and trypsin on proteids is the same in its ultimate result—*i.e.*, both convert proteids into peptones—certain differences have been noted between them, not only in the reaction of the medium suitable to each, but also in their manner of achieving their work, and in the by-products which attend their action. I am also led to believe that an important practical distinction betw pepsin and trypsin will prove to be the difference in the facility of their attack on the different kinds of proteids. Thus, I found it more easy to peptonise milk by trypsin than by pepsin; on the other hand, egg-albumen was attacked more energetically by pepsin than by trypsin.

The mutual reactions of pepsin and trypsin, when present together in solution, are of some practical interest. Kühne has stated that pepsin in an acid medium destroys trypsin, but that trypsin in an alkaline medium has no such effect on pepsin. The latter part of this statement is, I believe, incorrect. My own experiments on this point gave the following results. When pepsin and trypsin were infused together in a large dilution of simple water, at blood-heat, they proved mutually indifferent, and retained their respective activities even after three hours' companionship. But when the mixture was acidified with a few drops of hydrochloric acid, the trypsin was speedily destroyed; and conversely, when the mixture was feebly alkalised with sodium bicarbonate, the pepsin was quite as speedily destroyed. But I found, further, that pepsin was destroyed apparently as quickly in the simple alkaline solution, without any trypsin; and similarly, that trypsin was speedily destroyed in the simple acid solution when no pepsin was present.

These reactions involve a point of practical interest in regard to the medicinal administration of pancreatic preparations. They lead directly to the inference that acid gastric juice is destructive of the proteolytic activity of pancreatic preparations, and that it is useless to administer such preparations by the mouth, unless means be adopted to safeguard them against the action of the gastric acid. It is also plain that some of the new digestive remedies which are being sent out by eminent firms of druggists, and which are recommended expressly on the ground that they contain the combined energies of the gastric and pancreatic juices (two of these are styled respectively peptocolos and peptodyn) are compounded on erroneous principles. Pepsin and trypsin cannot possibly be combined in action. If the two ferments be present together in solution, there is no work to be got from either so long as the reaction is neutral; if you acidify, so as to waken the pepsin into activity, the trypsin is thereby rendered permanently inert; and conversely, if you quicken the trypsin into activity by adding an alkali, the pepsin loses its powers.

The Curdling Ferment of the Pancreas.—The property of curdling milk has hitherto been regarded as the special appanage of the gastric ferment; and I was surprised to find a curdling agent also associated with the pancreatic ferments. All extracts of pancreas, however made, were found to have this power. The action seems identical with that of rennet made from calf's stomach, and takes effect both in neutral and in alkalised milk.

I found that a piece of perfectly fresh pancreas infused in warm milk had only the feeblest possible curdling power. The extract of fresh pancreas, likewise, when newly prepared was inert, but after the lapse of a few weeks it became active. In this respect, the curdling ferment shows parallel behaviour with trypsin, and the explanation is probably the same in both cases, namely, that the pancreatic cells do not contain either ferment in a perfect state, but rather in the condition of zymogen or mother-of-ferment. It may be assumed that, in the living animal, the zymogens are converted into active ferments during the process of secretion. In the artificially made extracts, the change takes place more gradually, and is probably of the nature of a slow oxidation.

Pancreatic Diastase.—The pancreas is exceedingly rich in diastase. An aqueous extract of the gland (of which seven ounces represented one ounce of gland-tissue) was found to have about tenfold the starch-converting power of the best malt-extracts. We therefore possess, in pancreatic extracts, an efficient medicinal substitute for saliva in the digestion of starch.

The emulsifying properties of pancreatic juice have long been known; and Bernard demonstrated that this power depended not simply on the free alkali of the secretion, but on the presence of a special ferment.

Medicinal Equivalents of Pancreatic Juice.—There are two pancreatic preparations which have long been before the profession, namely, pancreatic emulsion and pancreatine, both sent out by Savory and Moore. I found that pancreatic emulsion contained no active ferments; they had probably been destroyed by the heat used in the manufacture; but it was the most perfect possible emulsion, and when mixed with water, the milk-like fluid showed no tendency to separate after several days.*

The single specimen of pancreatine which I was able to examine was found to have an energetic proteolytic activity, and it also curdled milk; but it had no action on starch, a fact which supplied an unex-

* This excellent preparation would be much improved if the strong ethereal and spicy flavour of it could be removed.

pected confirmation of the opinion that the four pancreatic ferments are perfectly distinct bodies.

The most complete, active, and convenient medicinal equivalents of pancreatic juice are, however, the liquid extracts of the gland. These may be prepared from the pancreas of the pig, with glycerine, with water, or with brine. The glycerine extract leaves nothing to desire on the score of activity, and it keeps perfectly; but the taste of glycerine is to some persons objectionable, and it seems sometimes to provoke nausea, and even vomiting.

The aqueous extract, as prepared for me by Mr. Benger, will, I think, prove a valuable preparation. It is simply an extract of the gland in water, with just enough spirit added to keep it from decomposition. I propose to call it liquor pancreaticus. A sample of it is on the table before you. It is a limpid, straw-coloured fluid, with very little taste or smell of its own, and of nearly neutral reaction. But though so pale and bland, it is an elixir of really remarkable powers; it curdles milk like rennet; it changes starch into sugar with unrivalled energy; with the aid of a little alkali, it transforms albuminous substances into peptones; finally, it emulsifies fats more perfectly than any other known agent. Extracts of pancreas are destined, if I am not mistaken, to play a considerable part in the dietetic therapeutics of the future. Whether the full powers of these preparations can be made available when administered by the mouth, must be regarded as uncertain. As an aid to the digestion of starch, the propriety of giving them by the mouth cannot of course be doubted; but the propriety of giving them by the mouth as proteolytic agents is a less simple question, seeing that it requires the addition of an alkali to bring the trypsin into activity; and the addition of an alkali is an interference with gastric digestion which may, or may not, be advantageous in a particular case. I commenced to employ pancreatic extract by the mouth about two years ago, and have now had considerable experience of its use. Guided by theoretical considerations, I have usually directed the dose (a teaspoonful) to be given, with twelve or fifteen grains of bicarbonate of soda, one and a half or two hours after a meal, when gastric digestion might be supposed to be approaching its termination, and the later portions of the meal to be passing into the duodenum. There is at this late period of digestion a tendency to excess of acid in the stomach, and the alkali alone is undoubtedly of service; but I have had, in several instances, striking results from the combination of the extract with the alkali, which I had previously failed to obtain from the alkali alone. I am, therefore, pretty strongly convinced that, by administering a pancreatic preparation towards the tail of gastric digestion, you can, under the guardianship of a dose of alkali, convey it into the duodenum, where it arrives opportunely to aid in the important work of intestinal digestion. But, however useful pancreatic extracts may prove to be for administration by the mouth, I anticipate far more important results from their employment in the preparation of peptones and peptonised aliments; and to this subject I now beg to call your attention.

[*To be continued.*]

PORTSMOUTH.—The two most interesting features in Mr. George Turner's last report are the account of an epidemic of typhoid fever due to milk, and a critical study of infantile diarrhœa. Into the latter question we need not now go, as Mr. Turner's opinions have been already sufficiently explained in the JOURNAL (vol. i, 1879, page 821); but we may, in passing, pay a tribute of admiration to Mr. Turner for the earnest and laborious investigation which he is making into this very difficult question. The history of the milk epidemic is not very exactly told; but it may be broadly stated that, of 153 cases of typhoid fever, during the third quarter of 1878, in a town which stands worst as regards the disease of the twenty large towns, 64 per cent. obtained their milk directly or indirectly, from a particular farm. At this farm, there had been a case of typhoid fever, and the well of the house was within a few feet of the cesspit of the common privy. There seems, therefore, little reason to doubt that the milk supplied by this dairy contained the contagium of enteric fever, which was thus distributed to the consumers. During the year, the general death-rate was 19.02 per 1,000, which, though higher than that for 1877, is slightly below the average for the last six years. The increased mortality has been due rather to a general rise in the death-rate from all causes than from the presence of any large amount of zymotic disease. The greatest blot on the character of the borough is the high death-rate from typhoid fever. The reasons why Portsmouth seems to be so much subject to this disease are the flatness of the sewers, the insufficient ventilation of sewers and house-drains, and the defective construction of houses. The typhoid fever-rate in 1878 was 0.71 per 1,000, and the disease is always most prevalent at the end of the third and the beginning of the fourth quarter of the year. The figures for the other zymotic diseases call for no remark.

CLINICAL LECTURE
ON
AMPUTATION AT THE HIP-JOINT:
WITH CASES ILLUSTRATING THE USE OF THE LEVER FOR CONTROLLING HÆMORRHAGE.

BY RICHARD DAVY, M.B., F.R.C.S.,
Surgeon to the Westminster Hospital.

GENTLEMEN,—Some few years ago, I drew the attention of surgeons to the *per rectum* compression of the aorta and iliac arteries for the temporary arrest of hæmorrhage during the performance of operations, and practically demonstrated the efficacy of the method in cases of amputation at the hip-joint. I shall endeavour to interest you to-day, first, by practical observations on amputation at the hip-joint; and, second, by recording the ascertained experience of operating surgeons in the use of the lever for controlling bleeding during amputation at the hip-joint.

Firstly, in considering how surgeons may best restrain bleeding in amputation at the hip-joint, just look at a side view of the pelvis, with the arteries injected (Royal College of Surgeons' Museum, 939, Q. f. Homo); you will notice how that the anterior flap is principally fed by the external, the posterior by the internal iliac artery; therefore, the common iliac artery must be compressed to secure both. And Nature has so focussed her blood-courses at the common iliac artery for the nourishment of the lower limb, that it really seems strange that compression of this vessel should not have been earlier practised.

I would insist strongly on the absolute necessity for restraining loss of blood from the posterior flap; much as I respect the femoral artery in the anterior flap, yet more do I beg you not to underrate the large and numerous muscular branches of the gluteal and sciatic trunks in the posterior. In an interesting discussion at the Clinical Society of London, following a paper read by my colleague, Mr. A. Pearce Gould (*vide* BRITISH MEDICAL JOURNAL, May 10th, 1879), the use of the rectal lever was received with favour, and a comparison was drawn between it and digital compression. I can only state that, after a surgeon has proved practically how very easy it is to prolong indefinitely compression by the lever, he will not care to submit to the fatigue, uncertainty, and anxiety of the digital pressure. Nor can I see why the whole thickness of the abdomen should be squeezed, now that it has been shown that the common iliac artery may be compressed, with only the thin rectal wall intervening.

Mr. Newman of Glasgow has sent me a pamphlet, in which he describes a special knife and India-rubber bands for compressing the flaps during amputation at the hip-joint. It seems to me that, as Pancoast's tourniquet applied over the aorta is too high up, so also Mr. Newman's apparatus on the flaps is applied too low down; and that operating surgeons in future will act on the spirit of the motto,

"In medio tutissimus ibis",

and compress the common iliac artery *per rectum*.

I will just say one word on the perfect safety and absence of inconvenience in using the lever. I have personally compressed the common iliac artery in a man suffering from aneurism of the right external iliac artery, aged 60, for twenty minutes, and without chloroform or other anæsthetic. The only pain felt was the presence of a foreign body; showing how tolerant of pressure the upper part of the rectum is. In no case (so far as I am aware) has any blood or stain been seen in the stool, though I have watched carefully for this event.

On anatomical grounds, the situation of the common iliac artery is perfect for the ends of compression; the lever drops between the psoas magnus muscle and the bodies of the lumbar vertebræ, having the spring (sacral margin) of the true pelvic brim as a counter-resistance to the lever, and no large nervous trunks in the way. I tried to pass the lever once on a dead body at the Westminster Hospital, and failed; I dissected this rectum *in situ*, and found syphilitic stricture in it; in short, the gut was tied up like a boy's cracker; this is the only case in which any difficulty has been met with at present.

The lever is turned out of ebony, and varies in length from eighteen



to twenty-two inches. Its surface is very smooth and polished; and its ends are rounded off much like the finger-tips. The maximum trans-

verse diameter is five-eighths of an inch; the minimum, three-eighths of an inch. The rectal end is graduated to an inch scale, so that the surgeon who applies the lever can at once learn whereabouts may be the end of the rod.*

I will end my first heading by enumerating what I maintain to be the salient advantages of rectal compression.

1. Most perfect control of the required artery.
2. Minimum amount of disturbance of the circulatory system.
3. Independence of the respiratory movements.
4. Its general and easy applicability; strictured rectum being the sole obstacle.
5. The pressure applied is so easy to maintain, and the assistant's body so well out of range of the operator that no hurry need perplex the one, nor anxiety the other.
6. Its application is quite safe in skilled hands, no injury having ever resulted, and but little pain having been suffered.
7. Cheapness and simplicity; illustrating a lever of the first order.
8. The success hitherto achieved by its employment.

Let us now consider the already ascertained experience of operating surgeons on the use of the lever in controlling bleeding during amputation at the hip-joint.

I have the record of ten cases in which the lever has been used: the total amount of blood lost during the ten operations has been under eighteen ounces, and there have been 80 per cent. of recoveries.

Here is a table, drawn up under my own observation, which summarises this new experience; the cases have occurred in the practice of Mr. Gould, Mr. Armstrong, Mr. Young, Mr. B. Wills Richardson, Mr. Cadge, Mr. George Cowell, Mr. Macnamara, Mr. Stokes, and myself.

tressing ascites. It would have been impossible to compress his aorta or his common iliac artery through the abdominal wall, by reason of the distension. This boy's recovery is pleasing, and the albumen in his urine is daily diminishing.

CASE 9.—Mr. Macnamara. This boy made a splendid recovery; and was sent to Eastbourne one month after the operation.

CASE 10.—Mr. Stokes of Dublin intends to publish his case *in extenso*.

August 22nd, 1879. I have this day received a note from Mr. W. Whitehead of Manchester, who states that he has used the lever with perfect success, and has forwarded his report thereon to the JOURNAL. (See page 693.)

It is worthy of remark that, out of these ten cases, nine are males, and eight occur in the right hip.

I was informed that Mr. Barwell had used the lever at Charing Cross Hospital; his House-Surgeon, Mr. Pattison, has furnished me with the following facts.

On May 8th, 1879, amputation at the left hip-joint was performed by Mr. Barwell at the Charing Cross Hospital.

"Boy, aged 7, the subject of morbus coxæ and previously excised left hip-joint. "Mr. Davy's lever was used, and was held by Mr. Cantlie. The child lost a quantity of blood during the operation; this being seemingly due to the fact that the lever compressed the common iliac vein as well as the artery, the blood lost being principally venous. After the operation, the boy recovered consciousness; but in about four hours' time was seized with a convulsion and died."

My only remark on this case is, that it must be impossible for the branches of the common iliac vein to bleed had the common iliac artery been effectually compressed.

In order that I might verify the hæmostatic value of the lever in amputations at the hip-joint, I performed the following experi-

Table of Cases of Amputation at the Hip-Joint.

No.	Sex.	Age.	Admission.	Year.	Surgeon.	Nature of Disease.	Operation.	Departure.	Result.	Ounces of Blood lost.
1	Boy	9	July 10th	1876	Mr. Davy Mr. Bond	Morbus coxæ. R.	January 16th, 1877	May 16th	Recovery	1½
2	Man	28	October 26th	1878	Mr. Gould Mr. Davy	Morbus coxæ. R. Excision previously	December 7th, 1878	December 11th	Death from thrombosis	3
3	Boy	12	February 2nd	1878	Mr. Armstrong Mr. Davy	Morbus coxæ. R. Excision previously, Dec. 17th, 1878	January 22nd, 1879	January 31st	Death from exhaustion; albuminuria	2½
4	Boy	9	January 12th	1879	Mr. Young Mr. H. Marsh	Morbus coxæ. R.	February 4th, 1879	May 29th	Recovery	1½
5	Girl	8	February 14th	1879	Mr. B. Wills Richardson (Dublin)	Morbus coxæ. L. Necrosis, acetabular and femoral	March 1st, 1879	June 10th	Recovery	2½
6	Man	21	April 12th	1879	Mr. Cadge (Norwich)	Osteo-sarcoma. R. Fracture of lower third femur	April 4th, 1879	June 9th	Recovery	2
7	Boy	7	November 29th	1878	Mr. Cowell Mr. Davy	Morbus coxæ. R.	June 17th, 1879	September 3rd	Recovery	¾
8	Boy	5	August 14th	1878	Mr. Davy	Morbus coxæ. R. Excision previously	July 16th, 1879	In hospital	Recovery	1
9	Boy	6	May 7th	1879	Mr. Macnamara Mr. Davy	Morbus coxæ. R.	August 8th, 1879	Eastbourne	Recovery	1
10	Man	43	August 29th	1879	Mr. Stokes (Dublin)	Caries. Left	October 1st, 1879	In Richmond Surgical Hospital	Recovery	1
									Total.....	16¾

CASE 1.—This has been duly reported in the BRITISH MEDICAL JOURNAL, May 18th, 1878, page 704.

CASE 2.—Mr. A. Pearce Gould. This case is reported in the BRITISH MEDICAL JOURNAL, May 10th, 1879, page 704; and will appear in the *Transactions* of the Clinical Society.

CASE 3.—Mr. Armstrong, Surgeon to the Royal Hospital School, Greenwich, intends to publish his case in detail. (See next page.)

CASE 4.—Mr. Young of Sevenoaks also intends publishing his case in full.

CASE 5.—Mr. B. Wills Richardson has reported his case in the *Medical Press and Circular*, April 9th, 1879.

CASE 6.—Mr. Cadge of Norwich wrote to me on June 9th, 1879, as follows: "I can scarcely think that any other plan than your lever will be used in future; I can see no drawback to its use, and the facility of its adaptability is equal to the certainty of its action, and in both these respects nothing better can be desired." Mr. Cadge's patient died on June 15th, 1879, of pulmonary sarcomatous deposits; but the stump had healed, with the exception of two sinuses.

CASE 7—Mr. George Cowell. This boy lost the smallest amount of blood ever recorded in an amputation of the hip; and the patient has made a rapid recovery.

CASE 8.—This boy had lardaceous disease of his viscera, with disments on the dead body. Having opened the aortic sheath, I inserted into the aorta a large pipe about one inch and a half above the bifurcation into the two common iliac arteries; and connected this pipe with a water-syringe, compressed by the hand of our Surgical Registrar, Mr. Forsbrook. I next amputated the right thigh at the hip-joint, and the water ran out freely in a *per saltum* spring. I then inserted the lever *per rectum*, compressed the right common iliac artery (Mr. Forsbrook still continuing his pumping), and immediately the flow of water ceased at all the cut ends of the vessels, and remained so as long as the compression was maintained. The longest time that I remember in which the lever was acting is twenty minutes—more than sufficient time for a careful operator to complete the details of a hip-joint amputation.

The lever that was used for the first time on the living body, and which was applied on the common iliac artery by my colleague Mr. Thomas Bond, has been presented to the Museum (Surgical Instrument Department) of the Royal College of Surgeons, London.

In conclusion, I commend this simple method of restraining hæmorrhage to the notice of operating surgeons as safe, reliable, and effectual; its future is by no means limited to amputations at the hip, but is applicable to all surgical procedure where it is desirable to check *pro tempore* the blood-current through the aorta or iliac arteries; and I trust that the wide field of practical surgery may yield instances of its varied utility.

* The instrument is manufactured by Messrs. Wright and Co., of 108, New Bond Street, W.

AMPUTATION OF THE RIGHT LOWER LIMB AFTER EXCISION OF THE HIP: USE OF DAVY'S LEVER.

By G. W. ARMSTRONG, M.R.C.S.Eng.
Surgeon to the Royal Hospital School, Greenwich.

RICHARD C., aged eleven years, a boy in this school, who had always been previously in good health, although of delicate appearance, came to the Infirmary on February 2nd, 1878, complaining of pain in the left ankle. There was some swelling about the joint, but no redness, nor much pain on moving it. He said he thought he had sprained it, but did not remember doing so. There was a slight graze on the right knee, which was healing and looked healthy. Fomentations were applied to the ankle.

On the next day, he had sharp feverish symptoms. His temperature was 104.4°; tongue white and furred. The case was judged to be one of acute rheumatism, and ten grains of salicine were ordered to be given every hour. On February 4th, the morning temperature was 101.3°, falling in the evening to 101°. The ankle was very red, and acutely painful. On the 5th, the left middle finger was very red and swollen; temperature at night 103°. On the 7th, he complained of pain in the right hip, thigh, and leg. On the 9th, the heart's action was tumultuous and irregular, and pain in the right ankle was complained of. The dose of salicine was increased to fifteen grains every hour, which was continued until the 12th, when, it being evident that pus had formed in the left ankle and in the metacarpo-phalangeal joint of the left middle finger, the salicine was discontinued and free incisions were made into these joints, a considerable amount of pus being evacuated. On February 16th, he had pain in the right heel and back of the right knee; he improved slightly, sleeping better, and having less pain, until the 23rd, when the right knee became painful, but the pain passed off. It returned on March 1st, and the joint swelled and became full of fluid. On March 3rd, redness and swelling were noticed below the left internal malleolus. On the 6th, an abscess, which had formed without pain just above the left elbow-joint, was opened. On the 10th, an abscess behind the left ankle-joint was opened. On March 18th, the right knee was freely incised on the inner side, and a good deal of pus let out. On the 26th, he was placed on a water-bed, there being a sore on the lower part of the sacrum; and, although great care was taken, others formed over the spines of the dorsal vertebra. On April 7th, there were petechiæ on the left arm. An abscess, which had formed about the right hip-joint, was opened, the incision being over the great trochanter; six ounces of pus were evacuated. On the 11th, an opening was made on the outer side of the right thigh, three inches above the knee. There was free discharge from all the openings in the right limb. On April 25th, a bed-sore formed on the right ankle. He was very weak and exhausted, but took nourishment and wine well.

From this date he gained somewhat in strength, and the abscesses on the left side healed; the sores on the back became cleaner, but did not heal; the discharge from the right thigh and hip were very great, and until December he continued in this state, when Mr. Johnson Smith of the Seamen's Hospital and Mr. Pink saw him, in consultation with me. The right knee was ankylosed; and, no bare bone being felt in the shaft of the femur, it was determined to try if excision of the hip would preserve the limb. Accordingly, on December 17th, Mr. Johnson Smith, Mr. Pink, and Mr. Purvis kindly assisting, Dr. Williams administered chloroform, and I made an incision about six inches long over the great trochanter, and through this removed the head and both trochanters of the femur, and gouged away the whole of the acetabulum. Some strips of lint were placed in the wound, and its edges were brought together by sutures. The limb was laid between sand-bags, and a bag, containing six pounds of shot, was attached to the leg by strips of plaster, and hung over the end of the bed to extend the limb. He slept well after the operation, under the influence of two doses of fifteen minims each of tincture of opium.

December 20th. He was put under the influence of chloroform, and the sheets were changed and the back dressed, etc. There was very great discharge of pus from the wound at the hip, and also from the inner side of the thigh. This method of dressing, under chloroform, was repeated every two days until January 21st, 1879, on which day he was so weak that it was not deemed safe to administer chloroform. Mr. Johnson Smith and Mr. Pink saw him with me on this day; and we determined that, if he were stronger on the morrow, we would amputate the limb.

On January 22nd, kindly assisted by Mr. R. Davy of the Westminster Hospital, Mr. Johnson Smith, Mr. Pink, and Mr. Bampton, the boy was anæsthetised by Dr. Williams. Mr. Davy controlled the hæmorrhage by his peculiar method. He introduced a wooden staff, about two feet in length and three-fourths of an inch in diameter, having a bulbous extremity, into the rectum, for a distance of nine inches; and then, using the anus as a fulcrum, compressed the common iliac artery against the pelvis. I removed the limb by antero-posterior flaps, commencing in the wound made for the excision. Fifteen ligatures were applied; and so completely did Mr. Davy's instrument prevent hæmorrhage, in both anterior and posterior flaps, that we were obliged to ask him to relax his pressure in order to discover the bleeding points. The total quantity of blood lost was measured, and was only three ounces, this being mixed with pus. The acetabulum and pelvis were examined, but no bare bone could be felt. The flaps were brought together with silk sutures.

The patient was greatly exhausted after the operation, and was almost pulseless. Brandy being freely administered, he gradually rallied, and, after a dose of fifteen minims of tincture of opium, he slept for a time.

On the 23rd, he had passed a fair night, taking nourishment freely. There was a considerable discharge of serum from the outer part of the wound. On the 24th, there was much serous discharge. He was carefully lifted; the stump and back were sponged, and simple ointment on lint applied to both, and the sheets, etc., were changed. On January 25th, the purulent discharge was offensive and copious; the scrotum and left thigh were œdematous. He was dressed as yesterday. On the 26th, the stump looked rather better; tongue moist. At his own wish, he tried to eat part of a mutton-chop, which caused vomiting and slight oozing of blood from the wound. The vomiting exhausted him very much, and at night he was very weak. The voice was hoarse, and he could not clear the larynx by coughing. On the 27th, his bowels were relaxed, to check which small doses of tincture of opium were administered, and a teaspoonful of Brand's essence of beef was given every hour. On the 28th, he took the essence well; the purging was stopped. He slept fairly. There was a free discharge of pus from the stump. On the 29th, he was very weak. The side was excoriated by the discharge which ran under him. He was ordered to have as much port-wine as he could take. On the 30th, the œdema of the left limb and scrotum had increased and was extending over the abdomen. He passed very little urine. On the 31st, the pulse was hardly perceptible. There was a glazed swelling over the left groin, with slight blush. He sank gradually, and died at 5 P.M.

February 2nd. I was allowed to open the abdomen, but, the father wishing to be present, I could only make a very partial examination. The peritoneum lining the cavity of the pelvis appeared healthy, and no pus or slough appeared on incising this membrane in several places. I examined the course of the right common iliac for any sign of pressure exercised whilst controlling the hæmorrhage at the operation, but could see none; nor was any cause discovered by me, in the necessarily imperfect examination, for the œdema of the left limb. The shaft of the removed femur was atrophied, but in other respects healthy and covered by periosteum, save over a small portion, about two inches in extent, of the posterior surface, near the upper and truncated extremity of the bone.

ON THE CAUSE OF EVERSION OF THE LIMB AFTER FRACTURE OF THE NECK OF THE FEMUR.*

By EDMUND OWEN, F.R.C.S.,
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FROM the time when this subject was first touched by the great master, Astley Cooper, surgical writers have, for the most part, been content to adopt the explanation which he gave. These were Cooper's words:† "This state (eversion) depends upon the numerous and strong external rotatory muscles, to which very feeble antagonists are provided." So far as I am aware, no experiments had ever been instituted with the view of determining the relative strength of the muscles which rotate the thigh inwards and outwards, and it is not improbable that Cooper himself based his statement on *à priori* grounds; nevertheless, his dictum has remained an excellent working hypothesis, though its truth has been but little questioned, and still less challenged.

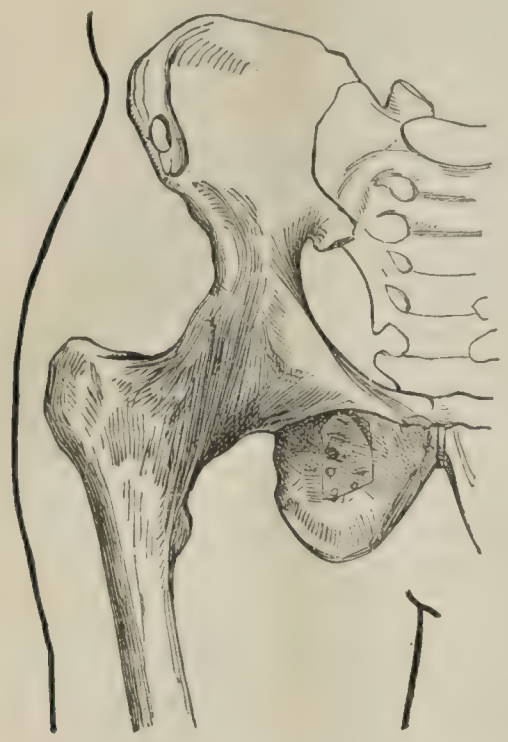
It will be my object to-day to show that the eversion is due solely to the force of gravity; that when the neck of the femur is broken, the limb "tumbles" on to its outer side. I shall affirm that the muscles of external rotation, though greatly superior in number, are inferior in

* Read in the Section of Surgery at the Annual Meeting of the British Medical Association in Cork, August 1879.

† *Treatise on Dislocations and Fractures of the Joints.* Edit. vii, p. 82.

strength to those of inversion; and I shall also call special attention to the fact that, when the femur is broken below the level of the attachments of the numerous small external rotators, eversion of the limb is still the characteristic feature of the lesion.

The muscles of internal rotation are the anterior two-thirds of the glutæus medius, with the tensor fasciæ femoris and the chief part of the glutæus minimus. The anterior part of the glutæus medius has but a



DIAGM A.

scanty origin from the dorsum of the ilium, but it takes a strong attachment from the deep surface of the fascia lata. That there is in these few muscles an immense mass of fibres for effecting inward rotation, an observer can readily assure himself by grasping with the finger and

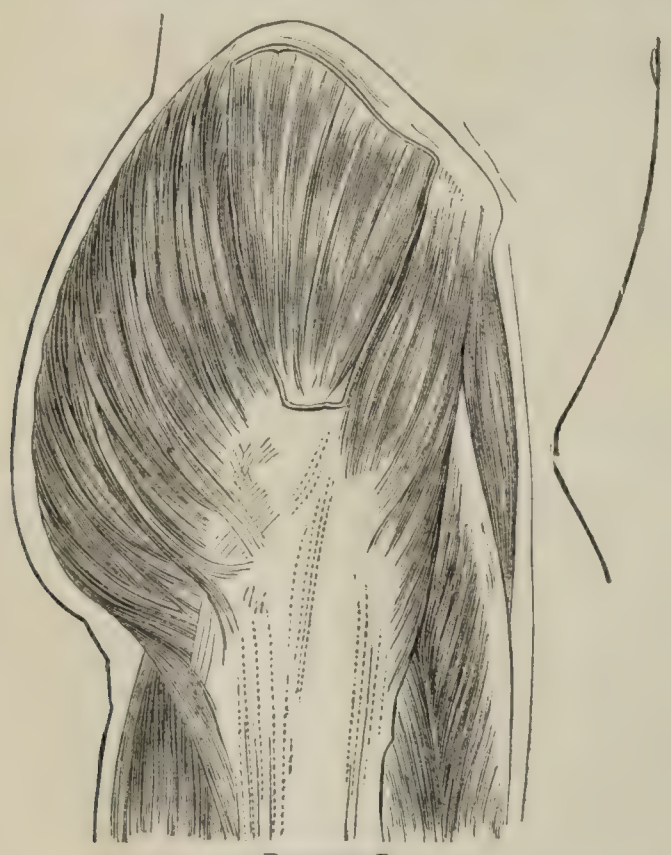


DIAGRAM B.

thumb the firm tissue which bellies up between the front of the iliac crest and the great trochanter when he rotates the limb inwards. The depth of the space which is occupied by this mass of fibres is shown in diagram A; the surface and the direction of some of the fibres are shown in B. The diagrams themselves are drawn to scale from Professor Marshall's *Anatomy for Artists*. But if eversion were due to the superior strength of certain muscles, how is it that after fracture of the patella the leg is not found firmly flexed upon the thigh, for the flexors of the leg are then free of all opposition? But opposed sets of muscles are not arranged in active physical antagonism, as if struggling in a perpetual "tug of war". Were this the case, the foot would be doubled upon the front of the leg when the tendon of Achilles is ruptured; and when the wrist-extensors are paralysed in lead-poisoning, the hand would be so firmly bent upon the forearm, that the term "drop-wrist" would but feebly express the abnormal state. Now, these conditions do not obtain; and we have no right to assume that the external rotators of the thigh would act the part which has been generally ascribed to them after the neck of the femur has been broken. That the *elasticity* of the muscles, skin, fascia, vessels, and nerves does much in producing shortening and other deformity after fracture, I am prepared to admit; but I apprehend that we are in the habit of attributing too much influence to the special muscular contraction. Is it the experience of the surgeon that after an amputation, say of the thigh, the divided muscles have retracted so that they have hidden their ends beneath the long-cut skin? Does he not rather find the skin-flaps disappearing? Does he not trim off tendons which would otherwise hang from between the flaps? When the effects of an anæsthetic have passed off, the ends of divided muscles will quiver on being irritated, but they will not coil into energetic contraction. But supposing the small external rotators did try to roll the limb outwards after fracture of the neck of the femur, they could exert but little influence, as the great trochanter has fallen backwards and inwards towards the great sacro-sciatic notch. This condition would, however, offer improved opportunities to the muscles of inversion. It may be remarked that the special adductors are also concerned in everting the limb; then, I would ask, why do not those muscles rather draw the broken limb across the opposite thigh, and so evince their claim to their name? But the special muscular contraction plays no part in the programme. I think that it will be granted that eversion of the limb is an immediate effect of the fracture, that the eversion is to its full extent, and that the shortening of the limb is often the work of time. And if this be granted, we must seek different causes for the eversion and shortening; and so it is. The eversion is due to the action of gravity; the shortening to the elastic recoil of the skin, fascia, muscles, and other tissues.

Some time since, I had under my care an aged female, who, three months previously, had sustained an intracapsular fracture, for the repair of which nature seemed to have made no effort. As she lay in bed, the affected limb (which was considerably shortened) rested perpetually upon the whole length of its outer side; but on my instructing her, she inverted it until the foot was at right angles to the surface of the bed. She was, however, unable to keep the limb long in this position, on account of the great expenditure of muscular force necessitated, which gave her the sensation of a "cramping" in the anterior gluteal region. In this case, the characteristic and persistent eversion of the limb could not have been due to a superior force in the muscles of external rotation, or, without assistance, the patient would have been unable to roll the limb inwards, even for a moment. In my opinion, the report of these facts has considerable bearing upon the explanation of the eversion after fracture.

One can readily understand how, shortly after the receipt of an injury, the pathological condition of the parts about the seat of fracture will preclude the practicability of the patient inverting the limb, for the least disturbance of the parts distresses. But I apprehend that, could we meet with a patient just after fracturing the neck of his femur, and could we by any means induce him to take sufficient personal interest in the experiment to command contraction of the muscles of internal rotation, the limb would be found obedient to their influence. But occasionally the limb is found inverted after fracture of the neck of the femur. How can the external rotators have allowed so unorthodox a proceeding? True, Hamilton saw but one such instance; and he states that in sixty cases of fracture of the neck of the femur, Cloquet did not find one such. Hamilton also remarks that Boyer never saw the limb inverted after the fracture. With commendable consistency, Guthrie tried to explain the abnormal position of the limb in such cases as the result of muscular action. Inversion, he was of opinion, would follow on a fracture which was so situated as to leave the small external rotators acting upon the upper fragment, whilst the two smaller gluteal muscles exerted their influence on the shaft of the bone. To this ingenious hypothesis, R. W. Smith rightly took exception, because Guthrie had left out of his calculations the psoas, the iliacus, the pectineus, and the adductors. Dupuytren considered that, if the line of fracture were so placed as to leave the shaft fragment of the neck behind the acetabular piece, there would be inversion of the limb. And, strange to say, the

great practical experience of R. W. Smith led him to hold the exactly opposite opinion. But Smith left the matter with this suggestive remark: "The question is still open to investigation." For my own part, I would submit that these rare cases of inversion are not to be explained by any theory of muscular action. Indeed, Smith appears to me to have exploded that hypothesis by showing that when the deformity has been removed and the limb restored to its natural length by extension, as soon as the extending force ceases to act, though the limb is again shortened, the foot will be found to remain everted. Nor need we attempt to arbitrate between Dupuytren and Smith in their antagonistic theories concerning the relative position of the acetabular and crural fragments as explaining the rare inversion; for there is a much simpler solution of the problem. It is this: If the external violence which broke the neck of the bone did its work when the limb was inverted, inversion may persist. Inspection of Smith's six cases of inversion goes far towards proving the correctness of this theory. Comminution or impaction is described as having obtained in five out of the six instances. The egg will not stand upon the table; but rap its end down upon the smooth surface with enough violence to fracture and cause some comminution of the shell, and a condition of stable equilibrium is at once obtained.

But to return to the question of the cause of the eversion of the limb: Diagram C represents an apparatus by means of which I have been

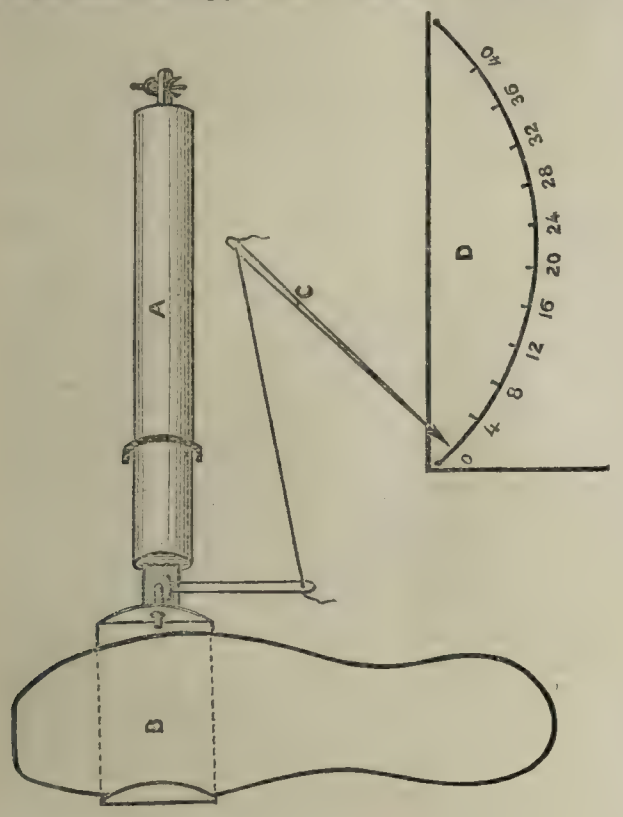


Diagram C.

enabled to test the relative power of the muscles of external and internal rotation of the thigh, and with this result, that the muscles of internal rotation are considerably stronger than their opponents. A is a strong spring balance, which is connected with a flanged foot-plate B. The balance is fixed upon a board twenty inches by fifteen, and the board is secured against the wall and rests upon the floor. For experimentation, the man lies supine, and with his heel upon the floor, the sole of the boot is lodged within the foot-plate. Now, keeping the knee straight, he to his utmost inverts or everts the thigh, as the case may be, and the central rod of the balance is drawn out, the pounds' force being registered upon a dial D by means of an indicator C, which is connected with the rod of the balance by a slender cord of silk. With the board in this position, inversion of the right limb and eversion of the left could be tested; and to try eversion of the right and inversion of the left, the board would have to be turned upside down. I repeat that I find in this way that the muscles of inversion are stronger than those of eversion. The centre of gravity of the lower limb lies far to the outer side of a straight line running from the centre of the hip-joint to the middle of the heel. Moreover, when a man is lying supine upon a firm and flat surface, the weight of the limb is transmitted to that surface by the back of the pelvis, by the calf, and by the heel; the back of the thigh does not rest upon the plane of support, because the femur arches boldly forwards in its course from the hip to the knee-joint. So, in the supine subject, the centre of gravity of the thigh is elevated, as well as being to the outer side of the theoretical axis of the limb. During sleep, the centre of gravity assumes the lowest possible convenient position by eversion of the limb. Then the front of the capsular ligament becomes tense and sets all muscles at rest. If the thigh be now somewhat flexed, so as to temporarily slacken the ligament, further eversion is permitted; and if in the mortuary the ligament be divided, still further eversion is obtainable. Moreover, if the neck of the femur be divided inside the capsule by means of a chisel, eversion to its full and characteristic extent is insured. For then the weight of the limb can no longer be received from the head of the femur and transmitted by the pelvis. The limb sinks and rolls outwards in search of stable equilibrium. But granting, for the sake of argument, that the eversion of the limb after fracture of the neck of the femur is due to the action of the pyriformis and company, how are we to explain the outward rolling of the limb which is so characteristic a feature of fracture of the shaft of the femur? "Rotation outwards of the lower fragment", says Mr. Bryant, "is found in nearly every case."

In different British and foreign museums, I have examined and taken notes of one hundred and fifty-two specimens of union after fracture of the femur below the lesser trochanter. Some of the bones have been picked up in graveyards, some had been removed from mortuaries. Some of the patients had been treated, I suppose, *secundum artem*, and many, if we may be allowed to judge from results, had not. Of these bones, only fourteen showed inversion of the lower fragment. In some of these cases, the inversion was but slight; and in most of them the malposition, comminution, and much new osseous cement were noticeable. Of the other preparations, about 50 per cent. showed eversion of the lower fragment, whilst 50 per cent. were femora united with neither inversion nor eversion. Those fourteen exceptional specimens were instances, I take it, of the violence which caused the fracture leaving the limb pounded in a state of secure inversion. So the broken ends of the bone had remained crossed or interlocked, or imbedded in the surrounding and retentive tissues. To attempt to account for the eversion of the limb after the neck or shaft of the thigh-bone has been broken, by the hypothesis of muscular contraction, is to wander from substantial reality to shadowy theorising.

And as an ending to this imperfect paper, I will ask this pertinent question: When administering an anæsthetic for the painless dealing with a broken neck of the femur, has ever a surgeon observed the everted limb to take up of itself a position of inversion or even to right itself?

ON EVERSION IN FRACTURE OF THE NECK OF THE FEMUR, ETC.

By RUSHTON PARKER, M.B., B.S., F.R.C.S.,
Lecturer on Surgery in the School of Medicine; and Assistant-Surgeon to the Royal Infirmary, Liverpool.

Now that this discussion has been reopened, it may be as well to finish it while it is fresh in the memory. With Mr. Edmund Owen, I perfectly agree, that the eversion of the lower limb in sleep, death, paralysis, and fractured femur, is equally due to the unresisted rolling outwards of the limb, owing to the suspension of the ordinary muscular functions. We are strengthened by the testimony of Professor Spence, in the form of an ancient conviction, and by that of Mr. Cooper Forster in his recent conversion. To me, this was once for all fully proved by a friend, when we were resident colleagues in University College Hospital ten years ago. The fact cannot, I think, be disputed, is probably widely known, and should be recollected in differential diagnosis; though, as Mr. Spence truly says, it needs no profound vindication. Eversion is present in most fractures of the pelvis no less than of the femur, including the neck, and is due in all to the natural falling outwards of the uncontrollable limb, provided the fracture of the neck be unimpacted.

But what is the cause of eversion in impacted fracture of the neck of the femur? This is a point of some interest, because inseparable from a complete discussion, though unnoticed by all the gentlemen who have shared in it, including Mr. Davies-Colley; but one which has been clearly expounded by Bigelow.

Impacted fracture of the neck he has clearly shown to be everted owing to impaction of the posterior wall only, with a mere bending of the anterior wall, or at any rate its non-displacement if actually broken; due to the greater strength of the anterior wall, as anyone may see on examining these fractures in dissection, and on preparing sections of the femur according to Bigelow's directions and engravings.

The rare occurrence of inversion in these fractures he equally clearly explains as due to a greater force, sufficient to overcome and impact the anterior wall as well as, and more than, the posterior (The Hip, pp. 118-138).

The notion of muscular contraction having anything to do with impacted fracture of any part of the neck is obviously untenable; and the shape, direction, and deformity in the unimpacted fractures are perfectly explicable without it. We never need to take it into account in any fractures except those obviously due to no other cause, such as cross-break of the patella, or olecranon. For instance, the notion of muscular action in Colles' fracture has been conclusively disposed of by Gordon, in his admirable exposition of the cross-breaking action at the lower end of the radius, due to over-extension of the wrist restrained by the inextensible flexor tendons until the bone itself gives way; and I made a perfect Colles' fracture at a first attempt on the dead body on following Gordon's directions (Fractures of Radius and Clavicle, etc., 1875).

I quite agree, then, with Mr. Owen, that "muscular action has nothing to do with it", and think the fact that this is so in impacted fracture of the femoral neck helps to justify the notion, which to many is self-evident, that in unimpacted cases it is equally true. I do not think, however, that it is worth arguing about to any elaborate extent with those who do not admit it.

But a word with Mr. Davies-Colley on another matter. In fracture of the neck, shortening is by no means a necessity, as I have had several good opportunities of knowing, either in impacted or in unimpacted fracture. On this point, Bigelow says, "This fracture" (impacted, of neck) "is characterised by shortening and eversion of the limb, sometimes so inconsiderable that we are obliged to accept a diagnosis based upon an almost imperceptible eversion, and a shortening of half an inch or less, by careful measurement".

When I say shortening, I mean "recognisable shortening", whether by careful measurement, or, what I think better, by squaring the anterior iliac spines with the middle line of the trunk, and placing symmetrically the axes of the lower limbs, whether parallel or not. The shortening can then be made out at a glance. So persistently do surgeons expect to find obvious shortening, that I have known the diagnosis suspended, I had almost said declined, for several days, in an unmistakable case, by two men of great experience and undoubted ability.

The diagnosis is really very easy to the surgically minded, especially after a little experience, and most particularly after having failed to recognise the fracture in even a single case. This injury is a very common one, not only in elderly people, but during and before middle life. But to put the exact method of diagnosis into words is hardly more easy than useful, further than to say that, in immediate disablement through a fall on the trochanter, it may be always suspected and generally found. The snapping-off of the head by indirect violence, such as turning in bed, I equally include among those easily diagnosed.

The most important item of all is the treatment, for which Thomas's hip-joint splint is the splint *par excellence;* and the bed must be soft. In firmly impacted fracture, the cure is painless, or nearly so; but the bed must be soft (this must be insisted on). In unimpacted fracture, with shortening, extension should be added, and the shortening will be reduced, and even abolished.

When practicable (which it seldom is), the splint should be put on before moving the patient from the place where he falls; as, in the act of transportation, a limb previously without shortening may be shortened. In fracture near the head, this splint is particularly important (the so-called intracapsular, the separate recognition of which, and its distinction from, so-called extracapsular, I accept Bigelow's opinion in considering an unprofitable attempt at useless refinement). In a few weeks, the patient can get up on crutches, wearing the splint, with a high boot or clog on the sound foot; the supposed inevitable non-union in fracture near the head being prevented, or having the best chance of being prevented.

If non-union should nevertheless occur, a modification of Thomas's knee-splint, as an ischiatic crutch with a single stem, will enable the patient to get about on his lower limbs, without the help of his arms. (See *Hip, Knee, and Ankle*, by H. D. Thomas. 1878.)

SURGICAL MEMORANDA.

THE TREATMENT OF SPINAL CURVATURE BY THE PLASTER-OF-PARIS JACKET.

After an extensive trial of this method of treating spine-disease, I am inclined to regard it as one of the most important additions that have been made to surgical therapeutics for many years. It is not to be wondered at that there are a few who object both to the principle as well as the practice. Dr. Ormsby's experience, however, cannot be an unusual one, for he says (Journal, October 11th) "those attempting to cure spinal curvature by this treatment must be ready to expect serious and at times alarming consequences, besides numerous disappointments". No doubt, there will be some disappointments; but, as to the "serious and alarming consequences" to which he alludes, I am bound to say that I cannot imagine what they can be. I have a large number of children at the hospital undergoing this plan of treatment—cases of lateral and of angular curvature, as well as general debility, where the spine seems to be weak and yielding. There is one point on which I join issue with Professor Sayre's teaching. I heard his demonstrations at Cork, and have read his remarks at Amsterdam. In applying the jacket, he advocates the use of an under-vest that fits like the skin; and, when the plaster bandages are being applied, he recommends that they shall be well rubbed in and made to fit into the intercostal spaces and all other irregularities in the chest-wall. In this I cannot agree with him. Even if during the extension and while the chest is fully expanded the jacket fit into all these inequalities, after extension has been left off, it must become comparatively loose. I quite agree that the jacket must be accurately moulded to the fixed points, and that it should not fit loosely anywhere; but I think that any attempt to make it fit like a glove would be unphysiological, and that it would lead to "alarming consequences". Unfortunately for the subjects of spine-disease, the chest has movable walls; but undue interference with these movements, such as would result from encasing it within an unyielding plaster-jacket, that fits well into all the intercostal spaces, would add rather than otherwise to the patient's discomfort. I have been greatly pleased with the result of this mode of treatment; and my success has been considerable, though I have not carried out Professor Sayre's instructions in the particular point just alluded to.

Robert William Parker, M.R.C.S.,
Assistant-Surgeon East London Hospital for Children, etc.

AN UNUSUAL CAUSE OF TYMPANIC ABSCESS.

Tympanic abscess with rupture of the membrane so frequently occurs at all ages, without any pain or antecedent symptoms, and without any discoverable cause, that any agency or exciting influence bearing on the subject is worthy of note, as by increased knowledge such accidents may possibly be diminished in the future. I therefore draw attention to the following case, as I have met with no similar history amongst numerous instances of abscess and perforation coming under my notice.

A gentleman about seventy years of age consulted me recently, concerning a discharge from one ear and deafness on that side. He stated that, a month previously, he had been seized with a violent attack of epistaxis. The nares were plugged at first anteriorly; but, this proving insufficient, the posterior nares were also plugged. The posterior plug, however, only remained *in situ* twenty-four hours, and then he discovered that he was totally deaf on the right side. He suffered no pain in the ear; but in three weeks a copious discharge suddenly commenced. On examination, a watch, which he could hear at a distance of six inches from the left ear, was only audible on close contact with the right side, where a perforation was discovered, through which pulsation could be observed in the tympanum, accompanied by tinnitus. A week afterwards, he also a sharp attack of inflammation of the meatus, which yielded to treatment in a few days.

As to the causation of this accident, it may be explained in several ways. At the time when the epistaxis occurred, an effusion of blood may have simultaneously taken place in the tympanum; but I incline to the belief that the abscess was due either to blood being forced into the Eustachian tube or tympanum, or, more probably, that the orifice of the Eustachian tube and adjacent parts were bruised by the manipulation of the plug; and that mischief in the tympanum was set up sympathetically, which would certainly, in many respects, be an interesting pathological fact to aurists, as having a direct bearing upon the question of operations in the postnasal region. Finally, I may remark that, in cases of otorrhœa and perforation, many surgeons would be surprised to find, on inquiry, how rarely any history can be obtained, except when scarlet fever or measles is the known agent.

Llewelyn Thomas, M.D., Surgeon Central Throat and Ear Hospital; Honorary Aurist Jewish Deaf and Dumb School.

UNREDUCED DISLOCATION OF THE THIGH INTO THE FORAMEN OVALE.

William Henry R., aged 1¾ years, was brought to the Lynn Hospital on August 23rd, as the mother said, because the child had lost the use of his left leg. No satisfactory history could be obtained as to how the accident occurred. Until August 1878, the child was quite well and walked about. On returning from school one day in August of last year, the mother noticed that the left leg appeared to hang loose, and the child complained of pain and inability to get about. She did

not notice any lengthening. No history could be got of any accident while at school.

The child cried a good deal for a few nights, and then he began to get about by holding on to chairs, etc. The leg appeared to drag, and the foot was everted. Nothing was done for the child at the time, as it was supposed by the parents to be a sprain.

Rather more than a year afterwards, the child has come under notice here. Examination shows lengthening of the left leg by fully one inch. A round globular hard swelling can be detected anteriorly in the foramen ovale; the hip is slightly flattened. When the child stands, the limb is flexed and the toes everted. Motion of the left leg is free, especially external rotation and flexion. The child cries a good deal when any motion is attempted, and cannot stand alone. The position of the head of the bone and the marked lengthening of the left limb clearly point to a dislocation downwards and forwards. From the length of time since the first sudden appearance of the symptoms, and from the present freedom of motion, as made out by manipulation, it seems evident that the bone has made a false joint in its new position, and forcible reduction seems to be out of the question.

The child was seen by Dr. Dale, Mr. Wilson, and Mr. Plowright, and their opinion was that the case was one of dislocation into the obturator foramen.

No apparent cause can be given for the dislocation in this case. The causes producing this dislocation are stated by Dr. F. H. Hamilton, in his book on *Fractures and Dislocations*, to be as follow. 1. The limb must be, at the moment of the receipt of the injury, in the position of abduction; and 2. It is probably most often occasioned by the fall of a heavy weight upon the back of the pelvis when the body is bent and the thighs spread asunder. There is no history of either cause having produced the dislocation in the case now recorded.

ARTHUR G. BLOMFIELD, M.B., M.R.C.S., House-Surgeon,
West Norfolk and Lynn Hospital.

OBSTETRIC MEMORANDA.

EPIDERMIC DESQUAMATION OF THE FŒTUS.

IN the BRITISH MEDICAL JOURNAL for October 18th, 1879, p. 624, a conclusion of Dr. Delore of Lyons is stated, that "the epidermic desquamation of the fœtus is an incontestable proof of death in the uterine cavity". It seems to me that the following case, copied *verbatim* from my note-book, scarcely justifies his conclusion.

Mrs. S., aged 30, expected her first confinement in October 1877; but natural labour only commenced on New Year's Day 1878, and was completed in twelve hours. The placenta was small and ragged; so rotten that the funis was torn in extraction; and handling it was extremely unpleasant. The child, a lusty male, had to be washed with great care, as its epidermis loosened and separated in flakes on the towel, leaving large raw surfaces of cutis exposed. The child, appearing little inconvenienced thereby, lived and grew well.

ALAN REEVE MANBY, M.R.C.S., East Rudham, Swaffham.

NITRITE OF AMYL IN UTERINE HÆMORRHAGE.

IN the *Allg. Med. Central-Zeitung*, No. 1, 1879, quoted in the JOURNAL of February 1st, 1879, Dr. Koehler states that he has for the last seven years, in cases of uterine hæmorrhage, applied warm fomentations to the head, to prevent anæmia of the brain and also of the heart. By this means, Dr. Koehler states that he has saved patients in the most dangerous cases of hæmorrhage. Of the success of this method of treatment I can myself speak with confidence, and the *rationale* of it I take to be the rapid dilatation of the cerebral vessels; and, if so, have we not in nitrite of amyl a more rapidly acting and more powerful agent to produce a similar result? This idea occurred to me a few nights ago, when attending a case of rather severe *post partum* hæmorrhage; and, happening to have some of the drug with me, I at once put my theory in practice by administering five minims by means of a Skinner's inhaler, and, I am happy to say, with immediate and most satisfactory results. The hæmorrhage ceased at once and permanently, and the patient was restored from a state of collapse. Indeed, in this latter respect, its effect was only comparable to that of the hypodermic injection of ether. I have not been able to find any notice of nitrite of amyl having been heretofore used with the above views; and, of course, a single case is hardly sufficient datum upon which to claim much; but I hope to be able to give the medicine a more extended trial, and shall be glad to publish the results.

ELIAS W. KERR, M.B. Trin. Coll. Dub., Bundoran, Ireland.

CLINICAL MEMORANDA.

INTESTINAL OBSTRUCTION.

AT a time when much attention is being directed to intestinal obstruction, its causation and treatment, perhaps it may not be out of place to give a *résumé* of a case of this kind which came under my observation some years ago.

The patient was a female about thirty years of age, who was admitted into the Perth Infirmary with symptoms of acute intestinal obstruction. She had been ill for nine days before admission; and the ordinary routine medical treatment had been expended to no purpose. The belly was much distended and tympanitic, and the contour of the intestines was visible through the abdominal walls. Vomiting was stercoraceous; pulse quick and feeble; the face anxious; and restlessness great. It was quite clear that something must be attempted for her relief, and I performed Nélaton's operation, opening into the ileum two inches above Poupart's ligament on the right side. The intestine was carefully secured to the wound by double transfixion with wire-sutures, the peritoneum being included. A considerable quantity of fæcal matter and flatus escaped by the artificial anus; and, in twenty-four hours, the abdomen had quite fallen, the vomiting and pain had ceased, and a condition of agony had been converted into one of calm and rest. The prognosis became more hopeful still when, next day, there was a motion *per vias naturales*. This condition continued for four days longer, when suddenly symptoms of collapse ensued, and life quietly terminated.

Post mortem Examination.—When the abdomen was opened, not a trace of recent peritonitis could be discovered, and the bowel at the artificial opening was safely secured by adhesive inflammation. The cause of death was found to be a falciform band, which had obstructed the ileum below the artificial anus, cut into its substance, and produced inflammatory gangrene of the gut.

Had the true nature of this case been discovered in time, and abdominal section performed, a single touch of the bistoury would in all probability have saved the life of the patient.

I must confess that my sympathies are strongly in favour of those who are at present striving to give abdominal section its true place in surgery. I believe the dangers of the operation have been much exaggerated, and that liberties can be used in the circumstances which would be fatal if accidentally inflicted.

It is quite true that we may perform abdominal section for a condition of parts very different from what we anticipated—*e.g.*, suppurative peritonitis—and in which the operation can be of no service; but, as the generality of such cases depend on bands, volutions, or intussusceptions, we must run the risk of an occasional unsuitable case; all the more so as our profession is not one in which we are often in circumstances to choose an unmixed optimism.

J. P. BRAMWELL, M.D., Surgeon to the Infirmary, Perth.

THERAPEUTIC MEMORANDA.

THYMOL AND OTHER ANTISEPTICS IN OZÆNA, ETC.

I AM not surprised to find, by a letter from a correspondent in the JOURNAL of October 18th, that practitioners are seeking for an antiseptic which shall act as an efficient substitute for carbolic acid; and the fact that two cases of carbolic acid poisoning are reported in the same number is a sufficient proof that the demand is only reasonable, especially for those diseases in which the remedy is to be used in such a way that a portion must almost of necessity be swallowed. I have, indeed, for a very long time abstained from prescribing carbolic acid as a gargle or nasal douche; not only, however, on account of its danger, but also because of its taste and odour, which are to many persons most objectionable. Permanganate of potash, also, though to be highly recommended on account of efficacy and price, has the disadvantage of staining the skin, as well as all linen with which it comes into contact. This objection does not apply with the same force to Condy's ozonised sea-salt, which is, I believe, simply a mixture of more or less purified common salt with the permanganate; and, in the proportion of a teaspoonful to a tumbler of warm water, it serves very well the double purpose of mild antiseptic and of increasing the specific gravity of the irritating fluid used with the ordinary anterior nasal douche. In cases of actual ulceration with necrosis of the nasal passages, however, something stronger is required; and, in the early part of this year, Mr. Martindale, of 10, New Cavendish Street, took great trouble in preparing for me some solutions of thymol, salicylic acid, etc., on which we jointly experimented.

Commencing with a solution of thymol (five grains in twelve fluid ounces of water, with a little glycerine and rectified spirit—that is, about

1 in 1,000, the proportion of Volkmann's solution), we found that it was necessary to dilute it to one-fourth of this strength before it could be borne as a nasal douche, and that even then the smarting produced was of a much more stinging character and of much longer duration than that caused by any other remedy in ordinary use and similarly applied. As a gargle, also, even when the mucous membrane was normal, it produced quite an irritant effect. On this account, therefore, we rejected it from further consideration.

We then tried salicylic acid in the following form: Salicylic acid, 2 drachms; rectified spirit, 10 drachms. One fluid-drachm of this solution (representing 10 grains of the acid) to half a pint of tepid water—in other words, about 1 in 500—made an agreeable non-irritating and efficient gargle or nasal douche for use with the postnasal syringe, but did not serve with the ordinary anterior douche, because the specific gravity of the fluid was not sufficiently great. We therefore tried the following: Borax, 3 drachms; salicylic acid, 2 drachms; glycerine, 2½ ounces; water to 3 ounces. One or two drachms of this mixture to the half-pint of water, at 95° Fahr., acted quite efficiently, whether used with anterior or postnasal douche, or as a gargle; and this form has now been used by me for many months. It has the advantage over and above its antiseptic qualities of being not only non-irritating, nor obnoxious in taste, but, on the contrary, of being even emollient, and of agreeable flavour.

These remedies of which I have been speaking are of especial value in the cases of ulceration, which, when occurring in the nostrils, is now by general agreement considered to be always due to syphilis. But there are many cases in which the ozæna arises from catarrhal inspissation, retention, and consequent putrefaction of the normal secretion. For such, a solution of chloride of ammonium and borax, about ten grains of each to the half-pint of warm water, acts admirably in clearing away the offensive accumulation, and in restoring the mucous membrane to healthy secretion.

In all cases of ozæna, of whatever kind, it is important to keep the passages as moist as possible, so as to prevent reincrustation between the periods of using the douche; and, for this purpose, the interior of the nostrils should be well anointed with vaseline, containing about five grains of iodoform to the ounce. It is further necessary in many cases to prescribe lozenges for the purpose of deodorising the expired breath. The compressed lozenges of Wyeth, containing chlorate of potash, and chlorate of potash and borax, are now well known and approved by the profession; but it may not be generally known that Mr. Cooper of Oxford Street has made some antiseptic effervescing lozenges containing thymol and salicylic acid, one-tenth of a grain of the active ingredient in each variety. Some of my patients who have tried them have reported most favourably on their utility.

I would say one word on the fluid called sanitas, which owes its remedial properties to the camphoric acid and the peroxide of hydrogen it is stated to contain. I am fully aware that many practical chemists speak sceptically both of its constitution and of its therapeutic value; but I feel justified in stating, as the result of a long and extensive experience, that, both as an antiseptic and as a disinfectant, I hold it in very high estimation.

LENNOX BROWNE, F.R.C.S.Ed., Senior Surgeon
to Central London Throat and Ear Hospital, etc.

CENTRAL LONDON.—Dr. S. Gibbon, the medical officer of health for the Holborn district, has made his report for the year which ended at Lady-day last. During a long space of time, the population of the Holborn district rose greatly; but now it is falling, for a new thoroughfare from Bloomsbury to Shoreditch runs through the Holborn district, and, in consequence, 150 houses have been taken down, to the displacement of 2,000 inhabitants, and the reduction of the population to about 40,000. The birth-rate of this population has been 25.9 per 1,000, which was apparently, Dr. Gibbon said, below that of the whole metropolis, which stands at 36.2. He said "apparently", because he had reason to believe that a "good many births among the Irish and Italians altogether escaped registration". Dr. Gibbon estimated the death-rate of the district, when corrected by deducting the deaths of non-residents in the hospitals and institutions, at 20.88 per 1,000, or 2.62 below the general death-rate of the metropolis. The deaths from epidemic (or preventable diseases) had increased from 86 in the previous year to 147 in the year reported upon, small-pox causing 4 deaths, measles 30, scarlet fever 16, whooping-cough 50, diarrhœa 37, and low fever 10. Deaths from violence had increased from 23 the previous year to 27. Dr. Gibbon gives his own views upon the difficult question of the proper treatment of a small-pox epidemic; and holds that patients, if moved at all, should only be moved short distances, thus indirectly arguing in favour of the increase in number of places where patients could be isolated from the healthy population.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

WESTMINSTER HOSPITAL.

CASE OF CEREBRAL HÆMORRHAGE IN A CHILD ONE YEAR AND TEN MONTHS OLD.

(Under the care of Dr. HUGHES BENNETT.)

THIS child was brought to the hospital by a person who knew absolutely nothing about it, but who stated that it had been seized that morning with "some fits". The condition on admission was as follows. It was a pale, emaciated, scrofulous looking infant, extremely small for its age. It lay quiet, breathing heavily, in apparently a semicomatose condition, but could be roused, and then it cried with a plaintive and husky voice. The child had a severe cough, and marked dulness of the right side of the chest; but, owing to its obviously moribund condition, a minute examination of the pulmonary organs was not made. The left side of the head and forehead was markedly larger and more prominent than the other. The entire right side of the body was paralysed. The right side of the face was immovable, and the features were drawn to the left, on which side only movements were made when the child cried. The right arm and leg lay motionless and flaccid, and when the patient was irritated the left limbs only were moved. At intervals during the day, that is, one or more times in an hour, the right side, especially the face and arm, was seized with a convulsive paroxysm, consisting of clonic twitchings, which lasted for several minutes. In this condition, the face was drawn to the right side, and both eyelids were spasmodically closed. The left pupil was widely dilated; the right was of ordinary size. During the attack, consciousness did not appear to be lost. The sensibility of the skin seemed to be abolished all over the right side, and when pinched or pricked the child evinced no uneasiness, while it did so when the left side was similarly treated. The patient was dull to stimuli of all kinds, and was so feeble that further details were not ascertained.

The child remained in the same condition for two days, when it died. The only change, according to the nurse, was that, prior to death, for some hours the attacks of spasms took place on both sides of the body.

After death, the mother of the patient was seen, who stated that she knew little about her child, as she was in the habit of paying a woman to look after it. It was, however, ascertained that it had always been in delicate health, and gradually emaciated. Two days before admission, it was seized with epistaxis, which was succeeded by "fits", with convulsions on both sides.

At the necropsy, the body was found greatly emaciated; no appearance of injury to the head. The left side of the forehead was markedly bulged outwards as compared to the other side. On removing the calvarium, this enlargement on the left side seemed to be a natural condition, as there were no thickening or abnormal conditions of the bone, nor was there any special expansion of the cerebral hemisphere to account for the increased size. Under the pia mater, on the surface of both cerebral hemispheres, were two large irregularly shaped effusions of blood occupying nearly the whole of the frontal and parietal regions. Both were of recent occurrence, and appeared to be of the same date. On making a vertical section, these clots were found to be about a quarter of an inch in thickness. The cerebral substance in their neighbourhood was discoloured, broken up, and infiltrated with blood and serum for about half an inch in thickness. The veins of those parts round which the hæmorrhage had taken place were distended and occupied by firm clots. The lateral ventricles contained each about half a drachm of clear serum. The base of the brain, as well as all the substance of that organ not mentioned above, were normal. The arteries throughout were everywhere without disease. The left lung was collapsed, and the pleura filled with pus. There were enlarged amyloid kidneys. The other organs were healthy.

REMARKS.—Hæmorrhage into the substance of the brain is of extremely rare occurrence in children. In this case, the total absence of an antecedent history made a diagnosis almost impossible. From the emaciation and miserable aspect of the child, the enlargement of the skull on one side and the definite nervous phenomena, a tubercular mass in one hemisphere seemed to be indicated. The cause of the hæmorrhage is not apparent, there being no naked-eye appearance of disease or rupture of the cerebral vessels. Whether it was the result of

minute capillary changes following chronic empyema, or whether the child had a fall on the head unknown to its guardians, is a question which, under the circumstances, cannot be answered.

TRAINING HOME FOR NURSES, GLASGOW.

A NEW OPERATION FOR EXTROVERSION OF THE BLADDER.

On October 21st, 1879, Dr. David Foulis operated on a boy aged 2½ years, in whom the bladder was completely everted and the urethra in a condition of epispadias. The bladder could not be returned at all, owing to the small size of the defect in the abdominal wall; and, as it appeared evident that the bladder could never again act as a reservoir for urine even under the best results obtainable by Wood's operation, Dr. Foulis resolved to try to obliterate it altogether, and thus avoid the misery of having pus and mucus oozing from the mucous surface. Accordingly, the patient being put under the influence of chloroform, Dr. Foulis stitched the prepuce to the lowest part of the scrotum, and proceeded to render the surface of the bladder raw. Beginning at the base, he removed the mucous membrane from every part of the surface of the bladder in successive segments, including, as he did so, a strip a quarter of an inch broad of the margin of the skin round the aperture in the abdominal wall. The orifices of the ureters were left intact. The bladder having been denuded of mucous membrane, a single pear-shaped flap was cut from the right groin and secured over the bladder, raw side downwards, in the following way. The orifices of the ureters were approximated to each other and to the upper end of the urethra by a horsehair stitch. Another hair-suture was then made to grasp a small piece of the raw tissue about the middle of the convex surface of the bladder; and the ends, being passed through the centre of the flap, were tied so as to ensure contact of the two raw surfaces; after which, the edges of the flap and the skin round the bladder were drawn together by hair-sutures. A couple of button wire sutures were used to approximate the edges of the skin over the place from which the flap had been taken; and, finally, the edges of the skin here also were brought together by hair-stitches.

The operation lasted three hours. At its close, the urine was observed to come freely through the ureters. A piece of boric lint, frequently changed and very loosely laid over the parts, formed the only dressing.

Recovery has up to date been unimpeded. The temperature, which rose above 101°, fell on the evening of the third day to 98.8°; and the parts have remained healthy and free from inflammatory redness. Adhesion of the raw surfaces has taken place. As soon as the parts have quite cicatrised, a further operation for the epispadias will be undertaken, when a detailed report of the whole case will be published.

MANCHESTER ROYAL INFIRMARY.

AMPUTATION AT THE HIP-JOINT: USE OF LEVER TO COMPRESS COMMON ILIAC ARTERY.

(Under the care of Mr. WALTER WHITEHEAD, Surgeon to the Infirmary.)

J. T. S., AGED 26, suffered from morbus coxarius since he was four years of age. On September 22nd, 1879, the head and several inches of the shaft of the femur were excised. On October 11th, secondary hæmorrhage occurred, and recurred on the 12th and 15th. The bleeding was so profuse, and proceeded from situations so difficult of access, that, taking into consideration the uselessness and the general unsatisfactory prospect of the limb, it was decided, in consultation with Mr. Bradley, to amputate. Immediate action being imperative, and Lister's abdominal tourniquet not at the time available, it was suggested to try the lever. Mr. Bradley acquiescing, consented to superintend its use, and selected for that purpose the roller of an ordinary small window-blind. This was made smooth and somewhat rounded at one end; and, after being well smeared with oil, was passed up the rectum and pressed on the pelvic wall until Mr. Bradley was satisfied, by the absence of pulsation at the groin, that the common iliac was under perfect control. The amputation was leisurely conducted, and the best flaps made that the sinus-riddled tissues would permit. The operation was performed without the loss of any blood beyond what might reasonably be considered to come from the tissues below the point of compression, and not in all amounting to more than an ounce. The limb had, previously to amputation, been subjected to the use of Esmarch's bandage. The man died on the table, without there being, however, any very obvious cause for immediate death.

The special object for reporting this case is to acknowledge the satisfactory and complete aid that was afforded by the use of the lever for compressing the common iliac during the operation—a procedure suggested by Mr. Richard Davy in 1874 (BRITISH MEDICAL JOURNAL, May 18th, 1878, p. 704), and made use of by him in 1876.

One great advantage of the lever is, that it can be extemporised out of so many ordinary and available articles of domestic furniture; an ordinary walking-stick, or even the rail of a bedroom chair, would equally serve the purpose.

It can be imagined that in very stout people Lister's tourniquet might fail to accomplish its object; but unless there should be a tight stricture of the rectum, or, as suggested by Mr. Bradley, a short mesocolon, preventing much lateral deflection of the rectum, it is difficult to apprehend any other condition or circumstance which would render the lever inapplicable.

DERBYSHIRE GENERAL INFIRMARY.

ANEURISM OF RIGHT SUPERFICIAL FEMORAL ARTERY: LIGATURE OF EXTERNAL ILIAC: RECOVERY.

(Under the care of Mr. CURGENVEN.)

THOMAS G., aged 24, by trade a slater's labourer, was admitted on July 21st, 1879. His employment, which he had followed for some years, necessitated the lifting of heavy weights. He had been a free drinker. There was no distinct history, but a suspicion of his having had syphilis. Four months ago, the patient first noticed a "lump" in the right anterior femoral region. It caused no inconvenience, and but little pain. In May, he served his three weeks' training in a militia regiment; and, during this time, he perceived the "lump" to increase rapidly in size, to become more painful, and to commence to pulsate.

On admission, the patient was found to be suffering from the presence of a large aneurism of the superficial femoral artery. The swelling was rounded, and very distinctly circumscribed; distensile pulsation was well marked, and there was a loud aneurismal *bruit*. Intermittent pressure was applied over the common femoral by means of a Liston's tourniquet for some few days; but, inasmuch as the patient was extremely restless, unable or unwilling to endure the pain, and the aneurism if anything was increasing in size, it was determined to ligature the external iliac. The operation was performed on August 1st. A curved incision was made, about three inches in length, in the usual way, commencing at a point two inches above and one inch to the inner side of the middle of Poupart's ligament. The artery was found and secured without any difficulty. A silk ligature was employed. The wound healed by first intention, with the exception of a sinus leading down to the artery and occupied by the ligature, which came away on the twentieth day. There has been no recurrence of pulsation in the tumour. To assist in maintaining an even temperature, the whole of the limb was swathed in cotton-wool. No adverse symptom appeared from first to last; and, on September 1st, the last recorded note appears: "Patient up and about; swelling decreased in size, firm, free from pain and tenderness."

ST. ALBAN'S HOSPITAL.

STRANGULATED INGUINAL HERNIA, WITH HOUR-GLASS-SHAPED CONTRACTION OF SAC: HERNIOTOMY: RECOVERY.

(Under the care of Mr. RIDGWAY LLOYD.)

A. B., AGED 80, formerly a gentleman's servant, was admitted into the St. Alban's Hospital on August 16th, 1879, suffering from strangulated inguinal hernia of the right side, with marked hour-glass-shaped contraction of the sac; the strangulation having existed for about four hours. The patient's earliest recollection of the hernia dated from the time he was six years old, when he was seen by Sir Astley Cooper, who ordered him a truss—a means of support the use of which he discontinued after wearing it for twenty years. Taxis under chloroform was tried, both before and after his admission, but without success. The neck of the hernial tumour was seen about an inch below the external ring. With the help of his colleagues (Messrs. J. R. Hutchinson and F. R. Webster), Mr. Lloyd proceeded to operate in the usual way. Division of the sac was followed by the escape of about half a pint of bloody serum; the bowel, which was not much congested, was easily returned into the abdomen. The wound was sewn up with interrupted sutures of silver wire, then covered with a thick pad of lint, dipped in carbolised oil, and over this a large piece of cotton-wool, the whole being secured by a spica bandage. After the operation, a suppository, containing half a grain of morphia, was introduced into the rectum. The patient was kept on broth, milk, and farinaceous food until the bowels acted, which they did on August 31st (the sixteenth day after the operation), in response to a small dose of castor-oil. He made a good recovery, and left the hospital on September 15th. His temperature never exceeded 99.8°, nor did the pulse go beyond 88. Vomiting occurred once, just before the operation. Cases of hernia of

this kind, which are somewhat rare, are due to a congenitally open state of the vaginal process of the peritoneum; they require liberation of the bowel as soon as possible, as has been well pointed out by Mr. Birkett in his Essay on Hernia, in Holmes's *System of Surgery*, second edition, vol. iv, page 747.

NOTES ON BOOKS.

Revue Philosophique. (October, 1879. Paris. Germer Baillière et Cie.) Few numbers of this review which we have seen have been so interesting as that of the present month. The first article is a most fascinating paper from the pen of M. Delbœuf, the first of a series on Sleep and Dreams. It consists of a detailed *résumé* of several recent works on the subject, the most important of which are *Schlaf und Traum*, by M. Radstock of Leipzic, and the relative sections of Professor Stricker's *Vorlesungen über Pathologie.* M. Delbœuf states the various views in a clear and always interesting style, and adds a running commentary of his own, preparing the way for further papers of a theoretic character. He concludes, with justice, that, apart from the physiological aspects of dreamland, there are grave difficulties, not yet sufficiently faced, attaching to the question of the criteria by which we distinguish our dreams or the illusions of a madman from what we call *reality*. He remarks that an implicit subjective belief in our judgments is inherent in the constitution of the human mind, and that therefore, so far as belief goes, we are as certain, in a wild dream, that $2+2=5$, as we are when awake that $2+2=4$. In illustration of this point, in fact, he adduces a very amusing dream of his own, wherein he found himself arguing, at the bar of a German *café*, that 20 *centimes plus* the half of 20 would make exactly 37½, and convincing the reluctant hostess in the end. We are promised, accordingly, a discussion in the next paper of the criteria of certitude in general and of external reality in particular, as contrasted with the recognised falsity of reveries and dreams, and the unrecognised delusiveness of insanity. The subject is of the last importance, the more that it has been strangely neglected hitherto. The editor of the *Revue* also contributes a valuable essay on Movements and their Psychological Importance, the aim of which is to draw attention to the integral part played by motor nerve processes in the field of psychology—as, for example, in all questions which concern the "muscular sense", and in the influence of words (and therefore of *articulations*) upon all our ideas, even the most abstract. There is yet a third most important article in this same number—an eloquent and able *compte-rendu* of M. Guyau's recent work, *La Morale Anglaise Contemporaine.* The book is of capital value to all students of modern ethical questions. It consists of a most careful statement of all the English schools, giving special prominence to Bentham, Mill, and H. Spencer; followed by a trenchant, and we are afraid unanswerable, demolition of their entire system, as impotent either to explain or to vindicate the moral side of life. On the whole, therefore, we are forced to conclude as we began, by congratulating the *Revue* on one of the best numbers we have yet seen.

The Dissector's Guide, by D. J. CUNNINGHAM, M.D. Part I. (Maclachlan and Stewart.) Cunningham's *Dissector's Guide* is an extremely handy manual for the use of students. It is very much more compact than most of the existing dissectors, but contains, on the whole, as much information as a first year's student, while dissecting, may be expected to begin with. It is framed on the same line as Cleland's *Dissector*, and is much less elaborate, therefore, than Ellis, Heath, or Holden.

The Heart and its Diseases. By J. MILNER FOTHERGILL, M.D. (London, 2nd edition, H. K. Lewis, 1879.) In this second edition, Dr. Fothergill has very thoroughly revised and largely developed the original work. He has added to it chapters on the morphology and evolution of the heart by Mr. Alban Doran, and a section on the uses of the sphygmograph by Dr. B. Foster, and has throughout added to and revised his original text. We have already expressed a favourable opinion of the first edition of the book, pointing out, however, what we considered to be some of its shortcomings. This second edition shows a much riper judgment and more polished literary habit. The most interesting chapter is undoubtedly that on the gouty heart, a subject which Dr. Fothergill has specially studied, and on which he entertains views such as are likely, we think, to be generally accepted by clinical physicians, although they have not before been stated, so far as we are aware, with the same breadth of view and extended illustration. The lithic poisoning of the blood is, in his view, frequently the first stage in a series of changes which commence with capillary obstruction and increased blood-tension, and lead up to inflammatory and destructive changes in the liver and kidneys, in the coats of the vessels themselves, and in the lining of the membrane and valves of the heart, as well as its muscular tissue. Although still wanting in accurate pathological detail, this second edition of Dr. Fothergill's well-known book has considerable clinical value, and deserves numerous readers.

The Transactions of the American Medical Association. (Vol. 29. 1878.) This is a volume of considerable size, and includes many contributions of an elaborate character and of lasting interest. It has, however, in common with most of the volumes of the kind, the disadvantage of appearing long after the meeting. Thus, although the meeting of which these are the records was held in the first week in June 1878, the volume itself does not appear until September 1879, when a great deal of the interest of the papers has worn off, and some of them are already ancient history. On the other hand, there is in this volume a great deal of such permanent interest as to make it a very important addition to the library. The address by Dr. Henry H. Smith, on the Pathology of Bone, is an extremely interesting study of tubercle of the bones fully illustrated and well studied. Dr. Post's communication on Blepharoplastic Operations, and that of Dr. Blodgett on Carcinoma of the Conjunctiva, are also solid and useful contributions; but the *pièces de resistance* of the book are the essays upon the Surgical Anatomy and History of the Carotid, Innominate, and Subclavian Arteries, by Dr. John Wyeth. This essay contains an analysis of 173 dissections of the surgical regions of the neck, and a collection of 1,198 cases in which the results of deligation of these vessels are given. It is illustrated by five plates. Altogether, the volume is one which does credit to American medical literature.

Children's Lives, and how to Protect Them. (Sampson Low and Co., London.) Dr. LOMAS discusses, in this useful little volume, the relation of the health of parents to that of their children; the mother's health during pregnancy; the bringing up of babies, whether suckled or hand-fed; and the early trials of children in teething and weaning, their minor maladies and common diseases. There is nothing in this volume which an intelligent mother will not be the better for knowing; and mothers, while they will learn a good deal that is useful to them in the management of their children, will not be encouraged to doctor them mischievously. Dr. Lomas has given a great deal of attention to this subject for many years, and has produced an useful and well written little book. The only fault which we have to find with it is, that it is too diffuse, and that many directions are given not altogether of a practical character; such as, for instance, those for disinfecting rooms by the use of fumes of nitrous acid, and the description of Voltolini's method of examining the ear for the detection of hard substances: a matter which goes beyond the proper function of a parent. On the whole, however, we may say that this book contains nothing that is harmful, and a great deal of very useful knowledge.

St. George's Hospital Reports. Vol. 9. Edited by W. H. DICKINSON, M.D. and T. P. PICK. (London: Churchill.) This goodly volume is of unusual proportions for a hospital report, and, on first taking it in hand, one is struck with astonishment at the mass of matter provided for the subscribers. A little observation, however, discloses the fact that this bulk is made up mainly of the statistical and analytical records of the Registrars. Thus, the Medical Registrar occupies 109 pages, the Surgical Registrar 200 pages. The *post mortem* record or necropsies extends to 84 pages, the obstetric records to 150, the ophthalmic records to 130, and so on, 633 pages being taken up by the reports of the Registrars of the various departments. This does, indeed, constitute a hospital report in the strict sense of the word; but it must be added that such reports, extended to such enormous length, are useful as *mémoires pour servir* rather than as reading-matter. For the rest of the volume, it is impossible to avoid being struck with the extremely small amount of matter contributed by the visiting members of the staff. The medical and surgical officers of the hospital, apart from the registrars, contribute only twenty pages to the volume; the rest being taken up by such matter as observation on Diphtheria in Rural Districts, by Dr. William Ogle, and papers by Mr. Wyndham Cottle and Mr. Gaskoin on Ichthyosis and Chrysophanic Acid, which have little to recommend them in the way of novelty, of originality, or of scientific value. In fact, beyond the statistical reports to which we have referred, which must undoubtedly be considered as valuable materials for medical statistics, and which occupy the great bulk of the volume, that part of it which consists of original papers is hardly sufficiently good to furnish forth an ordinary number of a second-rate medical journal. We feel sure that a staff which numbers so many accomplished, distinguished, and hard-working physicians and surgeons as the staff of St. George's Hospital could, with a little effort, furnish a series of papers much more worthy of the reputation and traditions of the hospital than those to which we have referred

SELECTIONS FROM JOURNALS.

MIDWIFERY AND DISEASES OF WOMEN.

SPONTANEOUS EXPULSION OF A FIBRO-MYOMA.—At a meeting of the Obstetric and Gynæcological Society of Berlin (*Berliner Klinische Wochenschrift*, October 6th), Dr. Eggel related the following case, which had occurred in his practice. A woman aged 32, who had been married four and a half years, but was sterile, and had for nine months suffered from profuse metrorrhagia, consulted him in October 1878 on account of her anæmic condition. Extending about two-and-a-half or three inches above the symphysis pubis, was a tumour belonging to the left half of the anterior wall of the uterus. The sound entered about three inches, somewhat to the right. She was ordered ergotin, liquor ferri, and, when the bleeding ceased, salt baths. On March 6th, the patient again presented herself, and reported that the menses had appeared very profusely on February 20th; and that consequently, by the advice of a female friend, she had on the fifth or sixth day used a hot vaginal injection—first, it was stated, at a temperature of 122° Fahr., and then, as this could not be borne, at 104° Fahr. This was followed by continuous pain in the hypogastrium. On March 16th, prolonged dancing was followed by a renewed loss of blood, and the patient observed that a foreign body was escaping from the vagina. In attempting to remove it, the patient tore away several firm flesh-like pieces varying in size from a plum-stone to a little finger. The mass of the tumour was of the same structure. Dr. Eggel, on March 18th, ascertained it to be a tough irregularly lobed mass, having a multipartite or a folded pedicle, and firmly embraced by the external os uteri. There was abundant discharge of a sero-sanguinolent fluid, smelling like glue. The temperature was slightly raised; the hypogastrium was tender. Ergot, cold bandages, and carbolic acid injections were ordered. During the following days, small portions of the tumour were discharged with much pain; on the morning of the fifth day, the whole mass was thrown off. The patient recovered. Dr. Eggel believed that the hot injections had produced inflammation and softening of the mucous membrane covering the myoma. Dr. Ruge had seen a myoma of the size of an apple thrown off spontaneously on the third day of childbed.

UTERUS BICORNIS: DOUBLE PREGNANCY.—An interesting case of this kind is reported by Dr. E. Goutermann in the *Berliner Klinische Wochenschrift* for October 13th. Frau E., born in 1844, first menstruated at the age of 15, and from that time regularly, but very profusely. She was married in 1869; and in the next six years all her pregnancies, though unattended with any special disturbance, ended in abortion at the third month; the catamenia appeared regularly two or two-and-a-half months afterwards. In September 1875, she again became pregnant, and was delivered in the following June, after an easy labour, of a living and healthy female child. In the end of January 1877, she had another abortion, which was followed by such profuse metrorrhagia as to demand medical aid; this had not occurred in her previous abortions. In November 1877, she again became pregnant, the catamenia having been in the meantime very profuse, but regular in duration (four or five days). On December 30th, she had another abortion, which was attended with labour-like pains, chiefly limited to the right side. In the middle of February 1878, the catamenia returned, and appeared at intervals of twenty-eight days with remarkable intensity; on the first day, large masses of coagula, not having an offensive smell, were discharged. On examining her at the end of March—three months after the abortion—Dr. Goutermann was astonished to find indications, in the enlargement of the uterus and the movements of the fœtus, that she was five months advanced in pregnancy. After consideration, he was led to suspect that the case was one of twin-pregnancy in an uterus bicornis; that one of the embryos had continued to develop itself after and in spite of the extrusion of the other; and that it was the emptied half of the uterus which menstruated. External and internal examination tended to confirm this view, but did not render it absolutely certain. The woman being very fat, the form of the fundus uteri could not be made out by palpation; the vaginal portion was normal, and the os was closed. Exploration with a sound was, of course, not attempted. She was ordered to rest, and to take easily digestible food. In the night of May 12th, Dr. Goutermann was called to the patient. He found the left hand of the fœtus, much swollen, protruding from the genital organs; the back lay forward, and the face to the right side. There were no pains nor hæmorrhage. The fœtus, a male, of about six months and a half, was easily brought into the world, but died some time afterwards. As the pains were insufficient to expel the placenta, Dr. Goutermann attempted to remove it by gentle traction and friction with pressure over the fundus uteri, but in vain. He then proceeded to introduce his hand, following the course of the umbilical cord. In doing this, he found that the os externum was formed as usual, but that the os internum, with the whole cavity of the uterus, was divided into a right and a left half by a septum. The right half, which had smooth walls and was empty, scarcely admitted the hand; in the left half, the placenta was adherent over the septum. The patient made a good recovery. In August 1879, Frau E. was delivered of a living male child, which presented in the breech-position, from the left division. On this occasion, also, there had been abortion at the second month from the right division, and subsequent menstruation.

PATHOLOGY.

COMMUNICATION BETWEEN THE AORTA AND PULMONARY ARTERY.—At a meeting of the Berlin Medical Society in March, Dr. B. Baginsky exhibited a heart and large vessels, in which there was a direct communication between the aorta and pulmonary artery, the ductus arteriosus being obliterated. He had shown it to Professor Virchow, who was unable to remember having seen anything similar; nor was a similar malformation depicted by Rokitansky in his Atlas of defects of the cardiac septum. The specimen was taken from a boy aged 4, who had been under Dr. Baginsky's observation almost from birth. When eight days old, the child had symptoms of bronchial catarrh; it had an aphonic hoarse cough, but there was not much dyspnœa. In a few days, Dr. Baginsky examined the heart, and found at various points a large number of systolic and diastolic murmurs, with resistent dulness over the right ventricle, and rather irregular action of the heart. The pulse was irregular. Dr. Baginsky came to the conclusion that there was a malformation of the heart, but of what kind he could not determine. In the course of the succeeding four years, the child had numerous attacks of bronchial catarrh; it grew normally, however, and was strong, but pigeon-breasted. Last year it had nephritis, probably of scarlatinal origin, followed by hæmaturia and afterwards by suppression of urine. In December, symptoms resembling whooping-cough appeared. Convulsions of the whole body took place repeatedly, and the child died. Dr. Baginsky examined the body. The heart weighed 250 *grammes* (about 8¾ ounces), and was 12½ *centimètres* (nearly 5 inches) in width. There was considerable hypertrophy of the right ventricle, the wall being 1.4 *millimètres* thick. The left ventricle was less hypertrophied, but was much dilated. The semilunar valves on both sides were normal. The musculi papillares of the auriculo-ventricular valves were atrophied. The ductus arteriosus was normally obliterated. Between the aorta and the pulmonary artery, there was a communication, about a *centimètre* in extent, with a thickened and indurated edge. The opening was nearly triangular, and its base was on a level with the upper free edge of the posterior semilunar valve of the pulmonary artery, and about half a *centimètre* above the free edge of the aortic valves. Professor Virchow was of opinion that the hypertrophy of the right ventricle was probably congenital, and that the dilatation of the left ventricle had taken place after birth. There was parenchymatous nephritis on both sides. The remaining organs were normal.

THE HISTOLOGICAL LESIONS OF THE MALPIGHIAN BODIES IN NEPHRITIS.—According to M. Langhans (Virchow's *Archiv*, Band lxxvi, p. 85), the glomerule is that part of the kidney which has been least studied by anatomo-pathologists. In his opinion, everything, or nearly everything, remains to be done; nevertheless, the fibrous transformation of these small organs in renal atrophy, and their amyloid degeneration, are sufficiently well known. The glomerule is composed, as we know, of a capillary tube twisted several times on itself, and surrounded by a fibrous capsule. Three elements susceptible of change besides the capsule are distinguished in it; the glomerular epithelium, the capsular epithelium, and the capillary itself. It contains no connective tissue, or at least Langhans has not been able to discover it. The three elements in question are studied separately in the memoir, both from the purely anatomical aspect, and from the lesion point of view. Finally, all three are susceptible of proliferation in the case of the capillaries. There are nuclei. When the glomerular capsule is inflamed, a quantity of cells, generally of a polyhedric form, are observed between the capsule and the glomeruli, as it happens "in a crowd of catarrhs of the mucous membranes with desquamation of the superficial layers of the epithelium". This is a very common lesion. When it is the capsular epithelium which proliferates, the result is nearly the same; but it appears as if the glomerule was more easily deranged in its function. M. Langhans frequently meets with the two lesions in question, desquamative glomerular nephritis and proliferation of the capsular epithelium. Whether they have any influence on the

functions of the kidney, is not as yet determined. There existed, in one case of classic interstitial nephritis, a curious symptom; the urine was at once very copious and very albuminous. *Post mortem* examination only showed the existence of the first-named change in the kidney. In a second case, capsular nephritis being very advanced, the quantity of urine was much reduced. It is, therefore, evident that it would be unwise to enunciate any conclusions; but these are clinical data useful to bear in mind. Traube insisted on the preponderant part played by the glomerule in renal pathology, but his ideas fell into oblivion because they were not supported by anatomical facts.

THERAPEUTICS.

SCILLAÏNE.—Herr M. V. Jarmersted (*Archiv für exp. Pathol. und Pharmak.*, t. xi, p. 22) proposes this name for a new alkaloid, the extract of *Urgenia Scilla*, of which it represents a large part of the active elements. It is a white or yellowish matter, without smell, bitter, slightly soluble in water, ether, and chloroform, very soluble in alcohol. It reduces Barreswil's liquor, and is transformed by heat into a resincus mass, which decomposes easily. It dissolves in concentrated hydrochlorine, to which it gives a bright red tint, vanishing when heat is applied. It also gives a fluorescent brown colour to sulphuric acid, passing to red on the addition of bromide of potassium. This new product, which is the only one meriting the name of alkaloid of squill, has not hitherto been employed in medicine. Experiments made on animals show that, in large doses, it brings on diarrhœa and sickness, and that it exercises an entirely special action on the heart. In the first stage, there is elevation of the blood-pressure, with diminution of the frequency of the pulse; in the second period, there is, on the contrary, diminution of the pressure and increase of the frequency of the pulse. Its physiological effects being exactly those of digitaline, the conclusion is, that the diuretic action of squill can only be produced in cases in which the difficulty of diuresis is in connexion with disorder of the circulation.

SURGERY.

WOUND OF THE BLADDER IN OVARIOTOMY.—In a recent number of the *Journal des Sciences Médicales de Lille*, Dr. G. Eustache describes a case where this grave complication occurred during operation, without being followed by fatal results, although the ovarian cyst was suppurating and universally adherent. The patient was a single lady aged 43, who had observed a gradual increase in the size of her abdomen for six years, commencing in an attack of severe pain in the right iliac region. The abdomen at length became very large, and frequent attacks of pain and feverishness, dyspnœa, tenesmus, and œdema of the lower extremities, supervened. The urine was also highly albuminous. She was tapped; but the peritoneal cavity soon filled again, so that ovariotomy was performed on May 14th. All instruments, sponges, and towels used for the operation were previously soaked in a five per cent. solution of carbolic acid; and the spray was employed. In making the abdominal incision, the bladder was wounded; urine, taken at the time for ascitic fluid, escaping from the lower extremity of the wound, which was about five inches above the symphysis. The cyst was tapped and detached from its adhesions with considerable difficulty; the spray was then discontinued—for what reason we are not informed. The pedicle was secured by a stout wire twisted round it, and a silk ligature was tied very tightly below it; then the tumour, a multilocular cyst of the right ovary, was cut away. Two catgut ligatures were applied to the omentum. After the peritoneal cavity was sponged out, the bladder was found to have been wounded by an incision nearly an inch long below the anterior peritoneal reflexion. The wound was sewn up by three catgut sutures passed through all the coats of the bladder, including the mucous membrane; the ends of the threads were cut short. On beginning the closure of the abdominal walls, the spray was again employed. The intestines had previously been protected by small pieces of flannel soaked in a solution of carbolic acid. The ends of the ligatures of the wounded omentum were brought out through the upper part of the incision; the pedicle was brought into apposition with the lower; the wire was removed; and, to prevent retraction, a pin was passed through the pedicle and the integument on each side of it. A drainage-tube was placed above the pedicle, and a second below it. On the second day, urine was passed freely and without pain. On the sixth day, the omental ligatures came away; black, sanious, stinking discharge escaped from the drainage-tube. On the ninth day, the pin was removed from the pedicle, which was sloughy. The drainage-tubes were removed on May 27th, and the pedicle came away on the sixteenth day. After an attack of bronchitis, the patient recovered completely, with no difficulty in performing micturition. The urine had been quite clear from the first. The successful issue of this case is highly satisfactory, considering the serious nature of the injury and the other complications. Some of the details of the treatment would have been arranged otherwise by English operators of the present period; but, from the paper itself, it is clear that great precautions were carried out by the operator in the after-treatment.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 28TH, 1879.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

REPORT OF COMMITTEE ON THE TREATMENT OF PERSONS APPARENTLY DROWNED.

A BRIEF preliminary report was presented by the Committee appointed to investigate the subject of suspended animation, and the comparative merits of the method at present used by the Royal Humane Society and that proposed by Dr. Benjamin Howard of New York for the recovery of persons apparently drowned. Owing to the difficulty of obtaining subjects suitable for experiments, the Committee were unable to present a final report to the Society. They had, however, compared Dr. Howard's method with that recommended by the Royal Humane Society in a series of experiments on two subjects, in order to determine by which method the greater quantity of air could be introduced into the lungs. The results were as follows. In the first subject, a woman aged 56, moderately fat, five feet four inches in height, dead five days, with no rigor mortis nor signs of decomposition, the average of ten experiments by Dr. Howard's method gave 6.1 cubic inches; while the average result of ten experiments by the Royal Humane Society's method was 9.1 cubic inches. In the second subject, a man aged 35, well-developed, very muscular, killed by accident twenty-eight hours previously, ten experiments by Dr. Howard's method gave an average of 7.5 cubic inches; and ten experiments by the Royal Humane Society's method, 10.7 cubic inches. The Committee were of opinion that Dr. Howard's suggestions as to the following points were very valuable, and might be adopted with advantage: 1. The removal of fluid from the air-passages and stomach; 2. The position of the head and trunk during the performance of artificial respiration. The more fully extended position of the head as advised by Dr. Howard was preferable to that of the Humane Society, inasmuch as it secured greater patency of the superior aperture of the larynx, and was less likely to offer any impediment to the ingress or egress of air.

The PRESIDENT called attention to a point on which much stress was laid by Dr. Howard—the necessity of keeping the glottis patent. In the process followed by the Royal Humane Society, there was no provision for preventing the occlusion of the glottis by mud, ooze, etc., in drowning; and, in cases where anæsthetics were used, the tongue was liable to roll back into the pharynx. Nothing was easier than to scoop out the mud and ooze, and to draw forward the tongue. This would often excite inspiration. In cases of artificial respiration during anæsthesia, pulling forward the tongue was regarded as essential; and it should also be tried in cases of apparent death from drowning. The mode of carrying the apparently drowned on a bier or litter, with the head thrown back and the chest compressed, was faulty. If they were carried in the prone position, with the head downwards, the slime and ooze could escape; and the holding backwards of the arms would facilitate the entrance of air into the chest.—Mr. CLOVER said that, in advanced narcosis from anæsthetics, the muscles of the tongue were relaxed, and a kind of valve was formed, which allowed air to pass out of the lungs, but not to enter them. In such circumstances, artificial respiration did more harm than good, by emptying the lungs of air and favouring a rush of blood to the heart. It was not of much consequence that Howard's method gave less air than Silvester's; very little air was sufficient.—Mr. SAVORY said that, in a former investigation made by a Committee of the Society in 1862, the amount of air varied from nine to forty-four cubic inches. It must also be remembered that it was often necessary to remove water from the lungs. Silvester's method was preferable to Howard's as regarded time.—Mr. HOLMES thought that Dr. Howard's method was more easily learned than Dr. Silvester's by person's uninstructed in other respects. He considered also that Dr. Howard's method had an advantage in favouring the escape of mud and slime. He hoped that the Committee would consider the matter in its practical as well as in its scientific aspect. He agreed with Mr. Clover that a small amount of air was sufficient.—Mr. HULKE had tried both methods, and preferred that of Dr. Silvester as bringing the patients round more quickly, and as being more easy of application.

DESCRIPTION OF A LARGE DERMOID CYST REMOVED FROM THE ABDOMEN OF A MAN.

BY WILLIAM M. ORD, M.D., AND C. BRODIE SEWELL, M.D.

THE cyst exhibited was removed, *post mortem*, from the abdomen of a gentleman, a patient of Dr. Sewell. It had not occasioned much suffering; but, having caused wide separation of the recti abdominis, was tapped to relieve pressure. About two pounds of liquid fat came away, but no more could be extracted. The tumour was not materially diminished. Peritonitis set in three hours after the operation, and carried off the patient at the end of five days. The tumour when removed weighed fourteen pounds and a quarter, was ten inches broad and thirteen inches long, and was filled with fat, partly in a pulpy state, partly in a large solid cake. The fat consisted almost entirely of fatty acids, with a bare trace of butyric acid. It contained numerous hairs, and much epithelium. The cyst presented hairs on its inner surface, and sebaceous glands of great size beneath the surface, but no sudoriparous glands or regular papillæ. The tumour was remarkable for its great size as compared with the ordinary size of dermoid cysts; also as occurring in the male abdomen. Its intimate connection with the rectum and bladder led to the inference that it had its origin in connection with the genito-urinary organs. There was, however, no malformation of the genital organs. The formation of a dermoid cyst in the abdomen of a man might be explained: 1. Upon the idea of "fœtal inclusion"; 2. Upon the idea of "developmental inclusion", such as gives rise to cysts in the track of branchial and other developmental fissures; 3. Upon the idea of "aberrant development", according to which deformities arise out of the persistence of embryonic structures which should in the natural way disappear or undergo complete remodelling. If any part of this blastema from which the ovaries and testes spring fail during development to be brought into its proper system, the part so left out, having lost its natural guidance, might be readily conceived as proceeding to irregular development. In such a case as the present, the destiny of the blastema being either ovary or testis, the fragment took on ovarian ways and produced a dermoid cyst as an ovary might. If developmental inclusion were the causative process, the tumour would be expected to be connected with the abdominal walls. On the other hand, the authors had been unable to find any structural aberration in the genito-urinary organs. They were left to chose between fœtal inclusion and aberrant development, with an inclination to the latter, founded upon consideration of similar ovarian tumours.

Dr. JOHN HARLEY asked if there was anything in the family history of the patient—such as imperfect closure of the median line—that might aid in explaining the malformation.—Dr. SEWELL had been informed that a brother of the patient had had what was supposed to be empyema, and that the fluid removed corresponded in character to that found in the abdominal cyst. The extreme depression of vitality, very different from the cachexia of ovarian disease, was remarkable. The tumour must have been congenital; but, from the patient's habit of life, Dr. Sewell at first imagined the symptoms to be due to disorder of the liver.—Mr. HULKE was not satisfied with the explanations of the origin of dermoid cysts. Many of them were in situations which did not correspond to great centres. Cysts in the orbit were separated from the skin by the orbicularis muscle, which was intact. The parthenogenetic origin of cysts was difficult of application in such cases as one in which several were found in the substance of the liver.—Mr. SAVORY had applied the parthenogenetic theory only to cysts in the ovary, which contained not only portions of the exoskeleton, but also bones placed in such order as to indicate the formation of a fœtus.—Dr. ORD agreed as to the difficulties in explaining the formation of dermoid cysts.

MALFORMATION OF THE GENITAL ORGANS OF A MAN, WITH PERSISTENCE OF ONE OF THE DUCTS OF MÜLLER.

BY WILLIAM M. ORD, M.D.

The preparation exhibited had been taken from the body of a man aged 36, who died in St. Thomas's Hospital of phthisis and complications. At the *post mortem* examination, a large tube, running from the head of the right kidney to the under aspect of the bladder, attracted attention, and was supposed to be a supernumerary ureter. Mr. Stewart, curator of the museum of the hospital, after a careful examination, had identified the structure as probably a surviving Müllerian duct. The tube, beginning in a blind sac at the head of the kidney, ended, without organic connection with any other structure, in the median line of the floor of the prostatic urethra, by a patulous orifice placed just above those of the ejaculatory ducts. The testis on the same side was undescended, being arrested in the inguinal canal; the vas deferens and vesicula seminalis on the same side were incompletely developed, but pervious; the external genital organs were perfect, except as regarded the position of the right testis. A small glandular structure was found capping the right kidney, but separated from it by a fibrous septum; this gland was also in contact with the end of the blind tube. The gland had the structure of a renal organ, with evidence of contraction and degeneration. It was suggested that the tube was the right Müllerian duct arrested in an early stage of its retrogression, and that the gland represented a parallel state of the Wolffian body. The only similar case of which Dr. Ord had been able to find record was shortly reported in the BRITISH MEDICAL JOURNAL of September 6th of this year, as having been examined by M. Remy. The subject was a boy aged 6. The malformation was unilateral. The persistent Müllerian tube took much the same course; but its head was related with a number of cysts, supposed to be remains of the Wolffian body. The hydatid of Morgagni and the organ of Giraldès were both present.

Mr. SPENCER WELLS referred to a case in which, after consultation with Sir James Paget, he had removed from the abdomen, by an operation resembling that of ovariotomy, an undescended testicle which was the seat of malignant disease. It weighed nine pounds. The patient died in three days of septicæmia, the case occurring at a time when Mr. Wells was trying the effect of thymol as an antiseptic.

EARLY REMOVAL OF THE DIAPHYSIS OF THE TIBIA FOR ACUTE NECROSIS OCCURRING IN A LAD AGED NINETEEN.

BY WALTER PYE, F.R.C.S.

The case reported was one of a lad aged 19, who was admitted into St. Mary's Hospital with the signs of acute necrosis of the tibia, and with coincident necrosis of the ungul phalanx of one finger. The necrosis ran a very acute course, and within three weeks of its development the diaphysis perished almost entirely. The patient's condition called urgently for interference; and, after consultation with Mr. Herbert Page, it was resolved to remove the necrosed shaft. The operation of subperiosteal section recommended by Mr. Holmes was performed, and the whole diaphysis was removed; the periosteum being preserved by incising it along its anterior surface, and separating it, where necessary, from the necrosed or necrosing bone. The patient made a satisfactory and tolerably quick recovery, with the formation of a very good new tibia. He was discharged from the hospital five months after the operation, and was able to walk on the limb three months later. There was little or no shortening, and the leg continued to be very useful and shapely. Attention was drawn to the time in the history of the necrosis at which the bone was removed, to the age of the patient, and to the ease with which the bone was removed. Photographs of the bone removed, and of the patient nine months after the operation, were shown.

Mr. JOHN CROFT approved of the treatment adopted, but doubted whether there was necrosis of the entire shaft of the bone.—Mr. SAVORY asked whether the new bone had been formed from the periosteum, or from the ends of the bone that were left. In children, there was often very imperfect repair, in consequence of the extensive destruction of the periosteum; in many cases, the repair was chiefly supplied by the ends of bone.—Mr. MORRANT BAKER inquired as to the relation of the abscess in the head of the tibia to the inflammation of the bone.—Mr. HOLMES believed that there were cases in which the necrosis of the shaft was due solely to periostitis. He had examined cases in which there was no inflammation of the bone-tissue. Repair was in many cases effected chiefly from the ends of bone; in others, entirely from the periosteum.—Mr. PYE said that perhaps it would be more correct to say that the diaphysis was not entirely necrosed. At the same time, in stripping off the periosteum, a deposit of new bone was found between it and the shaft. He regarded the abscess as evidence that the necrosis was due not merely to periostitis, but also to ostitis.

CLINICAL SOCIETY OF LONDON.

FRIDAY, OCTOBER 24th, 1879.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

The Late Mr. Callender.—The President's announcement, that he had just heard of the death of his immediate predecessor in office, was heard by all present with the deepest sorrow.

Cerebral Rheumatism without Hyperpyrexia.—Dr. SOUTHEY read notes of this case. The patient was a temperate young man aged 23, who had rheumatism complicated with pericarditis, in whom nothing remarkable occurred until the eleventh day, when his manner became abrupt, and he was first observed to be delirious and tremulous. His pulse became feeble and dicrotous, and death appeared imminent on the twentieth day of his illness, when the state of prostration and muscular subsultus, with constant low muttering delirium, made the case resemble typhus rather than rheumatism. Treatment was now

begun with conium-juice and potassium bromide internally in large and frequently repeated doses, while an ice-bag was applied to the vertex of the head and the nape of the neck. Nourishment was throughout given freely, and stimulants to the extent of four ounces of brandy in twenty-four hours. Some improvement was shortly noticed. The patient became less delirious and tremulous, but was still sleepless. Thirty grains of chloral produced four hours' sleep, and from this date, the twenty-second of his illness, he was no longer delirious. There was some return of the rheumatic pains, with extreme prostration, and another slighter relapse on the twenty-seventh day. But the patient made a good recovery. Dr. Southey offered no further remarks on this case than those which were interpolated in its narration.

Acute Rheumatism without Recent Cardiac Complication or Hyperpyrexia: Albuminuria: Death on the Ninth Day.—This was a third attack of rheumatism in the same woman, who was admitted to have had previous heart-disease. An old mitral murmur existed. The highest temperature observed was 102.2° on the evening of her admission, upon the fifth day of her disease. There was no albumen in her urine when she was admitted. On the seventh day, a trace only of albumen was perceived. On the eighth day, all the rheumatic pains had subsided, and she presented every likelihood of making a favourable recovery. Between the eighth and ninth days, she secreted, however, only six ounces of urine, and this was highly albuminous. On the ninth day, her lips became livid, and her face extremely pale; her pulse small, quick, and feeble. She perspired profusely, vomited two or three times, complained of sudden and intense epigastric pain, became unconscious, and died without any convulsion, twelve hours after the lividity of the lips was first observed. She had been treated for four days with chloral, chlorate of potash (of each five grains), and camphor mixture one ounce, every six hours. This was stopped on the morning of the day upon which the first serious symptom manifested itself. The *post mortem* examination showed no recent cardiac or pleural complication. The heart's cavities were distended with friable greenish-coloured blood-clots. The mitral valve presented old vegetations. The liver, kidneys, and spleen were soft and pale, the seats of general parenchymatous swelling, such as has been found associated with hyperpyrexia. The stomach and intestines contained some quantity of viscid bilious-coloured slimy mucus. Dr. Southey preferred to leave this case also to tell its own tale. The heart's muscular structure had a brown, unhealthy look, and the striation of the individual fibres was indistinct, but there was nothing in it to suggest carditis. The appearance of the kidneys and the albuminuria were no more than is found incident to persons who have died of any acute disease. Why then did she die? He thought that the cause of death might be some rapid disorganisation of the blood, which rendered this inapt to circulate, and that its stasis in one situation or another would be found to be the explanation of the various cerebral and hyperpyrexial complications, which rendered acute rheumatism at times so fatal a malady.

Dr. THEODORE WILLIAMS wished an examination of the blood had been made.—Dr. MACLACHLAN was of opinion that hyperpyrexia did not in such cases cause death, but was concomitant with it. Some particular portion of the nervous centre being affected by the rheumatic poison, hyperpyrexia was induced, and death was hurried on under the action of the morbific agent. The signs recorded were those of carditis and pericarditis.—Dr. SOUTHEY said that no examination of the blood had been made. The fluid was very decomposed and clotted, and no analysis of it had been performed. Any change observed would, he thought, possess no elucidative value, nor could he attach any importance to the alteration of the corpuscles. Thickened patches, evidently of old standing, about the base of the heart, indicated the previous existence of pericarditis, and carditis followed very considerable change in the muscle, whereby it lost its striæ.

Case in which a Man was Struck by Lightning.—Dr. G. WILKS (Ashford) contributed this case. On June 8th last, four men at work in Romney Marsh were compelled by the violence of the rain to seek shelter. Three of them retired into a lodge; the fourth (J. Orman) remaining under a willow-tree by the window of the lodge to pass urine. Almost instantaneously, the building was enveloped in a blaze of lightning. The three occupants, having recovered from their terror, ran to seek their companion. They saw that the tree had been struck, that Orman's boots lay at the foot of the tree, and his clothes scattered in a line for several yards along the field, while he himself was stretched upon his back six feet away, stark naked, calling to them for aid. The man himself said that he felt himself violently struck across the chest and shoulders, hurled through the air, and dashed upon the ground, and was sure that he never lost consciousness. His clothes were all blown off him, except one sleeve of his flannel under-vest; the leather straps which fastened his trousers were rent like tinder, and his new strong boots torn like paper, while his watch and chain were partly fused. Upon admission to the Ashford Cottage Hospital, the man was found to be burnt all over, more or less; his eyebrows and whiskers were gone; the burns on the back and chest were superficial, those on the abdomen and pubes more deep; down each leg ran a broad three-inch riband-like scar, terminating at the left heel in a small roundish hole; at the right, in a large lacerated wound, through which the os calcis might be felt fractured into several pieces. There was also a compound comminuted fracture of the right tibia and fibula, which bones were protruding through the skin in the course of the riband-like burn. The deepest burns were about where the buckles of the waist-belt and garters, and the watch, must have been; but from the knee to the heel on the right leg, the whole thickness of the skin in the riband-like track was destroyed by the burning. The man was deaf, but singularly placid and cheerful, showing no signs of shock. He made an excellent recovery (though the burns about the fractures, and the sloughy state of heel, were complications of some moment), walking across the room ten weeks after the accident. He was now (October) earning his living, with a leg shortened from a half to three-quarters of an inch. The following facts were noted: 1. The course of the electrical action was from above downwards; 2. The clothes being very wet, their conductivity had been probably heightened; 3. Where the flannel was next the skin, the burns were more superficial; 4. Where the cotton shirt and trousers touched him, the burns were uniformly deeper; 5. Wherever there had been a piece of metal (*e.g.*, waist-belt, jacket-buckles, watch, shoes), there had been an explosion, or at least a development of great heat; 6. The man was aware that he usually raised his right heel from the ground during micturition, which might have caused the fierce explosion on that side; 7. The nervous system had an almost complete immunity from injury. This was attributed to the wet clothes being good conductors.

Sir JAMES PAGET had held possession of the clothes (exhibited) for some weeks; seeing them, he felt sure that any one would conceive it impossible that a flash of lightning could do what had been done in the case. He considered the explanation of the man's preservation from instant death, as given by Dr. Wilks, the correct one—as being due to the dampness of the clothes in contact with the body. The course taken by the lightning flash was worthy of note, as showing the possibility it had of completely stripping a body by clean sweeps. The irregularities in the direction of the rents were to be attributed to interference with the direct passage of the current by dry patches of clothing. This was particularly noticeable in the boots, one of which, at the time of the accident partially raised from the ground, was much more irregularly injured than the other. The watch exhibited proof of the same peculiarity. Sir James further added that, in a tree close by the place where the man was, there remained marks to show that the flash had pursued a path down the moist *liber* of the trunk. He considered the man had been excellently treated by Dr. Wilks.—Dr. BROADBENT suggested that the stripping of the body might be explained on the assumption that a body of steam had been rapidly formed, and that its explosive force had stripped the man.—Dr. ALTHAUS remembered reading of a similar case twenty-one years ago, recorded in the *Philosophical Transactions*. He attributed the effects produced by electricity to the mechanical force merely of the discharge, which was very great. He could not but think it strange that the man exhibited no paralysis or affection of the nerve-centres. Possibly the man was a bad conductor of electricity.—Dr. HEWAN narrated the case of a dog, which many years ago, on the West African coast, was lying beside its master, when it was (presumably) struck dead by a current of electricity which passed through the house by a central lamp-suspender. The animal was quite dead after the storm. It exhibited no external evidence, however, of such a death.—Mr. HULKE did not see anything to prove that the dog was killed by lightning at all.

Cancer of the Breast following Eczema of the Nipple of long standing.—Mr. G. LAWSON read notes of this case. The patient had suffered from eczema of the nipple for four years, and during that time had been under the care of four physicians. In July 1878, she consulted the late Dr. Tilbury Fox. The eczema then involved the skin around the nipple for an area of about one inch. She had tried all the usual remedies, and had also taken arsenic largely. At this time, Mr. Lawson saw the case with Dr. Fox, and examined the breast specially to ascertain if there were any indications of cancer, but he was unable to discover any. The skin was movable over the breast, and the breast upon the muscle. There was no enlargement of the axillary glands. The eczema was relieved, but never cured. In July of this year, she came under the care of Mr. Lawson. The breast was then large and hard, with the nipple much retracted, and the skin around the nipple adherent to the parts below. There was also an enlarged gland in the axilla. On the following day, the patient saw Sir James Paget, and he concurred in the advice that the breast should be removed. The opera-

tion was accordingly performed, and the patient made a rapid recovery. Mr. Lawson remarked that one of the surgical questions of the day was whether we might consider intractable eczema of the nipple the precursor of scirrhus of the breast. The cases related by Sir James Paget and Mr. Butlin had established the fact that scirrhus of the breast frequently followed a condition of the skin which closely resembled eczema in its general characters. There was some doubt as to whether this so-called eczema was indeed true eczema; whether it was not rather a new growth with some of the superficial characters of eczema, but which differed from it in its microscopical structure. The important and practical question was whether, in cases of eczema of the nipple which had resisted for a length of time all treatment, we were not justified in advising that the breast should be removed in anticipation of a disease which did not then exist. In one case, he had removed the greater portion of a tongue because the gentleman had suffered from ichthyosis of that organ for eighteen years, and he had found that all the recorded cases of ichthyosis had terminated in cancer, either before or shortly after the disease had reached that age. He had also frequently excised an eye which had received a dangerous wound in anticipation of sympathetic ophthalmia occurring in the sound eye, feeling that it was better to save one eye than run the risk of losing both. The same principle of treatment, he thought, might be fairly applied to cases of intractable eczema of the nipple, if we could thoroughly establish the fact that in the majority of such cases the disease was followed by cancer.

Dr. THIN hoped soon to lay all the results of his investigations before the profession. He regarded the disease as not an eczema; and thought that the cancer, in such cases, preceded the eczema. The epithelial element, at the mouths of the galactophorous ducts, first underwent pathological changes, whence the cancerous matter spread. Consequently, to treat a patient in this condition only for the skin-affection involved the gravest error; for the disease was meanwhile making certain progress in the lactiferous vessels, progressing by certain stages to the axilla and mamma. Such a course was a common result.—Mr. BUTLIN said that he did not intend to imply skin-disease solely and precisely by eczema. He had seen four or five cases in which the nipple presented the same indications as in the one under discussion. In one case, however, there was no discharge, either from the surface or from ducts, and the organ on the affected side was less elastic and firm to the touch than that on the opposite side. Though not eczematous, still the condition of the nipple and ducts, even in this, agreed with those of the other cases. In it, only portions of epithelial structures were involved by disease; but in the others all the ducts were so affected.—Sir JAMES PAGET agreed that it might be unwise to give the term eczema to the condition of the parts, and that grave danger of a cancerous issue was involved therein. He differed from Dr. Thin on clinical grounds. He thought there were stages in which the disease was not cancer, but was curable. In one case which resisted treatment during eight months, a cure was effected in eight more, and no cancer was developed in the breast. Such cases, however, were in danger of becoming cancerous; and similarly, in continued ichthyosis, the tendency was to a cancerous disease of the tongue, although it would be wrong to diagnose cancer at the outset. In illustration of this principle, he would instance the proved possibility of cancer developing in ulcerating scars left by burns, even twenty or thirty years subsequent to the original injury. The number of cases in which cancer might appear was very large, and at present we had no accurate knowledge, either of the causes or of the time which determined its growth, or of the process itself.—Mr. JONATHAN HUTCHINSON had, some years ago, contributed a paper on what he termed "the successful cultivation of cancer", for the purpose of drawing attention to the conditions favouring its development. They were now dealing with precancerous state of cancer. He considered the term eczema correctly employed by Sir James Paget and Mr. Butlin, seeing that it admitted of a wide signification, and that the nature of the affection so called varied much. Probably, in some cases, there was simply at first a local disease of the nipple, which, disturbing the local nutrition, and setting up irritation lasting to the observed cancerous period of life, might eventuate in the production of the fatal disease. With them, might be other cases in which a process, more nearly allied to cancerous degeneration, set in from the first. In case the eczema resisted treatment, When was it sufficiently early to initiate special precautionary treatment? Such resistance to ordinary treatment must strengthen the suspicion of cancer. He agreed with Mr. Lawson as to the advisability of an early removal of white patches on the tongue. He related that in one of his cases a patient, operated on in an early stage, was at present, after four years, quite well.—Mr. H. MORRIS cited two cases of reported eczema, followed by cancer of the breast. The condition of the areola had existed too long not to have preceded the cancer; in one case, six years. He was consequently inclined to oppose the view held by Dr. Thin. He remembered an instance of similar external disease, where there was no suspicion of cancer, in a girl aged 18. By her account, she had suffered from cancer "of the mouth of the breast", but no sign of the disease could be detected. Mr. Morris could not advise early removal of the diseased organ in such cases. Similarly, he considered ichthyosis did not always indicate the operation for amputation of the tongue. Out of five hundred cases of cancer seen during six years' practice, he had observed only two in which cancer of the breast had followed ulcerated nipple.—Mr. LAWSON said that in 1865, in a case of eczema which was regarded as epithelioma, treatment by zinc chloride was persisted in until the tissues of the breast became deeply touched. Two years later, the patient returned with a bunch of diseased glands in the axilla, and she was now dying of true cancer.—Dr. THIN explained that the epithelium at the mouths of the ducts might be affected, and the pathological change be confined thereto. If the parts were removed at this stage, the patient might be saved. But the destruction of tissue continued if only treatment for eczema were followed out; in time, the affection spread along the ducts, and plunged into the body of the gland; irremediable mischief was thus set up, and a fatal termination ensued.

HARVEIAN SOCIETY OF LONDON.

FRIDAY, OCTOBER 17TH, 1879.

H. C. STEWART, Esq., President, in the Chair.

Great Enlargement of the Heart.—Mr. ALDERSON exhibited a heart of unusual size from a young man, a cab-driver, who drove from Cambridge to London in one day within a week of his death. He had been the subject of recognised heart-disease for some time before his death. A double mitral murmur was heard in life; and, on *post mortem* examination, the mitral orifice was found narrowed, and also rigid, so as to permit of regurgitation. During the last few days of life, convulsions, with unconsciousness, were common. There was great enlargement of the ventricles, especially the left; and the aortic valves were just commencing in chronic valvulitis. The kidneys could not be examined. The heart was full of clots, and altogether weighed thirty-eight ounces.

Immediate and Permanent Treatment of Disease.—Dr. MILNER FOTHERGILL read a paper on this subject, in which he pointed out how in many cases the treatment which gave immediate relief was not that to be continued in the permanent interests of the patient. He instanced first the free use of opium in the hacking cough of phthisis, and in chronic bronchitis, which gave immediate relief, but did harm eventually. Then, in the diarrhœa due to impacted masses in the rectum, astringent mixtures might give immediate relief, but they were not curative, while removal of the masses was. So, too, in neuralgia, the injection of morphia eased the pain for the time, but, if continued, was more likely to confirm it than to cure it. Likewise in dyspepsia, of reflex origin, its cure depended upon the removal of the exciting cause. In gout, the application of cold, or of leeches, give instant relief; but he quoted Garrod in illustration of the evil consequences which followed such treatment. But of all instances of the conflict betwixt the present and the permanent treatment of disease, that furnished by endocarditis was, he said, the most striking. It was the rule to give tonics as soon as possible, and to get the patient up; but, he contended, the proper plan of treatment was to keep the patient flat in bed for some days after all evidence of active mischief had passed away. The growth of connective tissue in the valve-curtains, which was lighted up by the inflammatory storm that passed over the endocardium, persisted some time after the endocarditis itself was over; and it was the mutilation, caused by the contraction of the neoplasm, which was chiefly to be dreaded. Consequently, the true line of practice was to reduce the strain upon the inflamed valve-curtains by complete rest, and the administration of agents which lowered the blood-pressure within the heart and arteries. The more the connective tissue growth could be limited at the outset, the less the future mutilation of the valves.—The PRESIDENT, Dr. CLEVELAND, Dr. MORTON, and Mr. CRIPPS LAWRENCE took part in the discussion which followed, after which Dr. FOTHERGILL replied.

The Society then adjourned.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THURSDAY, OCTOBER 9TH, 1879.

Croup and Diphtheria.—Dr. D. W. CHARLES HOOD read a paper on croup and diphtheria. He applied the term croup to laryngeal obstruction, as, by retaining the febrile symptoms, spasmodic cases would be excluded. He divided croup into five classes: 1. Catarrhal; 2. As a precursor of bronchitis; 3. Laryngeal; 4. Syphilitic; 5. Mem-

branous. The catarrhal variety occurred chiefly among ill-fed children. Trousseau found it difficult to distinguish from laryngismus stridulus, which, however, rarely occurred after the first year of life. In zymotic diseases, especially measles, it was found. He inquired whether simple catarrh could admit of membranous laryngitis, and thought that cases were so watched in private practice that membranous exudation was averted. As a precursor of bronchitis, it was difficult to distinguish from the real disease at first. Syphilitic laryngitis was easily diagnosed. True membranous croup was sporadic or epidemic. It had been found that the first few deaths in an epidemic of diphtheria were returned as croup. In the membranous stage, topical treatment was of great good. He considered diphtheria not a specific fever, but a specialised form of local affection. Follicular tonsillitis might put on a membranous character from poisoning. He instanced a case of supposed quinsy, which developed subsequent paralysis. He thought it difficult to say whether any throat having membrane is diphtheritic.—Mr. HALLOWES stated that the Reigate district was so free from diphtheria and croup that only cases of laryngeal spasm were met with.—Dr. GALTON found it difficult to accept the theory of the identity of diphtheria and croup, for two reasons. Firstly, in the few cases of membranous croup which he had seen, no other member of the family had been affected, although the patient had not been isolated. Secondly, in Ziemssen's *Cyclopædia*, he found that, although the theory of identity was fully accepted, the old plan of treatment by tartar emetic and ipecacuan was recommended. He inquired as to experience of members in the local application of alkalies, especially lime-water, as advised by Küchenmeister.—Mr. E. H. GALTON mentioned the case of a patient aged 23, who had membranous exudation in the pharynx for five weeks, which spread down the larynx. In this case, Küchenmeister's plan of alkaline spray, with Siegel's apparatus, was applied, and led to the free expulsion of the membrane. Dr. WALTERS had seen membranous croup without diphtheria. In one case, not separated from others in the house, no other was affected; and several other similar cases had come under his notice. On the diphtheria theory, what treatment was to be adopted? One London physician had recommended hot steam to the larynx, and waiting for tracheotomy.—Dr. HORACE JEAFFRESON thought that very small quota could be contributed from general practice in the south-eastern district. He found it difficult to believe in membranous croup without diphtheritic poison, and gave a case of apparent croup followed by albuminuria and paralysis.—Dr. HOOD, in reply, thought that cases might commence in the larynx.

Enteric Fever at Redhill.—Mr. HALLOWES read a clinical report on an outbreak of enteric fever at Redhill in the early part of 1879. During the bitterly cold weather of the winter of 1878-79, many children were found ill with the same set of symptoms of enteric fever. Redhill had the same water-supply as Caterham; and, from investigations by Dr. Thorne Thorne and Dr. Jacob, it was proved that a man affected with ambulatory typhoid, engaged in work in a well of the Caterham waterworks, had infected the water about January 5th. On January 19th, the first case of fever occurred, and its distribution was limited to houses supplied by the Caterham Company. Of one hundred and twenty cases attended by himself and Mr. Berridge, two were fatal. Most of the patients were young; one, however, was a woman aged 75. In more than half the cases, the bowels were confined; bleeding from the nose was frequent. He was unable to find the regular gradations of temperature of Wünderlich. Relapses were frequent. Cold sponging was of great service, the temperature often being lowered two degrees by it; stimulants were always required. Milk was the chief diet; one child, that would take no fluid, took readily three pints of frozen milk daily. After convalescence, abdominal pains occurred often, especially in cases of constipation during the disease. In two cases, loss of power in one limb followed. In one case, there was apparent incubation of a month; the patient had been nursing another, and drinking different water-supply. Many who escaped fever had sore-throat. Enemata of warm water were used after nine or ten days of constipation. Of three hundred cases, more than two hundred occurred during the first week of February.—Dr. WILTSHIRE stated that, during his service under Mr. Simon, cases of typhoid with lung-symptoms occurred at Patterdale under Helvellyn, contracted from fæcal poisoning by a Cornish miner, who was affected with ambulatory typhoid. At Wombwell in Yorkshire, a servant-maid from Sheffield carried typhoid. Here the wells were dug out of soft sand, and within five feet, in many cases, were privy chinks. In a population of fifteen hundred, four hundred and fifty cases occurred.—Dr. HOLMAN stated that the mortality was far larger under the German practice of giving calomel in large doses.—Dr. GALTON stated that, according to statistics, the duration of the disease was shorter in Germany.—Dr. LANCHESTER thought that good was done by occasional purgatives. The French gave salines. If constipation existed, relapses were far more likely. He thought we could often do without stimulants; but, in an epidemic in an orphan school near Croydon, with over one hundred cases, he found all require stimulants. The mortality was two. In the late Croydon epidemic, he had no doubt that fouling of the water-supply was the cause. Mr. Hallowes's case of infection from the motions themselves might have been due to defective house-drainage.—Dr. WITHERS MOORE assumed that this was a mild epidemic. He protested against giving indiscriminate stimulants to young children, and only recommended them in cases of feeble first heart-sound and great nervous symptoms. He agreed with the occasional use of aperients. He thought phlebitis due to feeble circulation, causing coagulation in the veins. In more severe cases, say with temperature of 108°, he thought there was danger in giving cold bath. He had used with advantage quinine in large doses, twenty-five to thirty grains, and relieved cinchonism if occurring by bromide of potassium.—Dr. OLDMAN, in one case of 106°, gave salicylate of soda, in ten-grain doses, for forty-eight hours, when the temperature was reduced to 103°; then gave stimulants, and the patient recovered well.—Dr. WITHERS MOORE had given salicylate of soda in half-drachm doses, but found no reduction of temperature.—Dr. BAGSHAWE thought mild purgatives advisable, but was very seldom forced to give stimulants. In an epidemic at Hastings, he had seen typhoid taken by inhalation from patient. A case visiting a friend with typhoid, noticed fœtid smell from patient; was not exposed to any other source of infection, and in a fortnight had typhoid.—Mr. HALLOWES admitted that it was a mild epidemic; had thought it best with so large a number of cases to be watched not to give aperients. The stimulants were given, especially in cases of nerve-disturbance. All excreta were mixed at once with strong carbolic acid. The efficiency of the well ventilated town-drainage was shown by the little spread of the epidemic.

Treatment of Post partum Hæmorrhage by injections of Hot Water.—Dr. JOHN WALTERS read a paper on this subject, and related four cases in which the treatment had been successful. Dr. Holman had also used it in two cases, one of placenta prævia; and Mr. Berridge in two cases, one of placenta prævia, the other of concealed hæmorrhage. He stated four conditions: 1. The uterus must be emptied completely. 2. The temperature of the water must be from 100° to 110°. 3. The tube must be passed to the fundus. 4. A considerable quantity of water must be used. The advantages of warm water were that it was cleanly, always at hand, antiseptic, and perfectly safe. He drew three conclusions. 1. Severe hæmorrhages were controlled by warm water. 2. Cold or ice in conjunction was useful. 3. In some cases, perchloride of iron must still be used. A discussion followed, in which Mr. Marsack, Mr. Soper, Mr. Berridge, Dr. Williams, Dr. Galton, Mr. Holman, and Mr. Jeaffreson, took part.

MERTHYR TYDVIL.—The two most striking features in Dr. Dyke's last report are: 1. The extraordinary absence of diarrhœa from a place so filthy and so densely populated with dirty Irish as Merthyr Tydvil; and 2. Two considerable outbreaks of typhus fever. Seven deaths amongst young children and one in a person aged sixty-five years, constitute the total mortality in the town from diarrhœa—a result which Mr. Dyke believes to be due to the almost absolute purity of the water-supply. The epidemics of typhus fever occurred in different parts of the district: one at Dowlais and the other at Merthyr. At Dowlais, those chiefly afflicted were Irish, but in a few instances Welsh as well as English people suffered. The spreading of the infection from one single case is traced with considerable accuracy; and altogether, fifty-three persons in thirty houses were invaded with the malady, the result being fatal in eleven instances. The disease would doubtless have become more general but for the timely removal of the cases to the Infectious Hospital, where a great majority of the patients were treated. The epidemic at Merthyr seems to have been less extensive, but the actual number of cases is not given. The other zymotic diseases, with the exception of whooping-cough and enteric fever, were not particularly prevalent. Thirty-eight deaths from the latter disease were registered, the malady being, according to Mr. Dyke, in each instance brought on by structural defects in the drains and sewers or by foul cesspits. Scrofulous diseases caused as many as two hundred and five deaths, or one-fifth of the entire number. This exceptional mortality is no doubt due to the continuous depression in the staple trades of the district and the consequent lowering of the standard of health. The general death-rate was 22.4, the mean of the years preceding having been 24.8. The deaths of children under one year were 15.5 per cent. of the registered births, and the mortality under five years was 38 per cent. of the total deaths. This is a considerable decrease on the figures for former years, and shows that the sanitary authority are working. Indeed, they have spent more than £300,000 on sanitary improvements, but they are yet very far from having completed their labours.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 1ST, 1879.

WATER MONOPOLIES.

A QUESTION of the gravest importance is raised by the recent revelations as to the possible pollution of the Sheffield water-supply. It is one which we have for a long time foreseen; and it has now been brought immediately under our notice by several glaring cases coming quickly one after another. The question is, in short, how the self-sufficiency and wrongheadedness of water-companies can best be checked and regulated. It may surprise many persons to know that these companies are now virtually under no control whatever; but such is the fact. Without going into questions which are more of a legal than of a medical character, it may be pointed out that the only redress which a local authority has against a company which neglects its obligations to supply a sufficiency of wholesome water, is itself to construct water-works. It is true that Clause 52 of the Public Health Act enacts that it shall not be lawful for the authority to construct waterworks within a company's limits, if and so long as such company is able and willing to supply water proper and sufficient for all reasonable purposes for which it is required by the authority; but this clause seems to contemplate only the case of a portion of a district left entirely, or almost entirely, unsupplied by a company within whose limits of supply it is. In those cases, and they are numerous, where the company supplies bad water, and insists that it is good, the authority seems to be helpless, unless it adopt the hardly probable course of constructing entirely independent water-works. Even this it must not do without due notice to the company; and if the latter contend that it is "able and willing to supply water proper and sufficient", the matter must be referred, not to the Local Government Board, but to an arbitrator, whose award, according to another section of the Act, is binding on both parties. Thus the authority, even if it gain the day, has to go to the unnecessary expense of providing water-works distinct from the company; whereas, if it lose, it must be content with the water, whatever its quality, vouchsafed by the latter. There is absolutely no appeal. That this difficulty is a real one, and has been actually felt, is clear from the information before us. A company that supplies Newcastle-upon-Tyne and Gateshead, under the authority of several Acts of Parliament, has repeatedly been bitterly complained against by the local authorities to the Local Government Board, on account of the inadequacy and imperfect filtration of the water supplied. An appeal was made for a Government Inspector to inquire into the means of supply of the company; but this proposal was declined in a letter which adverted to the powers of the authority to construct water-works under Clause 52 of the Public Health Act, a claue which, as we have already shown, is most unworkable.

The Sheffield Town Council are in a very similar predicament. Their Medical Officer of Health has reported to them that the land round the water-company's reservoirs has been sold for building purposes, and has pointed out the necessity of preventing the placing of habitations, sewers, etc., within a few yards of the water's edge. He has, moreover, shown that under a road, a dozen yards from the reservoirs, is a sewer formed of earthenware pipes. This sewer, becoming disjointed, has allowed the sewage to escape, and to percolate through the ground down to the steep grassy slope above the water. The deposit on the bank has been analysed and found to be sewage. The water-company, on being appealed to, adverted to the "excellent advice" it had as to the building of the houses referred to, and expressed its opinion that there was no ground whatever for uneasiness. It contended, moreover, that the reservoir could not be polluted, "as it contains a large quantity of very fine fish". The correspondence has been sent to the Local Government Board, and their attention drawn to the grave cause of peril to the public health by the threatened pollution of the reservoir by sewers in close proximity to the water; but the Whitehall Board can do nothing but give the same stereotyped answer as they did to Newcastle. They have already done so in a very similar case in Lancashire, where the Clayton Local Board has for some time been dissatisfied with the quality of the water supplied to its district, and to a number of neighbouring places, by the Accrington Gas and Water Company. The company not having fulfilled its promise of amendment, the Local Board directed a skilled examination of the water-courses to be made. The report of the expert appointed showed that the organic matter in the reservoirs was greatly in excess, especially under the head of albuminoid ammonia, which gave .28 parts per million. Examination proved that the ground surrounding the several farm-houses bordering on the gathering ground of the reservoir was in a shameful condition; the overflow of the sewage and the slops running into the gutters to mix with garbage and other nastiness, there awaiting the first heavy rain to wash them into the reservoirs, which are supplied principally by "surface-water". On the receipt of this report, the Local Board asked the advice and assistance of the Local Government Board in removing the cause of complaint, with the usual result. The answer from Whitehall was felt to be hardly helpful; and the Local Board have therefore resolved to invoke the aid of other sanitary authorities in the district, with the view of "prevailing" on the company to do what is necessary.

At Nottingham, one of the sources of the town supply has been under suspicion ever since 1871. The occupiers of houses supplied by it complain of its quality, and at times it is evidently very impure. Yet the Government Inspector, who made inquiry in 1871 into an outbreak of fever in the locality, was refused information by the water-company, who recently had the effrontery to state, in reply to an application on the subject from the Medical Officer of Health, that "water could be obtained at any of the taps in the town for analysis". In a recent inquiry at Abersychan, Dr. Ogle found the water supplied by a company, bound by their Act to "effectually filter all water supplied for domestic use", to be muddy and unpleasant, unfiltered, taken from surface-springs, and to contain worms and other organisms when delivered. Notwithstanding this, the company has been waging a fierce paper war to prove that this water is wholesome, and that the complaints about it are unfounded. One more example, and this the most recent of all, and we have done. At Yeadon, in Yorkshire, whither Mr. John Spear was recently sent to make a sanitary inquiry for the Local Government Board, the water-supply is furnished by a private company, incorporated in 1862. The supply is derived from two wells sunk in the sandstone and the surface-drainage from thirty acres of land. Both the wells are unprotected from surface-water or from the drainage of manured meadows. The surface-water is collected by means of common land tiles, which converge to socket-jointed pipes, laid quite superficially in the highway or field gutters, and these in their turn communicate with the main pipe which supplies one or other of the two reservoirs. The pipes laid thus superficially draw the water from meadows manured with night-soil, and from pasture land on which night-soil, for convenience of farmers, is deposited in large heaps, and on which cattle graze. The pipes, in their various course, pass in near proximity to three more or less filthy and badly drained farmyards; and there are at certain points breaks in their continuity, where cattle-troughs are formed. The surface around these troughs is fouled by manure, and from two of them at least the overflow water returns directly to the water-channel. The main feeder of one of the reservoirs runs, just before its entrance into the latter, beneath a stone pavement within two yards of the manager's house; the pavement has gaping crevices, and the water, thus unprotected from

surface and house washings at its last moment before reaching the reservoir, may be seen running just below. The system of water-collection here disclosed it seems difficult to find words sufficiently to condemn; and yet we are afraid that Yeadon, though perhaps an exceptional case, cannot by any means be looked upon as an isolated one. The fact is that the possibility of water-companies neglecting their functions seems to have been overlooked; and sanitary authorities are consequently now in a very awkward predicament.

The dangers of the public health from such a state of things as we have attempted to describe, evidently cannot be allowed to continue; but it seems to be generally conceded that, until an amendment of Section 52 of the Public Health Act is made in the direction of greater supervision over the companies, no improvement can be looked for. Water-companies have already much too powerful a monopoly for any straining of it to be tolerated; and the increasing number of cases of the kind to which we have referred above renders it necessary, until the law is altered, for local authorities and their medical advisers to keep a very strict watch on any application by water-companies for "powers", which they may or may not use, to supply districts with water to the exclusion of everybody else.

HEALTH OF CUSTOMS' OFFICERS IN THE PORT OF LONDON.

RELIABLE statistics of the sanitary condition of a typical section of the population are always a welcome contribution to Public Medicine. For many years the Commissioners of Her Majesty's Customs have published, in their annual report to the Lords of the Treasury, the tables and remarks furnished by their medical inspector, Dr. Dickson, concerning the health of the Customs' officers of the port of London, a body of men averaging about a thousand in number, chiefly in the prime of life, and variously occupied in fiscal duties on the Thames and its vicinity.

During the year 1878, the mean age of the force is computed at thirty-seven years, ranging from twenty to seventy as the extremes. At sixty years, officers may claim to be superannuated on a pension, but many continue to serve after that age, and senile diseases are, therefore, by no means unfrequent. It is in this regard that these statistics differ much from those of the army and navy, in which forces the youthfulness of the men, and the very large proportion invalided out of the service for incapacitating illness, tend to modify the general results to such a degree as to remove them from comparison with any considerable section of the civil population.

The average mortality of the Customs' force during the last twenty-one years has been 12 per 1,000; and the premature superannuation or invaliding, 7 per 1,000. In 1878, these ratios have been somewhat exceeded, the deaths having been 17 per 1,000, and the superannuations 10 per 1,000. The mean age of those who died was forty-six, and of those who were superannuated by reason of illness fifty-two years. One half of the deaths occurred from phthisis, always a heavy scourge in this service, and more frequently acquired than hereditary, as the age of its victims would indicate; the mean age of those who died of consumption having been forty-three years, and the mean duration of the malady about two years. In most cases, no hereditary or constitutional taint could be discovered; but the morbid lesion of the lungs appears to have supervened on repeated catarrhal attacks, due to exposure to cold and wet incident to their vocation. Bronchitis caused two deaths in officers advanced in life; cancer two; and brain-disease two; aneurism, erysipelas, peritonitis, and accident account for the remainder. Chronic disorders, as rheumatism, paralysis, and insanity, were the principal causes of superannuation.

The proportion of zymotic and febrile disease was, as usual, very small, not exceeding 6 per cent. of the whole amount of sickness in the year. Two cases of measles were contracted on board ship. Such instances of disease from infection in the course of duty have been of very rare occurrence in the force, who would seem *primâ facie* to be a good deal exposed to such hazards. Rheumatism and gout exhibit a large proportion, not less than 16 per cent. of the whole. Respiratory diseases contributed 20 per cent., which is below the mean. Disorders of the nervous and digestive organs showed respectively the ratios of 11 and 17 per cent. on the total illness of the year. July and September were the driest, and August the wettest, of those months on record for many years, but the season did not yield, in consequence, a higher ratio than ordinary of bowel and kindred complaints. Syphilitic and cognate diseases were found in the proportion of 4 per cent., almost exclusively in the Gravesend officers, who are, as a rule, the youngest men of the force, and are employed chiefly on board ship. Affections of the skin and cellular tissue gave a proportion of 8 per cent., and accidental injuries of 10 per cent. Dr. Dickson remarks that accidents maintain a more uniform annual average than any class of diseases. For many years they have occurred in the ratio of 10 per cent., a proportion almost identical with that which is obtained in the Royal Navy, and about double that of the Army.

The effect of climate and occupation is well exemplified in the periodic prevalence of the various classes of disease and their incidence on various classes of officers according to their exposure on duty to the vicissitudes of the weather. The mean daily number incapacitated by all causes was 40, or 4 per cent. on strength; the mean duration of each case was twenty days, and the time lost in the year through disease or accident was (including Sundays) sixteen days per man. Taking into consideration the advanced age of many of these officers, the amount of chronic and necessarily protracted disease, and the liberal treatment by which no diminution of salary is inflicted for illness or retirement is enforced until after six months' absence from duty, these figures testify to the high state of health existing in this department of the public service.

SUDDEN DEATH IN DIABETES.

THE sudden termination of cases of diabetes is so frequent, so well known, and withal so startling; the collapse from a condition of comparative wellbeing occurs so often without any previous warning; that even hypotheses which pretend to throw light upon these conditions, more especially if they contain some information holding out therapeutic indications, are welcome to the profession. Dr. Jules Cyr, in the December and January numbers of the *Archives Gén. de Médecine* for 1877-78, has published a paper in which he details the account of thirty-two cases of sudden death in diabetes, collected from various sources. He considers that there are at least five different conditions to which these may be ascribed: 1. The formation of acetone in the blood under conditions nearly unknown—acetonæmia; 2. The accumulation of excessive quantities of sugar in the blood—hyperglycæmia; 3. The retention of urinary solids or water in the blood—uræmia, dropsy of the ventricles; 4. Atrophy of the cardiac muscle; 5. Cerebral anæmia. It is probable that some at least of these may combine to produce the fatal result, while some have a more special and direct effect, and are capable of recognition during life. Of these thirty-two cases, twenty-one are stated to have died comatose; in a few the mode of death is not stated; in others there is no mention of coma; but this large proportion shows the relative frequency of this mode of death. In none of the cases in which necropsies were made, although these unfortunately were few, was there any anatomical change to account for death. Dr. Balthazar Foster has (BRITISH MEDICAL JOURNAL, January 19th, 1878) published a paper in these columns in which he has urged the probability of acetonæmia being the cause of death in a large number of these cases. This theory he supports by quoting three cases from his own practice; in the first, no smell of acetone was noticed in the breath, but the blood of the patient, examined after death, was of a peculiar pale colour and creamy consistence; under the microscope, the blood-corpuscles were broken down into a granular material, which he subsequently found could be artificially imitated by treating blood with acetone; in the other two cases, there was a strong odour of acetone in the breath of the patients. Dr. Foster alludes to the objection which has been made that, in many cases, no odour of acetone is per-

ceptible, and replies that a temperature of 100° Fahr. is necessary to volatilise acetone. Kussmaul (*Deutsches Archiv für Klin. Medicin*, 14 Band, 1874) has gone very fully into this question of acetonæmia, and from his experiments concludes that it is not possible to believe in a theory of acute intoxication from acetone, but that chronic poisoning by this substance may so effect the nervous system as to render it liable to take on an acute form, just as chronic alcoholism may suddenly explode in delirium tremens. His reason for thinking so is, that such very large quantities of acetone are required to produce any physiological effect. He says that he was in the habit of prescribing acetone for phthisis, and often gave four to six *grammes* daily (in one case for six weeks) without producing any disagreeable effect upon the patients, who never complained of headache or giddiness, etc. In his experiments upon animals, he injected as much as ten *grammes* of pure acetone within one hour beneath the skin of a dog, without producing intoxication, anæsthesia, or muscular enfeeblement; but with smaller doses he was able to produce these effects in rabbits. He especially remarks upon the extreme ease with which the odour of acetone could be detected in the breath of these animals; but it must be remembered that their usual temperature is somewhat higher than that of man. We can scarcely believe that acetone ordinarily, or even frequently, is capable of destroying the blood-corpuscles in the way described by Dr. Foster, for all Kussmaul's animals, without exception, even those in whom coma had been induced, recovered, which scarcely could have happened had the acetone produced those physical changes in their blood which Dr. Foster describes; it as at least probable, that these appearances were *post mortem*, perhaps due to a further development of acetone in the sugar-laden blood.

With regard to the treatment, Dr. Foster was successful in one case in which he administered two drops of carbolic acid every hour, combined with opium; he suggests salicylic acid or thymol; all these anti-zymotic substances being intended to check the fermentative change of sugar into acetone. If this conversion could be checked, the results of Kussmaul's experiments give us reason to believe that recovery might take place, but, unfortunately, a diabetic is not in quite such a favourable condition to resist the poison as healthy dogs and rabbits, and Kussmaul's suggestion of gradual impairment of the central nervous organs by chronic poisoning is only too probable. From reading Dr. Cyr's cases, it appears that these deaths are far more frequent in people who have neglected to restrict their diet, while very commonly the fatal accidents have supervened upon some excitement and unusual physical exertion; a woman runs with her baby to escape a shower of rain, a man hurries to catch a train, another loses his omnibus and has to walk home. All these teach the old lesson, none the less useful for not being new, that the only hope of safety for a diabetic is in making his mode of life conform to those rules which have been framed by medical experience and confirmed by medical science.

An addition has been made to the pathology of this subject, and a sixth condition added to Dr. Cyr's list, by Dr. Hamilton's discovery of lipæmia and fatty embola in the pulmonary and renal vessels of a case which died under the care of Dr. Sanders. In their paper (*Edin. Med. Journal*, July 1879) they describe the blood as presenting the same cream-like appearance noticed by Dr. Foster; on standing, it separated into two layers, the upper consisting of fat-globules and a finely granular precipitate, "evidently of an albuminous nature"; the lower stratum being unaltered blood corpuscles, with a few granules and oil-globules. In another case, the blood was in a similar condition, and on submitting it to analysis only a mere trace of acetone was discovered; unfortunately in this case no microscopical examination of the organs was made.

These observations cast some doubt on the occurrence of acetonæmia; but we have seen that the causes of sudden death in diabetes are manifold, and in natural science we must be content to accept a plurality of causes. It may be, that sometimes acetonæmia, sometimes lipæmia, produces the fatal result; or it may be, as Sanders and Hamilton have concluded, that acetonæmia is a myth, and lipæmia the sole condition. It is worth while remembering, however, that it is still open to doubt whether fat-embola can cause death. In their first case, the dyspnœa was very slight, and urine was passed shortly before death; the latter fact strongly contradicting the hypothesis of carbonic acid poisoning.

THE death of Mr. Callender makes a vacancy in the staff of surgeons of St. Bartholomew's Hospital, which will be filled, presumably, by the promotion of Mr. Willett, at present senior assistant-surgeon of the hospital. The then vacant office of assistant-surgeon will, it is generally anticipated, be conferred upon Mr. Butlin, at present surgical registrar of the hospital.

IT would be well if the present occasion were taken of making the additions which have long been plainly and generally perceived to be necessary in the surgical staff of the hospital. A surgical service of one hundred beds is a very heavy charge even when no other duties accompany it, and when no special clinical duties devolve upon the surgeon. It is barely possible for a surgeon to do full justice to the claims of so large a number of patients suffering from surgical affections and injuries, and still more nearly impossible to reconcile such perfect satisfaction of their claims with those of an immense body of students to adequate and continuous clinical instruction and training from the cases. The entry of students at St. Bartholomew's Hospital this year amounts, we believe, to a hundred and forty. The excellent organisation of the school, the large material in the hospital, and the *prestige* of some great names, have sufficed to produce and serve to justify this "run" upon St. Bartholomew's. Among the collegiate medical teaching establishments, it is the one which, by a judicious eclecticism in many of its appointments, by the liberal and wise administration of its funds, by the extent of its clinical resources and the organisation of its school, approaches most nearly to a satisfactory type of good teaching and adequate facilities and resources for general study. On the other hand, its clinical arrangements are notoriously inadequate, especially on the surgical side. As a mere numerical fact, four surgeons cannot adequately employ or superintend the requisite number of dressers to afford training to so great a body of students. The mere rapid routine treatment of so vast a number of patients leaves no sufficient time for the clinical teaching in an organised or systematic manner of the bands of students, who require to be broken up—if their teaching is to be real and fruitful, and not a scramble and a sham—into bodies of a limited number. It is only in Paris that a surgeon attempts to do justice to a surgical service of a hundred beds. But then Paris surgeons are at their hospital every day of the week (including Sunday as a rule) at eight in the morning, sometimes at half-past seven, and rarely leave it before eleven, and sometimes not much before twelve o'clock. Moreover, the Paris *internes* are a much more advanced and highly instructed class of young men than our house-surgeons; they have only obtained their *internat* as a sequel to their *externat*, and after a series of *concours* in which they have shown not only a certain fulness and accuracy of knowledge, but an aptitude to teach; and the *internes* and *chefs de clinique*—a higher and more thoroughly accomplished class of clinical assistants given to the surgeons and physicians, who are also "professors of the faculty"—bring the clinical teaching to a much better position than it is at such hospitals as St. Bartholomew's.

THIS is not, perhaps, the moment at which to insist on the shortcomings of our clinical teaching in London, especially on the surgical side and in some of the greater hospitals; but it is not too much to say that foreigners and provincials greatly reproach us with the great want of *systematic* clinical instruction and organised training in the wards, and the singularly hurried, crude, unmethodical manner in which the students are led round the wards, with now and then a few words of not very well thought out and not very exact or learned comment. They complain that, where "consultations" are held, the curiously imperfect, unlearned, unsystematic, and confused exposition of the clinical rela-

tions, surgical history, and literature of the subject, are often more calculated to show a student what a clinical conference ought not rather than what it ought to be. These criticisms we have heard repeated more than once by foreign students and foreign surgeons and physicians visiting our hospitals, with no desire to be captious, but, on the contrary, with much admiration for all that is good in our English humanity, cleanliness, good nursing, and practically sensible code of therapeutics.

THERE are probably several reasons for these palpable defects in our clinical and other teaching in metropolitan schools. Some of them we have already indicated frequently, and with quite unmistakable plainness. They are the tendency to regard hospital office and school lectureships as the heritage of the pupils of the particular school, and to treat them as a sort of succession which are to be the rewards of young men of moderate income, good staying power, and general utility, willing to take whatever comes first in turn, and as ready to lecture on botany as to teach medical jurisprudence, treating comparative anatomy as an introduction to materia medica, or a supplement to out-patient practice, and the whole as stepping-stones to practice, to be leaped over with as much speed and lightness of foot as possible, until the opposite bank is gained; and then hospital lectureship and clinical teaching are all deserted together; the successful man turns his back on the student as early in life as possible, and the happy day is reached on which the medical world is proudly informed that, "owing to the increasing claims of private practice", the happy incumbent withdraws his ripest knowledge and most matured skill from the sphere of medical education. This is not so in any other country in the world with which we are acquainted. The Nélatons, Trousseaus, Rokitanskys, and Langenbecks, feel clinical teaching to be their proudest title, their noblest occupation, their most delightful and fruitful duty; they never desert it; they have most of them died clinical teachers; and so with the Henles, the Du Bois-Reymonds, the Claude Bernards, the Sappeys, the anatomical and physiological teachers of the great foreign schools. How strangely would the theory be regarded abroad, that such scientific lectureships should be the changeable by-pursuits of a life devoted really to medical practice, and aiming at medical success and popularity.

THE other main defect in our hospital system is the absence of preliminary and systematic clinical training in teaching. The art of clinical teaching appears to be considered one which comes by inspiration, and is attained at the moment of election to a surgical or medical hospital office. Up to that time, the candidate is neither required to give any proofs of natural aptitude for teaching, nor to go through any preliminary course of training in which his natural fitness is ascertained, or acquired skill developed. There are no series of *concours*, no regulation trial "conferences", no defined and regular duties of chief of the clinic, in which the aspirant for full hospital powers and duties is required to give proof of a well-trained and well-stored memory, full of precedents and armed against pitfalls, or of educated utterance, instructed method, and acquired clearness, accuracy, and completeness of exposition. The results are well known, and are often lamentable enough. Here and there is a good, careful, well-trained, methodical clinical teacher; but the exceptions—so numerous as in the opinion of some people to constitute the rule—are seen in surgeons and physicians who go round their wards so hurriedly as to keep the students at a gallop, and to let house-surgeons and clinical clerks clearly understand that "details" are tedious, and "elaboration" a bore, and that the *coup d'œil* of the master and the *tactus eruditus* are endowments which may be received by intuition or discovered by admiring and dumb imitation, but not by careful teaching or patient study. In other cases, the hesitating utterance, or the learned or unlearned silence of the attending surgeon or physician, is equally uninstructive. It is plain, indeed, that the clinical teaching of many of our hospitals is bad, because the system or want of system out of which it springs makes no adequate and regular provision for its being good.

WE are informed that the Prince of Wales will formally open the new buildings at St. Bartholomew's Hospital on Monday afternoon next.

THE number of medical students registered this year at the General Medical Council up to October 29th was 898.

A SEVERE epidemic of cholera is reported to be raging in Japan. The outbreak is attributed to the opening, in April last, of the graves of a number of soldiers who died of the disease in 1877. Up to the end of August, 40,000 fatal cases were recorded; and 100,000 deaths are believed to have taken place up to the end of September.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: EXAMINATIONS IN DENTAL SURGERY.

THESE examinations have undergone great improvements, as, in addition to the usual written and oral examination, there is a practical examination of patients of both sexes selected from hospitals, etc. Each candidate is required to make a gold filling. He must have prepared the cavity on a previous occasion, so that nothing has to be done but to insert the gold. The fillings must be such as will take from half to three-quarters of an hour to accomplish. Each candidate is required to take all his own plugging instruments and materials, rubber-dam, damps, and gold.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

THE opening meeting of the session was held on Tuesday evening, Mr. Erichsen, the President, being in the chair. The proceedings commenced with the reading of a brief preliminary report by the Committee appointed to investigate the relative merits of the method for resuscitation of the apparently drowned followed by the Royal Humane Society, and that advocated by Dr. Benjamin Howard of New York. The difficulty of obtaining subjects for experiment had prevented the Committee from, as yet, arriving at a definite conclusion. In the mean time, it was pointed out that, while the amount of air-change in the lung is apparently less by Howard's than by Silvester's method, there are certain details of Dr. Howard's process, especially with regard to the position of the patient, which deserve attention. The subject is one in which Mr. Erichsen is well known to have taken much interest; and he made some practical remarks on it. Next came a paper by Dr. Ord and Dr. Brodie Sewell, on a dermoid cyst found in the abdomen of a male subject. In the brief discussion which followed, various theories as to the origin of these cysts were referred to; but—while Mr. Savory's idea of parthenogenesis might be applicable to ovarian cysts, and the theory of fœtal inclusion might explain some cases—none were recognised as accounting for all. Dr. Ord contributed another paper on a curiosity of development, in the form of persistence of the Müllerian duct in the male. This was followed by the history, by Mr. Pye, of a case of nearly complete necrosis of the shaft of the tibia, in a youth aged 19, in which he had removed the dead bone with very good result, reproduction of the bone by the periosteum having taken place.

AUSTRALIA FOR THE PHTHISICAL.

IN the course of an address to the Royal Society of Victoria, delivered at the opening of the twenty-second session, the President of the Society discusses a subject which is of considerable interest to English practitioners as well as to Australia, viz., the question whether Australia is or is not a suitable climate to which to send persons threatened with, or suffering from, tuberculosis. Mr. Ellery points out that "a very decided difference of opinion exists among medical men concerning the fitness of our climate for consumptive people, and the prevalence of that disease amongst us, especially among the native-born. Statistics have necessarily afforded the grounds upon which both opinions have been based, and both parties have established their cases satisfactorily to themselves, though perhaps not to those most concerned. Mr. Thomson takes one side, and Dr. Singleton, Dr. Bird, and, he believed, Dr. Williams the other—all authorities whose opinions are of weight. Mr. Thomson contends that phthisis is as prevalent in Melbourne and the suburban districts as in England, while the others take the reverse

side. If it be so common in Australia as to be a question of opinion, or of the method of treating statistics, whether it is worse here or in the mother country, the commonly received opinion that our climate offers comparative immunity from such disease is no longer tenable. It is somewhat remarkable that an alarming fatality among the young aboriginals at the various protection stations has occurred of late; and, from what is stated, he thinks there can be little doubt that the cause is phthisis. If this be so, and the aboriginals were formerly free from it, it will be evidence in favour of its being in a sense 'contagious', a view that is now rapidly gaining ground among leading medical men, and one upon which Mr. Thomson, in his work on *Phthisis in Victoria*, lays considerable stress; and, in a community where this disease has headed the mortality list for the last twenty years, this question becomes one of far more gravity and importance than that of comparative statistics."

THE BABY-FARMING CASE AT TRANMERE.

At the Chester Assizes on October 28th and 29th, before Lord Justice Brett, John and Catherine Barnes, residing at Tranmere, were tried on the charge of wilfully murdering three infants which had been committed to their charge. The evidence of Dr. Laidlaw, who had examined the children, proved that the cause of death was starvation induced by the want of food, proper clothing, and other necessaries. The jury returned a verdict of manslaughter. Lord Justice Brett, in passing sentence, said the prisoners had for years carried on the vilest trade that human malignity could have invented; and though the jury had by his direction found them not guilty of murder, they had committed a series of premeditated and reiterated crimes which were within a hairsbreadth of murder. It was true they had been guilty of manslaughter only, but there were degrees of manslaughter; and, in such a case as this, there could be only one sentence—that of penal servitude for the rest of their natural life.

DR. SCHLEIDEN.

Dr. Schleiden, to whom science is indebted for the investigation of the cellular structure of vegetables, was recently, on the occasion of the completion of the thirtieth year since his appointment as Professor in the University of Jena, waited on at his residence in Wiesbaden by a deputation from the Medical and Philosophical Faculties of the University. They congratulated him on the event, and presented him with an album containing portraits of his numerous pupils. Addresses acknowledging his great services to science were also presented to him on the part of both Faculties.

DR. A. DEVILLE.

The death of Dr. A. Deville, a man whose figure was at one time a very notable one in scientific medical circles in London, is announced as having taken place this week at Ivry. Deville was a Prosector of Anatomy in the hospitals of Paris, of very remarkable technical skill, and extraordinary energy and earnestness. He had very early attained to a considerable and just reputation as an anatomist of the first order, and one who promised to rise to the highest place. At the time of the *coup d'état*, however, he became obnoxious to the Imperial authorities, and was, without any overt cause of offence, seized as the son of a deputy known to entertain strong Republican sentiments, and transported to Cayenne. The influence of his medical colleagues obtained his release, but he was compelled to seek refuge in this country. After some of the first struggles incidental to arrival in a foreign land, where the language and the people were alike strange to him, he quickly made himself friends; his talent was recognised, and he was offered the post of Lecturer on Anatomy at the Grosvenor Place School of Medicine. It is not too much to say that the demonstrations which he gave were of their kind unique. He was not only an exquisite dissector and a learned anatomist, but his enthusiasm for his science knew no bounds; and his power of exposition was remarkable, while his enthusiasm was catching. His thoroughly democratic habits, his earnest and fiery nature, and his admirable devotion as a teacher, endeared him to a considerable body of students; and, in the course of the very few years during which he was teaching, he achieved for himself an excellent position, both as a teacher and also as a physician. All who learned under him, or who taught with him, will remember his little anatomical den, in which he would spend hours busily, earnestly, and enthusiastically working to make full sets of preparations for demonstration; and then the hurried quick step with which he would rush out in the dissecting-room to commence his demonstration when all was ready, wearing a short blue blouse, and carrying with him in his hand a little clay pipe, which he would rarely remove from his mouth when working; and they will remember, too, the remarkable mastery of detail, the perfect knowledge of his subject, the full surgical illustration, and the exquisite skill in dissection, which made those demonstrations very notable incidents in metropolitan teaching. Unfortunately, the troubles through which Deville had gone, his enforced exile, and the hatred which it bred in his mind to the political author of his misfortunes, weighed so strongly upon him as to produce morbid feelings, which ended in the most pronounced mental alienation. For many years, he was beset by the idea that he was the especial object of the hatred of the Bonaparte *régime*, that he was followed by spies, and that his life was not safe. In the end, his mind became wholly possessed with this idea; he was unable to follow his pursuits; and it became necessary for his friends to remove him to an asylum, where he died a confirmed lunatic.

HOW SMALL-POX IS SPREAD.

In a report on the Bishop Stortford urban district, Dr. Ogle refers to the case of a girl who had contracted small-pox in the family where she was servant, and who, when the eruption was out, was sent by her master by rail to some friends at a distance, without any information being given them either of the nature of the disease, or even that she was coming. Dr. Ogle says that this is only one instance of what is of most frequent occurrence. Outbreak after outbreak has been traced by him to a servant summarily dismissed from the house where she had contracted the infection, and sent home ruthlessly to her friends. Such an act is, however, not only cruel, but illegal; and every instance of the kind should be rigidly proceeded against under the provisions of Section 126 of the Public Health Act.

SCHOOLS AND INFECTION.

Considering the character and position of the London School Board, it is not a little surprising to find them deciding, "after consideration", that it is not necessary to close a school from which nearly a third of the children are absent on account of infectious disease. The School Board apparently pin their faith to thorough fumigation, and to the prohibition of the admission of infected children, forgetting that children may be carriers of infection before, and, indeed, without, being attacked by the disease themselves. It appears from a report presented by Dr. Sedgwick Saunders to the last meeting of the Commissioners of Sewers, that a serious outbreak of measles and scarlet fever has occurred in the neighbourhood of Fetter Lane, mainly in connection with the children attending the Greystoke School-Board School. On his first visit to the school, 42 infants were found absent out of 125 upon the books; 4 boys out of 131; and 10 girls out of 93; or a total of 56 children out of 349. The head master was away ill; and the head mistress, though at her post, was too unwell to be there. He communicated with the School Board on the subject, and recommended that the school should be closed for a month. The Board replied that, after consideration, they had decided that the school should not be altogether closed, but that no infected children should be admitted, and that the building should be thoroughly fumigated. This Dr. Saunders thought to be useless, and we entirely agree with him. On October 20th, he again visited the school, and found that 49 infants were away out of 129, 23 boys out of 130, and 28 girls out of 82. The governess was still very unwell, and one of the female teachers was away ill. He thought that the only means of stamping out the disease was the entire closing of the school, and this he recommended should be done. The matter has been referred to the Sanitary Committee of the Commission with a view to immediate action on the subject; but we do not see what more can be

done, except to protest against the absurdity of the School Board's decision. Sanitary authorities have no power to order schools to be closed. They can only recommend such a course, and, although local education authorities, if they are wise, generally bow to the opinion of the medical officer of health, being protected by the Revised Code against pecuniary loss thereby, yet the London School-Board probably think themselves too august a body to be dictated to or advised by anyone else. Systematic sanitary supervision of schools has been more than once suggested in influential quarters, and cases such as this prove the importance, and even necessity, of such supervision.

PROSECUTION FOR CAUSING DEATH BY TRICHINOSIS.

A CORRESPONDENT of the *Allgemeine Medicinische Central-Zeitung* writes from Merseburg: The criminal department of the district court of this place was occupied on September 29th with a charge of general importance. The subject was the death, through trichinosis, of a farmer named Nebelung. The brother-in-law of the deceased, an innkeeper named Albert Kirchhoff, was charged with having caused the death of Nebelung through neglecting, in his office of public inspector of meat, to examine for trichinæ a pig which he had killed. On April 10th, Kirchhoff had a pig killed; he examined it, and found it free from trichinæ; whereon Nebelung, his wife, the maid-servant, and the butcher who had killed the pig, ate more or less of the raw meat. They all became ill, but recovered, except Nebelung, who died on May 1st, three weeks after he had eaten the meat. The official *post mortem* examination showed that he had died of trichinosis; and an examination of the remaining flesh of the pig in question proved that it was infested with trichinæ to an extreme degree. The prosecution laid great stress on the gross neglect shown in the use of an instrument of insufficient length; and pointed out that, through the least oversight or carelessness on the part of an inspector of meat, disaster might occur to a whole neighbourhood. The defendant was condemned to six months' imprisonment. It is worthy of remark that the flesh of the pig was declared to be trichinous by about a hundred inspectors of the district, who examined it. About ten of them, as well as the district medical officer, found no trichinæ, although they examined the same preparations. This is ascribed to their using too high a magnifying power of the microscope.

CHOLERA AND POLLUTED WATER.

THE eleventh annual report of the Sanitary Commissioner for Bengal is a valuable and instructive document, but is much too diffuse to admit of ready condensation. Perhaps the most generally interesting feature in it is the record of the cholera-mortality of 1878 in the Presidency. During the year, that disease visited every district and was present in every month. Of the 673 registering centres, it prevailed epidemically in 46, was severe in 67, mildly prevalent in 518, and entirely absent from 47; and it affected 18,821 villages, against 23,041 in 1877. The number of deaths recorded from it amounted to the large total of 95,192, or 1.58 per 1000 of the population, against the even larger proportion of 2.58 per 1000 in 1877. The marked features with regard to the monthly incidence of the disease were: great severity of prevalence in January; very considerable decline in February, the force of the preceding year's winter severity of the disease having been exhausted; great aggravation in March; continued increase in virulence up to May, culminating in severity in April; sudden decline in June, coincident with a copious rainfall; continuance of abatement, month by month, up to October, when the rainfall was heaviest and the soil well saturated; and a rise in November, with a still further decrease in December, when the drying-up of the soil had recommenced. The winter severity of the disease was not so great as in some former years and commenced later, due no doubt to the prolonged continuance of the rains. In very few of the large number of fairs held in the province are sanitary precautions taken in a systematic manner against outbreaks of disease, particularly cholera, among the large numbers that attend them; but even with the imperfect sanitary measures taken, the results are extremely good. The annual severity and fatality of cholera at these fairs now are as nothing compared with what they were ten to twenty years ago, when practical sanitation was thought impossible. With regard to the causes of cholera, those mentioned from year to year were again referred to last year by the reporters of the various outbreaks. Of all these, stagnant and polluted water holds the first place, but every other unsanitary condition of air, soil, food, drainage, excrement disposal, and crowding, were noted in addition. Commenting on the discussion which has taken place relative to the connection between cholera and drinking-water, Dr. Coates (the Sanitary Commissioner) observes that to limit the cause of cholera to one factor, and its entrance into the system to one mode only, would be very unwise. Yet he confesses that every year's observation in going from district to district, in hearing the various opinions of the local officers on the subject, and in reflecting on both, has rendered his conviction stronger and stronger that there is a connection between impure water and cholera, and that the one—in Bengal at least—is the chief exciting cause of the other. This growing conviction is much strengthened by the effect that the preventive measures adopted at fairs and pilgrimages have had on cholera. Wherever the drinking-water has been most perfectly kept free from impurities (especially fæcal ones), there cholera has prevailed least. The difficulties to be encountered in India in keeping the water-supply pure are unfortunately enormous, and the change can only be a gradual one by educating the masses to discard their preference for drinking water in which they have washed after defæcation, and in which they have cleansed their bodies and clothes. Still, Dr. Coates reports that the improvements that have been effected are great, rapid, and encouraging, so that there is hope of better things in the future. An admirable map appended to the report shows the distribution of cholera and its comparative fatality in the different subdivisions of the province, and greatly facilitates the proper understanding of the text.

TYPHOID FEVER CONTRACTED IN TRAVEL.

IT is an unpleasant fact, that travellers, especially those of younger years, frequently, when moving about continental towns, contract fevers; and the recent losses of Dr. Leared and other promising and able men remind us forcibly of the danger of travel. This has been the case for a long time, and long anterior to the date when the distinction between typhus and typhoid fever was made out. It is often very difficult to ascertain the causes of attacks of typhoid. The usually recognised causes, bad drains and poisoned water, are not always admitted to have been present; although the drinking water is commonly derived from sources so liable to pollution, and the system of conservance is so bad, that both may well be suspected. Typhoid is especially common among the visitors of Italian and other Southern countries. Many of the German watering-places are inclosed in closely packed villages, in hollows among hills, with deficient drainage and imperfect ventilation or perflation. In such situations we should expect to meet with typhoid, and it is only surprising that it is not more often recorded. We are now told that typhoid is common in one of the German spas, which is particularly well situated and which has always borne the name of being a very healthy as well as health-giving locality—Homburg. There is everything in the situation of Homburg to create a presumption that it ought not to become a nest of typhoid. It consists mainly of one long street, running, as the name "Auf der Höhe", denotes, along a ridge, with a few short streets running at right angles and gently sloping towards one or two short and newer streets, which run parallel to the main one. The place is airy; indeed it is often recommended as much for its air as for its mineral waters. It is, for a German town, remarkably free from smells, although that is not saying all that can be wished. We have, moreover, the express statement of Dr. Lewis, who has resided there for years, that it is well drained. It is in this place that "Paterfamilias" conceives that his boys got typhoid; but his statements are vague; he does not say on what date he left Homburg, on what his boys got ill in Brussels, nor does he hint that he could suspect any of the arrangements of Homburg, with which he was well satisfied. The official authorities of Homburg have, in reply to his accusations, produced very positive evidence that typhoid

has not prevailed in the civil or military hospitals. We should have preferred if they had made some remark on the alleged existence of the disease in some of the hotels. But Dr. Lewis makes, on this head, the very distinct statement, for the season 1879: "I certify that I have not known or seen any case of typhoid fever during the whole of this season at Homburg, neither do I believe that there has been an epidemic of any description in the locality". Here we have the supposition of "Paterfamilias" met by a direct counterstatement. Nevertheless, we are not sorry that the question has been raised; anything that will tend to make foreign authorities look to the sanitary improvement of their spas is indirectly useful. Even Homburg will be none the worse for a careful inspection. It is not enough merely to build fine bath-houses and "Trink-halles". We have a notable instance of this in our old favourite spa, Spa in Belgium. There is no question that there has been a great deal of typhoid in it this season. While the authorities built a magnificent bath some years ago, and are now building a new Trink-Halle, they are not enlarging the narrow streets or letting in more air among the closely packed houses. If improvement in these and in other respects do not take place, and typhoid be not banished, the spa will certainly suffer by a falling-off of visitors. We shall conclude with a few general remarks. The frequency of the occurrence of typhoid and other fevers among visitors to spas and cities abroad is a very melancholy and serious fact. Practitioners are generally contented with asserting the healthiness of their own town; a fever in Florence is always stated to have been contracted elsewhere, probably in Rome; a fever in Rome is always set down to the discredit of Naples. It appears to us that medical men are very apt not to consider the subject dispassionately; instead of trying to arrive at the real causation, the tendency always is to lay the blame on some other place. If they would be at the trouble of keeping minute histories of the probable causation of the cases that come before them, ascertain the real condition of towns, their water-supply, their drains, and their hotels, and would send unprejudiced accounts of their results to the journals, we might in time arrive at some satisfactory results. The question is one of no small interest to the large body of our countrymen, and to those in particular who are now making their arrangements for winter residence. We have not yet materials for enabling us to judge how far reports of the prevalence of typhoid in various continental cities are well grounded or not. Meanwhile, the drinking water and the "siphons" met with in continental travel should be shunned like poison, and a natural mineral table-water selected.

DEATH FROM SUFFOCATION OR FROM A BLOW.

AN inquest has been recently held before the coroner for East Staffordshire, which is worthy of notice from the widely different opinions of the cause of death given by the two medical witnesses. According to the newspaper report, the case was that of an infant, aged seven weeks. The mother was carrying the child in her arms, when she suddenly received a blow from her husband. She was struck on the left bosom, against which the infant was at the time lying. The evidence showed that the child did not cry, and that it did not indicate by any sign that it had been struck. On reaching the house soon afterwards, it was found to be dead. Mr. Johnstone, surgeon, said that he was called to see the child, but it was then dead. He had since then made a *post mortem* examination of the body, and was of opinion that the child had died from shock caused by a blow on the nose. There were no external marks of violence on the body. There was nothing to lead him to suppose that the child had died from suffocation. When he saw the child, the hands were not clenched; but when he made the *post mortem* examination, he noticed that the hands were slightly clenched. He attributed this clenching of the hands merely to *post mortem* rigidity. Mr. Whitby said he was present at the *post mortem* examination, and was of opinion that, had the child died from the effects of a blow, there would have been some mark of violence on the body. There was nothing inconsistent in the examination with the theory that the child had died from suffocation, inasmuch as the hands were clenched, the tongue protruded slightly between the gums, and there was bloody mucus flowing from the nose. The jury found that the child had died from accidental suffocation, and not from the blow inflicted by the husband. We believe this to be a correct verdict. An infant of this age might be suddenly killed by a violent blow; but then we should certainly expect to find some marks of violence on the body. It is wholly improbable that a child of seven weeks should die from mere shock, irrespective of physical injury. The mother unconsciously had carried the child too closely wrapped up, or with its mouth pressed against her bosom; and, under such circumstances, suffocation would very readily take place in so young an infant. The clenching of the hands could not have occurred from *post mortem* rigidity; but it is a common result of death by asphyxia. It was probably overlooked when the child was first examined. The other appearances are also consistent with death from suffocation.

CANADA MEDICAL ASSOCIATION.

THE twelfth annual meeting of the Canada Medical Association was held in London, Ontario, on September 10th and 11th, under the presidency of Dr. J. D. Macdonald of Hamilton. It was decided to hold the next meeting in Ottawa, and Dr. R. P. Howard of Montreal was appointed president-elect.

EXAMINATIONS VERSUS "DOCTORS".

THE State Board of Health for Massachusetts, in their tenth Annual Report, direct the attention of the State Legislature to the experience of Illinois, where, in one year and a half, fourteen hundred self-styled doctors are reported as having left the State, because they were unable to pass the examinations required of them. Of these, four hundred are estimated to have gone to Indiana, two hundred and fifty to Wisconsin, one hundred to Minnesota, and an unestimated number to Missouri. The Board remark that, although it is impossible to maintain in this way as high a standard as is desirable, yet the good results are evident; and they recommend that there should be a competent board of examiners in every State, representing all the medical colleges which give satisfactory diplomas, for the purpose of testing the qualifications of those who assumed the practice of medicine without due authorisation.

POISONOUS EFFECTS OF TINNED MEAT.

RECENTLY, much excitement was caused in Bacup in consequence of twenty-one persons having been poisoned by eating tinned corned ox-hearts. We are indebted to Mr. Brown, the medical officer of the local board, for particulars. The meat was sold from a six-pound tin, prepared by a firm in Chicago, noted for its excellence in tinned provisions. The ages of the persons were from two years to sixty-three years. The symptoms produced were those of a powerful irritant poison. In some of the worst cases, in addition to severe vomiting and diarrhœa, there were marked collapse, cramps in the legs, melæna, hæmatemesis, severe pain in the stomach. Four persons suffered from intense drowsiness on the following day. All the people recovered; though it is probable that, in more than one case, death would have occurred had not speedy medical treatment been secured. The meat and tin were sent to an analyst. The following are the chief points in his report.

"There was minute trace of metal on the surface of the meat which was in contact with the solder, and such trace is incapable of producing any effect; even if it had, it would not have been such as has been described to me as having been suffered by persons who ate the meat. The red substance consists of fatty matter coloured by rust from the iron of the tin. It must be one of these cases which I meet occasionally — perhaps once a year—in which flesh food, apparently good, has begun to undergo those changes which precede decomposition and produces those effects, resembling those of an irritant poison. The meat was undoubtedly all right before the tin was opened."

Mr. Brown says that he cannot agree with the report in every particular. There are, however, two sources of danger indicated. 1. The meat may have been impregnated by metals by contact with the solder of the tin. Solder is made of lead and tin; both are poisonous; the latter often contains traces of arsenic as an impurity. In some solders, arsenic is used as an ingredient in its preparation. That this is a possible source of poisoning, we have proof by the fact, that a few weeks

ago, some fatal cases occurred in Germany from eating tinned meat, which were proved to be due to the meat being impregnated with lead from the tin. Lead is not a very powerful poison; some of the compounds of tin are, especially the chloride. It is possible that in some cases this substance may be formed during soldering, as hydrochloric acid is generally used for this purpose. The red deposit referred to in the report was on the solder on the inside of the tin, and was due to chemical action. This is not often seen, as several tradesmen had never seen any tins like it. Having examined a number of empty tins, Mr. Brown did not discover another like it. This circumstance led him to advise that when a tin was so affected, the meat was to be considered suspicious and not to be sold; and though the report states that it contained only "fatty matter and iron", he considers it a safe and prudent course to adopt. If the solder be a possible source of danger, is there any kind of solder free from danger? Or can the solder be protected by some kind of varnish which will not alter the flavour of the meat? This is a source of danger to all kinds of tinned provisions, whether of flesh or fish. 2. Poisoning may be due to changes which precede decomposition. The report does not state what these changes are, or how they are to be detected. The meat, the analyst says, "was undoubtedly all right". From careful inspection and examination by the microscope, nothing wrong could be detected; the muscular striæ were well marked, which would not have been had decomposition commenced. Would decomposed meat cause such powerful symptoms? A healthy young man ate a piece of the size of a hazel-nut, as an experiment, and an hour afterwards, vomiting occurred; and on the following day, he had cramps in the legs. The sale of tinned meat has fallen off 75 per cent. at some of the shops, as for the time the people are greatly scared by the occurrence.

CLINICAL SOCIETY.

THE meeting of Friday evening last was of varied interest. The proceedings received a deep tinge of melancholy at the outset from the sad news of the death of the late President, Mr. Callender, communicated to the Society by the present holder of the office. A member suggested that a vote of condolence with the deceased gentleman's family should then and there be passed. But it was ruled that such a procedure had no precedent, and that the proposition could not be entertained. The President next stated that the volume of *Transactions* of the Society for the past session was not yet ready, but that it would shortly be in the hands of the members, together with an Index volume of the *Transactions* already published. The Chairman announced that the Committee of the Society to examine into and report upon the hyperpyrexial condition in rheumatic fever, etc., had been formed, and that the members would be Dr. Hermann Weber, Dr. Southey, Dr. Ord, Dr. Frederick Taylor, Dr. T. Barlow, and Dr. Coupland, with power to add to their number. Dr. Southey next read two unusual cases of rheumatic fever; and Dr. G. Wilks of Ashford contributed an almost unique case, in which a man was stripped of his clothes by lightning, whilst he himself escaped without material injury to his nervous system. This case was well and tersely described, and was of interest throughout. Pains had evidently been taken to report the essential points, and to omit all redundancies; and the author, who was unfortunately absent, would have been gratified with the applause with which his trouble was rewarded. Sir James Paget, in whose possession the patient's clothing and watch had for some time been, stated that Professor Tyndall had seen the clothes, and considered the case unprecedented. Dr. Broadbent, Dr. Althaus, and others took part in the discussion. Mr. Lawson read notes of a case in which cancer followed so-called chronic eczema of the nipple. Dr. Thin denied that the disease was true eczema, and said the eczematous condition was preceded by superficial epithelioma of the galactophorous ducts. To this statement, Sir J. Paget, Mr. Jonathan Hutchinson, and Mr. H. Morris were opposed. The point is of great clinical interest, and the discussion will be found in our report of the meeting, at pp. 697-9.

SCOTLAND.

OPENING OF THE NEW EDINBURGH INFIRMARY.

THE new Infirmary, which has occupied about nine years in building, was formally opened on Wednesday, October 22nd, by the Lord Provost of Edinburgh, in the presence of the Magistrates and Town Council of the City; the Senators of the College of Justice; the professional Staff of the University; the Presidents and Fellows of the Royal Colleges of Physicians and Surgeons; the managers of the Infirmary; deputations from the Presbyteries and other public bodies; and a large concourse of students of medicine and others. The assemblage was addressed by the Lord Provost; by Dr. Peddie, President of the Royal College of Physicians; by Mr. Imlach, President of the Royal College of Surgeons; and by Sir Robert Christison.

WINTER SESSION, EDINBURGH.

THE winter session began on Tuesday, in the University and extra-mural School, by the opening of most of the classes. Owing to the removal from the old to the new Infirmary taking place this week, the clinical classes will not be opened till Monday for clinical surgery, and Tuesday for clinical medicine; in the latter class, there are four clinical professors on duty simultaneously in the ward teaching, while each lectures in rotation. The Professor of Midwifery also lectures in the clinical medicine course, on the diseases of women, every sixth lecture day; and gives practical teaching to sections of the class. In the gynæcological ward, the section of the tutorial class in the same subject meet nightly in the wards.

HEALTH OF EDINBURGH.

LAST week, the mortality in Edinburgh was 18 per 1,000, or nearly two less than the corresponding week last year. Seven deaths were of persons over eighty years of age; while 28, out of a total of 78, were under five years of age. Zymotic diseases caused 7 deaths, of which four occurred in the New Town. Noticeably, no death was due to whooping-cough.

WATER-SUPPLY.

A PETITION from North Queensferry has been sent to the local authority, requesting that North Queensferry may be formed into a special water-supply district, under the Public Health (Scotland) Act, as the present supply is inferior in quality as well as inadequate in quantity; and with the view of obtaining a supply from the Glensherup scheme, by which Dunfermline and the neighbourhood are supplied.—The Carluke local authority have resolved to procure an analysis of the water from Scott's Pit, and, if it be found of suitable quality, to utilise it by adding it to the other water-supply.—The expenditure on the new water-supply for Edinburgh, having much exceeded the estimates, is being made the subject of discussion at the forthcoming municipal election. What, however, is certainly of equal importance, is the proposal of one of the candidates to have the water analysed regularly, as is done in Glasgow.

AMBULANCE INSTRUCTION FOR VOLUNTEERS.

IT having been decided by the War Office authorities to extend the system of drill in ambulance instruction to the volunteers as well as the regular army, steps have been taken for carrying it out in the case of the Glasgow Volunteers. We understand that, with respect to the local regiments of volunteers, it has been determined that, during the ensuing six months, classes for ambulance instruction will be held. An officer, commissioned by the War Office, has already arrived in Glasgow to impart instruction to the classes that are to be formed.

GLASGOW ROYAL INFIRMARY DORCAS SOCIETY.

THE annual meeting of the supporters of this most useful Society was held on Monday. According to the report submitted, it appears that, out of 4,789 persons admitted to the Infirmary since November 1878, the Society has supplied 656 with clothing and 42 with artificial limbs, etc. The total income of the Society during the past year was £837 13s., and the expenditure £536.

BELVEDERE FEVER HOSPITAL, GLASGOW.

THE Glasgow Town Council, at a meeting on Monday, appointed Dr. J. B. Muirhead Assistant-Physician to the Belvedere Fever Hospital. At a meeting of Council, it was reported that fever has increased so much as to double the inmates in two months.

LONGEVITY AMONG PAUPERS.

IT has been said that one of the healthiest places of residence is a well-regulated prison; but the parish of Dall, in Perthshire, shows, by its poor-roll, a condition of longevity among the paupers that could scarcely be exceeded. Of the seventy-six paupers on the roll, fifteen are over eighty years of age and forty-two over seventy years of age.

OPENING OF THE MEDICAL SCHOOLS IN GLASGOW.

THE medical session of the Glasgow University was opened, on October 28th, with an address from Professor Balfour, who was recently elected to the Chair of Botany. At Anderson's College, Dr. Andrew Buchanan gave the opening address; and at the Royal Infirmary School of Medicine Dr. Clark, Lecturer on Anatomy, gave the introductory lecture.

IRELAND.

DR. BERNARD KAVANAGH died last week at his residence, George Street, Limerick, at an advanced age. The deceased, many years since, acted as resident physician to Barrington's Hospital, and was much respected in the town in which he resided.

SANITARY CONDITION OF NAAS.

FROM a recent report of the medical officer of the district, this town is shown to present a condition of sanitary neglect which imperatively calls for practical action. It appears that there is no system of public scavenging, and that a sewerage scheme is urgently required. The guardians at last seem to have awakened to their duty, and have appointed a committee to confer with Mr. Brett, C.E., on the drainage of the town, and to procure plans which can be carried out at a cost not exceeding £2,500.

THE DUBLIN INTRODUCTORIES.

THE commencement of the winter courses of lectures in the Dublin Schools of Medicine was inaugurated on Monday last, in the School of the Royal College of Surgeons, by the delivery of an introductory address by Dr. Roe, Professor of Midwifery in the College. Addresses were delivered yesterday (Friday) in the Richmond Hospital by Dr. McDowel, and in St. Vincent's Hospital by Dr. Quinlan, on the opening of the session in these hospitals. On Monday, Dr. J. W. Moore will deliver an address at the Meath Hospital; and on the same day, Dr. Gordon, President of the Carmichael College of Medicine and Surgery, will open, with an address, the handsome newly-erected buildings of the College in Aungier Street. Addresses will also be delivered by Dr. Christopher J. Nixon, in the School of the Catholic University; and by Dr. F. Alcock Nixon, in the Ledwich School, on Monday. Mr. Kilgariff will give the introductory address at the Mater Misericordiæ Hospital on Tuesday. We purpose, as usual, giving abstracts of these addresses.

DUBLIN ROYAL SANITARY COMMISSION.

THE Royal Commissioners conducting this inquiry have paid Mr. R. O'Brien Furlong, barrister-at-law, the compliment of nominating him as successor to the late Mr. Jerrold Dixon, secretary to the Commission, whose sudden death we chronicled last week. In one of our reports of the proceedings of the Commission, we mentioned that the Dublin Sanitary Association was represented thereat by Mr. Furlong, one of the honorary secretaries of the Association. Mr. Furlong is well known in Dublin as a gentleman who has devoted his talents to the cause of sanitary reform. The unsought recognition by the Royal Commissioners of his undeniable qualifications for the office of their secretary must be particularly gratifying to Mr. Furlong, as well as to the Sanitary Association, whom he so well represented at the inquiry as to elicit the following complimentary resolution from its Executive Committee: "That the marked thanks of this Committee are due and are hereby given to Mr. Furlong for his kindness in undertaking the duty of representing the Association at the public sittings of the Commission of Inquiry into the Sanitary State of Dublin, and for the zeal, ability, assiduity, and tact with which he performed that duty."

THE VACANT PROFESSORSHIP OF ZOOLOGY IN THE UNIVERSITY OF DUBLIN.

NOTICE has been given that the University Council will, during the ensuing Michaelmas term, nominate to this professorship, which has been lately vacated by the appointment of its original holder, Dr. Macalister, to the chair of Physiology and Surgery in the University. The emoluments consist of a salary of £200 *per annum*, and £50 paid to the professor each year for a course of demonstrations in Zoology. Candidates are to send their applications and testimonials to the Secretary of the Council before November 5th, 1879, and copies of the same to Dr. Stack, the Registrar of Trinity College.

DEATH FROM TETANUS INDUCED BY A HYPODERMIC INJECTION.

AN inquest was held by the coroner for the city of Dublin last week, on the body of a governess, aged about fifty-six years, whose death was attributed to the above cause. From the medical evidence adduced, it would appear that the deceased for years used to inject morphia herself subcutaneously, for the relief of neuralgia arising from bad teeth; and that the habit grew so upon her, that when suffering from this neuralgia her usual habit was to use twenty grains of morphia in the twenty-four hours. On the morning of the 10th ult., she had used twelve grains of morphia in one injection. Symptoms of tetanus showed themselves on the 12th, and were fully developed on the 14th. Dr. Austin Meldon, Surgeon to Jervis Street Hospital, who was called to see the patient, had her removed from her lodgings for convenience of treatment to his hospital. He was of opinion that the cause of the tetanus must have been the injury of some nerve by the needle in the self-administration of the injection on the 10th. From the 13th to the 17th, she was unable to swallow; but she recovered that power two days before her death on the 20th ult. Dr. Meldon deposed that the front of the body of the deceased was covered with innumerable scars from the punctures caused by the hypodermic needles; in fact, it was just as if she had been tattooed. He also stated that there was no case on record of such a large quantity of morphia ever having been used at a time as this lady had used. Two or three years ago, a case, he said, of death from tetanus produced by a wound from a subcutaneous injection occurred in London; but in that case, the dose was only two or three grains. He also knew of two other cases of lock-jaw produced in the same way. The jury found that the deceased died in consequence of traumatic tetanus supervening on a wound caused by the needle of a subcutaneous injection machine which deceased was in the habit of using, and that her death was the result of misadventure. This case is of much interest as bearing on the recognised possibility, as stated by Dr. Meldon, of the wound caused by a hypodermic injection inducing tetanus. We do not know of the particular case occurring in London alluded to by Dr. Meldon, or of the other cases he mentioned; but in the *Lancet* of July 6th, 1867, three cases are referred to of death from traumatic tetanus after the hypodermic injections of sulphate of quinine; and in the same journal (December 16th, 1876, p. 873), the case is reported of a lady who died at Southsea of well marked tetanus after the use on herself of hypodermic injection of morphia, given, it was supposed, with a rusty needle. With reference to this particular case, attention is directed to the symptoms resembling those of tetanus sometimes caused by morphia itself. In Dr. Meldon's case, however, this effect of morphia could not apparently have been in force, as he continued the injection of one grain of morphia when the patient was attacked with the tetanic spasms with instant relief to them. Like many other cases reported in this JOURNAL, the case is also a sad illustration of the result of its being in the power of the public to obtain—as it would appear this unfortunate lady did—unlimited repetitions of the same prescription for a deadly poison from several different chemists on the same day.

DINNER TO SURGEON-MAJOR REYNOLDS, V.C.

THE dinner of the members of the British Medical Association to Surgeon-Major Reynolds, mentioned in the JOURNAL of the 18th October, is fixed to be held at Willis's Rooms on Wednesday, the 26th November next. Further particulars will be announced in our next week's issue. Amongst those who have consented to act as stewards, are—Dr. Alfred Carpenter, President of the Council; Mr. John Wood, F.R.S., President of the Metropolitan Counties Branch; Dr. Sieveking; Professor Aitken; Surgeon-General Longmore; Surgeon-General Mouat, C.B., V.C.; Surgeon-Major Logie; Surgeon-Major Roberts; Dr. Frazer; Mr. W. Platt (Tower Hamlets Rifle Brigade); Dr. C. Holman (Reigate); Mr. H. N. Davies; Dr. Varne; Dr. Rice; and others.

CANON DUCKWORTH AND THE SOCIETY FOR THE TOTAL ABOLITION AND UTTER SUPPRESSION OF VIVISECTION.

THE following further correspondence, in which the gentle antivivisectionists appear in characteristic colours, has been handed to us for publication. It will be remembered, that the outburst of insolent vituperation with which Canon Duckworth has been assailed by the representatives of this society was provoked by the very thoughtful and moderate statement which he made on the subject at the opening of Westminster Hospital Medical School, in which he expressed the opinion that the existing law on the subject of experimentation on living animals was amply sufficient to restrain any cruelties which thoughtless, uninstructed, or reckless persons might be supposed to be inclined to inflict upon animals in the name of science. For this very moderate and fair statement, coupled with a general tribute to the humanity of the medical profession, and to their claim to be considered the best exponents of humanity in relation to animals as well as in relation to men on the subject of medical science, Canon Duckworth was violently and virulently assailed in advertisements published by the Society for the Total Abolition and Utter Suppression of Vivisection in the columns of the *Echo* and the *Globe*. We published recently the rebuke which he administered to those who were assailing him; and the following letters continue and probably conclude this noteworthy correspondence.

"Henbury, Macclesfield, Cheshire, October 24th, 1879.

"Sir,—The want of temper,—the violence of language,—the loss of self-control betrayed in your letter of the 13th inst.,—and the absence of reasoning, which, in our opinion, characterize it,—make evident that any attempt to argue the question with you, may, possibly, be useless. From a Clergyman, a Canon of Westminster, and a Chaplain to Her Majesty,—more mildness, more high-bred courtesy, and more intelligence might have been anticipated. You do not meet the point at issue,—you ignore the quotations from the Evidence given before the Royal Commission by Physiologists and Medical Men,—you have descended to such expressions as 'fanatical vapourings',—'shameful libel",—'shrieking sentimentalism',—'gibbeted in foolish advertisements',—etc. It is the old, old story: '*No Case. Abuse Plaintiff's Attorney.*'

"You accuse us of reviling you,—especially because you are a 'Minister of Religion',—and 'pelting you' with pictures, etc. The accusations are unfounded. Our answer to your gratuitous attack was, even under such gross provocation, temperate and argumentative but in no way abusive. As to 'pelting you' with pictures,—we never issued *one*. And our pamphlets and petitions are approved of by men of intellect, learning, and station.

"Your self-laudation as to your 'abhorrence of cruelty',—'incessant contact with suffering',—'farther-sighted regard for the interests of humanity',—and 'pains to arrive at a rational opinion',—etc., we can, perhaps, afford to pass by with the comment, that the sufferings of the innocent and helpless creatures of your Heavenly Master you seem to disregard, and even to hate those men who raise an unselfish and unhired hand in their defence.

"As you appear to misapprehend the position in which you have voluntarily exhibited yourself before your countrymen, and are desirous to exalt yourself as a 'Martyr to Science' while you furiously fling injurious epithets at the members of our Society,—we consider it right to draw your attention to the following communication from a Gentleman who has become, in consequence of your conduct, a Subscriber to our Association. Perchance, it may enlighten you.

'London, 10th Oct., 1879.

'Sir,—I beg leave to enclose a guinea for the Society for the Abolition of Vivisection. I am moved hereto by Canon Duckworth's recent exploit. I can imagine no....., whose attack is, I hope, more likely to strengthen your hands than to weaken them.—Your obedient servant,

'G. R. Jesse, Esq., — — —.'

Henbury, nr. Macclesfield, Cheshire.'

"We hope you have perused the letter which appeared in the *Echo* of the 16th inst., and written by Mr. Robert McCormick, R.N., Deputy Inspector-General of Hospitals and Fleets;—the companion of Parry;—Chief Medical Officer and Naturalist to the Antarctic Expedition by Ross in Voyage of the *Erebus* and *Terror;*—and who commanded a Boat search for Franklin. Perhaps such opinions,—even from 'the ill-informed section of Society'—*may* have some salutary effect upon your prejudice and bias. But, however that may be, we feel sure they will not be lost on the minds of thoughtful and impartial men.

"As the question is a public one, we presume you will have no objection to our publishing this correspondence.—I am, sir, your obedient servant,

"GEORGE R. JESSE,
Hon. Sec., etc."

"The Rev. Canon Duckworth, D.D.,
77, Hamilton Terrace, London, N.W."

"77, Hamilton Terrace, N.W., October 28th, 1879.

"Sir,—I have to acknowledge your letter of the 24th inst. The question, you say, is one which concerns the public. This I beg leave to deny. I hold that, in matters affecting the progress of science, no opinion is of value except skilled opinion, and the appeal *ad populum* is the unfairest and most fallacious of all appeals. It is on this ground that I, in common with most educated persons, deprecate the action of the Society with which you are identified. I am content to abide by the notorious views of the most eminent workers in medicine and surgery, the members of our great metropolitan hospital staffs, men whose humanity is as unquestioned as their ability. The professional names you could point to as approving of your present agitation could not bear one moment's comparison with those which could be quoted as condemning your objects and your proceedings.

"However, you are quite at liberty to publish, if you choose, the letters which have passed between us. I willingly leave it to persons of ordinary good feeling and enlightenment to find in your letter to me ample reason why I should decline, as I do, to continue correspondence with you.—Your obedient servant,

"G. R. Jesse, Esq." "R. DUCKWORTH."

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

THE following are the new By-laws and Regulations respecting the Examination and Admission of Candidates for the Membership of the College, as adopted by the College, and approved of by the Crown.

1. The grade or order of members of the King and Queen's College of Physicians in Ireland is distinct from that of the Fellows of the College, and the members, as such, are not members of the body corporate of the President and Fellows of the King and Queen's College of Physicians in Ireland.—2. The members of the College alone are eligible to the Fellowship. They shall have the use of the reading-rooms, library, and museums, subject to the regulations relating thereto, and shall be admitted to all lectures, and shall enjoy such further privileges as may from time to time be defined by the by-laws.

3. All persons who have been admitted Licentiates of the College before December 12th, 1878, shall be entitled to be admitted members of the College without payment or examination, on giving six weeks' notice, in writing, to the Registrar, of their intention to avail themselves of the privilege conferred by the Supplemental Charter, and on complying with all or any other prescribed conditions, provided they have, since their admission as Licentiates, obeyed the by-laws of the College.

4. Every candidate for the membership of the College must be a Licentiate of this College for three years at least, computed from the day on which he shall have subscribed his name on admission as a Licentiate; or a Licentiate of one year's standing, and a Graduate of Arts of an University in the United Kingdom; or a Licentiate of one year's standing, and a registered practitioner of seven years' standing.—5. Every candidate for membership shall furnish proof that he has attained the age of twenty-five years.—6. Every candidate shall produce a testimonial from a Fellow or Member of the College, or from a Fellow of the Royal College of Physicians of London or of Edinburgh, satisfactory to the College, to the effect that, as regards moral character and professional conduct, he is a fit and proper person to be admitted a member of the College.—7. No candidate shall be admitted to examination who is

engaged in trade, or who directly or indirectly vends medicines or drugs, or who practises medicine or surgery in partnership, by deed or otherwise, so long as that partnership continues.—8. Every candidate for examination shall produce evidence of having attended courses of practical instruction in Ophthalmology and Histology; he shall also produce evidence that he has held during at least six months the office of resident physician or resident medical pupil, or has acted for the same period as clinical clerk in the medical wards of a hospital recognised by the College, or that he has been in medical charge, for at least twelve months, of any public institution for the treatment of the sick.

9. Every candidate, before being admitted a member of the College, shall subscribe the following declaration in the presence of the President and Fellows.

"I do hereby solemnly and sincerely promise that I will observe and obey the Statutes, By-laws, and Regulations of this College relating to members, and will submit to such penalties as may be lawfully imposed for any neglect or infringement of them. I further promise and declare that I will, to the best of my ability, do all things in the practice of my profession for the honour of the College and the good of the public."

Examination for Membership.—10. Stated examinations for the membership of the College are held quarterly, in the months of January, April, July, and October.—11. Every candidate for the membership must return his name to the Registrar of the College, and lodge with him his certificates, bank receipt of fees, and his schedule,* at least *four* days before the first Friday in each of the abovenamed months. Should the evidence produced by the candidate be in accordance with the By-laws of the College, the candidate will be permitted to present himself at the ensuing examination.—12. Every candidate for examination will be required to translate into English a passage from a Latin author, or to show that he possesses a knowledge of Greek, or French, or German. He will also be required to pass a professional examination in the following subjects: Pathology; Medical Anatomy; Histology; Medical Chemistry; Principles of Public Health, including Climatology and Meteorology; Psychology; Forensic Medicine; and Clinical Medicine.†

13. The fee‡ for membership shall be twenty guineas.

Conditions under which Candidates who were admitted Licentiates of the College before December 12th, 1878, may be admitted Members of the College.—They shall comply with By-laws 4, 5, 6, and 7. They shall also satisfy the College that they have, since their admission as Licentiates, obeyed the By-laws of the College. They shall give six weeks' notice, in writing, to the Registrar of their intention to avail themselves of the privilege. Should the College be satisfied that they have complied with the above regulations, they shall be admitted members without fee or examination, on taking the declaration required of members. §

Should the candidate wish to obtain the parchment diploma of member, he shall pay one guinea.

THE INTERNATIONAL MEDICAL CONGRESS IN AMSTERDAM.

A CORRESPONDENT forwards us, in completion of our Report on the International Congress of Medical Science at Amsterdam, a brief account of Section x—the Museum. This formed an important feature of the meeting, and was exhibited in a temporary building at the Park, the entrance being both from the garden and from the great hall where the general sittings were held.

The Committee of Management consisted of Professor Tilanus, Dr. M. C. Gori, and Mr. M. van Lissa. The great bulk of the work, however, was undertaken and carried out by Dr. Gori, whose name is already well-known in this country by his works, among which we may indicate specially his admirable Reports upon the objects of medical and sanitary interest in the various exhibitions which have been so frequent of late years. It is not very long since we reviewed an able pamphlet of his, giving an excellent account of the medical arrangements for our own army. Dr. Gori thus brought to the work a great wealth of experience, which, united to his own natural energy and enthusiasm, was sure to make whatever he undertook a success. There are always on such occasions very considerable difficulties to contend with, and he who undertakes the somewhat thankless duty must be prepared for much labour and sacrifice of both time and temper. All who visited the museum must have been convinced that its promoter had spared neither time nor labour, whilst his unfailing courtesy in giving explanations and assistance must have been felt by every one.

Although the space at command was somewhat limited, there were a considerable number of objects exhibited, the catalogue extending to six-and-twenty pages, and including the names of fifty-two exhibitors. We note a few of these.

M. Louis Blumberg of Berlin shewed various appliances, including a *pulveriser*, or spray-producer, for carbolic acid, of an useful form.

M. Bosch of Gorinchem, Holland, shewed a stretcher for the transport, treatment, and changing of the sick and wounded.

Messrs. J. and A. Churchill of London exhibited a very complete set of the medical works published by them.

M. Cretes of Paris shewed ophthalmoscopes, etc.; also an ingenious apparatus for testing colour-blindness among railway servants, sailors, and others.

M. C. De Mooij, Army Surgeon, Amsterdam, shewed a number of appliances for use in the field, especially cane-splints and bandages, etc., made of various vegetable materials easily obtainable, especially with reference to tropical service, as exemplified in the Atcheen campaign.

Among the various objects exhibited by the International Manufactory of Medical and Surgical Appliances at Schaffhausen was a very compendious and convenient metal valise or box, for antiseptic dressing, including, besides other things, a spray-producer and irrigator, the latter capable of holding two and a half litres; part of it forms a basin when required. It shuts up in the form of a cylinder and is covered with an oil-cloth case; its shape and portability render it very convenient for carrying about.

Dr. M. W. C. Gori of Amsterdam exhibited various models of stretchers, both hand and wheel; of a portable hut for twelve patients; of a tent constructed after the plan of Professor Léon Le Fort of Paris; also stretchers constructed by the Chevalier Alex. Locati of Turin, and adopted by the Italian Army; Baron Mundy's mountain *seat brancard*. He also shewed a stretcher support for the transport of sick and wounded by rail, as adopted by the Minister for War of Holland; also, reports upon the sections of military surgery and help to the sick and wounded at the exhibitions of Vienna, Philadelphia, Brussels, and Paris.

Messrs. Julius Marx, Heine, and Co. of Leipsic, shewed various appliances in India-rubber.

Hendriks and van Steenbergen of Amsterdam shewed surgical and orthopædic instruments.

Dr. Emile Hermant of Brussels shewed an ambulance valise and regimental medicine-chest, as adopted in the Belgian Army in 1872.

W. A. Hirschmann of Berlin shewed electrical and galvanic instruments.

D. B. Kagenaar of Utrecht shewed physiological instruments, including the isoscope, phænophthalmotrope, cycloscope, horopteroscope, etc., of Donders.

Dr. Hugo Magnus of Breslau exhibited a colour-table for the methodical development of the colour-sense, with explanations and seventy-two diagrams.

Professor Marey of Paris exhibited a polygraph, or registering apparatus for registering the various movements that physicians study in the human economy, such as arterial pulse, heart pulse, respiration, muscular action, and temperature.

Messrs. R. and H. Mathieu (fils) of Paris exhibited a very large and complete collection of their medical and surgical instruments and appliances.

Dr. J. Neudörfer of Vienna showed a drawing of a carriage for the wounded, and pocket-filter for the use of soldiers.

M. J. Pohl of the Hague showed a very large collection of medical and surgical instruments and appliances.

Professor Snellen of Utrecht exhibited some of his well known instruments and appliances for optical purposes.

M. Jules Talrich, anatomical modeller to the Faculty of Paris, showed models of the encephalon; models showing uterine displacements; and models of diseases of the eyes and eyelids. Many of these were in elastic material, which had the strongest resemblance to a real subject.

M. Follet of Paris, engineer, etc., showed plans and drawings of his ogival method of barrack and hospital construction.

M. Trouvé showed various electrical and galvanic apparatus of interest; among others, the electric polyscope, which professes to enable the observer to examine the cavities of the body, including the throat, eye, ear, vagina, bladder, and stomach, by a series of reflections of

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* Blank schedules are to be obtained on application at the College, or by letter addressed to the Registrar, College Hall, Kildare Street, Dublin.

† The examination will be conducted by printed questions, and orally, as well as at the bed-side in the medical wards of one of the hospitals.

‡ This fee must be lodged to the credit of the King and Queen's College of Physicians in Ireland, in the Royal Bank, Foster Place. All cheques made payable to the Treasurer, to be crossed "Royal Bank".

§ In case the residence of any candidate be out of Ireland, he will be required to send a copy of the declaration, written in his own handwriting, with his name subscribed and duly attested.

the electric light, conducted through prisms at different angles. The facility with which the light is produced, and the handiness and comparatively moderate price of the apparatus, will doubtless recommend its use. There were also an electric bullet-explorer and extractor; a galvano-caustic pile; and various other instruments.

Dr. Van de Loo of Venlo exhibited specimens of his well known plaster bandages, showing how they may be extemporised out of old blankets and the like.

This brief account will give an idea of the nature and extent of the exhibition, and of the care and pains bestowed upon its arrangement and cataloguing by the Committee, especially by its chief active member, Dr. Gori.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Clinical Chair of Syphilitic and Cutaneous Diseases.—Patent Medicines.—Hygiene of House-Lamps.—Supposed Spontaneous Combustion.—Dangers of Inhaling Turpentine Vapour.

JUST before the parliamentary recess, the Budget Commission of the Chamber of Deputies had accepted with favour the proposition of the Council of the Faculty of Medicine of Paris for the creation of a new clinical chair for syphilitic and cutaneous affections, which, from the acknowledged importance of the subject, will, it is anticipated, be passed without any opposition by both Houses. Hitherto this branch of pathology used to be treated of as a supplementary course and by the *agrégés* or subprofessors *ex officio;* but, as a chair for this branch exists in the Faculty of Medicine of Lyons, that of Paris was determined not to be behindhand. Many other subjects are treated of at the supplementary courses, which proved so successful that three others have been converted into official chairs: mental affections, diseases of children, and ophthalmology. Thus it will be seen that, notwithstanding protestations to the contrary, the Paris Faculty is fast drifting to specialisms.

Patent medicines or specialities in pharmaceutical preparations are also getting greatly in vogue; and M. Chatin, Director of the École de Pharmacie in Paris, thinks that they ought to be discountenanced as much as possible. At a recent meeting of the Academy of Medicine, this gentleman expressed himself in the strongest terms against their adoption, as their composition is often unknown, medical men lose the habit of formulating their prescriptions, and *pharmaciens* of preparing the medicaments.

Now that the electric light is offering a serious competition against gas and other lights, it may not be inopportune to submit some observations made by M. Bouchardat, professor of hygiene, on the subject, as far as they regard the public health. After having enumerated the various affections caused by strong light, or by insufficient or badly regulated light, M. Bouchardat referred to the various kinds of light that have hitherto been employed for domestic, personal, and other purposes; and remarked that those which produced the greatest quantity of yellow light were proportionally preferable to the red and violet lights, and the most prejudicial to the sight or health were those which combined with their lighting power a calorifying or heat-giving action inherent to itself or associated with some chemical action. Among the combustible materials which produced the greatest amount of yellow light, M. Bouchardat placed fatty substances, whether of animal or vegetable origin, such as suet, wax, and the various oils, which perhaps have in all ages formed part of domestic hygiene. He then dwelt upon the relative advantages of the various kinds of candles, and gave the preference to suet or tallow candles, which, but for other drawbacks, ought certainly to supersede the wax or stearine and other candles of a like nature. Among the lamp-oils, M. Bouchardat prefers the colza or rape oil, although the petroleum oil has many advantages over it, particularly in an economical point of view; but, as many accidents have occurred with the latter, it behoves housekeepers to be on their guard and see that the petroleum is perfectly pure. This is a very important matter, as the petroleum is frequently adulterated with volatile substances which are highly inflammable. Fortunately, however, there is a very simple way by which the purity of petroleum may be tested, and it is this: pour a small quantity into a saucer, just sufficient to cover the bottom, and pass a lighted match over the surface of the liquid, and then drop the ignited match into it. If the petroleum be pure, it ought not to take fire; and the match, after continuing to burn for an instant, becomes extinguished. All petroleums that cannot stand this test ought to be rejected. Petroleum oil, besides affording a good light, gives out a great deal of heat, and in this respect resembles gas-light. The flame of the latter is, moreover, rather vacillating, almost always unequal, and in many cases excessive, as is also the heat which accompanies it. Everybody who has had some experience with gas-lights could testify to the fact that, in a room lighted with gas, one feels a sense of suffocation; pulmonary affections are developed; and etiolation is also one of the results. The deduction from the above is that gas-light is suited only where it can be exposed to a draught or a free circulation of air; and consequently it is well suited for lighting shops, corridors, staircases, and public streets. For the latter purpose, it has not, according to M. Bouchardat, yet found its rival; and, notwithstanding the great progress that has been effected with the electric light, the latter is not likely to supplant the gas, at least for a long time to come.

The Paris daily papers have been full of a case of sudden death caused by "spontaneous combustion" in the person of a workman under the following circumstances. It was stated that the man had been a soldier, and left the army after having served his proper time. He was greatly addicted to the bottle; and, the day he was found dead in his bed, he was completely saturated with liquor. The face and upper part of the chest were burnt, evidently by the pipe he had been smoking, which was found on his pillow; and the impression was that his breath, being saturated with spirits, took fire, and he was burnt to death in the manner described. Now the real cause of death in this case was congestion of the brain, brought on by continual intoxication, and the burning played a secondary part in the drama, for the other parts of the body bore no marks of being burnt. So-called spontaneous combustion of the human body is an extremely rare occurrence; so much so, that the possibility of such a catastrophe is denied by some high authorities on the subject; that is, so far as the spontaneity of the phenomenon is concerned; for they aver that, for combustion to take place, the contact of a flame or any substance in a state of ignition is necessary.

The danger of inhaling the vapour of turpentine has been long known, and its pernicious influence on the health is beyond all doubt, as has been verified in several cases occurring in persons sleeping in newly painted rooms, some of which have even proved fatal. Several theories, more or less plausible, have been propounded to explain the prejudicial effects of the inhalation of these vapours; but, whatever be the correct explanation, there is no doubt of the danger of occupying a room recently painted in which turpentine has been employed, before complete desiccation has taken place. It was pointed out by the Council of Hygiene, that a sudden death which recently took place in Paris was attributable to this cause, it being shown that it could not be ascribed to the lead which entered into the composition of the paint of the room in which the deceased slept; the lead, being fixed and non-volatile, cannot in these cases be accused of being the offending element.

OUR CONFESSIONAL.

THE PLACENTA IN ABORTION.

IT would be dangerous to allow the practice recommended by Mr. Cox, with regard to the treatment of retained secundines in abortion, to pass without condemnation; for, although there are many cases in which more harm than good may be done by interference, yet surely Mr. Cox must have been an unusually lucky man if, following out the "let alone" treatment he recommends, he have not met with cases like that recorded by Mr. Williams. I can distinctly call to mind two cases parallel with that. In one, the expectant treatment had been duly carried out by the medical man in attendance; the other had been managed by a midwife with equal success; and in each case it required a temperature of about 105°, rapid pulse, tender abdomen, and severe rigors, to convince the attendant that any risk was incurred by leaving the case to nature. The frequency with which chronic uterine disease follows abortion ought to make us extremely careful in our treatment of these cases; and while we avoid all undue interference, we should carefully watch for the first signs of possible mischief.

Wirksworth. WM. MILLIGAN.

TREATMENT OF FRACTURE OF FEMUR IN NEW-BORN INFANTS.

SIR,—About twelve years ago I was sent for to a case in which a midwife had left a woman in labour with the femur fractured. Since then I have had another case. On arriving in the room, I saw the patient had severe pains, and the nurse whispered: "It is a footling, and will soon be over." On examining, however, I found the waters broken, and an arm far down in the passage. The patient and her husband both objecting to chloroform, I had, owing to the severe pains, great difficulty in turning, and during a pain I felt the bone snap. The treatment in both of these cases consisted of moulding gutta percha splints above and below from hip to knee; placing the thigh in a gutta percha case, in fact, but leaving the leg free. I covered the splints with chamois leather, and put outside, to keep them dry, etc., a piece of the thin waterproof cloth (used instead of oiled silk). Both cases did very well, with no shortening or wasting of the leg; and it was wonderful how soon the little patient was able to kick about his foot. In each case the fracture occurred in the middle third.—I am, sir, yours truly,

Exeter. JOHN WOODMAN, F.R.C.S.

ASSOCIATION INTELLIGENCE.

DUBLIN BRANCH.

NOTICE is hereby given, that a special general meeting of this Branch will be held in the King and Queen's College of Physicians, Kildare Street, on Monday, November 3rd, 1879, at 4 o'clock P.M., to consider a resolution adopted by the Council, proposing to increase the annual subscription to the Branch.

GEORGE F. DUFFEY, M.D., *Honorary Secretary.*

30, Fitzwilliam Place, Dublin, October 8th, 1879.

SOUTH OF IRELAND BRANCH.

THE fourth annual meeting of this Branch will be held at the Royal Cork Institution on Saturday, November 8th, at four o'clock P.M. An address will be delivered by the President, JAMES A. EAMES, M.D.

Business to be transacted :—Election of officers for 1880; election of new members; report of Council.

Dinner at 7 P.M., at Lloyd's Hotel. Charge, 7s. each, exclusive of wine.

Members intending to be present are requested to notify the same to Dr. P. J. Cremen, Camden Place, on or before November 4th.

P. J. CREMEN, M.D., T. G. ATKINS, M.D., *Honorary Secretaries.*

Cork, October 28th, 1879.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT.

A MEETING of the above district was held at the Castle Hotel, Hastings, on Friday, September 26th: Dr. B. H. ALLEN in the Chair. Nineteen members and visitors were present.

Communications.—The following communications were read.

1. Dr. Allen: Remarks on Provident Dispensaries.
2. Mr. Gabb: Case of Psoriasis followed by Varicella.
3. Dr. J. Williams (London): On Antiseptics in Midwifery.
4. Mr. Campbell: Case of Perineal Section.
5. Mr. Crothers: Davos; the effect of its Climate on Pulmonary Affections.

Next Meeting.—The next meeting will be held at Lewes at the end of November, Mr. R. Turner being nominated as Chairman.

Dinner at the Castle Hotel followed the business proceedings.

NORTH OF ENGLAND BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held in Bishop Cosin's Library, Durham, on Tuesday, September 23rd, at 2 P.M.; there were present the President, G. H. PHILIPSON, M.A., M.D., in the chair, and forty-three members and three visitors.

New Members.—The following gentleman was unanimously elected a member of the Association and Branch: Hugh Torrington Bowman, M.B., Newcastle-on-Tyne. The following gentleman, being already a member of the Association, was unanimously elected a member of the Branch: Arthur Woolsey Blacklock, M.D., Gateshead.

Papers.—The following papers were read.

1. Dr. PHILIPSON, the President, read a paper on Progressive Muscular Atrophy, and recorded the details of a case which he had successfully treated with electricity in the Newcastle Infirmary. The case was remarkable as illustrating the theory that progressive muscular atrophy is a primary muscular affection.

2. Mr. EDWARD JEPSON read notes of a case of Fracture of the Base of the Skull, and exhibited the patient, in whom there was complete loss of sight and partial loss of hearing. The most remarkable feature was that the man had survived.

3. Mr. JEPSON read notes of a case of Amputation at the Shoulder-Joint, and exhibited the patient.

4. Dr. GIBSON read an interesting paper on Acute Articular Rheumatism.—The discussion on this paper was adjourned.

5. Dr. T. W. BARRON showed a patient in whom he had Ligatured the External Iliac Artery for Femoral Aneurism. Two attempts had previously been made to cure the aneurism by continuous pressure with the fingers and with the tourniquet, but without success. The deligation of the artery was accomplished without any difficulty, with Lister's antiseptic precautions, carbolised catgut being employed for the ligature. The patient made a very rapid recovery, the temperature never rising more than a degree above the normal.

Votes of Thanks.—On the motion of the PRESIDENT, votes of thanks were unanimously passed to the Trustees for the use of Dr. Cosin's Library, and to the authorities of the Durham University for the use of the Castle Hall.

After the meeting, many of the members attended service in the Cathedral.

Dinner.—The members and their friends, to the number of thirty-eight, afterwards dined together in the Common Room of the Castle; the President in the chair, and Dr. T. W. Barron in the vice-chair. There were also present the Rev. A. Plummer, Master of University College, and Mr. Arthur Bearlands.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: ORDINARY MEETING.

THE first meeting of the session 1879-80 was held at the Queen's College on the 9th inst.: Present, Dr. JAMES JOHNSTON, President, in the chair, and fifty-eight members and visitors.

New Members.—Dr. Fitch of Chaddesley was elected a member of the Branch.

Communications.—The following communications were read.

1. Mr. TAIT showed two Gall-stones: one in a state of detritus, from a case in which he had performed Cholecystotomy.

2. Mr. TAIT showed an Ovarian Tumour, in which the adhesions were so firm that in removing the tumour he made rents in the edge of the liver and gall-bladder; the hæmorrhage from these was somewhat profuse, but it was ultimately controlled by the application of solid perchloride of iron.

3. Another tumour shown by Mr. TAIT was a Myoma, from the impaction of which in the pelvis a large effusion of ascitic fluid had been produced. He expressed a fear that some damage had been done to an ureter at the time of the operation, and that the patient was not doing well.

4. Mr. HUGH THOMAS showed a specimen of Uterine Hydatids. The patient, aged 21, had miscarried twice previously, and when again advanced to the fourth month of pregnancy had a sanguineous discharge, which lasted upwards of three weeks. She then became jaundiced, and miscarried with a quantity of hydatids, which required much care in completely removing. She subsequently did well.

5. Dr. JAMES THOMPSON showed a Vaginal Speculum of the ordinary Fergusson shape, with a handle attached at a right angle near the outer opening; this he found to allow facility in moving and more convenient than the one in use.

6. Mr. FURNEAUX JORDAN read a paper on a Method of performing Lithotomy.

7. Dr. SAWYER read a paper entitled Therapeutic Notes, in which he drew attention to the value of arsenious acid in the treatment of chorea, and of chloride of calcium in phthisis, and pointed to the important part of diathetic states in the causation of eczema, and the use of ointments of the oleates of zinc and lead as local applications to the diseased skin.

STAFFORDSHIRE BRANCH: ORDINARY MEETING.

THE third ordinary meeting of this session was held at the Bell Medical Library, Cleveland Road, Wolverhampton, on Thursday, May 29th, 1879; present, E. F. WESTON, Esq., President, in the chair, and fifty-six members.

The meeting, to which the members of the Shropshire and Mid-Wales Branch had been invited, was commemorative of the gift of the Library and of a sum of £1,000, the interest of which is to be yearly spent in the purchase of valuable medical and surgical books of reference for the use of the medical profession of the town and district.

Address by the Chairman.—The CHAIRMAN, in opening the meeting, said it was hardly necessary for him to remind those present that their gathering was signalised by a more than ordinary amount of interest and importance. Beyond the pleasurable and instructive character of their meetings generally, with their means of renewing old acquaintances and forming new ones, and their benefits in the interchange of thought and opinions, on cases of interest that were brought before them, they had in connection with the present meeting a circumstance which would make it memorable. That circumstance was the opening of the room in which they were assembled, which, through the liberality of two private individuals, had been built and endowed for the benefit of the medical profession in Wolverhampton and the immediate neighbourhood, and which would henceforth be known as the Bell Medical Library. It was quite impossible for them to mark too thoroughly their high appreciation of the kindness of the two founders of that library,

who had so nobly placed it at the disposal of the medical profession here; and it was impossible to overestimate the advantages that would hereafter be derived from the possession of such a room as that in which they were assembled, which was an addition to the grand hospital by whose side it stood, and an addition of the facilities already in existence in this town for the improvement and advancement of medical and surgical science. The interest of the present meeting was further enhanced by the attendance of members of the neighbouring Branch Association of Shropshire and Mid-Wales, who had accepted the invitation held out to them to come and do honour to the occasion. It might not be inappropriate to touch upon the circumstances under which the new library originated. He believed that some years ago it was thought a library of reference was very desirable to have in connection with the hospital at Wolverhampton; and, after some discussion, the Weekly Board placed at the disposal of the medical staff a room for the purpose; and then Mr. Pugh, a member of the Weekly Board, generously came forward and offered to build a larger room at his own cost; and Mrs. Bell, the widow of a physician, supplemented Mr. Pugh's noble offer by giving a donation of £1,000, the interest of which was to be spent in the yearly purchase of books suitable for a medical reference library. He had no doubt that they were inaugurating for the library a long career of usefulness; and he had great pleasure in moving: "That the hearty thanks of this meeting be accorded to Mrs. Bell and Mr. Pugh for their noble gifts to the medical profession of Wolverhampton and district; and this meeting expresses its opinion that the library is not only a handsome, but in every way a convenient room for the purpose for which it has been erected, and that there cannot be the slightest doubt that year by year its importance will be increased and its usefulness extended."

Mr. R. GARNER seconded the resolution; and it was carried with applause.

New Members.—The following members of the Association were duly elected members of the Branch: Alfred Parkes, Esq., Longton; John Cameron, Esq., Bilston; Dr. Horton, Chasetown, near Cannock; Dr. Archer, Birmingham.

Specimens and Cases.—The following were exhibited.

1. Mr. LAWSON TAIT exhibited preparations from seven cases of Abdominal Section which he had performed during the preceding ten days; these included five cases of ovariotomy, one case of hydrosalpinx, and one case of extra-uterine gestation. All the cases were doing well, except one of the ovariotomy patients, who had died quite suddenly of valvular disease of the heart.

2. Mr. FOLKER showed a large Tumour recently removed from the posterior aspect of the Right Gluteal Region of a man. The tumour, which was encapsuled, was found to be attached by a short pedicle to the sciatic ligament and coccyx.

3. Mr. SPANTON exhibited Vaginal and Anal Specula, made of porcelain, and lined with platinum plating.

4. Mr. SPANTON also showed an Uterus with Ovaries, the former containing a large Interstitial Fibroid, and the latter a large Multilocular Cystic Tumour, which had been removed three days previously from a widow (aged 46) according to Freund's method. The operation was followed by death.

5. Mr. VINCENT JACKSON brought under the notice of the meeting a man aged 83, admitted to hospital with retention of urine of three days' duration, and due to a very tight organic Stricture of the Urethra. A No. ½ silver catheter was, after a very tedious but careful manipulation, introduced into the bladder and tied in for two days; it was then replaced by No. 2 silver catheter; and the next day this was withdrawn, and Holt's dilator introduced and the stricture split; afterwards No. 12 catheter was easily passed, and has daily been so.

6. Mr. V. JACKSON showed a man, aged 37, admitted to hospital with Obstruction of the Bowels due to a Cancerous Stricture of the Rectum, which had existed for three years, the obstruction having lasted three weeks. A left colotomy was performed, followed by instant relief and no bad symptom.

7. Mr. V. JACKSON exhibited a boy, aged 16, admitted with acute Left Morbus Coxæ of the femoral variety. Counterirritation was applied over the articulation by means of the actual cautery, and when the wound which followed the separation of the slough was healed, a Sayre's splint was fitted to the limb, and, a patten having been fixed to the boot worn on the right foot, he got up and walked with crutches with ease, the foot of the diseased limb being prevented from dropping by being slung.

8. Mr. V. JACKSON exhibited a young woman aged 24, admitted with severe Congenital Talipes Equinus of the left foot. During infancy, all treatment was prevented by the medical attendant telling her mother that cutting the tendons was a serious operation, and might cause death. A perfect cure had been accomplished by incising the tendo Achillis and afterwards gradually flexing the foot by means of India-rubber cords properly adjusted. Photographs of cases before, during, and after the treatment were exhibited.

9. Mr. JACKSON showed a man aged 19, admitted with extensive Compound and Depressed Fracture of the Right Side of the Skull. Trephining elevation had been performed, and large fragments had been removed. Secondary and uncontrollable hæmorrhage from the middle meningeal artery set in six weeks afterwards. Ligature of the common carotid artery was performed. Recovery was complete.

Communication.—Dr. MILLINGTON read a paper, entitled Brief Practical Remarks on the Treatment of Syphilis leading to Miscarriage in Pregnant Women.

The Poroplastic and Plaster-of-Paris Jackets.—The meeting adjourned to the theatre of the hospital, where the application of Cocking's poroplastic corset was demonstrated on one of the hospital patients. The facility and quickness with which the corset was adapted were very satisfactory, and an efficient support the result.

Dr. T. J. WALKER of Peterborough showed his method of applying the plaster-of-Paris jacket in the recumbent position. A full description of his plan was given in the BRITISH MEDICAL JOURNAL of March 1st.

SHROPSHIRE AND MID-WALES BRANCH: ANNUAL MEETING.

THE annual meeting of this Branch was held at the Salop Infirmary, Shrewsbury, on Tuesday, September 30th; JAMES BRATTON, F.R.C.S., President, in the chair.

A large number of members of the Branch were present, and also several Staffordshire members, an invitation having been sent them to attend the meeting and dinner, in return for their hospitality at their recent meeting at Wolverhampton; a few other visitors were also present.

A Vote of Thanks to the retiring President was carried unanimously.

President's Address.—The PRESIDENT gave an address, in which he alluded to the changes and improvements which had taken place during the fifty years he had belonged to the profession.

New Members.—The following gentlemen were elected members of the Branch: E. Cureton, Esq., Shrewsbury; Samuel Butler, Esq., Shrewsbury; T. Chillingworth, Esq., Shrewsbury; and Wm. Aylmer-Lewis, Esq., Oswestry.

Representatives in the General Council.—The following gentlemen were elected to represent the Branch at the meetings of the General Council: The President; J. R. Humphreys, Esq.; J. D. Harries, Esq.; and the Honorary Secretary.

Council of the Branch.—The following gentlemen were elected on the Branch Council: The President; T. B. Barrett, Esq.; J. Sides Davies, Esq.; Wm. Eddowes, jun., Esq.; H. J. Elliot, Esq.; Dr. S. Tayleur Gwynne; J. D. Harries, Esq.; J. R. Humphreys, Esq.; J. Rider, Esq.; H. J. Rope, Esq.; R. W. O. Withers, Esq.; and the Honorary Secretary.

Honorary Secretary.—Mr. Henry Nelson Edwards was reappointed Honorary Secretary and Treasurer.

Papers.—The following were read.

1. Dr. CHEYNE: On some of the Results obtained from the Antiseptic Treatment.

2. Mr. WM. EDDOWES, jun.: Notes on the cases of several children who had been struck by Lightning.

3. Mr. H. O. THOMAS of Liverpool demonstrated the method of applying some of the Splints invented by him for the Cure of Disease of the Joints; and several of his appliances were exhibited.

4. Dr. ANDREW gave a short address on Antiseptic Ice Treatment; and demonstrated the readiness with which solutions of several of the substances used in antiseptic surgery become frozen.

Dinner.—Members of both Branches, to the number of fifty, dined at the Lion Hotel. The usual toasts were given and responded to, and the intervals were filled up by some very excellent glee singing. The meeting and dinner were most successful.

LIVERPOOL MEDICAL STUDENTS' DEBATING SOCIETY.—On Saturday evening, October 25th, the first meeting of the sixth session of this Society was held, under the presidency of Dr. Glynn. Dr. Carter was elected president for the ensuing session. Mr. Prothero read an able and interesting paper on Alcohol, which evoked an animated discussion. There was a large attendance of members. Books or instruments, to the value of eighteen guineas, will be awarded as prizes for papers, reports of medical and surgical cases, debating, and exhibition of specimens during the session.

OBITUARY.

GEORGE WILLIAM CALLENDER, F.R.C.S., F.R.S.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

A PROFOUND impression of painful regret has been produced by the announcement this week of the premature death, at the age of forty-nine, of Mr. Callender, on board the steamer which was bringing him from America to this country after a short holiday trip, in the course of which he had revisited his professional brethren there, who had last year given him so warm a welcome as to induce him to desire to repeat his visit. George Callender was one of the surgeons of whom England was most proud, and whose career and character reflected credit upon the school of surgery to which he belonged, and on the profession in which he had early attained a distinguished position. A man of solid attainments, of calm and judicial mind, of kind and sympathetic character; well grounded in scientific knowledge; efficiently and industriously trained to a high degree of technical skill by steady conscientious work; sober in judgment, reliable in council, well versed in precedents, self-reliant without boastfulness; deferential to the mature judgment of colleagues, but habituated to the formation of ripe and independent decision; a firm friend, a pleasant companion; conservative in his instincts, and very respectful of old traditions, but yet steadily progressive, and not averse to the study of new views; mainly concentrated in the pursuit of his own life-work, but yet tinctured by liberal tastes and sympathetic with men of artistic pursuits; a man of science emphatically; a sound practitioner; very tender-hearted, and scrupulously careful to avoid the infliction of the least avoidable pang, physical or moral, upon those who surrounded him or came within his influence—Callender possessed qualities which early marked him out for a distinguished place even in that great hospital to which he belonged, which still boasts, and which has always boasted, of many great names and of a continuous course of high achievement.

To those who remember him, as does the writer of this notice, as a student at the time, in 1852, when he took the senior scholarship at St. Bartholomew's, and subsequently as a demonstrator, waiting the trials by which he earned his spurs, he is remembered as the pleasant companion in the cricket-field; the active and earnest secretary of more than one organisation, such as that of the Students' Naval Medical Association, by which the students of his day demonstrated their interests in the larger subjects of professional importance, and for a time undertook to champion a cause which aimed at the elevation of the whole status of the profession. When a student, Mr. Callender was noted for great personal neatness; and it has often been said of him that he was one of the few "well dressed" students that were hard workers and rose to a high position in the profession. He would put on evening-dress for dinner even when spending an evening by himself, hard at work in his rooms. This, at a period when students affected extreme Bohemian manners, doubtless had a favourable influence on his companions. Subsequently as a teacher, and in minor appointments at subsidiary institutions, such as the Ophthalmic Hospital in Charlotte Street, where he was the colleague of the writer and of Mr. Timothy Holmes, he endeared himself to his friends by his friendly, conscientious, and faithful character, no less than by his clear judgment, his unvarying and steady attention to the duties of his office, and the sound and judicious advice for which he was already noted as being eminently qualified to give in cases of difficulty. Early in 1868, before his appointment to the chair of surgery, he delivered a surgical lecture, in the place of a distinguished senior colleague then indisposed. The lecture was delivered in a characteristically methodical manner; the facts were recapitulated and summarised in a way congenial to the industrious note-taking student; and the lecturer was greatly applauded. This lecture, probably now entirely forgotten, then excited great attention. When officially appointed surgical lecturer, and removed from the task of teaching the comparatively dry facts of systematic anatomy, he justified the good impression he had made by this lecture. His course of promotion at St. Bartholomew's Hospital was remarkably rapid. It is little more than twenty-five years since he became a member of the College of Surgeons, and already he had achieved considerable seniority in the list of surgeons at St. Bartholomew's, on which at the time of his death he stood third in order. His services to the museum, to the dissecting-room, and to the school were considerable and continuous. For years he never missed a demonstration or a lecture. He gave to his duties the most steady persevering and assiduous attention. As a teacher, he was sound, clear, and exact. He left nothing to chance, and trusted little to happy inspirations of the moment. His work was carefully prepared, his facts concisely stated, closely condensed, and well arranged; and his conclusions accurately thought out, and stated with great precision. The students quickly learned that they might rely upon Mr. Callender for good sound teaching, thoroughly in accordance with the ascertained facts of the day, and such as they might depend on as being free from party bias or from fanciful exaggeration. His manner to students was extremely kindly; and he never made the off-hand and so-called "practical" observations based on superficial observations which are sometimes heard, but explained clinical details with measured slowness and precision. In talking about a case with a dresser or house-surgeon, he always put the junior on the best terms with himself by speaking in the first person plural, and so including his inexperienced coadjutor for the time being. We may conclude these small but suggestive details as to the kindliness of the late Mr. Callender by stating that he was extremely hospitable to his students, many of whom he made a practice of inviting to his table.

The scientific work of the late Mr. Callender, by which he earned the Fellowship of the Royal Society, was chiefly in anatomical subjects, especially on the development of the bones of the jaw. In surgery, his first important studies were on femoral hernia; and it was on the subject of hernia that he made his first important contribution to the classical text-books of surgery in Holmes's *System*.

Always disposed to take part in any well-considered movement for the advancement of medical science, Mr. Callender was one of the most active persons in founding the Clinical Society of London. He was one of the Executive Committee appointed at the first meeting at Dr. Burdon Sanderson's house, at which that Society was originated; he acted for several years as one of its secretaries, and did much by his personal influence and general popularity to confirm the success of that valuable society; and it was in recognition of these long-continued services to the society, of his loyalty to its interests, and his frequent and valuable contributions to its proceedings, that Mr. Callender, while still in the early prime of life, received the honour of being appointed President of that Society, a post most frequently reserved for men much his seniors in the profession.

He will be remembered, however, chiefly in surgery for the remarkable successes which he obtained as a practical surgeon in eliminating from his wards many of the causes of death which beset operations in hospitals, and for the great success which attended his practice in respect to the low rates of mortality which he established and maintained, and to the gentle and painless dressings which he reduced to a method. The remarkable lectures which he contributed from time to time to the columns of this JOURNAL (in which nearly all his most important contributions to current medical literature were made) raised definitely, and in a form which has attracted the attention of all the surgeons of Europe, the question how far the accidents of surgery, so frequently fatal, may be eliminated by scientific cleanliness and surgical isolation in the treatment of each individual patient. It was Mr. Callender's just boast that septicæmia, blood-poisoning after surgical operations and as an incident of such operations, or of traumatic injuries, was practically unknown in his wards; and the statistics which he published in these columns, and in the *St. Bartholomew's Hospital Reports*, go far to establish that boast, even to the very letter of the statement. By unwearied attention to details; by thoughtful, tender, and patient organisation of the dressings of each particular case; by securing for each patient his own dressing apparatus; by establishing, as it were, a system of surgical quarantine around every injury or operation, Mr. Callender succeeded in equalling, in some respects at least, the success to which Mr. Lister and his followers can point as the almost exclusive and especial appanage of antiseptic surgery. His records of amputation and of success in the treatment of compound fractures not only stand out as unsurpassed and rarely equalled in surgery, but they have the merit of having created a school which aims at outdoing the brilliant achievements of antisepticism on the Listerian method, by creating a new kind of antisepticism, depending on the purity of all the surroundings of the patient, and on the freedom from all disturbing or poisonous elements of the dressings, and of every instrument or appliance with which the patient is brought in contact. Mr. Callender's method was, indeed, a modified Listerism; but it was a modification entirely in accordance with the character of the man—a modification in which the surgeon depended less upon a rigorous and what might be called mechanical application of a scientific uniform safeguard to all cases, than upon the personal individual and minute attention of the surgeon to all the details of his case, and to all its surroundings. This is not the place to weigh the relative achievements of the antisepticism discovered

and introduced by Lister, and of the modified antisepticism practised by Callender, or to inquire whether the proceedings of the latter could ever suffice to produce results so indicative of absolute safety, or could ever furnish means of encountering with impunity larger risks, as in opening joints, such as characterise the Listerian system; but this may be said with certainty: that to the study of this great subject—the highest in surgical science—to the study of the means by which surgery may be robbed of its fatal accidents, and of the ever-impending terrors of hospitalism, Mr. Callender, approaching the subject from his own point of view, has made contributions of permanent and inestimable value to surgery, such as well justified the great reputation which he had achieved here, and which won for him so magnificent a reception last year on his visit to America. Our contemporary surgeons abroad, our foreign critics, and our American cousins may claim to anticipate for living surgeons here the voice of posterity; and their voice has already accorded to Callender one of the highest places in the temple of surgical science. He was regarded everywhere as the representative of the highest merits of British surgery, and was received with the honour which his achievements merited, and with the personal attention and kindness which the sincerity of his character and the amenities of his nature naturally evoked.

Mr. Callender contributed largely to the *St. Bartholomew's Hospital Reports*, of which he was surgical editor from their first appearance in 1865 until 1873. His principal contributions were: "Fractures involving Joints: Fractures interfering with Movements at the Wrist" (vol. i). "Respecting Rupture of the Axillary Artery in reducing Dislocations at the Shoulder-Joint" (vol. ii); "On an Operation for the Relief of a Stricture of the Urethra" *(Ibid.)*; "The Anatomy of Brain-Shocks" (vols. iii and v); "Cases of Masked Hernia, and other Cases" (vol. iv); "Comparison of the Death-Rates after Amputations in Country Private Practice, in Hospital Practice, and on Country Patients in a Town Hospital" (vol. v); "Fractures injuring Joints" (vol. vi); "On the so-called 'Serpent-Teeth'" (vol. vii); "Notes on the Death-rates after Amputations in Hospital Practice" (vol. viii); "Two Years of Hospital Practice" (vol. ix); "Surgical Notes: Wounds and Ulcers" (vol. x); "Seven Years of Hospital Practice" (vol. xiv); besides other contributions in which he co-operated with a medical or surgical colleague. Of his contributions to the JOURNAL we have already spoken.

Mr. Callender's loss will be deeply felt in the British Medical Association. He was first led to take an active interest in the affairs of the Association when he consented to become one of the local secretaries for making the arrangements for the last great meeting of the Association in London. Having thus for the first time become well acquainted with the objects and working of the Association, and satisfied of its value as a powerful instrument in promoting the welfare and fraternal union of the profession, Mr. Callender, who earned well deserved gratitude by his exertions on that occasion, consented shortly afterwards to be nominated as a member of the Committee of Council, and subsequently as a member, and at last as Chairman, of the Scientific Grants Committee. He further added to the debt which the Association owes to him for continuous and faithful assistance. His last act before leaving England was to leave with the writer of this article a memorandum on the subject of the completion of the report of the Committee on Hydrophobia, of which he was Chairman; and, only the day before he left, he wrote a letter asking the editor to visit, or to send a representative to visit, the greatly extended new buildings of St. Bartholomew's School, and to publish a notice of them, thus manifesting in this last message the interest which he continued to maintain to the last in the welfare of his school, and in the promotion of scientific inquiry for the benefit of mankind.

Mr. Callender was an admirable man of business—very methodical, very accurate, and of excellent judgment both in devising and carrying out business details. He was never over-prompt to make a change, and yet always ready to consider any suggested improvements, and not slow himself to initiate them. He was eminently a peacemaker, and as such exercised a great and just influence in the Councils of many societies. He knew how to make due allowances for differences which arose in the conduct of affairs, and was always disposed to use his utmost exertions to lessen friction and to compose dissensions. He will be sorely missed from many committees, both in the public institutions with which he was connected, and where his guiding and moderating influence has long been felt to be of very great value.

Mr. Callender's connection with St. Bartholomew's Hospital commenced on October 1st, 1849, when he entered as a student. From October 1852 to October 1853, he was house-surgeon to the late Mr. Stanley. In July 1854, he was appointed registrar to the hospital, and retired from office in July 1859. In August 1861, he was appointed Assistant-Surgeon, and became full Surgeon in May 1871. He was lecturer on Comparative Anatomy from July 1862 to August 1865; in the latter year, he exchanged this duty for that of joint lecturer on Anatomy; and in July 1873 was appointed a lecturer on Surgery.

The death of Mr. Callender was due to Bright's disease, from which he had been suffering for the last two years. He was himself conscious of the fact, but it had not assumed any alarming form. His friends, however, had noticed a palpable failing in health during the last year. His case was the subject of frequent and anxious consultation in Philadelphia between Dr. Da Costa and Dr. Levis, at whose house Mr. Callender was staying. They felt compelled to take a very serious view of his case, as his illness was rapidly increasing; and it was at Mr. Callender's express desire that his return to Europe was anticipated by about ten days; and he was brought from Philadelphia to New York on October 15th, the day the *Gallia*, the steamship which brought him, sailed for England. He was at this time suffering from very considerable anasarca of the extremities, together with great debility; and he was so reduced that he had to be carried on to the ship. On board the *Gallia*, he received the assiduous care of Dr. Hill, one of the senior surgeons in the Cunard service, and a St. Bartholomew's man and a personal friend of Mr. Callender. An additional state-room was given him on deck, and special arrangements were made for his medical care and nursing; and, as Mr. Callender's daughters were with him, nothing which care, kindness, or affection could suggest was wanting; but, in spite of all that was done for him, he gradually sank and died at 3.30 A.M., on Monday, October 20th. Mr. Callender himself felt how serious his illness was, and more than once expressed a fear he would not survive to reach England.

The news of his death was received in Liverpool with the deepest regret; and from Liverpool transmitted to London on Thursday night of last week by Mr. Reginald Harrison, his attached personal friend. We should add that the *Gallia* made the fastest passage which has ever been made by a Cunard steamer, having completed the journey from shore to shore within eight days.

Mr. Callender's funeral took place at Norwood Cemetery on October 29th, and was attended by his bereaved family and a large number of his professional colleagues and friends.

F. S. ARNOTT, C.B.

DR. FRANCIS SHORT ARNOTT, C.B., died at his residence, Kirkconnel Park, Dumfriesshire, on the 16th ultimo. He was born in Ecclefechan in the year 1805; was educated for the medical profession at, and graduated as M.D. in, the Edinburgh University. He entered the military service of the East India Company in 1829, and was in it during the mutiny. He retired from the army in 1869, when he held the appointment of Surgeon-General, Bombay Medical Department. In recognition of his services, he was created an Honorary Surgeon to the Queen and C.B. The latter years of his life have been spent at Kirkconnel Hall, Dumfriesshire, of which county he was a magistrate. He died, after a short illness, in his seventy-fourth year.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

AT a special meeting of the Parochial Board of St. Andrew's, held on October 27th, the vacancy caused by the death of Dr. Malcolm was filled up by the appointment of Dr. Lyon, M.A.

EARLY INFORMATION OF CASES OF INFECTIOUS DISEASES.

As as illustration of the importance of early information being given of the existence of cases of infectious disease, Dr. Yeld records, in his last annual report on Sunderland, the case of a labouring man who had been out of work and in a destitute condition, and who was attacked by typhus. As soon as he became ill, he became entitled to ten shillings a-week from his club and the doctor's attendance. The case was not reported to Dr. Yeld, and the man was not, therefore, removed to the Corporation Fever Hospital. The patient recovered, but during his recovery, his wife took the disease and died; his children became ill, and were removed to the hospital; a neighbour, meeting him in the house, fell ill and died; and a young girl who visited the house was also attacked and ultimately died. Altogether, the outbreak resulted in thirteen persons being attacked by the disease, three of whom died. Had the first case been reported to the sanitary officials, it could have been at once isolated, with every probability of the disease spreading no further.

TYPHOID FEVER AND POLLUTED WELLS.

An outbreak of typhoid fever, of a kind which is unfortunately but too common in rural districts where privies and wells are in "loving juxtaposition", is recorded by Mr. R. W. Jenkins in his last quarterly report to the New Forest Rural Sanitary Authority. It appears that a death from typhoid fever occurred in the case of a man who lived in one of seven cottages, the drainage and water-supply of which were very bad. The man appears to have contracted the disease away from home, and when he had been ill for some weeks, the disease spread both in his own house and two adjoining ones, all the inmates of which were drinking the same well-water. Seven more persons almost simultaneously contracted the disease, of whom six were removed to other localities where the sanitary conditions were less imperfect. All of these recovered, and the disease did not further spread.

FEVER AT QUICKMERE.

The attention of the Local Government Board having been attracted to the number of fever-deaths recorded in the Registrar-General's Return as occurring at Quickmere, a small urban district on the borders of Yorkshire, Mr. John Spear was instructed to make inquiry into the matter. On his arrival in the district, the local sanitary authority denied that there had been any prevalence of fever, and this seems to have been correct. During the first quarter of the present year, no less than 40 per cent. of the deaths were uncertified, and of the five deaths from fever that had particularly attracted the attention of the Whitehall authorities, three registered as typhus had been certified as such by a person styling himself a "medical botanist", though at least two of them were not typhus, but scarlet fever. Moreover, one of the typhoid cases occurred beyond the limits of the district. Nevertheless, Mr. Spear shows that, however incorrect the official registers might have been in this particular case, there is no doubt that scarlatina is often prevalent in the district, that diarrhœa is often most prevalent and fatal in the summer, and that small localised outbreaks of enteric fever are constantly recurring in the district. Streets, yards, and courts are mostly unpaved, very often unchanneled, and, owing to this and the complete want of proper scavenging, filth of all descriptions fouls the surface. The sewers are only loose stone or rubble drains, so constructed as to allow the free percolation of their contents into the surrounding soil. Excrement and house-refuse are stored for lengthened periods in vast sunken and uncovered middens of the worst and foulest description. In many of the houses, even those of quite recent construction, the windows are not made to open, and there are scores of back-to-back houses. The water-supply of the central part of the district is indeed wholesome and constant, but that for the outlying parts is liable to pollution and is quite insufficient. No proper provision is made for checking the spread of infection, though disinfectants are freely given to people, who have no sort of instruction in their use afforded them. No remedial action of any tangible description has been attempted by the authority. It is not surprising to learn that the average annual death-rate of the place is 26.7 per 1,000, a rate above that of most of our largest and most crowded towns, and that the zymotic death-rate reaches 5.5 per 1,000.

CERTIFYING OF PAUPER LUNATICS.

The *Peterborough and Huntingdonshire Standard* of the 18th October reports the proceedings of the Peterborough Board of Guardians, from which we learn that at their last meeting a letter was read from Dr. Thomson, one of the medical officers, complaining "that he was not allowed to sign the medical certificate for removal", *as is universally the custom, without exception.* The reading of the letter gave rise to considerable discussion, in which it was elicited that a member of the Board, Mr. Life, a justice, had signed the order; and he claimed the right to select the physician or surgeon who should advise him as to the sanity or insanity of an alleged lunatic. In this he is legally correct, as we pointed out in a former issue; and we refer our readers thereto.

We also feel it our duty to correct the wrong view held by Dr. Thomson as to the custom being such as he asserts. In many instances, the medical officer's duty is limited to giving notice to the relieving officer that there is a person supposed to be of unsound mind in the district. The relieving officer then forwards the notice to the magistrate or justice of the peace acting within the district, who gives directions that the supposed lunatic should be brought before him. Ordinarily, the district medical officer attends before the magistrates or justices; but he has no power of claiming to do so as a right, as it is contrary to the statute, which vests all power in the magistrates or justices, not only of choosing the medical gentleman, but of fixing the amount of fee that should be paid for his certificate.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Taunton, Rural and Urban.—The health of these districts compares favourably with that of former years. In the rural district, the death-rate was at the low figure of 15.4 per 1,000; 74 out of the total 308 deaths, or nearly a fourth of the whole number, being in children under five years. On the other hand, 131, or nearly a half, were deaths of persons over sixty years. The general death-rate, as well as that from zymotic diseases, is declining. The only epidemic of the year was measles, which caused 13 deaths. Diseases of the respiratory organs were fatal in as many as 80 instances. They were also very fatal in the urban district, where 99 deaths from this cause occurred. A curious fatality from cancer (12 deaths in a small town of 16,000 people) is also recorded. The death-rate of Taunton borough was 21.8, which is below the average. Nearly a third of the deaths were in children under five years, a proportion greatly swelled by the mortality from measles and diarrhœa, both of which were unusually prevalent. We are glad to observe that a hospital for infectious diseases, which appears in every way satisfactory, has been provided jointly by the urban and rural authorities.

Tendring Rural District.—The information given in Dr. Cook's report as to the vital statistics of the year and as to the sanitary state of the district is satisfactorily complete. A total of 575 births and 362 deaths are reported, the latter being equal to a rate of 16.7 per 1,000. Fifty-nine of the deaths were between the ages of seventy-five and eighty-five; 21 from eighty-five to ninety-five; and one over ninety-five years. Zymotic diseases caused 53 deaths, 33 of which were under five years of age. Three cases of small-pox (one fatal) occurred; scarlatina and measles were prevalent in most parts of the district; and whooping-cough also prevailed to a large extent. There was an outbreak of typhoid fever at Little Clacton, about fifteen cases being reported, and cases of the disease occurred at four other villages. Phthisis was not quite so prevalent as in 1877. There seems to be a good deal of room for sanitary improvement in the district. The water-supply (procured from wells), as well as the drainage, is reported as still deficient in many instances; and the cottage accommodation for the working classes is very limited.

Carnarvonshire.—We are gratified to find that Mr. Rees has adopted the suggestion which we ventured to give him when commenting on his report for 1877 (Journal, vol. i, 1879, p. 50); and that his report for 1878 contains a summary which admits, however, of considerable development of the vital statistics of the district, considered as a whole. Carnarvonshire, in common with the greater part of England and Wales, had in 1878 a higher death-rate than in 1877. The increase is, however, proportionately smaller than the average increase in the whole of England; and the same remark holds good with regard to the infantile mortality. This favourable result may perhaps be attributable to the district, especially its more thickly populated localities, being situate near the coast; but some degree of merit may not unreasonably be ascribed to the influence of the numerous sanitary improvements which have of late been effected. In most of the separate reports on the various districts, there are references to sanitary work accomplished during the year; and in many parts of the country the sanitary authorities seem to have shown great readiness and zeal in the adoption of improvements. Some of the authorities appear, indeed, slow to convince of the necessity and even economy of sanitary work, but even these are now awaking to activity. In the whole county, 3,307 deaths were registered during the year, and, of these, 323 occurred from zymotic diseases of various kinds. Scarlatina was much less prevalent than in 1877, causing only 36 deaths as against 175 in the preceding year. Diarrhœa was the most fatal complaint (79 deaths), and whooping-cough comes next with 76 deaths. Typhoid fever caused 49 deaths, the chief outbreak being at Bethesda, whose sanitary state has been for a long while very unsatisfactory, the drainage and water-supply both being exceedingly defective, and the method of excrement-disposal faulty in the extreme. Small-pox and measles were conspicuous by their absence, causing 1 and 2 deaths respectively. Diphtheria was fatal in 36 cases, 21 of which occurred at a single village where there was no drainage or water-supply, and where innumerable nuisances existed. The death-rates of the majority of the districts show an improvement over those for 1877; but in two rural districts and three urban districts they are higher. The rates of some of the urban districts still remain extremely high, that at Bethesda reaching 30.15 per 1,000; at Ynyscynhaiarn, 25.46; at Bangor, 23.62; at Pwllheli, 22.9; and that at Carnarvon, 22.59 per 1,000. Hospital accommodation for infectious diseases is a great desideratum for the county. At present, there is no such accommodation, although the question has been "seriously considered" by the authorities of two of the districts.

UNIVERSITY INTELLIGENCE.

UNIVERSITY OF OXFORD.

EXAMINATIONS FOR THE DEGREE OF M.B. AND IN PREVENTIVE MEDICINE AND PUBLIC HEALTH.—The Regius Professor of Medicine notifies that examinations for the degree of Bachelor of Medicine, both for the first (or scientific) and the second (or practical) portions, and an examination for the certificate in State Medicine and the Public Health, will commence early in December. The days and hours for each examination will be hereafter notified. Intending candidates are requested to send their names to the Professor at the Museum, on or before Friday, November 14th.

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 23rd, 1879.

Henslow, Frederick Wakefield Doyle, Wermingay Lynn, Norfolk
Sheppard, Charles Edward, Addison Gardens, South Kensington
Smith, Robert Percy, Abbey Farm, Belvedere, Kent

The following gentlemen also on the same day passed their primary professional examination.

Newnham, Ernest Edmund, Charing Cross Hospital
Walker, William Frederick, Charing Cross Hospital

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

CASTLEREA UNION—Medical Officer for Castlerea Dispensary District. Salary, £100 per annum as Medical Officer, with £25 yearly as Medical Officer of Health, together with Registration and Vaccination Fees. Election on Nov. 1st.

*CLAYTON HOSPITAL AND DISPENSARY, Wakefield—House-Surgeon. Salary, £120 per annum, with residence, coals, and gas. Application, with testimonials, on or before November 13th.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

EVELINA HOSPITAL FOR SICK CHILDREN—Physician to Out-Patients. Applications on or before November 6th.

*HOSPITAL FOR WOMEN, Soho Square—Assistant Physician. Applications to the Secretary on or before November 12th.

NORTHAMPTON GENERAL INFIRMARY — Resident Medical Officer. Salary, £100 per annum, with furnished apartments, board, attendance, and washing. Applications on or before November 3rd.

ROYAL FREE HOSPITAL, Gray's Inn Road—Assistant Surgeon. Applications, with testimonials, on or before November 26th.

ST. MARYLEBONE GENERAL DISPENSARY—Honorary Physician. Applications on or before November 5th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

KRAUSS, Adolphus, M.D., appointed Resident Medical Officer to the German Hospital, *vice* Max Altdorfer, M.D., resigned.

TREVES, Frederick, M.R.C.S., appointed Assistant-Surgeon to the London Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGES.

LAW—PRICE.—On the 22nd October, at St. Mary's, Eastbourne, by the Rev. Charles Marshall, M.A., Prebendary of St. Paul's and Vicar of St. Bride's, Fleet Street, uncle of the bride, assisted by the Rev. J. H. Usill, M.A., Incumbent of All Saints, Eastbourne, William Thomas Law, M.D., F.R.C.S.(Exam.), Resident Medical Officer at the Brompton Hospital for Consumption, to Georgiana Charlotte Elizabeth, second daughter of Edwin Plumer Price, Esq., Q.C., Recorder of York, and Judge of County Courts for West Norfolk, and of Lucy, elder daughter and co-heir of John Harrison, Esq., and granddaughter of Robert Harrison, Esq., of Benningholme Hall, Ruisthorpe, county York, and Ripley Court, county Surrey.

BRYAN—BARKER.—On October 18th, at St. Peter's, Brighton, by the Rev. L. L. Roxby, M.A., Incumbent of All Saints', Brighton, assisted by the Rev. J. C. B. W. Warwick, M.A., Rector of Astley Abbots, brother-in-law of the bridegroom, Francis Charles Bryan, Surgeon, Little Hampton, second son of *Dr. Bryan, F.R.C.S., Northampton, to Ada Mary, second daughter of Dr. Barker of Brighton.

DEATHS.

LEONARD.—On October 13th, at Rockleigh House, Clifton, *Crosby Leonard, Esq., F.R.C.S.Edin., M.R.C.S., late Senior Surgeon of the Bristol Royal Infirmary, aged 51.

SANDWELL.—On October 23rd, at 10, Charles Street, Soho, W., Mary Jane, the dearly loved wife of Dr. Edward Sandwell, and second daughter of the late James Fernandez Clarke, Esq., aged 37.

THE SAMARITAN HOSPITAL.—Her Royal Highness the Duchess of Connaught, having become a Patroness of the Samaritan Free Hospital for Women and Children, has evinced her interest by sending a donation of £25 in aid of the funds.

THE Recreation Grounds Committee, Sheffield, have unanimously resolved to recommend the Town Council to accept the offer of the Water Company to sell upwards of five acres of land on Crookes Moor, at £400 per acre, on condition that it is kept as an open space for ever.

LADY MEDICAL STUDENTS.—Fourteen new students have joined the London School of Medicine for Women this winter session, making thirty-seven in attendance at the School; and at the Royal Free Hospital, seventy students in all have entered the school since its foundation.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the twenty-fourth session was held, at the Royal Kent Dispensary, Greenwich Road, on Friday, October 3rd—Mr. A. Roper (president), in the chair. After the officers for the ensuing session (1879-80) had been elected, Mr. Roper vacated the chair in favour of Mr. J. P. Purvis, who delivered an inaugural address, in which he considered the several advances made in surgery, etc.; and then dwelt on vaccination and its prophylactic action, citing the report of the Small-pox Hospital. He then considered the advisability of adopting animal vaccination, and said he hoped the day would not be far distant when the Government would establish animal vaccine stations at various parts.

ST. THOMAS'S HOSPITAL.—On the 18th instant, Miss Airy, who has for many years been one of the most popular and respected of the "Nightingale" sisters at St. Thomas's Hospital, was presented with a testimonial from members of the staff and students, consisting of a photographic album, containing portraits of the hospital staff, house-surgeons, and dressers; a handsome time-piece; and a purse containing a sum of money with which to purchase a piano or a harmonium. This testimony of regard and esteem is, as all old St. Thomas's men who have had the pleasure of working in Miss Airy's ward can testify, but a slight mark of their appreciation of the skill and humanity she always displayed in the performance of duties, at all times onerous, and often difficult and complex. The occasion was that of Miss Airy's leaving St. Thomas's Hospital to assume the post of Lady Superintendent of the York County Hospital.

PUBLIC HEALTH.—During last week, 3,608 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living. It was 19 in Edinburgh, 18 in Glasgow, and 32 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Wolverhampton 15, Bristol 16, Portsmouth 16, Bradford 18, Leicester 19, Norwich 20, Sheffield 20, Birmingham 20, Newcastle-upon-Tyne 21, Brighton 22, Plymouth 22, Hull 22, Nottingham 22, Leeds 22, Sunderland 22, London 23, Salford 24, Oldham 25, and the highest rate 26, both in Manchester and Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.3 per 1,000 in the twenty towns, and ranged from 0.0 and 0.7 in Wolverhampton and Plymouth to 5.5 and 5.7 in Liverpool and Newcastle-upon-Tyne. Scarlet fever showed the largest proportional fatality in Bradford, Manchester, Liverpool, Sunderland, and Newcastle-upon-Tyne. In London, 1,561 deaths were registered, exceeding the average by 61, and giving an annual death-rate of 22.5. During the past four weeks of the current quarter, the death-rate has averaged 20.7, against 20.4 in the corresponding period both of 1877 and 1878. The 1,561 deaths included 5 from small-pox, 30 from measles, 79 from scarlet fever, 10 from diphtheria, 34 from whooping-cough, 31 from different forms of fever, and 35 from diarrhœa; in all, 224 deaths, against 230 and 220 in the two preceding weeks. These 224 deaths were 26 below the average, and were equal to an annual rate of 3.2 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 190 and 318 in the two preceding weeks, further rose to 396 last week, and exceeded the corrected weekly average by 82. Different forms of violence caused 58 deaths; 47 were the result of negligence or accident, including 25 from fractures and contusions, 5 from burns and scalds, 3 from drowning, and 11 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 49.4°, and 0.7° below the average. The general direction of the wind was westerly, and the horizontal movement of the air averaged 12.6 miles per hour, which is 1.5 above the average. Rain fell on six days of the week, to the aggregate amount of 0.48 of an inch. The duration of registered bright sunshine in the week was equal to 15 per cent of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F., 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Drysdale, "On the Mortality of the Rich and Poor"; Mr. Rose, "On the Treatment of Fractured Patellæ, by drilling fragments and wiring them together"; Mr. H. A. Reeves, "On the Treatment of some Affections of the Urethra and Bladder in the Female".—Odontological Society of Great Britain, 8 P.M. Communications from Mr. C. S. Tomes and Mr. S. J. Hutchinson, etc.

TUESDAY.—Pathological Society of London, 8.30 P.M. Dr. F. Taylor: Lymphadenoma. Dr. Greenhow: Rupture of Aortic Valves. Dr. Coupland: Primary Cancer of the Liver. Dr. Crocker: Specimens illustrating the Histology and Pathology of Morphæa. Mr. F. Eve: Lymph-Sarcoma of Pericardium and Mediastinal Glands. Mr. John Wood (for Mr. De la Tour of Christchurch): Colotomy in a Sheep performed by a Parrot. Dr. N. Moore: Calvaria from a Case of Congenital Syphilis. And other Specimens.

WEDNESDAY.—Epidemiological Society of London, 8.30 P.M. The President will deliver an Inaugural Address.—Obstetrical Society of London, 8 P.M. Specimens: Solid Tumours of Ovaries, by Mr. C. J. Cullingworth; Parts from Tubal Gestation, by Dr. Godson. Papers: Mr. Lawson Tait, "On a new Method of Operation for repair of the Female Perinæum"; Dr. Matthews Duncan, "On Expression of the Cord".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

A MISTRANSLATION.

SIR,—In your number of September 13th, you published on page 16 of the advertisement sheet an advertisement, without signature or address, in favour of a well known bitter water, giving what purports to be a translation of a letter from Professor Virchow of Berlin. The letter, as translated in your columns, is made to say:

"I have known and used the Friedrichshall bitter water for a long time, and experience has proved to me its many excellent properties. Although I do not wish to undervalue the merits of other bitter waters, I feel that, in justice to the bitter waters of Friedrichshall, I must record my opinion that it is the best and most useful of the bitter waters, and as such I can confidently and gladly recommend it."

The actual text in the German is published in full in the *Deutsche Medicinische Wochenschrift* of September 27th, by Messrs. C. Oppel and Co., proprietors of the Friedrichshall spring, and it runs thus;

"Auf ihre gefällige Mittheilung erwiedere ich, dass ich das natürliche Friedrichshaller Bitterwasser seit Dezennien kenne und anwende und dass ich die vortrefflichen Eigenschaften desselben nach wie vor schätze. Es ist nicht meine Absicht gewesen, indem ich mich über ein anderes Bitterwasser günstig aussprach, dadurch das Friedrichshaller herabsetzen zu wollen, und ich bezeuge daher recht gern, dass es mir fern gelegen hat, irgend ein anderes ähnliches Wasser als das unterallen Verhältnissen vorzuziehende und als das absolut beste zu empfehlen.—Berlin, 8 Juli, 1879.—(Gez.) RUD. VIRCHOW."

Of this the literal translation is as follows:

"To your polite communication I reply that for upwards of twenty years (seit Dezennien) I have known and employed the natural Friedrichshall bitter water, and that now, as heretofore, I appreciate its excellent qualities. In giving a favourable opinion of another bitter water, I did not intend thereby to depreciate the Friedrichshall water, and I quite willingly affirm that it was far from me to recommend any other similar water as that which is to be preferred under all circumstances, and as the absolutely best.—Berlin, July 8th, 1879.—(Signed) RUD. VIRCHOW."

We must request you to publish this correction of the regrettable mistranslation which has been given currency in your paper, as it is one having an obvious tendency to misinterpret the facts and to injure the Hunyadi János water, in favour of which Professor Virchow's first letter was given, and at which the present unfair mistranslation is unmistakably aimed.—We are, sir, yours truly, the Apollinaris Company, JULIUS C. PRINCE, Secretary.

19, Regent Street, S.W., October 16th, 1879.

ECONOMY.—1. If you cannot procure a pipkin strong enough to stand the heat of the fire for the preparation of a *pot-au-feu*, an ordinary iron saucepan, tinned inside, will do. It is better, however, to use a strong earthenware pipkin; and such a vessel should last some time, as after the *pot-au-feu* has once boiled, it should be skimmed, drawn on one side, and allowed to simmer at a very gentle heat on the top of the kitchener, or by the side of the open range. 2. The oil used for fish-frying should not be salad-oil, but ordinary olive-oil, supplied by many grocers and Italian warehousemen for the purpose, at 8s. per gallon. If there be any oil left after the frying is finished, it should be poured into a basin to cool and settle, and when wanted again for frying, should be strained through muslin. It may be used in this way three or four times, if any be left; but the perfection of frying is so to apportion the quantity of oil to the material to be fried, that there shall be none left when the frying is finished.

THE IODIDE AND BROMIDE OF POTASSIUM IN THE TREATMENT OF EPILEPSY.

SIR,—A short time ago, a correspondent wrote in your columns about the superior therapeutic value of a combination of iodide with bromide of potassium in the treatment of epileptiform diseases. My JOURNAL was laid carefully apart for future reference, but unfortunately in the meantime I cannot lay hands on it. It will, therefore, be a great favour if your correspondent would repeat his information either privately or through your columns. I would be also greatly obliged if he would furnish the dose of each, as well as the data which have brought him to the conclusion that the combination is so much better than the plain bromide.

Epilepsy seems endemic to this district, and I have at present two or three which I would gladly make test cases, and in which the bromide alone has been somewhat disappointing.—Yours, etc., ALEXANDER FERGUSSON, M.D.

Peebles, October 8th, 1879.

DR. JOHN ROSE.—Messrs. Salt and Son of Birmingham, Messrs. Mottershead and Co. of Manchester, and the India-Rubber and Gutta Percha Company, 100, Cannon Street, E.C., all supply galvanic batteries well suited for your purpose.

CREMATION.

SIR,—Could the editor kindly give me the name and address of the secretary of the Cremation Society, and the names of any works published on the subject of cremation, and where they are published?—Yours, J. W. HAMILL, M.D.

Woodlands, Higher Broughton, Manchester, October 1879.

*** The secretary of the Cremation Society is Mr. W. Eassie, C.E., 11, Argyll Street, Regent Street. The reports of the Society, which are very interesting documents, and an excellent monograph on cremation by Mr. Eassie, are published by Smith, Elder, and Co., 15, Waterloo Place.

HOMES FOR INVALID CHILDREN.

SIR,—In reference to Dr. Coumbe's inquiry in the JOURNAL of Oct. 18th, I can mention a home which would, in my opinion, be very suitable. I allude to a home for invalid children at Cliftonville, Margate, presided over by Mrs. John Moore, a widow lady, who is admirably endowed with qualities to suit her for the care of helpless or invalid children.—I am, sir, yours truly, J. L.

London, October 20th, 1879.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

REMUNERATION BY CLUBS.

SIR,—I see much space in the correspondence columns devoted to the "Title of Doctor", the value of "Foreign Degrees", both subjects of small importance compared with many things of daily occurrence which really demand alteration: I allude to the flagrant abuses found in club practice, and the unsatisfactory relationship between the medical profession and friendly societies generally.

The pecuniary consideration of the surgeon's services is, with but few exceptions, an insult, while the number of well-to-do tradesmen who expect professional attendance is a yoke hard to bear. These latter are always most exacting in their requirements; and some of them declare "they only want the doctor, and can afford to do without drawing on their club-funds". In all these societies "Dogberryism" is rampant; very trifling circumstances are made causes of complaint against the doctor, while if he ventilate any grievances, the wrath of the authorities is stirred up with indignation at his presumption — the ultimate effect being much like whistling jigs to a mile-post.

The remedy, one may be told, is to resign the offending club; but at present so many "shady" men are ready to pounce upon any chance which offers, that to a young practitioner such a course often means the loss of half his practice, and the introduction of an opponent who acts dishonourably on every opportunity. Or, if the clubs be sufficiently powerful, they unite and appoint a surgeon for their sole benefit, restricting him from private practice.

Now, sir, the real remedy is in complete unity. Why cannot we combine to compel clubs to pay us reasonable fees, and consent to a mutual (and not as at present one-sided) justice? I hope ere many years elapse that it will be one of our articles of ethics to accept no club except upon certain well defined terms, which shall be recognised by every member of our profession, and to obtain which an association might usefully be formed.—I enclose my card, and remain, sir, very faithfully yours, A DISGUSTED "CLUB-DOCTOR".

A CONSTANT READER.—It will be necessary to pass the usual entrance examination, and go through a course of instruction at Netley.

A COIN IN THE ALIMENTARY CANAL.

SIR,—The following case may be worth recording on account of the age of the patient. He was a bright healthy boy of three years, who, by his appearance, intelligence, and youthful manliness, engaged the attention of all who came into contact with him. Receiving one evening the present of a halfpenny-piece from a lady visitor, and his hands being fully occupied with toys, he speedily transferred the coin to his mouth, and, bent upon his own pursuits, made to go outside. His mother noticing the act, and afraid of his being choked, promptly divested herself of a younger charge, and overtook him at the door, with the object of removing the coin from its dangerous habitation, but it was already beyond her reach. On being questioned, the little fellow admitted swallowing it—an admission so far confirmed by the absence of the coin, and further corroborated shortly after by gastric pain and vomiting. In my absence, and in ignorance of what else to do, a dose of castor-oil was administered. Late in the evening, when I arrived, the vomiting had ceased, and the little patient was asleep. Nothing remained to appearance save the anxiety of the parents, for the castor-oil had operated, but without the desired result. I ordered a diet of porridge and bran-bread, a mustard-poultice in the event of pain or vomiting recurring, and confinement to bed; and allayed parental fears with the assurance that all would come right. The next day was allowed to pass without interference. The mustard-poultices were required both for pain and for occasional sickness. The little fellow, blessed with a healthy appetite, did ample justice, in the wide intervals of ease, to his "homely fare". On the morning of the second day after the occurrence, an infusion of a drachm of senna-leaves was administered, and in due time followed by copious stools, among which the errant coin was found.—I am, etc., A HELPER OF NATURE.

THE PRACTICAL APPLICATION OF ELECTRICITY.

A VERY extensively circulated document announces that the Committee of Management of the West End Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy, 73, Welbeck Street, Cavendish Square, have ordered that those medical men who prescribe electricity for their private patients, but have not time or proper appliances, may, should they so wish, have treatment carried out in the electrical room of the hospital. This rule is applicable solely to those who produce a letter from a registered medical practitioner, which should be addressed to the Medical Superintendent. A separate waiting-room is set apart for these patients, and a contribution of two shillings and sixpence to the hospital funds will be required upon each visit, which sum may be paid either by themselves or their medical attendant.

This arrangement may, no doubt, sometimes be a convenience to medical men residing in the neighbourhood of Cavendish Square, for there are often practical difficulties in applying electricity. But we trust the arrangement will be carefully guarded, and that it will not prove to be another means of accustoming well-to-do people to look to hospitals for medical assistance. General practitioners have already too much reason to complain of the injury which the hospitals—and more particularly the special hospitals—have done them.

PROVIDENT DISPENSARIES.

SIR,—Will any of your readers be good enough to inform me where I can obtain rules for the management of a provident dispensary, or give me any particulars respecting the same?—I am, sir, yours, etc., A MEMBER.

*** We have replied many times in these columns to similar queries, that Model Rules for Provident Dispensaries (price 1d.) may be obtained of the Charity Organisation Society, Buckingham Street, Strand, who publish also a variety of other information on the subject.

AN EXPLANATION.

SIR,—Having observed in your last issue a notice of an advertisement of this hospital, I write to say that in its original form it was inserted inadvertently by me, and that immediately on my attention being called to the matter by several members of the staff here, I altered it to its present form. I had already given instructions to the printers before knowing of the subject being alluded to in your excellent paper, but I think it well to give you the above brief explanation.—I am, sir, yours faithfully, EDWARD ALMACK, Secretary.

King's College Hospital, Lincoln's Inn Fields, Oct. 28th, 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

THE MEDICAL ALLIANCE ASSOCIATION AND FOREIGN DEGREES.

SIR,—I should be glad to be allowed to reply, very briefly, to some of the assertions of your numerous correspondents who have favoured me with their opinions of the value of their foreign degrees. So far as my memory serves me—I make the remark subject to correction—on no occasion during the many controversies which have appeared in your pages previously to the publication of my letter of the 20th ultimo, has it been admitted by a holder of a foreign degree, that foreign degrees could be obtained by gentlemen possessing only a single British qualification, and undergoing, in addition, an easy medical examination conducted in English by an interpreter, for examiners who themselves knew nothing of English. Now, however, that facts have been produced to prove that under these conditions foreign degrees have been obtained, the holders of these degrees admit that all their former dogmatic assertions of the difficulty of obtaining them were erroneous. But, apparently to excuse themselves, they now say that, although they were wrong "formerly", they are now right in affirming that, in the present year, the regulations for obtaining these degrees have become as stringent, and as difficult to be conformed to, as formerly they used to describe them to be. Judging of the present by the past, I venture to doubt the accuracy of this statement; but, if it be true, with what force it smites the British holders of foreign qualifications granted before this year, it is quite unnecessary for me further to allude to.

Dr. Beresford Ryley, L.R.C.P.Edin., says that he "is prepared to adduce the evidence of at least thirty medical men to prove that the examination for the M.D. of Brussels is now more comprehensive, searching, exhaustive, and in every way better than those of the M.R.C.S. and L.R.C.P.Lond., and infinitely more so than that of the L.R.C.P.Edin. or the Apothecaries' Hall". Does Dr. Ryley comprehend what this very rash assertion involves? I think not, and must ask him to keep his volunteered public pledge by stating publicly the names, addresses, and qualifications of the medical witnesses to whom he refers. I very much doubt whether Dr. Ryley can name even one gentleman who, upon cross-examination, would be admitted to be competent to give the evidence he names.

Some of your correspondents, not altogether inappropriately, although it is only a collateral question, introduce into the discussion observations upon the assumption of the title of Doctor by Licentiates of the London College of Physicians, and allege that they have no right to take that title unless they be graduates in medicine. The arguments of these gentleman are just sufficient to show that they know absolutely nothing of what they are writing about. They will tell us perhaps, as very many others have told us, as a backing-up for their assertions, that there is a by-law of the College which forbids their Fellows, Members, or Licentiates taking the title of Doctor unless they be Doctors of Medicine, but there is no such by-law in existence, nor have the College a legal right to make a by-law of this description. Moreover, the Licentiates and, *à fortiori*, the Fellows and Members of the College may, I maintain, in virtue of their licences alone, lawfully use the prefix "Dr." or the affix "Doctor of Physic of the Royal College of Physicians of London". Whilst fully admitting the power of the College to regulate the mode of practice of the different grades of their Licentiates, and regretting that they do not always do so with energy and resolution, I hold that they have no power to regulate the titles they take. Probably I may shortly return to this question as a distinct subject, and in the meantime remain, sir, your obedient servant,

130, Stockwell Road, S.W., October 27th, 1879. R. H. S. CARPENTER.

SIR,—What Mr. Carpenter states to be facts may, when they come to be sifted, prove fictions.

In 1867, he stated in the *Durham Chronicle* that the F.R.C.S.Lond. could be purchased for £10. Is this a fact?

He also stated that the L.R.C.P.Edin. could be purchased for the same sum. This paper (*Durham Chronicle*) is read by large numbers of the working classes, and statements like these do us much harm. Any non-professional person would imagine that anyone, however ignorant, had only to present himself with the money, and he would receive the diploma. Anyone interested in the subject of foreign degrees should read the *London Medical Record* for last month. This gives information which is valuable, as it comes from an unprejudiced person. I am only acquainted with one graduate of Jena. He obtained the degree there many years ago, and had to pass an examination; and I am certain the diploma belonging to the venereal quack is forged. Some of our best men have not been ashamed of foreign degrees. The late Drs. Baly and Kirkes were foreign graduates; a late member of the Medical Council was another; and if necessary, I could fill a page with good names. The English bodies have been lax in their day. The London College of Physicians have a by-law admitting men who were in practice before 1861; the Apothecaries' Company took in men in 1858, and for a year or two afterwards, who had only attended very few lectures.

The foreign graduates will also be prepared with facts to bring before the Committee when it renews its sittings.—Yours truly, W. EASBY, M.D.

March, Cambs, October 27th, 1879.

SIR,—In reply to Mr. R. H. Carpenter's letter on the M.D. of the University of Jena, I beg to state that, some time since, I wrote to the Dean of the Medical Faculty of that University, asking on what terms I might be admitted to the examination for the M.D. I received in reply the regulations, which I enclose for your inspection, and of which the following is a translation.

"The conditions to be fulfilled by the candidates for the medical examination are as follows: 1. Certificates to be given as to the extent of medical studies (at least six terms), and the period of time which has elapsed since their completion. 2. Satisfactory testimonials as to character from the neighbouring head office of police. 3. A written essay upon any subject of medical science (in German or Latin). The same composition may be given in, which is afterwards to be printed in the form of a dissertation. 4. Matriculation into this University. This is done immediately when, upon fulfilment of the other conditions, the candidate himself makes his appearance. 5. Payment of examination and promotion fees must be made to the amount of 141 thalers. In case the examination is not passed, the promotion fees and 52 thalers are returned.

"The examination will only be held in the German language. It comprises all branches of Medicine, viz., Anatomy, Physiology, General Pathology and Pathological Anatomy, Special Pathology and Therapeutics, Surgery, and Midwifery. No examination takes place in the holidays. The Faculty holds examinations from November 1st until March 15th, and from May 1st until August 15th. When the examination is passed, the student has to give in his dissertation, the subject of which he chose for himself. The Faculty examines the work to see whether it is worth publication. A dispensation from the Latin or German Disputation may

be granted when the examination is satisfactorily passed. After the essay is printed, and also when the public disputation is over, the making out of the medical diploma takes place.

"The degree of Doctor will only be granted in the University, by the Faculty, upon fulfilment of the abovenamed conditions. Dr. W. Leube, Dean of the Medical Faculty, Jena, March 26th, 1874."

After reading this translation, which is a correct rendering of the German original, the profession will see for themselves that no such medical degree as that mentioned by Mr. Carpenter is at the present day granted by the University of Jena. Perhaps Mr. Carpenter will give us the date of the diploma he so carefully translated. It was no doubt granted many years since in the same manner that many of the British medical degrees were disposed of. The German University medical degrees, although they were once disposed of after this fashion, cannot now be obtained except under hard conditions. There was clearly no intention on the part of the Jena Faculty to deceive, for the diploma states that the degree was purely an honorary one, granted without examination, to a man already possessed of a degree in Medicine. If Mr. Carpenter will give himself the trouble of translating any diploma granted by the same Medical Faculty, of a recent date, he will find the wording very different. By way of example, I may state that my own degree, granted a few years since by the University of Giessen, ends in this manner (translation): "John Michael Francis Birnbaum, Doctor of Laws and Philosophy, etc., having conceded to him the right of granting the Faculty—By decree of the gracious order of Physicians, the Senate assenting in the name of the University, this day confers upon that celebrated and learned man ——, a native (or resident) of ——, after that his knowledge and experience both in the science and practice of medicine has been tested by an examination passed with credit, the highest honours of Doctor of Medicine, Surgery, and Midwifery, and whatever immunities, prerogatives, rights, and privileges are annexed thereunto. In attestation of which, p. p. d., April, 20th, 1875, under the great seal of the University. Signed by the Dean and Chancellor."

I enclose a copy of my foreign diploma, that you may see that the above is a correct translation, also my card, and beg to remain, sir, yours, etc.,

MEMBER OF B. M. A.

HOW FOREIGN DEGREES MAY BE OBTAINED.

SIR,—On a recent visit to the United States, certain facts in respect to the value of the Doctorate in Dental Surgery or Medicine as a measure of professional culture, came to my knowledge, which in the interest of professional education should be generally known.

I had determined to avail myself of the first opportunity which presented, to learn from personal inquiry how far the alleged traffic in "bogus" degrees is consistent with truth. With this view, I presented myself as a candidate for the degree of Doctor in Dental Surgery at the office of a well known chartered university, having for its home a small building in a third-rate street in one of the principal American cities. I was received by the Dean of the Faculty, who informed me that the conditions of graduation were as follows: That I should state how long I had been in practice; that I should, on a subsequent day, attend there for about three hours, and perform certain operations, and be examined; that I should sign my name in the presence of a notary-public, and pay £10, for which I should receive the degrees of D.D.S. and D.M.D., meaning respectively Doctor of Dental Surgery and of Dental Medicine!

I ventured to express the hope that I should not be required to swear how long I had been in practice, and was informed, "Oh! we do all the swearing"; and my inquiry respecting the difficulties of the operations and of the examinations was answered by an assuring gesticulation! I believe that for a few pounds more I could have been made M.D.!

A degree so obtained must be, to all intents and purposes, a "bogus" degree—one that does not indicate in the possessor any professional knowledge. In two other transatlantic colleges, I obtained ample evidence in support of the allegation that the terms of graduation laid down in their prospectuses are not always observed. In one case, the Doctorate was given after six weeks' attendance, in place of the stipulated five months' course, and in another after an equally short period of study; and in both cases to incompetent men. The institution which sells its degrees for £10 each, issues a prospectus just as complete in its educational requirements, and supported by as an imposing a list of professors as in that of any *bonâ fide* college. They are practically alike to the reader, unless he has, like the writer, been on the spot, and able to read between the lines. Bodies which undertake both to educate and graduate within their own walls, and in which the teachers and examiners are one and the same persons, may or may not observe the conditions of graduation set forth in their calendars.

In the absence of publicity, who can say whether the published conditions are fulfilled with strict impartiality? Who can tell when the title of Doctor is but a receipt for £10, or when it is a guarantee of professional knowledge?—Yours truly,

M.R.C.S.Eng., not D.D.S. of America.

P.S.—I found out that a former fellow-student of my own, who had never got his schedules signed in England, had bought this degree of D.D.S. for £30, without any examination at all. It may be added that it is possible to get the degree of M.D. after a three years' curriculum, and the D.D.S. after a two years' curriculum, at all but two of the eight colleges in America I visited; and of the latter, each course consists of four to five months only of each year, and five years' practice is accepted instead of one course.

DIPLOMAS IN STATE MEDICINE.

SIR,—Would you please let me know through the BRITISH MEDICAL JOURNAL what advantages does the possession of the certificate in State Health of the University of Cambridge, or of any of the other bodies, confer upon a general medical practitioner? In applying for an appointment as medical officer of health, is the certificate supposed to enhance the chances of success of a candidate? In case of his rejection by the local authority in favour of another candidate without the certificate, would the Local Government Board be likely to interfere if appealed to?—I am, yours truly,

NEW SCHOOL.

*** The degree of importance which any local authority may attach to a diploma of this kind is a matter entirely within its own discretion. As yet, no steps have been taken to give legal validity to any such diplomas, or to establish any standard of minimum efficiency. They are not required by law; they are not registrable; they are of various standard and value, and there is no authentic information as to their relative value: they are fancy diplomas. Under such circumstances, it is open to any local board to regard them according to their own estimate; and certainly the Local Government Board cannot and will not, under existing circumstances, compel their recognition.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

EPISTAXIS.

SIR,—Will you express your opinion with reference to the following case? I was called at 5 A.M. on Sunday last to see a patient suffering from severe epistaxis, which no external remedy was able for a time to subdue. The nostrils were plugged, and the blood flowing down the throat, caused vomiting, which dislodged the plugs. At length, however, the hæmorrhage ceased, only to recur again in a few hours, and again a few hours later, this repeated loss of blood rendering the patient very prostrate. About 3 P.M., severe vomiting ensued, and immediately afterwards, as the patient was taking a sniff of gallic acid, he, with a loud cry, fell back insensible in bed, and remained so for some minutes, breathing labouredly. The pupils were equal; the countenance livid; he was foaming at the mouth. No sleep followed the fit. No paralysis remained. There was no difficulty of speech; no impairment of intellect or memory; and no bleeding came on afterwards. The patient is a rather thick-set young man, in the habit of taking stimulant daily, but not to any excess. He never complained of headache, and never before had any kind of fit, fainting or otherwise. There is no family history of fits, and he has never had syphilis. The quantity of blood lost in about fourteen hours was not less than thirty ounces. Will you inform me whether you are inclined to believe that this was a fit of apoplexy, one of epilepsy, or mere fainting from loss of blood?—I am, etc.,

September 24th, 1879. EPISTAXIS.

*** There can be no doubt, from the description furnished, that the "fits" described were a well marked example of what is commonly seen after severe hæmorrhage—namely, anæmic convulsions, strongly marked in this case probably because the patient was a healthy, young, full-blooded man beforehand. The effort of "sniffing" was possibly the last determining factor here, owing its tendency to cause a sudden flux of blood towards the thoracic organs from other parts, the brain included. The latter was thus probably deprived of the last drop of blood it could spare, and its equilibrium upset.

SAYRE'S PLASTER JACKET.

SIR,—Dr. Ormsby's condemnation in last week's JOURNAL of Dr. Sayre's method of treating Pott's curvature calls for a reply. As a believer in the treatment, and one who has seen the greatest good and no evil result from it, permit me to offer a few remarks.

1. As regards the statement, "Suspension *alone*, without the plaster, is the only important part of his (Sayre's) suggestions": if this can be proved, I am sure no one will rejoice more than Dr. Sayre himself, who already admits that in lateral curvature it is sufficient.

2. Dr. Sayre does not advocate suspension when ankylosis has taken place. Suspension and the jacket will not work "impossibilities", and I am not aware that the learned American professor ever advocated breaking down bony union.

3. The jacket is said to be "dirty, unyielding, uncomfortable, likely to produce pressure-sores, and to have a great tendency to induce the generation of vermin". This is truly a fearful indictment, and, if true, sufficient to condemn it at once. But where is the dirt in plaster-of-Paris? Unyielding it is, and that is its best attribute as a cure of disease. Uncomfortable it is not, if properly applied, as many a poor sufferer will bear witness. It will not cause pressure-sores if proper precautions be taken; and as to its inducing the generation of vermin, that depends on the cleanliness or otherwise of the wearer, and the care taken, before it be applied, that all sources of vermin be removed. Those who have vermin habitually about their persons will not be worse off for wearing a jacket. Plaster-of-Paris, bandages, and a few strips of tin never originated them. I had the opportunity this day of showing Dr. Sayre a case put up in the middle of May last: the jacket is still on, and not one of the long list of drawbacks above recorded has happened. The wearer is an officer, performing his daily duty, whose case I hope to publish when the jacket is removed a month hence.—I am, etc.,

Cork, Oct. 17th, 1879. R. DE LA COUR CORBETT, Surgeon A.M.D.

MR. J. G. MACASKIE.—The questions given at the preliminary examination of the Royal College of Surgeons can be obtained (except a few sets which are out of print) from Messrs. C. Hodgson and Son, 1, Gough Square, Fleet Street, E.C. The price of each set (free by post) is sevenpence.

POROPLASTIC.

SIR,—Your reports are usually so accurate that I have no right to doubt the correctness of that which appeared in yours of the 11th of Dr. Sayre's lecture at University College respecting my poroplastic spinal corset, although his remarks thereon appear to me absolutely astounding. Would it be indiscreet to ask when and where Dr. Sayre got the knowledge that enabled him to speak so decisively against it? It could not have been during his previous visits to England, for it was not then known. It could not have been at Cork, for he did not attend my demonstration there before the Association. He did attend some days afterwards, and saw me apply one at the Women and Children's Hospital there; but as he immediately afterwards directed one to be applied to a private patient he saw in consultation with Dr. Hobart, I presume what he saw then did not unfavourably impress him with its merits (I may say this particular application has been most successful). Neither could it have been at Dublin three days afterwards, where, with Mr. Hamilton, he examined a jacket applied by Mr. Swain of Devonport, and which had been worn about six weeks, for he expressed his approval; and, when parting with Dr. Sayre at Dublin, I promised to bring him jackets in various stages of their manufacture, and explain to him how they were made—an offer I certainly should not have made had I not seen that he was unfamiliar with my material and the proper mode of its application. Up to this time, surely, he was not in a position to denounce it; neither can he since have been so influenced by reports from the users of them, for Mr. Adams undoubtedly expressed not only his own opinion, but those of our most eminent surgeons, when in the discussion which followed my demonstration at Cork he said: "I have had much experience of plaster and poroplastic, and much prefer poroplastic, and I find my patients prefer it also."

I therefore conclude, and I think reasonably, that Dr. Sayre ignores all this, and falls back on his home experiences; and I quite agree with him that, with felt prepared and used as it was in the States, no good results, as a spinal support, could be obtained. But, as I showed him, it is very different here, and therefore conclusions based on his American experiences are by no means so weighty as he imagines. I may say the results I have obtained have been got by patient and thoughtful hard work, aided by the suggestions and encouragement of such men as Hutchinson, Willett, Denham, and others, and from the practical assistance of Mr. Wolfenstone

of Plymouth. Mr. William Adams introduced it at the British Medical Association at Bath, and Mr. Fisher has ably advocated its worth in the medical journals. Twelve hundred are already in use, in most instances to the displacement of plaster; and surely Mr. Sayre overrates his influence if he suppose such a mass of evidence can be disposed of by an invective delivered at the request of Mr. Berkeley Hill. The argument is soon summed up: Dr. Sayre, familiar with the use of plaster only, favours plaster; men who know both plaster and poroplastic, favour poroplastic.

One thing the lecture has done: it has decided my future course of action. Hitherto I have gone on quietly, endeavouring only to perfect the manufacture, leaving to others the application; but I now see that in the teeth of the excellent rules given in Mr. Ernst's and Messrs. Coxeter's pamphlets for the application of the jacket, some are ill fitted. I shall, therefore, on my return from Paris (where with M. de Saint Germain I have shortly to demonstrate my method) make a lengthened stay in London, and, whilst there, shall be pleased to give the practical information needed to those members of the profession and surgical instrument-makers interested in the subject. The field is a wide one, as it includes not only spinal but almost every other form of surgical support.—Your obedient servant,

Plymouth, Oct. 20th, 1879. J. T. COCKING.

INFANTILE DIARRHŒA AND SWISS MILK.

SIR,—It strikes me, in reading the remarks of some of your correspondents on the subject of Swiss milk as a food for infants, that the truth lies, as is its wont, *in medio*. We may grant to the uncompromising and somewhat illogical party, which condemns this article of diet because some children do not thrive on it, that given for a prolonged time it is often followed by a bad result, on account, probably, of its large proportion of sugar, and perhaps in some cases of its improper dilution. It is practically known that hand-reared children may become rickety under a protracted course of preserved milk, even though all other circumstances be apparently in their favour. But for a time—say the first three months of life—almost all children do well on it; and though perhaps unnecessary and even unadvisable in the case of the upper classes, who are able to get the best cow's milk and administer it properly, it is valuable to others as a means of giving milk of an uniform strength and quality—an end which is often difficult to attain.

There are innumerable instances of very healthy babies who have had nothing but Swiss milk for the first few months of life, or even longer, as there are of diseased babies who have never had anything but the best cow's milk; and diarrhœa will often occur in an apparently healthy child on any course of diet, to disappear on a change. We want a much more accurate collection of facts than has at present been quoted to justify a general attack on preserved milks, which, properly used, not only appear harmless, but fill a most important place in the substitution-dietary of young children.—I am, yours, etc., H. DONKIN.

SIR,—I am surprised to find any protest being made against the use of condensed milk as a food. I have always been led to look upon the introduction of the preparation as a very great blessing to humanity. Differing as it does in its chemical constituents but little from human milk, it is difficult to account for any deficiency in nutrition that may arise from its use. Cow's milk has a larger proportion of fat and casein, but a less proportion of sugar than human milk; the addition of sugar of milk, therefore, scarcely transforms cow's milk into "an unnatural food", as Dr. Neale would have us to believe.

Condensed milk is not only as close a representation of human milk as can possibly be obtained, but it proves in cases which come before our daily notice a diet to be much preferred even to the supply the mother affords. I have used it both at home and abroad extensively, and I can but think that a doubt expressed as to its value must prove misleading to those whose experience has been but limited.—I am, etc., GEO. WORTHINGTON, M.K. & Q.C.P.I.

ERRATUM.—In the JOURNAL of October 18th, page 627, column 2, line 9, for "Reeves" read "Treves".

TYPHOID FEVER IN ADVANCED LIFE.

SIR,—I read with interest your comment on the death of Dr. Fleming of Glasgow, from typhoid fever, having lately had a well marked case of that disease in my practice, the patient's age being 74.—I am, sir, yours truly,

October 25th, 1879. J. A. ERSKINE STUART.

AN ASSOCIATE asks for the names of medical men in Devon and West Somerset who receive lunatics into their houses as patients.

KALA HIZAR.

SIR,—With reference to your paragraph about "kala hizar" in the "Garo" Hills in the JOURNAL of this date, I wish to say that "kala" is the Hindee for black, and "hizar", or "haize", the Hindee for cholera, so that the "new" disease is most probably a malignant form of cholera. This idea is strengthened by the paragraph below referring to cholera prevalent in the province of Assam during the past season, having been of the most deadly nature. The Jarrow Hills are in the province of Assam. This "kala hizar", then, is one and the same disease that is prevalent in Assam, and with which Dr. Cooper is nobly battling.—I am, sir, yours obediently, GEO. K. POOLE, M.D., Surgeon-Major H.M.I.S., retired.

Upper Norwood, October 25th, 1879.

SIR,—Those gentlemen who have written to me in answer to my inquiry are thanked for their letters: and, unless answered by me, may consider their place not to suit.—Yours truly, H. G. CARTWRIGHT.

Narboro', Leicester, October 29th, 1879.

HYDROPATHIC ESTABLISHMENTS.

SIR,—From a happy personal experience, I can fully endorse the favourable opinion given in the JOURNAL of August 30th, of Dr. Grindrod's hydropathic establishment here, by Surgeon-General Francis. There is no finer air in England; and the whole surroundings of Malvern are such as to favour speedy and permanent recovery from the debility following disease and accident. My own rapid restoration, after a recurrence of blood-poisoning symptoms from a *post mortem* wound, has been greatly hastened by Dr. Grindrod's careful and scientific application of the hydropathic treatment. Few of us know (and I am ashamed to confess my former ignorance of the fact) that Dr. Grindrod, who has been thirty years at this work, has always eschewed the quackery which has but too often discredited hydropathy, and has employed it, as all enlightened physicians do, only as one means among many of therapeutic treatment. He aims at receiving patients on the advice of their family medical attendant, and at co-operating with the family doctor in the attempt at cure. For wearied brain-workers (medical men, clergymen, and lawyers especially), I know no safer haven of rest, quiet, and comfort, with the hope of restoration to health on a sound basis, than is afforded in this favourite and most pleasant hygienic home.—I am, sir, yours, etc., NORMAN KERR.

Townshend House, Great Malvern, October 15th, 1879.

A WESTERN PROFESSOR thus relieves his overcharged intellect. "Anatomy, physiology, chemistry, botany, and microscopy, have assumed for medicine the morning of a vast and glorious kingdom, whose temple of fame will cope with the hand of war and accompany time through eternity." "This", says the *St. Louis Clinic*, "is certainly a genuine sunflower of rhetoric".

HYGIENE OF DWELLINGS.

SIR,—Can any of your correspondents inform me if positive danger to health is to be expected from residence in a cottage, the wooden floors and rafters of which are extensively pervaded by fungous growths of various kinds? Illnesses of somewhat suspicious kind—sore-throats and feverish attacks—have occurred in the family; but I desire further exact information as to the deleterious influence of such circumstances. The house is only three years old; the site is a compact wet clay; but rafters are nearly two feet above the soil, and the under space has abundant ventilation provided.—I am, yours, etc., DAVID BRODIE, M.D.

Columbia Lodge, Liberton, Edinburgh, Oct. 16th, 1879.

ERRATUM.—In the paragraph headed "Aberdeen University Court", in the JOURNAL of October 25th, page 668, column 2, the name "Clement Gordon, M.D.", should be "Clement Godson, M.D."

THE TITLE OF DOCTOR.

SIR,—Every extra-licentiate of the Royal College of Physicians can confirm what your correspondent "J. F. M." states as to the "title of Doctor being accorded by Colleges of Physicians from their foundation". After the examination for the Extra-Licentiateship was passed at the Royal College of Physicians, the successful candidate was immediately addressed as "Doctor" by the authorities and officials of the College. The College of late years has had the sad courage to withdraw the title it conferred, imagining it may play fast and loose at its pleasure, and break its word without discredit.—I am, very faithfully yours,

October 27th, 1879. EXTRA-LICENTIATE.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

The Regius Professor of Medicine, Oxford; Dr. T. Clifford Allbutt, Leeds; Dr. Alfred Carpenter, Croydon; Mr. Reginald Harrison, Liverpool; Dr. John Davidson, Chester; Dr. A. Grant, London; Meldreth; Mr. G. A. Tunton, Fulham; Mr. J. G. Macaskie, Bury; Dr. Rabagliati, Bradford; Dr. Meredith, Wellington; Dr. G. F. Elliott, Hull; Justus; O. I.; Dr. G. K. Poole, Upper Norwood; Practitioner; R. R. S.; Dr. A. S. Taylor, London; R. N.; Mr. William Sedgwick, London; Mr. Rushton Parker, Liverpool; Economy; Mr. Richard Davy, London; Mr. Edmund Owen, London; A Junior Physician to a London Hospital; One Interested; Mr. F. Toulmin, London; The Secretary of the Odontological Society; M.D.; Mr. G. Eastes, London; The Secretary of the Epidemiological Society; Dr. F. Barnes, London; The Secretary of the Obstetrical Society; Dr. Wm. Roberts, Manchester; The Secretary of the Pathological Society; Mr. Whitehead, Manchester; Mr. A. S. May, Forest Hill; Mr. A. S. Verity, Bridgend; Mr. S. Benton, London; Dr. de Pietra Santa, Paris; Mr. J. Hogg, London; The Honorary Secretary of the London School of Medicine for Women; Dr. D. B. Lees, London; Mr. J. Hawkings, London; Dr. G. Parsons, Bristol; Dr. Lush, Weymouth; Nemo; F. A.; A London Undergraduate; Mr. J. L. Green, Salisbury; Mr. J. Butler, Nottingham; Dr. R. Bruce Low, Helmsley; Mr. H. C. Wright, Leicester; Dr. Jas. Gardner, Bath; Dr. Wolfe, Glasgow; E. T. W.; Messrs. Baillière, Tindall, and Cox, London; Messrs. W. H. Smith and Son, London; Mr. P. Mead, Whitby; Dr. F. A. Mahomed, London; etc.

BOOKS, ETC., RECEIVED.

Proceedings of the Medical Society of London. Vol. IV: 1877-1879. Edited by F. De Havilland Hall, M.D., and D. H. Goodsall, F.R.C.S. London: J. E. Adlard. 1879.

A Handbook of Physical Diagnosis: comprising the Throat, Thorax, and Abdomen. By Dr. Paul Guttmann. Translated from the Third German Edition. By Alex. Napier, M.D. London: The New Sydenham Society. 1879.

The Functional Stage of Granular Kidney. By Robert Saundby, M.D. Birmingham: White and Pike. 1879.

Observations and Comments on Certain Convulsive Disorders. By Henry Day, M.D. London: J. and A. Churchill. 1879.

St. George's Hospital Reports. Edited by W. H. Dickinson, M.D., and T. P Pick. London: J. and A. Churchill. 1879.

Poems. By W. F. Smith, M.B. Second Edition. London: Smith, Elder, and Co. 1879.

The Riviera: Sketches of the Health Resorts. By Edward I. Sparks, M.A. M.B.Oxon. London: J. and A. Churchill. 1879.

Glaucoma: its Causes, Symptoms, Pathology, and Treatment. By Priestley Smith With Lithographic Plates. London: J. and A. Churchill. 1879.

St. Thomas's Hospital Reports; new series. Edited by Dr. Robert Cory and Mr Francis Mason. Vol. ix. London: J. and A. Churchill. 1879.

A SUPPLEMENTARY ADDRESS
ON
PSYCHOLOGICAL PHYSIOLOGY:

BEING

The Address delivered at the opening of the Session of the Medical Society of London.

By JOHN COCKLE, A.M., M.D.,
Physician to the Royal Free Hospital; President of the Society.

GENTLEMEN,—If we are forced, as it were, by physiology to the contemplation of mental action, we quickly find that we may approach the subject of mind by metaphysical or psychological as well as by physiological routes. Speaking without pretence to extreme accuracy, we may roughly describe the metaphysical method as introspective, for the most part *à priori*, analytical, and dealing with the developed mind. The psychological method is retrospective, *à posteriori*, and, though abounding in analytical processes, largely synthetical. It has continual recourse to experience, and deals with the mind in its progress to maturity. We, however, are more immediately concerned with psychological physiology—a term which I prefer to physiological psychology. Physiology may afford important aid, even in purely metaphysical and psychological questions; and has undoubtedly thrown great light upon the whole of that region which embraces sensation. Excepting in the cases noticed in my address, the advance has been as yet but indirect, having been effected in general by observers neither acting in concert nor having psychology specially in view. The investigations have been confined chiefly to the psycho-physical phenomena of the senses; and it is by the experimental method adopted, occasionally involving considerations of number, measure, and weight, that psychological phenomena have been elucidated, and the *dictum* of Leonardo da Vinci, that experiment and observation must be the guides to the investigation of nature, illustrated in the sphere of mind. Of these aids, modern psychological physiology has largely availed itself, and has thus tended to shift, in some degree, the standpoint of inquirers. The more recondite phenomena of consciousness are, at present, less amenable to this process of investigation. That psychology remains incomplete so long as it only deals with man as an isolated individual, is a point taken by Herbart as early as 1815, and subsequently insisted on by him. The correctness of Herbart's view seems to be manifested in the writings of more recent psychologists. But I need not here dwell further upon it.

When the physiologist happens to be also a metaphysician, we may see the ideas of past ages brought into a curious and interesting apposition with those of our day. Taking, with Professor Huxley, "muskiness" to mean the odour of musk, it may be said that (1) minute particles of the musk fly off from its surface and impinge upon the olfactory epithelium and rods; (2) the impact produces a molecular change (probably vibration), which is transmitted to, and passes along, the olfactory nerve-fibres, and finally reaches the olfactory sensorium; (3) the consequent change in the sensorium is immediately followed by the sensation of "muskiness". Now, the speculation of Democritus and the Epicureans comes to this: that the surfaces of bodies are constantly throwing off excessively attenuated films of their own substance; and that these films, reaching the mind, excite the appropriate sensations in it. Aristotle, who did not admit the existence of any such material films, conceived that it was the form, and not the matter, which affected sense, as a seal impresses wax. Many of the schoolmen supposed that an "intentional species", something not exactly material or immaterial, effected the needful communication. But Professor Huxley points out that we have a representative of the Epicurean *simulacra* in the volatile particles of the musk; of the Aristotelian "form", in the stamp of the particles on the olfactory epithelium; of the "intentional species", in the modes of motion of the molecules of the olfactory cell, nerve, and sensorium. He observes that, with the sensorium, matter and motion come to an end, while phenomena of another order, or immaterial states of consciousness, make their appearance; and that sensations of odour are, in the strictest sense of the word, immaterial entities. The mode of conceiving the relation between the material and the immaterial phenomena is a question on which Professor Huxley remarks that three mutually irreconcileable readings of the riddle have been offered, viz.: (1) that an immaterial substance of mind exists, and is affected by the mode of motion of the sensorium; (2) that the sensation is a direct effect of the mode of motion; (3) that it is not an effect, but a concomitant, of the motion. The second is the reading to which Professor Huxley inclines.

I may remark that, were we to adopt the first, a difficulty might arise. Is the action of the sensorium upon the mind accompanied or not by a corresponding reaction? How is such reaction consistent with the immateriality of the mind? What is the nature of such reaction? Does it modify the energy of the bodily machine? Is there any minute or infinitesimal increment or decrement in the energy of that machine? If it be said that such increment or decrement may exist, and yet be incapable of experimental proof, it may be replied that it is equally incapable of experimental disproof; and that high authorities hold that, in respect of the great law of the conservation of energy, living beings must be regarded in the very same light as any other machines.

In the words of the late Mr. Lewes, as paraphrased by Mr. Courtney, we may say that, although there is an intelligible expression of matter and motion in terms of thought, there is no such intelligible expression of thought in terms of matter and motion. This being so, it certainly does seem simply preposterous, in the strict sense of the term, to suppose that we shall ever be able to understand scientifically the source of consciousness and volition. But, however this may be, the question of life—mere vitality, remains an open one. According to Professor Tait, the surmise is not unreasonable that possibly we may, by the help of physical principles, especially that of the dissipation or degradation of energy, some time attain to a notion of what constitutes life. But, should this mystery ever be penetrated, it would by no means follow that we should thereby be enabled to produce, except from life, even the lowest form of life; and, if we could do so, the question of the passage from life to consciousness would still remain.

We have no knowledge of life as absolutely commencing, or as artificially originated, or as dissociated from antecedent life. Take, for instance, the protoplasmic fluid, or the protide of the ocean; the bacteria, or the ova of the highest mammals. We may pass in imagination back to the earliest appearance, in time, of life upon our planet; but, as to the origin of that life, we have nothing to aid us but conjecture. The various theories largely depend on the mental bias of the proposer; for we must bear in mind the apophthegm of Goethe, that a man's philosophy is but the expression of his personality. One philosopher would contend for specific creative fiat; another for a fortuitous aggregation of molecules into a protoplasm; while another, again, might, with Sir William Thomson, seek in the matter shot from some disrupted planet the germs of terrestrial life. This last theory, however, would only throw the origin of life further back, without solving the problem of its origin.

It seems to me a fault of many philosophers that they leave so little room for open questions. Theories are framed, in support of which the functions of the judge appear to be sometimes merged in those of the advocate; and occasionally it would even appear that poverty of thought is concealed by a profuse display of wealth of language. The origin and nature of life I hold to be pre-eminently an open question; and it is likely to remain so, unless and until we can construct protoplasm; true though it be that protoplasm forms the physical basis of life, the theatre in which vital activities are exhibited. The very definition of life is difficult. Definitions of more or less questionable sufficiency have, indeed, been offered; but has any one yet attained universal currency? The theory of Mr. Darwin, subject to possible modifications, seems, in the main, to have met with universal, or at least very general, acceptance. Thus laws of Nature of a new character claim our recognition, and the chain of physical necessity seems lengthened. Upon theories of the evolution of mind I shall here say no more, than that it is not clear to me that any such theory has as yet enabled us to decide finally the questions at issue between the advocates of transcendental views and the disciples of the school of experience. It might assist us in arriving at a decision, if we were to confine the battle, in the first instance, to the field of Time. That of Space is so much more extensive, and the considerations which arise thereon so much more numerous and complicated, that it seems well-nigh hopeless to come to a result upon the latter so long as the battle on the former is undecided. They who hold that the consciousness of time is given along with the first sequence experienced, and that such sequence cannot otherwise be known as a sequence, are likely to cling to their post with great tenacity.

In speaking of the doctrine of evolution, I mean, of course, the evolution of organic forms; but the same or a similar doctrine may be applicable to other forms. Passing through the regions trodden by

Kant in his *Physical Researches*, we may at last find ourselves face to face with speculations which can be properly dealt with only by men of profound—say of the profoundest—mathematical and physical knowledge: men competent to deal, for example, with Sir William Thomson's theory of vortex-atoms, the interest of which is already so widely recognised. Whatever be the ultimate conclusion, we must not allow our road to it to be encumbered by *à priori* arguments about the infinite divisibility of matter. The extent to which the physical division of a given quantity of matter can be carried is a question for the physicist, and for him alone. Questions about the infinite divisibility of the space which matter occupies we may safely leave to the proper authority—the geometers.

There is, indeed, no *à priori* road to physical truth. We must never forget the maxim, which cannot be better expressed than in the words of Professor Tait, that advances in physical science come or not according as we remember or forget that our science is to be based entirely upon experiment, or mathematical deductions from experiment. It is by an enormously extended series of experiments, and not by arguments merely speculative, that we gain the assurance that no portion of matter, however small, goes out of existence or comes into existence in any chemical or physical operation whatever. If we neglect the maxim, we may construct systems; but they will not be systems of philosophy in any true sense of the phrase. And, apparently, so-called philosophical generalisations may be too hastily made; for, according to Professor Tait, even the purely space-relation, or geometrical conception of position, need not necessarily be relative, provided that something like the idea of Riemann, Helmholtz, and others, have an actual existence in the universe.

I conclude by saying that, if we would avoid verbal disputes, we should always keep before us what is meant by physical necessity. When it is said that such and such a physical consequent necessarily follows such and such a physical antecedent, all that is meant (at all events, ought to be meant) is that the given consequent will follow the given antecedent, so long as the physical laws we recognise remain unchanged. Practically speaking, physical necessity amounts to much the same thing as necessity proper; for the belief in the uniformity of nature and of natural sequences may be supposed to exist in the minds of those to whom arguments from physical necessity are addressed. If a proposition bear the stamp of physical necessity, another proposition which conflicts with it may justly enough be deemed incredible, or in a sense impossible; that is to say, physically impossible. But to class such conflicting proposition with those which are universally regarded as self-contradictory, or to say that its truth is inconceivable, unthinkable, and so on, or impossible in the sense of unconditionally impossible, is to assert that which may be contradicted, and actually is contradicted, by the mere play of the imagination, and by the constructive art of the mechanician and the painter and the sculptor.

NEWCASTLE-ON-TYNE.—Mr. Armstrong's reports abound in valuable tables and diagrams, which add much to their interest and completeness. His last report contains, in addition, a startling exemplification of domestic dangers from poisoning, in the shape of a flaring sample of wall-paper, which contains arsenic to the extent of 0.73 per square foot. The paper in question is one of a new and favourite pattern, consisting of dull-green fruit and leaves, pink apple-blossoms, greyish-green grasses, brown birds with yellow markings, and blue butterflies with brown and yellow markings, on a blueish-grey ground. The surface of the paper is dull, and the colouring-matter separates on slight friction. The adornment of the bedrooms of a house with this gorgeous paper led to five of the members of the family showing signs of arsenical poisoning. During the year 1878, 5,484 births and 3,423 deaths were registered in the borough, representing rates of 38.8 and 23.7 per 1,000 respectively. The birth-rate shows a decrease of 0.6 and the death-rate an increase of 1.4 per 1,000, as compared with the rates for 1877. The zymotic rate was 4.4 per 1,000, against 2.4 for each of the two preceding years. The chief epidemic of the year was one of scarlatina, which was fatal in 219 instances. Typhus caused 9 deaths, enteric fever 52, whooping-cough 87, and diarrhœa 218 deaths. Bronchitis and pneumonia caused 385 deaths, as compared with 443 in 1877. The number of infantile deaths was 888, or 16.2 per cent. of the registered births. The non-certified deaths numbered 119. A total of 467 cases of infectious disease were made known to Mr. Armstrong during the year, and were duly attended to. Sixty-five patients (13 suffering from typhus, 26 from enteric fever, 14 from scarlet fever, and 12 from other diseases) were admitted into the Fever Hospital, which, unventilated, dilapidated, and defective as it is, yet proved of the greatest service. Mr. Armstrong's personal action seems to be very energetic; and it would be well if, in this respect, he were followed more closely by his sanitary authority.

OBSERVATIONS
ON
THE DIGESTIVE FERMENTS, AND THEIR THERAPEUTICAL USES.*

BY WM. ROBERTS, M.D., F.R.S.,
Physician to the Manchester Royal Infirmary; Professor of Clinical Medicine to the Owens College.

II.

PEPTONES AS FOOD.—Although we have been able for many years to imitate digestion very accurately in the laboratory, the proposal or suggestion to feed patients with artificially digested food has hardly yet passed beyond the tentative stage. There cannot be a doubt that, i we had at our disposal an available supply of artificially digested (or peptonised) proteids in a state fit for human food, we should find numerous conditions in which such a resource would offer promise of important advantage. In the alimentation of fevers, in the malnutrition of infants, in various gastric and intestinal lesions; in short, wherever natural digestion was partly or wholly in abeyance, we should find an ample field for the trial of peptonised food. The attempts hitherto made to prepare peptones and peptonised aliments for the sick have followed the gastric method, that is, the process with pepsin and hydrochloric acid. But so far the results have been disappointing. The difficulty lies in this. If you subject any native article of food—say milk, or bread, or meat—to artificial digestion with pepsin and acid, you utterly destroy the grateful odour and taste, and the inviting appearance, which made it desirable as food, and you convert it into a nauseous mess from which the human palate turns away with disgust. The unsavouriness of digested food is, however, not due to any ill taste or smell inherent in the peptones themselves—which, when purified, are both odourless and tasteless—but to a number of by-products of various kinds, volatile acids and other matters, which accumulate as digestion proceeds. One of these by-products is a bitter flavour, which is a constant and noteworthy characteristic of gastric digestion. I find it also associated with the later periods of pancreatic digestion, but in less intensity. The difficulty can be evaded by separating the peptones from the digested mass, and purifying them by repeated precipitation with absolute alcohol. But this process involves so much cost and labour, that it would preclude peptones so obtained from getting into general use.†

PEPTONISED MILK.—For some time past, I have been trying to attack the problem in another way. Last year, I found that extract of pancreas digested milk with great ease and with little apparent disturbance of its physical character. Milk, as you know, contains all the elements of a perfect food adjusted in their due proportion for the nutrition of the body. Two out of its three chief ingredients—namely, the sugar and the fat—are already in the most favourable condition for absorption, and require little, if any, further assistance from the digestive ferments. It is, therefore, obvious that, if we could change the casein of milk into peptone without materially altering the taste and appearance of the milk, such a result would go very near completely solving the problem of supplying a predigested food for the use of invalids. This consummation is still some way off; but the results already reached are, I think, susceptible of important dietetic application. You cannot, so far as I now know, *completely* peptonise milk without rendering it unfit for human food; but you can *fractionally* peptonise milk, that is, convert three-fourths or four-fifths of its casein into peptone without materially diminishing its agreeable qualities as an article of food. In order to understand this matter fully, I must ask you to follow me while I describe what occurs when milk is subjected to the process of pancreatic digestion. I cannot do this better than by describing an experi-

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* This paper is the substance of an address delivered before a meeting of the Lancashire and Cheshire Branch of the British Medical Association, at Northwich, on April 26th, 1879.

† Dr. A. Adamkiewicz seems to have prepared fibrine-peptone on a large scale from purified blood-fibrine. He speaks of operating on hundredweights of fibrine. The peptone prepared by him from this source by the acid-pepsin process has been successfully used in feeding patients with intestinal obstruction.—*Natur und Nahrwerth des Peptons.* Berlin: 1879.

ment performed this forenoon, of which the results are placed in these phials before me. A pint of milk was diluted with half-a-pint of water, and after being heated to 120° F., was placed in a glass beaker with a tablespoonful of liquor pancreaticus and twenty grains of bicarbonate of soda. The beaker was then placed in a warm chamber, and maintained at a temperature of 110° F. until the close of the experiment. In about ten minutes, the milk was observed to thicken and become softly curdled. This phase soon passed away; the soft curds became dissolved; and in about half-an-hour from the commencement, the milk had recovered its diffluent condition. Meanwhile, the milk had lost something of its glossy white appearance, and become a shade yellower. Very gradually, further changes took place; the milk got to look a little thinner and greyer; its flavour also progressively deteriorated, and at length became somewhat bitter and unpleasant. The process was completed, that is, all the casein was converted into peptone in two hours and a half from the commencement of the experiment. The milk no longer precipitated with acetic acid nor even with nitric acid. These numbered bottles contain samples withdrawn from the beaker at different periods and immediately boiled to prevent further changes. No. 1 represents the original mixture; No. 2 was removed in half-an-hour; No. 3 in an hour; No. 4 in two hours; and No. 5 at the end of the experiment. Nos. 1, 2, and 3 are scarcely distinguishable from each other, either in appearance or in taste; and yet I know, from other and parallel experiments, that in No. 3 at least three-fourths of the casein is changed into peptone. Nos. 4 and 5 are perceptibly altered in taste, but even these have nearly preserved their original milky appearance. The slight yellowing and greying just spoken of are not appreciable, except by comparison with a specimen of unaltered milk placed by the side of the digested samples. The series of changes do not cease with the completion of the peptonising process. The milk continues to deteriorate; and, in the course of some hours, it becomes more grey and watery-looking, and its taste becomes decidedly bitter and nauseous. It is important to know that you can arrest this series of changes at any point or at any moment by simply heating the milk to the boiling point. This at once destroys the activity of the ferments and puts an absolute check to all changes. It is also important to know that the greater part of the casein is converted into peptone soon after the commencement of the process, and that it takes a disproportionately long time to convert the remaining portion. Thus I found, when the experiment was so arranged that the milk was wholly peptonised in two hours and a half, that two-thirds of the casein was converted in the first half-hour and three-fourths in the first hour; and that it took an hour and a half longer to convert the remaining one-fourth. In this respect, the peptonising process followed the rule observed in many other ferment-actions; namely, that the gradually accumulating product of the ferment-action hampers the operation.

In preparing peptonised milk for invalids, it is absolutely essential to immediately boil the milk when the process has reached the desired point, in order to stop ulterior changes. It is, moreover, obvious that it is not necessary for a therapeutical purpose that the milk shall be completely peptonised. A milk in which three-fourths of the casein is digested, and which is so little altered in flavour that it can be taken like ordinary milk, would probably fulfil all the service capable of being rendered by fully peptonised milk. Such a result as this is, I believe, now within our reach. The rate at which milk can be peptonised by pancreatic extract—in other words, the time within which a given quantity of milk can be digested by this means—varies almost indefinitely according to the attendant circumstances. Four conditions have especially to be taken into account, namely, temperature, the degree of alkalescence, the degree of dilution, and, above all, the quantity of the ferment. The higher the temperature, up to about 140° F., the quicker the digestion. The process is arrested and the ferment destroyed at 157°-158° F. On the other hand, a slow action takes place even in the cold. The process is hastened by increasing the alkali up to about four grains of the bicarbonate to each ounce of milk. An alkalescence of one grain to the ounce of milk secures a sufficiently rapid action, and gives no appreciable taste to the product. A slower action takes place even in milk to which no alkali has been added. Dilution with water hastens the process greatly; it also facilitates it in another way. If the milk be diluted with one-third or one-half its bulk of water, the curdling phase is either altogether absent, or is usually so slight as not to amount to more than a transient thickening of the milk. In practice, I have, therefore, always found it advisable to dilute the milk beforehand, either with simple water or with a farinaceous gruel, so as to abate the tendency to curdling. This tendency varies in a way I cannot always explain. Pronounced curdling delays the peptonising process very considerably, and thereby renders the product less acceptable to invalids.

The quantity of ferment that should be used is always a matter of uncertainty. It is impossible to obtain pancreatic extracts of constant strength; and not only do several specimens of pancreatic extract differ from each other, but even the same specimen varies in activity according to its age. Freshly made extracts are nearly inert, and they go on increasing in activity for many months after they are made. But supposing you to be operating with the same sample, the proportion added to the milk greatly influences the rate of digestion. I have generally used a dessert-spoonful of the extract to the half-pint of milk. If the preparation be fairly active, this proportion yields a sufficiently quick result; and, in the case of the liquor pancreaticus, communicates no flavour. The glycerine extract perceptibly sweetens the milk, and is to some people disagreeable.

After a good many trials, I now advise the following procedure for preparing peptonised milk for the sick-room. A pint of milk is first diluted with half its bulk of water and heated to about 150° F. It is then put into a covered jug with a tablespoonful of liquor pancreaticus and twenty grains of bicarbonate of soda (in solution). The jug is then placed in a warm place under a "cosey" for one hour. At the end of this time, the milk is at once raised to the boiling point. It can then be used like any other milk, and undergoes no further change until decomposition sets in. It is well, however, to know that peptonised milk does not keep well, and that it should be used within twelve hours of the time of preparation. The use of the thermometer may be obviated by directing the milk to be diluted with an equal bulk of *boiling* water.

Another formula, which supplies a more nutritious product, and does not require the thermometer, is the following. To half-a-pint of cold milk, in a covered jug, add half-a-pint of well boiled and *boiling* gruel. This gives a temperature of 120° to 130° F. To this add a dessert-spoonful of the liquor pancreaticus and a dessert-spoonful of a saturated solution of bicarbonate of soda (which contains about ten grains). Put under a "cosey", as before, and heat to boiling at the expiration of an hour. In this case, the trypsin of the pancreatic extract acts on the casein of the milk and (I presume) on the gluten contained in the gruel. The diastase of the extract also acts on the starch of the gruel, and converts it into sugar. This method gives us a preparation similar in design to Liebig's food for infants, but in which the proteids, as well as the amylacea, are subjected to digestion. The making of it is exceedingly easy, and it would seem well adapted both for the nursery and for the sick-room. The gruel employed should be made thin; it may be prepared from wheat-flour, or from oatmeal, or from any other farina.

I have now used these fractionally digested articles of food in a considerable number of cases, and in many with gratifying results. If the process be properly performed, if it be cut short by boiling at the right moment—that is, after the curdling phase has passed away, and before ulterior changes have rendered the milk unpleasant to the palate—the resulting products are liked as well as if they were simple milk-and-water or simple milk-gruel. But if the process be carried too far—or if, on the other hand, the milk be still partially curdled when put before the patient—the product is not liked, and is even apt to cause nausea.

When further experience shall have taught us how to produce a pancreatic extract of constant strength, there will be no difficulty in exactly fixing the proper moment for stopping the ferment-action; meanwhile, the best rule is to allow the process to go on for an hour, and not longer. I have several times seen fractionally digested milk remain on the stomach when nothing else would remain. I have also seen this food tolerated without pain when all other food caused pain.

In the present state of this inquiry, it would not be prudent to say more on the therapeutical uses of peptonised milk and milk-gruel. Any practitioner can easily prepare these articles for himself, and make trial of them among his patients. The pancreatic extracts are made under the personal supervision of Mr. Benger,* who has spared neither time nor labour in their preparation, and who, by his skill as a practical pharmaceutist and his aptitude for experimental work, has rendered me invaluable aid throughout this investigation.

* F. B. Benger, of the firm of Mottershead and Co., Chemists, Manchester, from whom these preparations can be obtained.

BATH.—During the second quarter of the present year, the death-rate of this city was 20.8 per 1,000, as against 23.9 in the corresponding quarter of 1878. The total number of deaths were 280, of which 57 were under five years of age, and 124, or not very far from half, over sixty years of age. The deaths above eighty years were 34, or about an eighth of the deaths. The zymotic fatality was remarkably low (0.8 per 1,000). In the early part of the year, there was a smart outbreak of scarlet fever; but its progress was effectually checked by the isolation afforded by the infectious hospital.

DISINFECTION BY ACIDS.

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Although disinfection by chemical means has been practised at least since the days of Homer, yet hitherto it has been based on purely empirical grounds. Only within the last few years, sharing in the increased interest taken in sanitary science, has it been made the subject of exact research. Considering the complexity and breadth of the question, the diverse methods by which inquirers have approached and dealt with it, their aggregate results, though as yet small, have the unity and precision of scientific truth. Of late years, perhaps, no material has been so largely used in disinfection as carbolic acid. This may in great part be attribute to the character given it as a surgical application, on the grounds that septic phenomena are caused by bacteria and their allies; that no body is so fatal to these organisms as carbolic acid; and that hence carbolic acid is the most powerful antiseptic. The ardent and painstaking zeal with which these views have been advocated, has evoked a spirit of inquiry both into the natural history of bacteria and into the alleged antiseptic and disinfectant powers not only of carbolic acid, but of many other chemical bodies. Of late, also, much has been said and written to show that bacteria form the infecting principle of zymotic poison. If it be argued that the number of zymotic and of infective inflammatory diseases far exceeds the number of species of bacteria, the reply is, that a single species of these organisms can originate these various distempers, according to the environment. This is tantamount to saying that the environment is rather the cause of the disease, and affects the bacteria, and not the bacteria, as they do not affect the environment; or, in other words, that bacteria are merely passive, harmless, zymotic, and inflammatory products, not active, poisonous, zymotic, and septic causes. However this may be, it is the case that carbolic acid is largely used as a disinfectant in zymotic disease, presumably on the same grounds as it is used as an antiseptic in surgery.

The following remarks being on the destruction of infective matter—on *dis*infection, and not on the preservation of organic matter, or antiseption as practised in surgery—I shall deal chiefly with facts and inferences having a direct bearing on the annihilation of zymotic virus. In an experimental inquiry on this subject, the results of which were published (*Glasgow Medical Journal*, November 1872 and February 1873), I found that fresh liquid vaccine lymph, which is true infective matter, contains no bacteria, and ceases to infect when it does contain bacteria, if exposed to the fumes of certain volatile acid bodies *till it had an acid reaction*, permanently lost its infecting power. Moreover, I found that carbolic acid was not one of those bodies; *i.e.*, that lymph exposed for about thirty-six hours to an atmosphere saturated with its vapour did not acquire thereby an acid reaction, and had not lost its infecting power. I further mechanically incorporated about forty parts of carbolic acid with about sixty parts of fluid vaccine, and found that this mixture, after being kept from the air for two days, failed to vaccinate; while a portion of the same preparation, after being freely exposed to the air for twelve days, succeeded in vaccinating. These experiments were repeated with the same results. It was found also that no amount of exposure retrieved the lost infecting power of the lymph, which had been exposed to the other acid fumes until it was acid. These results, I felt, justified me in concluding that carbolic acid was not a disinfectant, not a destroyer of organic matter, but rather an antiseptic, a preserver of organic matter—arresting and preventing putrescent and fermenting change, and suspending zymotic action, for a time proportioned to the quantities of the acid and organic matter mixed, but latterly becoming volatilised, and leaving such matter, whether infective or otherwise, in its original state. From these results, I also felt justified in holding that the volatile acid bodies which had permanently annulled the infecting power of the lymph—viz., chlorine, hydrochloric, nitrous, acetic, and sulphurous acids—independent of any antiseptic powers they might have, were at least reliable disinfectants of that substance, and therefore, by inference, of all infective matters.

In Mr. Simon's *Public Health Report*, No. VI, 1875, these views are largely expanded and remarkably confirmed. Here are recorded the details and results of an elaborate and interesting series of experiments to test the disinfecting powers of heat, carbolic acid, permanganate of potash, chlorine, and sulphur-dioxide, on vaccine lymph, liquid and dry, virus of infective inflammation, and virus of glanders. These experiments were planned by Drs. Burdon Sanderson and Baxter, and ostensibly performed by the latter. In eight experiments with a mixture of chlorine and liquid vaccine, it was found that the lymph vaccinated successfully while the mixture was alkaline; but in the ninth, in which the quantity of chlorine incorporated with the lymph had been much increased and the mixture thereby rendered acid, the lymph was deprived of its infective energy. In four experiments in which dry vaccine was exposed to the fumes of sulphurous acid for only ten minutes, its infecting power was destroyed. This acid was also found to be destructive of the virus of infective inflammation, of glander virus, and to be fatal to the growth and multiplication of microzymes, bacteria, and their allies. Mecklenburg (*Berlin. Klin. Wochenschrift*, June 21st, 1869) also found that lymph mixed with an equal volume of acetic acid lost its infecting power; and Davaine (*Comptes Rendus*, Oct. 13th, 1873), that chromic and sulphuric acids were powerful destructives of *charbon* virus. In the course of these experiments, chlorine is also shown to be a good disinfectant, if used in large quantity. Vaccine, as already noticed, is acidised by it, and only then is it rendered inert. Whether the acid formed in the lymph be hypochlorous or hydrochloric, I cannot say; but I am inclined to think it the latter. The *rationale* of its action seems explained by saying that the chlorine decomposes the water present, seizing its hydrogen to form hydrochloric acid, while its oxygen is liberated in an uncombined state. Chlorine may thus be said to have a double action: a caustic destructive one, by virtue of the acid it forms; and an oxidising one, from the oxygen it liberates. The fumes of burning sulphur are, however, far more easily obtained, used, prompt, and effective. Permanganate of potash is also shown to be a disinfectant; this, of course, is entirely owing to its oxidising properties. At the end of the report, it is stated, as an inference drawn from the results of the experiments, that, "when the permanganate is used to disinfect a virulent fluid containing much organic matter, there is no security for the effectual fulfilment of disinfection short of the presence of undecomposed permanganate in the liquid after all chemical action has had time to subside". Some rough experiments I made many years ago with the permanganate, in the form of Condy's fluid, led me to discard it as a disinfectant, and to use it only as a deodoriser. Its oxidising powers, though prompt and sure, are very limited, and are quickly exhausted by mere hydrogen-sulphide and ammonium-sulphide, which of course are not infective; while its price limits its consumption to a quantity from which it is very improbable any real benefit as a disinfectant is obtained. About two years ago, I performed an experiment suggested to me by the inferences above quoted, and drawn by Dr. Baxter from his experiments with the permanganate. I had a measured quantity of Condy's fluid conveyed to a house where I was attending a bad case of typhoid fever. To a newly passed characteristic enteric stool of unknown quantity, a portion of this fluid was added; the mixture was stirred, and set aside for a short time. The pink hue of the permanganate-fluid having become brown, more was added; and this process was continued until the lapse of nearly a week, when the fluid retained its pink colour for twelve hours. At this point, it was assumed that the organic matter forming the enteric stool was fully oxidised. The whole mixture was then measured, and, the quantity of Condy's fluid added being known, it was easy to find the relative proportion of oxidised fæcal matter and deoxidised Condy's fluid. These were as follow. Avoiding fractions, one fluid-ounce of enteric fæces deoxidised not less than ten ounces of Condy's fluid. The same plan was tried with the patient's urine, and it was found that one ounce deoxidised two ounces of Condy's fluid. Taking these results as a basis for calculation, it will be seen how ridiculous it is to expect any real benefit from the driblets of Condy's fluid which are used, and how objectionable it is when employed in such quantities, from the false sense of security from infection which it is calculated to produce. Supposing that a typhoid patient pass twelve ounces of fæcal matter and twenty ounces of urine during each twenty-four hours—say for a week—which, it will be conceded, are not excessive quantities; and supposing that Condy's fluid sold to the public in eight-ounce bottles at one shilling each is used, it follows that two hundred and eighty ounces of Condy's fluid are required to oxidise or disinfect the week's urine, which, at one shilling per eight ounces, amounts to £1 15s.; and that 840 ounces are required to oxidise or disinfect the week's fæces, which, at one shilling per eight ounces, amounts to £5 5s.; in all, £7 per week, or at the rate of £365 *per annum*. Now, supposing a hospital with thirty enteric patients on an average constantly under treatment, on these data, it would take £10,950 worth of Condy's fluid to disinfect their yearly excretions.

In the report alluded to, carbolic acid is also stated to be a disinfectant, although it further says "that the use of carbolic acid as an aërial disinfectant should be abandoned, owing to the relative feeble-

ness and uncertainty of its action". But the results on which Dr. Baxter ascribed disinfectant powers to carbolic acid are vitiated, especially those with the acid and vaccine, from the fact that the mixture was used in vaccinating *at once or soon* after its preparation, and was kept sealed in capillary tubes till required. As it seemed that two per cent. of the acid added to moist vaccine, and exposure of dry vaccine to the fumes of the acid, prevented it from vaccinating, it was therefore concluded that carbolic acid is a disinfectant. Now, I myself have obtained the same results with moist lymph under similar conditions, and was on the point of forming the same conclusions; but, observing that the carbolised lymph was milky from coagulation when vaccinating, it occurred to me that the reason why it did not vaccinate successfully might be that the infecting particles of the lymph had become covered with the coagulated vaccine fluid in which they are suspended; also that the free acid in the mixture coagulated the contents of the dermal capillaries which are ruptured during vaccination, and so transformed their contents into embola, while at the same time their walls, being made impervious by the same means, presented an obstacle to endosmotic action. Thus both the vaccine and the nidus of its insertion seemed put in a most unfavourable condition for absorption and absorbing.

To further test this view, I again recently mixed about forty parts of carbolic acid liquefied by a minimum of water with about sixty parts of vaccine. The mixture was then divided in two equal portions on glass slides, and set aside uncovered. In two days afterwards, a child was vaccinated with one portion, but without success; this child was successfully vaccinated two weeks subsequently with pure vaccine. The other portion, after it had been intentionally very freely exposed to air and light for fourteen days, vaccinated successfully. This shows that the acid had only temporarily suspended the infecting power of the lymph, and not permanently destroyed it. Dr. Baxter, therefore, in assuming that carbolic acid is a disinfectant at all, has not unnaturally, from the mode of his experiments, mistaken antiseption or preservation for disinfection or destruction. In the able and interesting report by Drs. Braidwood and Vacher on the *Life-History of Contagium*, presented to the Scientific Grants Committee of the British Medical Association, and lately published, are detailed a number of experiments to ascertain the effect of various alleged germicides on vaccine; *i.e.*, as to whether these destroyed its infecting power. Chief among the substances used were carbolic acid, sulphurous acid, permanganate of potash, and chlorine. The reporters say that "Dr. Baxter's conclusions regarding the influence of carbolic acid, sulphur-dioxide, and chlorine (on vaccine), coincide to a great extent with those at which we have arrived". These conclusions are, that "sulphurous acid, chlorine, carbolic acid, and permanganate of potash, destroy the activity of vaccine". With the exception of carbolic acid, I am also of the same opinion, but have the same objections to urge even more strongly against Drs. Braidwood and Vacher's mode of experimenting with vaccine and carbolic acid as already made in regard to Dr. Baxter's. The reporters state, as the results of their experiments, "that the immediate inoculation of a freshly prepared mixture of vaccine with an equal portion of a one-to-twenty aqueous solution of carbolic acid succeeded (in vaccinating) in some instances" (about 70 per cent. of the inoculations failed). "Such a mixture, preserved for seventeen days to six weeks, failed to produce vesicles." "A mixture of six tubes of vaccine with four drops of a one-to-four aqueous solution of carbolic acid failed to produce vesicles." "A mixture of six tubes of vaccine and four drops of carbolate of glycerine containing 20 per cent. of carbolic acid failed to vaccinate."

As regards the first set of these results, it is easy to account for the success which followed inoculation. (The cause of non-success has been already explained.) The mixture of the acid and lymph had simply not been sufficiently long in contact to coagulate the latter, or the two bodies were not thoroughly incorporated previously to inoculation, so that some pure lymph was left in the mixture. It is stated, that in the other experiments with carbolic acid and vaccine, the mixtures were either used at once after their preparation, or kept hermetically sealed in capillary tubes for seventeen days, three weeks, four weeks, and six weeks before being used. It will thus be seen that in every instance the greatest care was taken that the carbolic acid should be kept in close contact with the lymph until the mixture was used for vaccinating. Why all this care? Did the experimenters suspect that, if the mixture were exposed to the atmosphere, the acid would become volatilised and leave the vaccine intact? It will at least be admitted that, although the vaccine had been made permanently inert, the experiments have no practical value in disinfection, in consequence of the relative excessive quantities of the acid used as compared with the amount of vaccine employed; also of the absolute seclusion to which the mixtures were subjected, hermetically sealed in capillary glass tubes; and likewise of the great length of time they were kept in these tubes—seventeen days, three weeks, four weeks, and six weeks. A one-to-twenty aqueous solution of carbolic acid is saturated, and is so strong, that few or none acquainted with its properties would think of using it as a disinfectant for sinks or sewers, for which it is only applicable. This solution contains one pound of pure acid to two gallons of water; and if the hand were wet with it for half a minute, it would be numb for a day after. But if this 5 per cent. solution be strong, the other two solutions far surpass it, both containing 20 per cent., being 1 in 5 of the acid, or two pounds of acid to a gallon of water. As the acid requires twenty parts of water for its solution, obviously three-fourths of it must have remained undissolved in these preparations; so that it may almost be said that the lymph was mixed with pure acid. Some of it must have been.

Then, again, in practical aërial disinfection—for example, disinfection of a room in which a patient had died of smallpox—the apartment would require to be, on these data, kept closed for from seventeen days to six weeks; while it would be impracticable to volatilise the quantity of acid in the room required by these experiments, and impossible to confine it as it was done in the tubes.

But although I entirely disapprove of the use of carbolic acid as a disinfectant, I believe, nevertheless, that in virtue of its antiseptic powers, it may be made to assist in preventing zymotic disease. If it be assumed that decaying organic matter is capable of originating *de novo* infective poison, or of forming a favourable nidus for its multiplication (and that the latter is the case there can be no doubt), then carbolic acid may be added to such matter with benefit, as by its antiseptic properties it will, for a time, prevent decomposition. Should, however, any infective material be present, then the acid will have an antiseptic action, wil serve it, and though it may for a certain period arrest its power of infection, it will ultimately, as with the vaccine, become volatilised, leaving the poison free to act.

The experiments of Dr. Baxter generally, but especially those with vaccine, chlorine, and the fumes of sulphur-dioxide, have a much more practical bearing than those of Drs. Braidwood and Vacher. The former exposed one portion of dry vaccine to chlorine gas for thirty minutes, and found its infective power destroyed; and another to the vapour of sulphur-dioxide for ten minutes, with the same result in four different trials. The latter submitted one portion of liquid vaccine to the influence of chlorine gas; and another to the fumes of ignited sulphur *all night* (I presume twelve hours) with the same result. But dried vaccine must obviously be more difficult to disinfect than liquid vaccine; and, as this was done in ten minutes in the one case and thirty minutes in the other, it is manifest that Drs. Braidwood and Vacher exposed their liquid vaccine much too long. If every infected apartment required from twelve hours to six weeks for its disinfection, it is very probable that the process would seldom be done efficiently. Fortunately, however, such is not the case, as it is seen that sulphurous acid and chlorine disinfect with a promptitude easily utilised.

From the general tenour of the preceding, it will be seen that acids are prompt and efficient antizymotics, omitting carbolic acid, of course, which partakes more of the character of an alcohol, and is called an acid because it forms salts with alkalies, while it does not redden blue litmus. It is but natural to think that acids should act thus, from the fact that, so far as known, all infecta have a neutral, but chiefly an alkaline reaction. Such is the case with vaccine, varioline, virus of infective inflammation, virus of glanders, enteric and choleraic fæcal matter.* Hence acids may act as disinfectants not only by destroying the molecular arrangement of the poisonous substance, but also by changing the nature of its environment.

Disinfection by acids is far from new, sulphurous acid or the fumes of burning sulphur having been used by the Greeks to fumigate their temples after sacrificial rites, and also to destroy the parasites which infested their sheep.

Dr. Lind,† who, considering the state of sanitary science at the time he wrote, must have had very much greater opportunities of seeing the ravages of infectious disease than any of the present generation, says: "It gives me the highest satisfaction to affirm that I seldom or never knew a proper application of fumes of sulphur to be unsuccessful in effectually purifying all tainted places, materials, and substances. I have known, in several ships where there are the fairest opportunities of trying things of this nature, that the contagion of small-pox has been entirely stopped by means of wood fires sprinkled with brimstone, kept burning and closely confined in the infected place." The following is a crucial experiment. The commission at Moscow, in the year 1770, invented a fumigating odoriferous powder, which, from several lesser

* Stale healthy urine and fæcal matter are also alkaline; but, when newly voided, acid. This is an example of nature using acids as antiputrefactives.

† *Philosophy of Medicine*; London, 1799: quoted from his *Dissertation on Fevers and Infection*, page 225.

experiments, proved efficacious in preventing the infection of the plague. In order more fully to ascertain its virtue in that respect, it was determined towards the end of the year that ten malefactors under sentence of death should, without undergoing any other precautions than the fumigation, be confined three weeks in a lazaretto, be laid upon the beds and dressed in the clothes which had been used by persons sick, dying, and even dead, of the plague in the hospital. The experiment was accordingly tried, and none of the ten malefactors were then infected or afterwards became ill.* The chief ingredients in the fumigating powder were nitre and sulphur.

Acetic acid has also been long used as a disinfectant. It is related that Cardinal Wolsey was in the habit of carrying a sponge soaked with this substance and various aromatics, in an orange-skin, when passing through the crowds which his fame attracted, in order to preserve him from infection. The reputation of acetic acid as a disinfectant is said to have arisen from the confession of four thieves, who, during the plague of Marseilles, plundered the dead bodies with perfect security, and, on being arrested, stated, on condition of their lives being spared, that the use of aromatic vinegar had preserved them from the influence of the contagion. It is on this account sometimes called "Le vinaigre des quatre voleurs". Muratori, an Italian physician of the seventeenth century, advocates the use of vinegar as a disinfectant. This substance is also in great favour with the Arabians as such. The late Dr. Mead, who was somewhat sceptical regarding the benefits of fumigation and advocated the keeping of houses cool and airy, was nevertheless favourable to the use of vinegar and burning sulphur as disinfectants.

In the year 1773, Gayton Morveau brought forward hydrochloric acid as a disinfectant. The gas was to be made by pouring sulphuric acid on common salt, and was recommended as an efficient mode of disinfecting military hospitals, for which it was largely used, and undoubtedly with great success, as the Chancellor of the Legion of Honour in 1805 writes to him as follows, in the name of the Emperor Napoleon. "Europe and America know that since 1773 you have employed your discovery of the application of muriatic acid fume to arrest the effects of contagious and direful diseases."† So high was this discovery valued, that for it he was made brevet officer of the Legion of Honour, and a decree was passed by the National Assembly ordering its use in military hospitals where infection prevailed.

In 1780, Dr. Carmichael Smyth began to use nitrous acid fumes as a disinfectant. Fever had broken out among the prisoners in Winchester, which attracted the attention of Parliament. Several eminent London physicians were asked to take charge of the prisoners, but refused. Dr. Smyth latterly agreed to do so. One hundred and eighty of the prisoners, with most of the officers and servants, had already died, and the disease was daily increasing. In Dr. Smyth's own words, "When I arrived at Winchester, I found the hospital in the following state.

Table of Deaths.

Date of Weekly Accounts.	Number of Spanish Prisoners		
	In Custody.	Sick.	Dead.
March 26, 1780	1247	60	1
April 2, ,, ...	1243	106	4
,, 9, ,, ...	1475	150	10
,, 16, ,, ...	1457	172	18
,, 23, ,, ...	1433	142	21
,, 30, ,, ...	1412	171	21
May 7, ,, ...	1388	191	25
,, 14, ,, ...	1351	197	27
,, 21, ,, ...	1523	205	30
,, 28, ,, ...	1494	226	31
		Total.. ..	188

Immediately on the admission of the nitrous acid vapour, the deaths fell on June 17th to nine; on the 27th, to five; July 1st, to five; and July 8th, to one, when the contagion ceased. None after its admission caught it, and the disease immediately showed a milder aspect." A Dr. McGregor, of the 88th Regiment, having about this time lost from forty to fifty patients during an outbreak of fever, tried, on a subsequent outbreak of the same disease, nitrous fumigation, and, of sixty-four men seized, did not lose one. The results of Dr. Smyth's application of nitrous acid fumes, not only in Winchester Prison, but in hospitals and ships, produced such an effect on the public mind, that Parliament in 1802 voted him £5,000, and he was appointed physician extraordinary to the King.

[*To be concluded.*]

* *Philosophy of Medicine.* London, 1799.

† *Traité des moyens de désinfecter l'Air, de prévenir la Contagion, et d'en arrêter les Progrès.* 1805.

A NEW METHOD OF APPLYING A PLASTER-OF-PARIS JACKET IN THE RECUMBENT POSTURE.

By J. W. MILLER, M.D.Edin.,
Consulting Physician to the Dundee Royal Infirmary.

DR. SAYRE is entitled to the gratitude of the profession for having shown how by the use of plaster-of-Paris jacket it is within the power of every practitioner to employ the treatment by artificial support in cases of spinal disease, and for establishing clearly how great is the benefit thus conferred upon the patient. It would be difficult to say how many cases are now treated in this manner for one which was so treated previously to Dr. Sayre's publication of his method, and for this great extension of practical knowledge we are wholly indebted to him. While however we fully recognise this, it does not follow that his method must be adopted in every detail as always the best in every case, and I think there can be no doubt that there are at least inconveniences in the method by suspension. It is at all events desirable to have an alternative; and Dr. Walker's paper in the JOURNAL of March 1st was a gratifying contribution to our knowledge, in showing how the jacket can be applied in the recumbent posture, with good results. After alluding to the success of the treatment of these cases by artificial support, which he has proved during a seventeen years' experience, he goes on to say, "But, in order that such a jacket shall be effectual, it is a *sine quâ non* that it shall be applied when the spine is in such a position that the diseased vertebræ shall be free from all pressure, and the deformity, if any deformity exist, be reduced to a minimum. This condition is found, it is true, when the patient is suspended by the head and shoulders, as recommended by Sayre, but it also obtains in an equal degree when the patient is laid flat on his back; and the same result as to increase of height, diminution of the deformity of the spine, and relief to pain and functional disturbance follows the application of the bandage, when the patient is in the recumbent posture, as when he is suspended."

There is sometimes a difficulty, however, in Dr. Walker's plan, in getting the jacket completed before the plaster has begun to set; at least, I have found it so, even with the use of gum to delay the setting. Thinking by what means the procedure might be hastened, the simple expedient suggested itself to me which I am about to describe; of which the great advantage is, that so much can be done before water is employed, that about five minutes' time after the first wetting of plaster suffices to complete the jacket; this also renders unnecessary the mixture of any substance with the plaster to delay the setting. My method, it will be observed, is only a modification of Dr. Walker's.

The best material for the bandages is Victoria lawn, but not too close in texture; and four yards is a convenient length for them. The plaster should be well rubbed into the bandages, but it is desirable to have a considerable quantity besides loose on the surface of the bandages. Shortly before the jacket is to be put on, the patient should have a full meal, thus putting "a pad" of the correct size inside, instead of Sayre's "dinner-pad" outside. The patient, having put on a thin closely fitting woollen shirt, is laid on his back in bed, or on a table covered with a folded blanket, a waterproof under him, and his arms extended at right angles to his body. The requisite depth of jacket is marked on the bed by any appropriate means, such as pins inserted in the waterproof or blanket, two on each side, one opposite the axilla and another opposite a point about an inch below the crest of the ilium. The patient is now made to sit, and after doing so must be careful not to change his place on the bed, in order that, when he again lies down, he may resume exactly his former situation. The length of bandage having been ascertained, which is requisite to encircle the body and overlap in front to the extent of four or five inches, pieces of bandage cut to this length are laid down in succession across the bed, each piece overlapping the preceding by two-thirds of its breadth, as Dr. Walker directs, until a sufficient number are laid down to give the required depth of jacket. The first and the last piece laid down should, however, be about a third of their breadth beyond the marks, and should be then folded in, as otherwise the jacket at its upper and lower edges would be only twofold. The ends of the bandages are now fastened together by being fixed on each side between two slips of wood, which are clasped by three American clothes-pins. These slips of wood should be about fourteen inches long, one inch broad, and three-sixteenths of an inch thick, and the wood should be left in its rough state on one side, in order to grip the bandages more firmly. If any of these were to slip out after being wet, the whole operation would be spoiled; this could be effectually guarded against by one of the pieces of wood being pierced by a row of

very small sprigs about an inch apart, so that their sharp points might project slightly on the rough side. I have not found this necessary, being careful when lifting the bandages to hold firmly with the fingers. By this means, the whole layer of bandages can be lifted between the two hands and dipped in fluid plaster; but before doing so, a second layer of bandages must be made ready in the same manner. No water having been as yet employed, all these arrangements can be gone about with perfect leisure, and it may be well to cause the patient to lie down on the arranged bandages to make sure that the correct size has been taken. If the jacket is to be strengthened with slips of tin, these should now be cut to the proper length and laid at hand. Everything being now ready, a thin mixture of plaster is prepared by mixing two pounds in forty ounces of water, and this is then poured on a flat tray broad enough to accommodate the depth of the jacket.* One of the layers of bandages is now drawn slowly through the plaster on the tray twice or thrice, care being taken that it is thoroughly saturated, by turning first one side and then the other down; which having been properly done, it is laid aside on any convenient place. The other layer of bandages, having been treated in the same manner, is laid on the bed behind the patient, being carefully placed on the spot previously marked, and the layer which was first dipped then laid upon it. By placing them in this order, the first dipped, and therefore nearest setting, will be first applied to the patient. The patient is now laid back carefully on the bandages, the arms extended as before, and, the slips of wood having been detached from the upper layer, each bandage in succession is brought round and overlapped in front. The slips of wood holding the ends of the bandages firmly between them having prevented the saturation of these portions with fluid, an assistant, while they are being crossed in front, pours on with a spoon some of the fluid plaster from the tray. The second layer is put on in the same way, pieces of tin being interposed where thought desirable. As much as may be necessary of the remaining liquid plaster is now smeared over the surface of the jacket, and smoothed with the hand as it sets. The whole procedure, after commencing to mix the plaster and water, occupies, with ordinary despatch, about five minutes; and on the last occasion, the patient being a child, the whole time occupied, after placing the patient on the bed till the jacket was completed, was fifteen minutes. I have only had four opportunities of employing this method, the last two being by the courtesy of the surgical staff of the hospital. The cases have not been suitable for ascertaining the effect of the recumbent position as compared with that of suspension in straightening the spine and adding to the stature, but Dr. Walker speaks decidedly on this point. The best opportunity of testing the matter would be, in the case of an adult patient about to have a jacket removed, which had been put on during suspension, his height being carefully noted before its removal, and again after the application of a new one in the recumbent posture.

* For hospital use, a modification of the machine, figured by Dr. Walker in his paper, would be a convenient appliance. It would be necessary to make it sixteen or eighteen inches long, without the spindles for carrying the bandage, but having the fan-roller.

THE PHYSIOLOGICAL EFFECT OF PILOCARPINE IN CONJUNCTION WITH THE ADMINISTRATION OF CHLOROFORM.

By ALFRED L. GALABIN, M.D., F.R.C.P.,
Assistant Obstetric-Physician and Joint Lecturer on Obstetric Medicine to Guy's Hospital.

ELIZABETH W., a married woman, aged 35, was a patient of the Guy's Hospital Lying-in Charity. She was subject to epileptiform convulsions, which, from the description given of them, appeared to partake in some degree of the hysterical character. These convulsions were usually increased in severity and frequency on any excitement. During her last labour, epileptiform fits had occurred. Assistance was sent for at 2.30 P.M. on September 6th, 1879, on account of the onset of repeated convulsions. She was then at about the full term of her eighth pregnancy. The fits appeared to be purely epileptiform in character, but without any violent clonic convulsion. During the fit, the eyes were widely open, conjunctivæ insensitive to touch, teeth tightly closed and ground together, with saliva flowing from the mouth; limbs rigid and semiflexed. Each fit lasted about two minutes, and ended in a deep inspiration, after which consciousness returned. Weak and infrequent labour-pains had occurred, and the os was found to be dilated to about the size of a florin. The obstetric resident, on visiting the patient at 3.30 P.M., found the pulse to be 120, temperature 100.6°. A small quantity of urine was withdrawn by the catheter, and found to be free from albumen. Fifteen grains of hydrate of chloral, with the same quantity of bromide of potassium, were then administered every half-hour.

I was summoned to see the patient about 7 P.M. The fits had then diminished in frequency, three only having occurred within the last forty minutes. The patient in the intervals was not fully sensible, but could answer questions, although somewhat incoherently, and was able to swallow. The pulse had fallen to about 80. The membranes were ruptured, but the os uteri was scarcely so much as two-fifths dilated, and its edges were rigid and undilatable. Labour-pains had almost entirely ceased, and the body of the uterus was lax. A sphygmographic tracing showed the pulse to be regular, and of somewhat high pressure, the maximum good working pressure being six ounces, and the systolic summit somewhat broad, but without any distinction between primary and tidal wave.

The hypodermic syringe having been accidentally left behind, one-third of a grain of pilocarpine was administered by mouth. As scarcely any manifest physiological effect was produced, a second and a third dose of the same amount were given after intervals of twenty minutes each. Soon after the third dose, salivation commenced. A little later, violent vomiting came on; and, upon this, sweating, hitherto scarcely noticeable, became profuse. The salivation also became very extreme, and the condition of the patient generally very miserable. No labour-pains occurred, the uterus remained quite flaccid, and the os unrelaxed. A sphygmographic tracing was again taken, the pulse having risen from 80 to about 90. The curve had now become somewhat higher and more pointed, and a slight notch was shown between the primary and tidal (or predicrotic) wave. The maximum good working pressure, however, was only very slightly diminished, being now five instead of six ounces; still remaining, therefore, above the normal level. Thus some degree of diminution of arterial tension was shown as the effect of the pilocarpine, but much less in degree than that which may be easily produced by a moderate dose of nitrite of amyl, although the general physiological effects of the drug were developed in extreme degree.

With the object of facilitating digital dilatation of the os uteri, and the subsequent application of forceps, the administration of chloroform was now commenced. Before, however, anæsthesia had been fully produced, an alarming change took place in the pulse. Having been previously full, strong, and regular, at the rate of about 90, it ran up suddenly to at least 180, becoming at the same time extremely irregular and compressible, and fluctuating so much with respiration that, during the inspiratory period, it could scarcely be felt at the wrist. The chloroform was at once discontinued, since it appeared dangerous to prolong the administration. As soon as consciousness had returned, the pulse again became strong and regular, at its former rate of about 90. Chloroform was then again administered, in order to test whether the effect really depended upon its use. Again, before the stage of rigidity had passed, the pulse became rapid, irregular, and almost imperceptible, its rate going up to quite 200. As before, it returned to its original quality and rate as the effect of the chloroform passed off.

Digital dilatation of the os, which remained rigid, by means of the fingers of one hand in the form of a cone, was then continued for about an hour. After this, forceps was applied by the obstetric resident, Mr. Pedley, the diameter of the os having now reached a diameter of two inches and a half, and the head being still high up in the pelvis. A living male child was delivered, about half an hour being occupied in the extraction. No uterine action whatever occurred until the forceps was applied; but, under the stimulus of their use, some pains came on.

Since the effect of chloroform in labour is ordinarily to diminish the rapidity of the pulse, the effect on the pulse in this case must have been due, not to the chloroform alone, but to chloroform acting in conjunction with a large dose of pilocarpine. Since pilocarpine is known to have an accelerating effect upon the heart, it would seem probable that the chloroform paralysed some inhibitory mechanism by which this influence was kept in check so long as consciousness existed. As in this instance it did not appear safe to continue the anæsthetic, the case appears to suggest that there may be an inconvenience in treating puerperal eclampsia by pilocarpine, when it is likely that an anæsthetic will soon afterwards be called for in order to terminate the delivery.

No convulsion occurred after the administration of the first dose of pilocarpine, although fully three hours elapsed before delivery was completed, and notwithstanding the prolonged digital dilatation of the os, and the slow extraction by forceps, both which proceedings in a case of eclampsia would be likely to bring on convulsions in the absence of an anæsthetic. Some complication was introduced by the fact of chloral and bromide of potassium having been given previously; but, since there had been no interval free from convulsion longer than about fifteen minutes until the administration of the pilocarpine, there appeared to

be no doubt that the drug had a direct influence in checking the attacks. In the present instance, this could hardly be due to the elimination of any material from the blood, since there was no uræmic element in the causation of the convulsions. Nor did the effect upon the pulse, as shown by the sphygmograph, appear to be sufficient to make the explanation probable that its mode of action was by causing relaxation of any arterial spasm. As an oxytocic, the pilocarpine appeared in this case to be absolutely without any effect.

No further convulsions occurred after delivery, and the patient recovered well.

INTRA-UTERINE MEDICATION.

By CLEMENT GODSON, M.D.,
Assistant Physician Accoucheur to St. Bartholomew's Hospital; Honorary Secretary of the Obstetrical Society of London.

It is with a feeling of anxiety that I see, in the BRITISH MEDICAL JOURNAL of August 30th, a series of abstracts of papers which were read at the annual meeting in Cork, advocating the treatment of certain uterine complaints by means of medicaments applied to the cavity of the body of the womb. This JOURNAL has such an enormous circulation among all classes of the profession, that the mere heading will attract the notice of many who have but little time to do more than glance at the contents of the papers; and I fear that, having ascertained that carbolic acid, iodine, etc., are useful agents in the treatment of uterine discharges, many will fly to put their efficacy to the test, without having learnt to discriminate the class of cases applicable to them, or having attained the skill necessary to employ them. There is much in fashion. A century ago, every one was bled; now, venesection is hardly ever practised. We have passed from one extreme to the other. A few years since, in gynæcological practice, division of the cervix by the metrotome was constantly performed by some physicians; now, this operation is but rarely undertaken; indeed, we hear, at least in one quarter, that sewing up the gaping os uteri is all the rage. Lately, there has been a discussion on the use of the forceps and its alternatives in lingering labour, before the Obstetrical Society of London. Many eloquent discourses have been contributed, and the subject has been ably discussed by several of our eminent leaders in the school of midwifery. But, to sum up the whole, at what have we arrived? The general impression gained, is that the forceps is used far less frequently than it might be with advantage to both patient and practitioner. The result of this will be, unless I am much mistaken, that an authority has been granted for the frequent use of the instrument, and that we shall find the evil effects of this from its indiscriminate and unskilful employment. In the out-patient female department of St. Bartholomew's Hospital, where I see from fifty to seventy new patients per week, I have unusual opportunities of observation. After having made an examination, I am frequently led to inquire: Were you delivered with instruments in your confinement? And, in nine cases out of ten, the answer is in the affirmative. The reason why I put the question was that I found the cervix deeply fissured up to its junction with the vaginal wall, along which extended a cicatrix. This is a clinical fact, which testifies to the truth of the remark made by Dr. Henry Bennet in his speech, and objected to by Dr. Barnes in his reply, at the Obstetrical Society's discussion.

But, with respect to uterine medication, the results are likely to be much more serious; and I have already met with instances. If an application to the cavity of the body of the womb be required, there should be an amount of *endometritis* calling for it; but, in how many cases of discharges from the os uteri does the exudation come from above the canal of the cervix—the so-called internal os? I venture to say, in very few. The probe, covered with cotton-wool saturated with carbolic acid, is passed along the cervical canal up to the fundus uteri, and in many cases good results are obtained—not because the fundus uteri has been reached, but *because the application has been made to the canal of the cervix;* and, had a zinc-alum point been placed in this situation, and the uterine cavity have not been reached, the result would have been equally satisfactory, without the risk of danger possible to occur from probing the cavity of the womb. This brings me to the nature of the evil consequences.

One which I have met with is abortion. The possibility of existing pregnancy has not been thought of. The patient may have gone but a few days over her time for menstruation, and, not having been very regular previously, little heed is paid to this. Nevertheless, she may have conceived immediately after her last period, and, if even she have not quite reached her next menstrual epoch, she may yet be pregnant when the application is made. Another danger is that of inflammatory mischief in and around the uterus. It is well known how the simple passage of the ordinary uterine sound is liable to give rise to this. Surely, then, a probe saturated with carbolic acid or other agent is equally if not more likely to produce such results.

The points, therefore, that I would urge upon my professional brethren are these. Before deciding to make applications to the cavity of the body of the womb, be satisfied that this part is affected by disease, and that it is not the cervical canal only that is involved. Without having determined this, it would be just as irrational to pass a medicated bougie into a man's bladder for every purulent discharge escaping from the meatus urinarius.

The papers to which I have referred, as published in the JOURNAL, fail to my mind to show sufficiently clearly the symptoms which give proof of the existence of endometritis. Then, the application should never be made to a sensitive uterus in which inflammation is likely to ensue, or pelvic inflammation or abscess may result; and a probe should never be passed into the uterus of a childbearing woman about the time of an impending menstrual period; indeed, it would be well to make a rule not to probe the cavity within a week of the catamenia, but to limit the time for intra-uterine medication to the fortnight subsequent to the cessation of the flow.

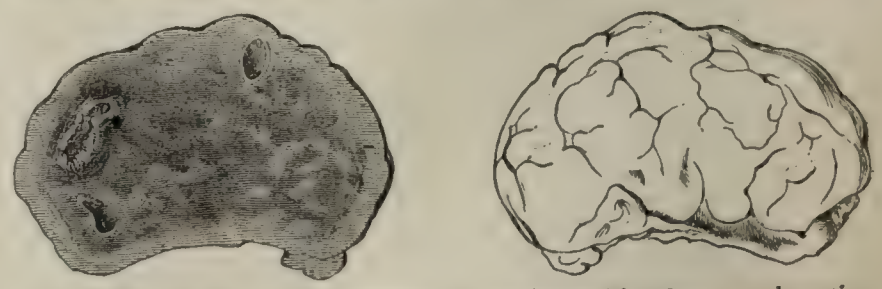
OÖPHORECTOMY PERFORMED SUCCESSFULLY FOR MENSTRUAL EPILEPSY.

By LAWSON TAIT, F.R.C.S.Ed.,
Surgeon to the Birmingham Hospital for Women.

THE case of E. E. has already been published in the *Obstetrical Journal* for May 1873, and in my book on *Diseases of Women*, as a typical case of ovarian atrophy arising from exanthematic oöphoritis: a disease to which I was the first to call attention many years ago, as occurring very frequently as a sequel of scarlet fever and small-pox.

Her history after May 1873 is, that the efforts to induce the return of the menstrual flow by means of galvanic pessaries were persevered in, after several relapses, till at last everybody concerned was wearied of them. The patient ceased her attendance at the hospital, and I heard of her only occasionally to the effect that her epilepsy was becoming worse and worse. One of my critics, in alluding to this case, broadly stated that I had mistaken a bad case of hysteria for one of epilepsy. I wish he had seen the poor woman as I saw her on February 5th, 1877, in an attack of epileptic mania, covered with bruises of all kinds. I urged her friends to commit her to an asylum; but to this I could not persuade them, as for at least one week in every month she was quite rational and comparatively free from fits. During the other three she had fits almost every day; and during the menstrual week, when a faint show generally appeared for one or two days, her fits were incessant and her delirium uninterrupted.

This state of matters lasted till August of this year, when her friends, completely worn out by her, seemed at last to agree that she should be placed in an asylum. Before doing that, however, I urged them to let me cut out the ovaries, in the hope that this might arrest the disease by removing what I believed to be the cause. To this they readily consented, and I performed the operation on August 11th. There was no particular difficulty about the operation, save that the patient was very fat. The ovaries when removed presented all the characters of the atrophy peculiar to inflammatory change of their true gland-structure. (*Diseases of Women*, p. 215.) Mr. Alban Doran has favoured me with a report upon the ovaries removed, which completely confirms the views of the pathology of this case which I have expressed in my former publication of it. "The elongated cells of the stroma are larger than in normal ovaries; and there are few vessels, the hypertrophy of the walls of those that remain, and the bundles of fibrous tissue, point to a cirrhotic



Ovaries showing naked eye appearances of atrophy resulting from exanthematic oöphoritis, removed from case of menstrual epilepsy.

change following the exanthematic oöphoritis." One of the ovaries is now in the Museum of the College of Surgeons.

The result of the case so far is very satisfactory, for the fits have entirely ceased. Three days after the operation, there came on the

pseudo-menstruation which frequently follows ovarian operations, and this lasted for three days.

On September 18th, she left the hospital quite well; and the house-surgeon's note is: "Patient bright and cheerful; memory quite returned; and she is able to reply intelligently to questions put to her."

I saw her on October 13th, when she told me that she was quite well, and was going to her home in Peterborough in a few days.

A CASE OF PERSISTENT OVARIAN MENORRHAGIA: OÖPHORECTOMY: RECOVERY.*

By JOHN MEREDITH, M.D.Edin.,
President-Elect, West Somerset Branch of the British Medical Association.

In May 1877, I had to attend a young woman aged 20, on account of excessive menstrual discharge, which had been going on for some weeks.

The previous history of the case was briefly this. The patient, as a girl, had always been considered delicate up to the menstrual period (which, with her, began when she was fifteen), although she was well-formed and tall. Once the courses became established, she began to gain strength and fatten. The catamenia were regular, but scanty, only about three diapers at a period; still she felt well, and gave this no particular thought. Her parents are healthy, and so are her brothers and sisters. One day in March of the year mentioned (1877), whilst menstruating, she assisted to lift a book-case. She felt the effort affecting her; and the discharge, instead of terminating at the expected time, went on day after day.

When I saw her, she was in an exhausted condition from the loss, and suffering pain, etc., in the lower part of the abdomen, indicating the presence of a certain amount of local inflammatory action. After the administration of opiates, this condition of irritability subsided; and after a while I obtained permission to make a digital examination of the vagina and cervix uteri.

The information I got from this was, that there was no appreciable difficulty in introducing the finger; the os uteri was patulous, with a blood-clot in it, and the cervix elongated. There was nothing special to note in regard to the condition of the uterus—no marked version or flexion. Now, a very natural question suggested itself, and I have no doubt it arises at once in your minds: namely, Was not the case one of miscarriage? A question which I put to the patient sometime afterwards, bearing on this, was met by a negative answer—just what I might have expected. But my duty was to arrest the hæmorrhage and bring about recovery, if I could. To this end I administered ergot, acids, bromide of potassium, chlorate of potash, digitalis, and cannabis Indica. The last-named three, in combination, seemed to answer well for a while; then there would be a relapse. Cloths dipped in vinegar and water were applied over the vulva and lower part of the abdomen; cold water, vinegar and water, and carbolic acid solution were at intervals injected into the vagina; and, of course, absolute rest in bed was enjoined, with everything cold in the way of food and drink.

In spite of everything, the discharge continued more or less until July. At times, there would be nothing but a pink sanguineous staining on the cloth. The patient soon learnt to dislike this appearance, as she had always a good deal of backache with it, from which she was only relieved after the expulsion of blood-clots. The explanation of this, I take it, was that the clot formed in the os uteri, and, owing to the flow not being enough at times to carry itself off as a whole, the fibrin separated at the uterine outlet and in the uterus as well, staying there gathering in volume; while the liquor sanguinis escaped, and produced the stains mentioned. The fibrinous part in thickening rested upon the walls of the os, distending it, and, as in labour or any other form of tension at the os uteri, the discomfort was referred to the sacral region—the region of backache with many women. After going on in this way for a time, I decided to apply pure carbolic acid to the interior of the uterus. I did this in the usual way, by means of a piece of cotton-wool wrapped round an ordinary uterine sound. The result was satisfactory for the time; the discharge stopped for five months, the patient recovered strength, and was able again to go about and enjoy herself.

In the beginning of 1878, the menses reappeared, but nothing much to complain of at first; then the loss assumed a more persistent character. Drugs seemed to have very little influence now; nor had the intra-uterine application of carbolic acid the same arresting influence as at first; still it exercised a certain amount of staying power. Thus, matters went on unsatisfactorily to all concerned. Towards the end of 1878, the loss was not very great; still it recurred at short intervals; but, on Christmas-eve, she got excited with some of her friends, and then it came on profusely. There was always tenderness over the ovaries, at times more over one than the other, and, of course, the usual sympathetic tenderness along the spine.

Finding that I was unable to afford the relief I wished, I urged the patient to go to the Women's Hospital at Birmingham, to be under the care of Mr. Lawson Tait, with whom I had had some correspondence regarding the case. Accordingly, on January 15th, she went thither. She was thin, weak, and anæmic at the time. A few days afterwards, I had a note from Mr. Tait, saying that he could find nothing amiss with the uterus, only that the fundus was a little enlarged, nothing more.

A few days after admission, nitrate of silver was applied to the cavity of the womb, and repeated three times between that and February 15th. On the 19th, the loss ceased, and no further application was made. The patient had mixtures given her, consisting of ergot, bromide of potassium or chlorate of potash, and, after the cessation of the discharge, dialysed iron.

She left the hospital, apparently recovered, on March 1st, and went to a convalescent home, where she stayed for a good while, and was much improved. In due course, she returned home to Wellington. On the night of her return, the discharge began again.

I knew nothing of her return, or of the recurrence of the discharge, until she had been at home for some weeks. During the interval, she tried the effects of medicines which some neighbours procured for her—getting into a sort of desperation-state, which we can all pardon under the circumstances. I now tried the effects of cold water hip-baths, and with some apparent good results. Mustard poultices over the ovaries were followed by no marked benefit. Swabbing the interior of the uterus produced some relief. After a time, I introduced a piece of nitrate of silver into the cavity of the uterus, and left it there. This altered the character of the discharge; but, in spite of all, the loss persisted. I frequently left her alone, desiring her to keep still and take no medicines at all; the result was the same, always losing.

On July 9th last, I gave her a hypodermic injection of ergotine, which was followed by a stoppage of the discharge for about three weeks. On August 5th, I again sent her to the Women's Hospital at Birmingham, under the care of Mr. Tait. At the time, the patient was anæmic, thin, and weak, and hardly able to stand.

I shall give the history of the case, after the patient reached the hospital, from Mr. Tait's own report, who has kindly sent it to me to lay the result before the members of the Branch.

The patient was admitted into the hospital on the 5th of August last. On the 8th, oöphorectomy was performed by Mr. Tait, in the presence of several medical practitioners. Both ovaries were removed, and the pedicle of each tied by a special knot—"Tait's knot". The ovaries were found enlarged and flabby, with traces of lymph in their neighbourhood. The patient made a good recovery. The temperature did not once rise above 101°, although the pulse was 134 on the third day. The patient returned to her home a few weeks ago, able to walk a mile or more with ease; and is in every way improving, gaining strength and feeling well. It is hardly necessary to say that there has been no menstrual appearance since.

* Read before the West Somerset Branch.

OBSTETRIC MEMORANDA.

TREATMENT OF THE VOMITING OF PREGNANCY.

When Dr. Copeman published his method of curing the sickness caused by pregnancy, he not only conferred a boon on womankind, but taught the profession a wholesome lesson, encouraging all to discard tradition and authorityin favour of an enlightened common sense. The *modus operandi* of his treatment could not be explained. As all women do not suffer from sickness during pregnancy, and as the gravity of the sickness varies in the same woman during different pregnancies, and knowing that dilatation of the cervical canal stops it, it would seem that the primary cause lies in the state of the cervix, and the secondary cause in the cavity of the uterus.

In July 1878, I met with a case where the sickness was so grave that no food whatever could be retained. I was inclined to try Dr. Copeman's method, but was a little afraid of causing abortion by the procedure. Having a decided dislike to the treatment of cases of abortion, and in no wise desirous of the credit of having brought it on, finding that she had a good deal of leucorrhœa, and observing the parts about the os uteri to have a red eroded appearance, I resolved to try the effect of the application of lunar caustic, under the impression that the primary cause of the sickness might be connected with the eroded state of the cervical mucous membrane. I applied it, and the vomiting ceased, greatly to my satisfaction and to the astonishment of the patient. I

have met with two more cases having exactly the same signs and symptoms, in which the same treatment has been equally and instantly successful.

The application of lunar caustic seems to me simpler and less likely to cause abortion than dilatation of the cervical canal; and, if it should prove as efficacious, it will assist us to understand the *modus operandi* of Dr. Copeman's method, and afford another proof of the immense importance of the mucous membrane of the cervix uteri in the female economy.

This method of treatment may not be original; I cannot hope that it is new; still it may be worthy of record that the sickness of pregnancy has been so simply cut short.

JOHN HADDON, M.A., M.D., Eccles, Manchester.

SURGICAL MEMORANDA.

EXTRACTION OF A FARTHING FROM THE ŒSOPHAGUS.

CHARLES S., aged 3, who had been attending for two months as an outpatient at the Hospital for Sick Children, on account of palpitation and other symptoms of disease of the heart (probably congenital), was brought, on February 4th, with the statement that he had, two days previously, swallowed a farthing. The mother stated that the child had retched violently, and had suffered much from palpitation soon afterwards, and that ever since he had complained of pain beneath the lower portion of the sternum. He had, however, often previously complained of pain in the lower sternal and præcordial regions after attacks of palpitation. She stated that the boy swallowed well. There was no dyspnœa. The bowels had been opened three times on the 5th, but the coin had not been seen. It was advised that the child should be fed chiefly on porridge and thick puddings, and that a little castor-oil should be given the next night but one.

On February 6th, the boy was again brought. The farthing had not been passed, though the bowels had been opened three times daily. There had been some dysphagia; liquid could be swallowed without difficulty, but, after swallowing solid food, he had complained of pain, and brought it up again. He had not vomited any blood. When asked where it hurt him, the child put his hand to the epigastrium. A piece of crumb of bread was given to him to eat, which he chewed and swallowed. After about two seconds, he cried, put his hand to the lower sternal region, retched, and brought up again the chewed morsel. No inducement could prevail upon him to try a second piece.

These symptoms seemed to justify the inference that the coin was fixed at the lower end of the œsophagus. Mr. Kempe, the House-Surgeon, was therefore requested to pass an expanding probang with a view to its removal. The first attempt was unsuccessful, owing to the boy's struggles. It was observed that, when the instrument was removed, his cheeks had lost their wonted bright colour, and become livid; this passed off in a few moments. He was now firmly held down in a recumbent position on a couch. The probang was passed quite down to the stomach, expanded, and withdrawn. It was followed immediately by the farthing, which had no doubt slipped from it in the mouth. The coin was a little dulled on the surface, but was otherwise unaltered. It had been in the œsophagus more than four days. No blood came with it. The child was brought for inspection three days afterwards. He had had no more pain, and could eat solid food without difficulty.

DAVID B. LEES, M.D., South Kensington.

THE SWALLOWING OF A HALFPENNY FATAL TWO YEARS AFTER THE EVENT.

THE publication of Dr. Macdonald's case of death in a boy, six months after swallowing a halfpenny, reminds me of a somewhat similar case that came under my notice some years ago. A boy, aged 5, was brought to the surgery by his mother on the afternoon of October 22nd, 1856. He had been seized with vomiting of blood, half an hour before, while at play. In the surgery, he began to vomit again; and, with about half a pint of coagulated blood, he brought up a darkly discoloured halfpenny. The blood was somewhat florid, and mixed with bread-crumbs. The vomiting soon ceased, and the boy, drowsy and pallid, was taken home and put to bed. In the evening, he became quite lively, ran about the kitchen, and had nearly a pint of milk. He went to bed about ten, and rested for an hour, when the vomiting returned, and continued at intervals for about another hour, when he "stretched himself out, and died".

His mother reminded me that, two years and three months before, she told me her boy had recently swallowed a halfpenny, and that he had some difficulty in swallowing his food. Apparently, at the time, I thought this difficulty arose from some abrasion of the œsophagus in the passage of the coin, as I advised her to give him demulcents, farinaceous food, etc. I heard nothing more of him until he was brought to me on account of vomiting of blood. His friends said that he often vomited food since he swallowed the halfpenny, sometimes immediately after taking his meals, sometimes in a short time afterwards. He could take milk and fluids well, but had great difficulty with meat, even minced. Nevertheless, he could manage bread fairly well.

A *post mortem* examination was made three days after death. The body was tolerably well nourished and developed. The stomach and ileum were intensely red and congested, with one or two patches of redness in the bowel elsewhere. The stomach contained a clot of blood as large as the fist, as well as some fluid. There was no abrasion of the mucous membrane, but an uniform velvety redness wherever a clot of blood rested in contact with the lining of the bowel. On passing the finger up the œsophagus, it was grasped, rather tightly, a little below the arch of the aorta. On slitting the œsophagus open above the contraction, two ulcerated points were seen on opposite sides in its mucous lining. The ulcer on the left had perforated the aorta by a small opening a little below and opposite to the origin of the left subclavian. About half an inch of cicatrix appeared above each ulcer, marking the downward course and progress of the coin in the two years and a quarter it had remained suspended in the gullet. There was no inflammatory redness about the perforation, and very little, if any, thickening. Whether the contraction below it had been congenital, or acquired after the sticking of the halfpenny, is a question not easily decided. My impression is that this contraction had existed from birth, and that it had checked the farther descent of the coin. In time, the pressure of the edge of the halfpenny caused ulceration, and worked its way into the aorta. Blood then escaped, descended into the stomach, and the clots in being vomited up dislodged the halfpenny.

LEONARD ARMSTRONG, M.R.C.S., etc., Newton Abbot.

THERAPEUTIC MEMORANDA.

AN IMPROVEMENT IN THE TREATMENT OF PORT-WINE MARK BY LINEAR SCARIFICATION.

THE obliteration of port-wine mark without scar (namely, by means of linear scarification), as first recommended by myself two or three years ago, has since become generally practised both in this country and abroad. Some expressions of dissatisfaction with this method as applied to port-wine mark have been published recently in this JOURNAL. A visit to the continent this summer has shown me that the objections expressed in this country have been felt equally by dermatologists in France, Italy, and Austria. I accordingly felt it a duty to improve my process if possible.

The chief disadvantage of my previous method was the multiplicity of sittings it required; but I have now arrived at reducing the process to two sittings. The obliteration is obtained by the same process that I originally advocated, with only a slight but important difference. The modification in the original process consists in giving the minute incisions an oblique instead of a vertical direction, making them at an angle of forty-five degrees to the surface.

In order to explain why so slight an alteration of the direction of the cuts should lead to so important an abbreviation of the process, it is necessary that I should advert to the view taken by one of my objectors. His objection is, that I do not really obtain by means of linear scarification a definite obliteration of the minute blood-vessels of a port-wine mark when I have divided by means of my minute cuts. I have still reason to feel satisfied that my original method produced complete obliteration of the minute blood-vessels; but there was one remaining obstacle of which I had not taken account, and that was the as yet unobliterated supply of blood from the venous network permeating the subcutaneous cellular tissue.

I had by my original method of vertical incisions cut off the *horizontal* supply of blood quite finally, by means of my crossed and closely spaced minute vertical incisions, which left no scar. But these vertical squares had to be crossed obliquely by other squares, so often repeated as to tire the patience of many experimenters. Indeed, by such a process, the skin demanded to be traversed by a series of vertical scars which, although so fine as to leave no trace of scar, required to be so closely spaced as to leave the skin almost as finely sliced in a vertical direction as is needed for the production of microscope sections. In short, in my first process, the efficacy of linear scarification remained considerably retarded by the constant free communication of the subcutaneous blood-

vessels with the erectile plexus of blood-vessels in the skin. By means of oblique incisions, this underneath supply of blood, also, is at once cut off; and the result is a very speedy and complete obliteration of the port-wine mark.

The details of my new operation are simple. At the first operation, I divide the skin into small squares by two series of parallel incisions, the one set crossed at right angles to the other, just as in my former method; but the incisions, instead of entering the skin perpendicularly, enter it slantingly. I may call the one series of parallel incisions longitudes, and the other cross series latitudes. At my first operation, the obliquity of the longitudinal incisions is directed eastwards, and that of the latitudinal ones southwards. At the second operation, executed about a week afterwards, the lines of longitude and latitude are re-executed still in the same directions respectively, only that now the obliquity of the longitudinal incisions is directed westward, while that of the latitudinal ones is directed northward. In this way, the obliteration of a port-wine mark may be effected in a fortnight if the whole of the mark be operated on at once, although it may often be more convenient to treat the mark piecemeal. There are various little details special to this modification of the operation which demand attention; but the above are the main features of the new process.

BALMANNO SQUIRE, M.B.

TREATMENT OF CHRONIC ECZEMA OF THE PALM.

IN the JOURNAL of July 5th are some notes by Dr. Liveing on the treatment of chronic eczema rimosum of the palm. A case has lately come under my notice, which was cured by two applications of the anodyne amyl colloid, prepared by Messrs. Ferris and Co. of Bristol. The patient was a domestic servant in my house, who for ten years had been troubled with this complaint every spring. It lasted through the summer months, and spontaneously disappeared with the approach of winter. The palm was fissured along one of the natural flexures, the bottom of the fissure being red and irritable, while the cuticle at its edges was thickened, hard, and brittle: the case was therefore one of those which Dr. Liveing pronounces most obstinate. My idea was that a coating of collodion would protect the part from irritation, and allow healing to take place: but, having the anodyne colloid beside me, I gave it a trial. It caused, however, such severe smarting, which lasted for two days, that, when I proposed to repeat the application, it was respectfully but firmly declined. Although the colloid belied its title of anodyne, it was so far efficacious that, after a few days, my patient came, saying that her hand was almost well, and she thought another application would complete the cure. From ten days after the first application, her hand has been quite smooth and sound. Possibly simple collodion would have been equally efficacious. At any rate, the remedy is worthy of further trial.

THEOBALD A. PALM, Niigata, Japan.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

CARDIFF INFIRMARY.

INTESTINAL OBSTRUCTION: PUNCTURE OF THE INTESTINE: LEFT LUMBAR COLOTOMY: RECOVERY.

(Under the care of Dr. ALFRED SHEEN.)

C. S., AGED 42, a labourer, married, was admitted into the Infirmary on July 11th, and stated that he was taken ill a fortnight previously, and somewhat suddenly, with "wind and pain in his bowels". He took some castor-oil and several pills, which acted in two days; but his bowels had not been relieved for ten days, and he had passed no flatus.

The patient seemed in fair general health, and there was not much appearance of distress about his face. He complained of but little pain. There was no sickness. His abdomen was somewhat distended and tympanitic throughout. There was no evidence of tumour or moving coils of intestine. The finger passed *per rectum* just reached a part which felt somewhat nodular and hard, and gave one a similar impression to the os uteri. There was a slight amount of thick bloody fluid on the tip of the finger when withdrawn.

The patient was intellectually dull; he seemed to suffer but little pain, and made no complaints; and it was very difficult to get any satisfactory history of his disease from him. He stated that he had never previously suffered from a similar attack. The house-surgeon gave him oil mixture every four hours; and, later in the day, Dr. Sheen ordered extract of belladonna in half-grain doses every hour.

July 13th. There was no relief; the tympanites was increasing slowly. He was ordered to continue the medicine.

July 14th. There was no change beyond increased distension. A consultation was held, and he was ordered two drachms of sulphate of magnesia every hour, to which was added fifteen minims of tincture of belladonna. Although up to this time his condition had not much changed, during the day he became worse, the tympanites increasing rapidly, accompanied by rumblings in the bowels and severe pain; the pulse increased in rapidity and diminished in force, and the respirations became quick and shallow; and, at 9 P.M., he looked and felt very ill. The mixture was stopped, and the intestines were punctured in seven or eight places, with great relief.

July 15th, 11 A.M. The bowels not being relieved, a further consultation was held, and the patient was placed under chloroform, and an oblique incision was made on the left side, midway between the last rib and the crest of the ilium; the bowel was easily found, and, after being secured, was opened and attached to the skin. No vessels required ligature.

July 16th. A normal motion was passed by the wound at 9 P.M. last night, and again at seven this morning. The wound was covered with lint dipped in carbolic oil.

July 18th. The man was doing well. Two ounces of meat were added to the milk-diet.

July 21st. The sutures were removed. The surrounding skin was red, and the wound sloughy. The bowel was receding. He was put on house-diet, a pint of milk and half a pint of porter; and the wound and bowel were ordered to be frequently washed with water and Condy's fluid.

July 24th. The wound was granulating and looking healthier.

August 9th. The man was doing remarkably well. He had been up and about the ward since the 4th, with a pad of oakum over the wound, retained in position by a bandage round the abdomen. Daily, since the operation, he had passed a small amount of bloody discharge, and latterly simply pus, in small quantity; occasionally, if he exerted himself more than usual, this discharge smelling disagreeably. About a week after the operation, he passed nearly a pint of thick bloody matter, which was unfortunately thrown away before being shown to the medical attendant. He was discharged on this day, about twenty-six days after the operation, saying he never felt better in his life. He was kept under observation.

When seen on October 3rd, he expressed himself as being quite well, and suffering no inconvenience whatever from his artificial anus, through which the bowels were relieved once a day regularly, and the fæces were not lessening in calibre. The oiled lint which he had had on underneath the oakum since the morning was scarcely soiled. On August 21st, his temperature began to assume a somewhat septicæmic character; but two grains of quinine, with five minims of tincture of opium, every four hours, seemed to keep it between 99° and 100°, until, on August 1st, it became normal.

REMARKS BY DR. SHEEN.—There are some points of interest about this case.

1. What was the nature of the obstruction? It evidently belonged to the chronic class of cases, and was probably caused by some malignant deposit in the bowel, which had not yet involved surrounding structures to such an extent as to give external abdominal evidence of its existence, or to undermine the patient's general health.

2. The case illustrated the relief given to distressing symptoms by the puncturing of the intestines; and, so far as one case can do so, the safety with which this operation might be performed. Lately there have been several valuable papers in the JOURNAL on intestinal obstruction and its treatment; and it is interesting to note the varying opinions held with regard to this remedial measure. Dr. Goodhart speaks of it with something akin to sorrow. He says: "It is an exceedingly dangerous thing to do, and I do not feel the least inclined to recommend it to your notice" (*vide* JOURNAL of September 27th, 1879, p. 487). Dr. Broadbent gives a case which was successfully treated by puncture, but he did not use it until "after nearly a fortnight of anxious watching", and then employed a long aspirator-needle. I used Dr. Southey's anasarca-trocar and cannula, an instrument which I believe to be admirably adapted to such a purpose. With such an instrument, I believe it to be perfectly safe to puncture the intestines to relieve distressing distension from flatus. Theoretically, I do not see any objection to it. I certainly cannot see the force of Dr. Goodhart's argument. I would submit that, as gas escapes from the distended intestine, the latter contracts, and the arrangement of the muscular fibres of its coats would surely prevent escape of its contents into the abdomen, where such a small opening is made. In the case I have related, the trocar was plunged sharply

through the abdominal walls, without selecting any particular spot; and, on withdrawing the trocar, there was a rush of air, followed, finally, by a small quantity of yellowish fluid, on the appearance of which the cannula was gently and steadily withdrawn, and the instrument reintroduced at another spot.

3. This case further illustrates the uselessness, and even cruelty, of giving purgatives in intestinal obstruction. Up to a certain period, the patient's sufferings were by no means great; then a purgative was administered, and the intensity of his sufferings rapidly increased. What else could one expect in such a case? The sulphate of magnesia could do nothing but increase the watery exudations into the bowel, and so increase the pain and irritability. The routine administration of purgatives in these cases, though not so frequent as formerly, is by no means unfrequent in the present day, and, to my mind, deserves nothing but condemnation, except, perhaps, in those cases where the obstruction is presumably a movable one. Even in such cases, I doubt whether it is not more rational treatment to administer remedies by the mouth which have a soothing and tonic effect on the coats of the intestines, such as belladonna, alone or combined with opium, or even ergot of rye, and to attack the movable obstruction by large enemata, and, perhaps, by the kneading of the bowels.

REVIEWS AND NOTICES.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1877. Vol. xix, pp. 254. London: Printed for Her Majesty's Stationery Office. 1879.

SECOND NOTICE.

IN our previous remarks on the Army Medical Department report on the health of the army for the year 1877 (see JOURNAL, April 19th, p. 592), we noticed the general results of the facts collected in the statistical returns: first, with regard to the army as a whole; and, next, as to that portion of it which was serving in the United Kingdom. We propose now to notice some of the facts embodied in the returns and reports which were forwarded by the principal medical officers from parts of the army which were serving in foreign stations. We are at a loss to understand why the sanitary remarks of the medical officers are printed away from the statistical returns with which they are naturally associated; their separation entails the disadvantage of having to make frequent references to different parts of the volume, without any apparent advantage in other ways. In some former volumes, we believe, the statistics, and the medical and sanitary observations relating to the diseases tabulated in them, were placed together under the particular stations to which they all in common belonged.

The average number of European non-commissioned officers and men quartered in India during 1877 was 57,821, nearly one-third of the total strength of the British army. Of these troops, 36,666 were quartered in Bengal, 11,016 in Madras, and 10,139 in Bombay. The amount of sickness among the troops is shown to have been less, and the admissions into hospital to have been attended with a less proportion of fatal results, than the average of previous years. The death-rate in the two presidencies of Bengal and Bombay was almost identically the same; whilst, rather singularly, although the admissions into hospital were relatively fewer in the Madras command, the rate of mortality was very considerably higher. In Bengal, the admissions into hospital gave, during the year, a ratio of 1227.5 per 1000 troops, the deaths a ratio of 12.55; in Bombay, the admissions were 1350, with a death-rate of 12.92 per 1000; while in Madras, though the admissions were 84 per 1000 less than in Bengal, and 207 less than in Bombay, viz., 1,143 per 1000, the deaths were at the increased rate of 18.52 per 1000. The highest of these ratios, however, is very far below what the average annual death-rate was in Cyprus last year, viz., 37.57 per 1000, which Colonel Stanley, when introducing the army estimates on the 3rd of March last, stated that the death-rates in Bengal and Bombay resembled.

Taking all parts of India together, the death-rate in 1877 was a very favourable one compared with that of previous years. Thus for 10 years, from 1864 to 1873, the mortality among the British troops in India averaged 22.85 per 1000; in 1874, it fell to 14.22 per 1000; in 1875, the death-rate was 18.52 per 1000; in 1876, 16.10; while in 1877 it was as low as 13.75 per 1000. Neither was the number of non-commissioned officers and men sent from India to England as invalids, although large, so large as it had been in some previous years. During the 10 years from 1864 to 1873, the men invalided from India averaged 42.77 per 1000 of the troops serving there; in 1874, they numbered 40.19 per 1000; in 1875, 46.24; in 1876, 38.918; while in 1877, the number of soldiers invalided from India was 2425, being in the proportion of 41.94 per 1000.

It might well be expected that a high ratio of invaliding from India to England would be followed by a proportionate number of men being finally discharged from the service after they had reached the home country; but an analysis of the returns for several years proves that this does not necessarily occur. Thus in 1874, when the proportion of invalids sent from India was 40.19 per 1000 troops in the country, the number discharged from the army after their arrival in England was only 9.41 per 1000; in 1875, when the invalids were 46.24, the number discharged was 11.61 per 1000; in 1876, when the invalids sent home were less in number, viz., 38.95 per 1000, the number of men finally discharged was nearly double that of the two previous years, viz., 20.50 per 1000; while in 1877, when the invaliding from India was at the higher rate of 41.94 per 1000, the proportion discharged from the army was much lower than in 1876, viz., 15.44 per 1000.

There is a table furnished from the Bombay presidency which enables us to compare the proportions of deaths, and of those sent home as invalids, in the three grades of commissioned officers, non-commissioned officers, and privates, during the year 1877, and for eight previous years. The difference of the death-rate in these several ranks was hardly noticeable in 1877; being 10.67 among the commissioned officers, 11.21 among the non-commissioned officers, and 12.01 among the privates, per 1000 of strength. During some recent years, it has varied greatly; the most marked variation having been in 1869, when the mortality among the officers was only 1.92 per 1000 of the strength; while among the non-commissioned officers it was 25.70, and among the privates 20.98 per 1000. If we look at the proportionate numbers sent home as invalids, the officers are seen to be largely in excess in all the years tabulated. Thus in 1877, 93.33 per 1000 among the officers, 54.31 among the non-commissioned officers, and 47.50 per 1000 of the privates, were invalided to England. In 1876, the numbers respectively were: officers, 116.85; non-commissioned officers, 41.56: and privates, 47.52 per 1000. Similar information is not supplied as regards Bengal and Madras. It is to be regretted that this want of uniformity exists in the returns from the different presidencies. A still more striking discrepancy in the Indian part of the Blue Book is that, while the sanitary reports from Madras and Bombay refer to the occurrences of the year 1877, the report from Bengal refers to those of the year 1876! It is stated in a foot-note that the report for 1876 was received too late for publication in the previous volume, while that for 1877 had not been received when the present volume was published. The statistical health-returns for Bengal refer to one year, the sanitary report refers to another year. Surely such a confusion of periods as this ought not to be met with in a publication stamped with official authority.

The recent publication of Surgeon-General C. A. Gordon, in which that officer has denied the existence of typhoid fever in India, gives interest to the fact that the statistical returns before us show 142 admissions into hospital for this disease, with 53 deaths, in Bengal; 65 admissions, with 22 deaths, in Madras; and 22 cases, with 15 deaths, in the Bombay presidency. Cholera fortunately did not assume an epidemic form among the British troops in India in 1877. The largest number of admissions and deaths from this disease occurred in Madras, viz., 35 admissions, with 19 deaths. One officer also died from cholera. It seems remarkable that there were not more cases of this fatal malady among the troops, seeing that 357,430 deaths were ascribed to it among the native community in Madras. The freedom of the troops from small-pox is also a noticeable fact. Five cases only are recorded, and none of these were fatal; while it is mentioned in the Blue Book that as many as 88,321 natives died from small-pox in the Madras presidency alone in 1877. The terrible famine by which Madras was visited in that year no doubt favoured the mortality from this disease as well as from cholera among the natives.

The statistical tables and sanitary observations regarding our colonies in South Africa, to which the war is now attracting much attention, occupy but a small space in the report for the year 1877. The South African settlements are all comprehended under the general name of the "Cape of Good Hope" in the Blue Book. The troops serving at St. Helena are included in the tabular returns with those in South Africa, from the fact of their being under one and the same military command. The average annual strength of the troops was 3738, of whom 225 were stationed at St. Helena. The general health was very favourable at both stations, particularly so at St. Helena. The deaths among the 3738 troops amounted to 32 in the year; and of these, 7 were from accidental injuries or drowning, and one occurred in an engagement with Kaffirs. The ratio of mortality from all causes was,

therefore, 8.56 per 1,000 of strength. The admissions into hospital in the South African portion of the command was at the rate of 760.7 per 1000 of strength; among the troops stationed at St. Helena, only 72.9 per 1,000. A very considerable number of the cases admitted are shown under the class of constitutional diseases, and these almost wholly consisted of syphilis and rheumatism.

In the West Indies, the death-rate was 15.88 per 1000, which was 12.20 per 1000 higher than it was in the previous year 1876. This was due to an outbreak of yellow fever in Jamaica, where it spread from the civil population to the troops. Out of 11 soldiers admitted to hospital for this disease, 10 died. The principal medical officer reports that the removal of the troops to another locality had the effect of putting an end to the epidemic, for no cases occurred among them after the change; and he urges very strongly the necessity of always speedily removing soldiers from any barrack or camp where yellow fever has localised itself. He remarks that, at the time of the outbreak, the sanitary condition of the cantonment was exceptionally good; but that a hut occupied by some civilians just outside its limits was reported to be in an exceedingly foul state. The inmates of the hut, however, escaped without any attack.

The other foreign stations of which statistical information is given in the Blue Book are Gibraltar, Malta, Canada, Western Africa, Mauritius, Ceylon, China, and the Straits Settlements, and the Fiji Islands. There are also returns and some remarks on the state of health and casualties among troops on board ship, whether proceeding from home to foreign stations, or returning from them, or passing from one foreign station to another. The limits of this review will not allow us to notice these stations further; but the mere mention of their names suffices to show in what widely separated parts of the world, and in what different climates, the medical officers of the army have to treat the diseases which arise among the troops which are quartered in them.

The statistical and sanitary reports are followed by an appendix, which occupies nearly a hundred pages of the volume. This appendix contains a report on the progress of hygiene for the year 1877 and part of 1878, by Dr. De Chaumont, Professor of Hygiene in the Army Medical School at Netley; a list of the surgical operations performed at the Royal Victoria Hospital in 1877, with remarks by Surgeon-Major Porter; observations by the same surgeon on the use of chloroform and ether at Netley; a report on the Jowaki expedition, on the extreme border of the north-west frontier of India, from December 1877 to February 1878, by Surgeon-Major F. W. Moore; an account of the progress of military prison hygiene in Ireland, by Surgeon-Major A. A. Gore; a report on the state of vaccination of recruits examined at the Liverpool recruiting-office, by Surgeon-Major S. Archer; notes on a collection of vesical calculi extracted from natives of India, by Surgeon-Major Kelsall; a report of a successful case of tracheotomy for croup in a child eighteen months of age, by Surgeon-Major S. Archer; of a case of sword-bayonet wound of the abdomen, by Surgeon-Major Turton; and lastly, of a case of aneurism of the right femoral artery treated by digital pressure, by Surgeon M. D. O'Connel. Abstracts of meteorological observations at foreign stations during the year 1877 complete the volume.

Of these papers, the most important is the report on the progress of hygiene by Dr. De Chaumont. It embraces too wide a sphere, and is already in too condensed a form, to be more than referred to in this notice. This will be readily understood when we mention that the report includes a digest of the legislative enactments bearing on hygiene during the period named; an account of the work done by sanitary institutes and societies at home and abroad; a review of the literature, English and foreign, on hygiene; an abstract of the progress made in special hygienic subjects relating to water, air, ventilation, barrack and hospital construction, filtration, food and beverages, propagation of disease, and other similar topics. Dr. De Chaumont's paper occupies nearly thirty closely printed pages, and includes, among other matters, the detailed analyses, in a tabular form, of sixty-five samples of water sent to the hygienic laboratory at Netley for observation. The case of recovery from sword-bayonet wounds, reported by Surgeon-Major Turton, has some remarkable features, not merely from the number of wounds inflicted, but also from the serious nature of several of them. A private soldier, while lying in a helplessly drunken state on his cot in a barrack-room at Meerut in India, was bayoneted by a drunken comrade. Fifteen stabs were inflicted in various parts of the body and limbs. Among them were "one in the abdomen, through which a small knuckle of omentum protruded"; "one penetrating the stomach"; "one wound on the left side of the chest, between the sixth and seventh ribs, through which a portion of the lung protruded and became strangulated"; not to mention others. The portion of protruded lung was two inches in length, by an inch and a quarter in breadth. It was not interfered with, and it sloughed off on the twenty-second day after the injury. The piece of omentum was "about the size of a large broad bean". It became red and granulating, shrank in size, and eventually disappeared from view in the cicatrix of the abdominal wound from which it first issued. The evidence given in the report of the stomach having been penetrated is that "a probe was easily passed into it", and that "the stomach was emptied of its contents by vomiting, blood being mixed with the ejected matter". The report further states that the patient passed through Netley Hospital in 1878, and that the man appeared little the worse for his extensive injuries, only having pain at the sites of the thoracic and abdominal wounds when making exertion.

The volume under review shows that, during the year 1877, no fewer than 165,371 cases of disease and injury were admitted into the military hospitals, and treated by the medical officers of the army in the home and foreign stations where the troops were quartered. Of this immense number of cases, less than a dozen have their particulars given in the volume. How is it that with such a vast field of professional observation as must be afforded by the methodical treatment of diseases and injuries, amounting to the sixth part of a million in number, occurring in every variety of climate, and under circumstances where everything seems to be favourable for critical observation, and for establishing comparisons on a large scale, not only as regards the subjects of disease, but also the conditions by which the patients have been surrounded before and at the time of their attacks—where nothing, indeed, seems to be wanting for enabling accurate clinical investigations and correct registration of pathological facts to be conducted—how is it that so little should be found worthy of record and publication? Surely a great deal might be accomplished by the eight or nine hundred medical officers of the army towards solving many doubts, and clearing away many errors, regarding the nature and origin of numerous particular diseases, and the action of the remedies which are administered for their cure, if the opportunities afforded were turned to a profitable account. The medical officers start in the military service as highly trained and educated professional men; and we cannot believe it to be their fault if more be not done in the direction just mentioned. If professional merit were the merit among them which was shown to be the most appreciated by the heads of the war department; if the medical officer who showed himself foremost in scientific attainments and in professional knowledge and zeal, met with the most approval, testified by proportionate advancement and distinction, scientific medical work would be less neglected than as a general rule it appears to be. The authorities who hold the reins, whoever they may be, it may be depended upon, rule the direction which the medical officers take in their career; and if these officers do not do so much in forwarding professional science as they might do, it will very probably be found that they meet with little encouragement for looking in that direction for the honours and rewards incidental to the service to which they are affiliated.

NOTES ON BOOKS.

FINLAYSON'S *Clinical Manual for the Study of Medical Cases* (Smith, Elder, and Co.) is a book which has already established itself while we have been waiting for an opportunity to notice it as among the most useful of which any student can possess himself on entering the medical wards. The idea is an excellent one, and it has been carried out with unusual success. The object of this manual is to enable a student, when he reaches the bedside of the patients, to follow up his clinical inquiries in a systematic and thorough manner, and to learn what to ask, how to ask it, how to arrange the information which he gets from his patients, what are the probable fallacies to which he is exposed in using that information, and what are the collateral issues to which his attention may usefully be directed. The book was planned apparently at the suggestion of Dr. Gairdner, at the Glasgow Royal Infirmary, and he edits it, supplying also a most valuable chapter on the Physiognomy of Disease. This chapter is altogether worthy of the high clinical reputation of the Professor of Physic in the University of Glasgow. Dr. Finlayson, Lecturer on Clinical Medicine in the Infirmary, furnishes an admirable section on Case-Taking and on the Symptoms of Disorder in the various Systems, which are supplemented by sections by Dr. Robertson, the Superintendent of the Parochial Asylum of Glasgow, on Insanity; by Dr. Stevenson, the Professor of Midwifery at Aberdeen, on Disorders of the Female Organs; by Dr. Gemmel on the Sphygmograph and the Physical Examination of the Chest and Abdomen; and by Dr. Coats on the Examination of the Fauces, Larynx, and Nares, and on the Method of performing *Post Mortem* Examinations. In this way, a handbook is made up which is the most satisfactory manual of diagnosis existing in any language. It has been edited with great skill,

and that due proportion of parts is observed which is frequently rare in composite books of the kind. The student has, therefore, here the advantage of the special knowledge, well digested and carefully co-ordinated, of a series of experts. Among the most valuable chapters, we would mention especially that on the Examination and Reporting of Medical Cases, the chapter on the Uses of Electrical Instruments, the chapter on Insanity, and Dr. Coats's admirable chapter on the Method of Performing *Post Mortem* Examinations. The book is very fully illustrated; there is a bibliography, which the advanced students or those desirous of making special studies will find extremely useful, and a well made index. This manual reflects honour on the Glasgow School of Medicine, and is probably destined to increasing popularity amongst medical students, to whom it will be of inestimable value.

Students' Guide to the Diseases of Women. By A. LEWIS GALABIN, M.D. (London: J. and A. Churchill.) This very succinct little text-book, by the accomplished Assistant Obstetric Physician of Guy's Hospital, aims at furnishing a handy *résumé* of the principal diseases of women. It has many excellent qualities. It is, however, not so complete as might have been desired, even in a miniature volume of the kind; many of the most important operative procedures—such as the operations for lacerated perinæum, for vesico- and recto-vaginal fistulæ—being altogether omitted. Battey's operation, though mentioned, is not described. There is a certain want of balance visible throughout. Thus considerable attention has been paid to describing the numerous pessaries now in use, and, of the sixty-three illustrations in the book, eighteen are devoted to pessaries; while dysmenorrhœa and pelvic cellulitis—the latter one of the most common and troublesome of all uterine affections — do not receive the consideration and more detailed description they deserve. The merits of the book are positive and considerable, and its faults are chiefly faults of omission. No doubt, these omissions will be supplied in a future edition, and they will have the effect of making the book a more complete summary of diseases of women than it is at present. Dr. Galabin is a teacher of whose work we hope to read more.

REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 4TH, 1879.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Specimens of Lymphadenoma. Dr. FREDERICK TAYLOR showed a growth of this nature removed from a boy aged 10, admitted into Guy's Hospital in May 1879. Six months previously, a small lump was found just above the right clavicle; subsequently, enlargement of the glands in both axillæ occurred, and finally of the glands above the left clavicle. On admission, there was dulness at the apex of the right lung, with a high temperature. From that time, the glands increased in size, though they occasionally diminished for a time. They were not hard, and were freely movable. After a time, effusion took place in the right pleura, which was tapped. There was no leucocythæmia. *Post mortem*, the trachea was found to be surrounded by a large mass of glands, continuous with the anterior and posterior mediastinal glands, which were also enlarged. The glands were of all sizes, from a pea upwards. There was fluid in the right pleural cavity; this cavity was crossed by long adhesions, which, as well as the pleura itself, contained lymphadenomatous growth. The glands of the mediastinum projected into the pericardium, which contained fluid. These were very small; and one large nodule in the liver and the spleen was studded with the growth. The mesenteric and axillary glands were enlarged. The glands were nowhere cheesy. Microscopically, the growths presented the typical lymphadenomatous structure.

Mediastinal Lymphosarcoma.—Mr. FREDERICK EVE showed this specimen, taken from a man aged 28, who had been admitted into St. Bartholomew's Hospital for pain in the stomach and palpitation. There were dulness and pulsation over the whole præcordial region, and over the manubrium sterni. Six months later, the upper part of the chest became prominent. There was dyspnœa, with nocturnal exacerbations and a laryngeal cough. The right radial pulse was stronger than the left. After death, a white brain-like growth was found in the anterior mediastinum, infiltrating the pericardium, which, at the base of the heart, was more than an inch thick. It surrounded the large vessels, and compressed the arch of the aorta. The pneumogastric nerves were involved in, and apparently compressed by, the growth. There were no secondary growths. Microscopically, there were found lymphoid corpuscles imbedded in a matrix of gelatinous intercellular substance. In the glands, all distinction between cortical and medullary substance was lost; there was no reticular tissue. The most remarkable feature in the case was the infiltration and great thickening of the pericardium. There was every reason to believe that the growth began in the lymphatic glands. It was not surprising that the growth should extend into the serous membranes, considering the relation between these and the glands. He had found that in glioma of the retina the growth passed backwards along the lymphatic sheath of the optic nerve, and that it here presented typical reticular lymphatic tissue. Hence he should think there was a relation between these two forms of growth. He thought that the disease began as a simple hyperplasia of lymphatic tissue, which subsequently took on malignant characters.

Lymphoma compressing a Bronchus.—Dr. LEDIARD showed this specimen. The growth involved the anterior and posterior mediastinal glands, and extended into the lungs. The case illustrated the effects of compression of the bronchus, as described by Dr. Irvine and Dr. Powell. The right side of the chest was retracted, and there were signs of fluid in the pleura; but, when a trocar was introduced, air rushed into the chest, producing signs of pneumothorax. There were secondary deposits in the liver.—Mr. DORAN remarked that the pneumogastric nerve might undergo considerable compression without the production of symptoms.—Dr. POWELL inquired whether the original growth was secondary to distal irritation. This was a point of importance in reference to treatment. He thought it was true that so long as the gland-capsule was not ruptured the growth was simple, but that if rupture took place the surrounding tissues became invaded.—Mr. PARKER described the case of a child with large glands on one side of the neck. He removed them, but they recurred. Again he removed them, and again they recurred. Once more he removed them, but cachexia set in and the spleen became enlarged. In this case, there had been no distal irritation to cause the primary enlargement. All the glands were definitely encapsuled. There was marked diminution of the red corpuscles in the blood.—The PRESIDENT asked whether there was any family history of cancer. Dr. Hodgkin had been inclined to believe in the malignant nature of the disease. He believed that no other form of primary malignant disease of the lymphatic glands was known.—Dr. TAYLOR said, in reply, that he had not obtained a good family history. The only possibility of a local cause in his case was a discharge from the right ear five years previously; the gland which first enlarged, however, was just above the clavicle.—Mr. RIVINGTON asked whether the secondary deposits were limited to parts pouring lymph into the affected glands.—Mr. EVE, in reply to Dr. Powell, remarked that lymphadenoma of the mediastinum occurred later in life than elsewhere. Was it possible that this was because catarrhal conditions were more common at that time of life?

Rupture of Aortic Valve.—Dr. GREENHOW showed the heart of a man aged 39, who had been temperate and had never had rheumatism. Last April, after lifting a heavy weight, he felt that something had given way inside him, and for a short time he had sharp pain all over him. For two months he remained well, but the pain recurred if he lifted a heavy weight. After that time, he complained of dyspnœa and palpitation, and œdema soon set in. On admission, he had a double aortic murmur, and soon afterwards he died. *Post mortem*, the right and posterior aortic cusps were found glued together. On the right cusp was a large polypoid vegetation; the posterior cusp was divided into two parts by ulceration; the left cusp was nearly ulcerated away. Near the valve was an ulcer on the endocardium. He thought the right cusp had been injured, leading to localised endocarditis: hence the fusion of the cusp and the formation of the polypoid growth, the irritation of which had caused the ulceration of the other two cusps. No symptoms arose until the polypoid growth had induced the ulceration.

Histology and Pathology of Morphœa.—Dr. RADCLIFFE CROCKER showed a series of microscopical specimens and living cases of this disease, to illustrate its pathology and its relation to scleroderma adultorum. Some authors termed morphœa a hypertrophy, and others an atrophy, of the skin. Both were partially right, but there was no evidence of the lardaceous deposit sometimes spoken of. The result of microscopical examination of the early and advanced stages were as follows: in the early stage, degenerative changes and sometimes pigmentation of the deeper layers of the epidermis; atrophy of the papillæ of the corium; thrombosis of the vessels of the superficial plexus; masses of cells round the sebaceous glands and hair-follicles, but not round the more deeply lying sweat-glands; vessels terminating abruptly in the cell-masses. The vessels of the deep plexus were usually unaffected in this stage. There were no signs of lardaceous change. In the later stage, there was great increase in the connective and elastic tissues of the corium. The morbid process extended to the deeper tissues; the vessels being obliterated, the sebaceous glands atrophied, and the sweat-ducts obstructed. The cell-exudation and thrombosis were probably due to

trophic changes in the vascular wall, possibly of nervous origin. Dr. Crocker then proceeded to explain the clinical characters on the basis of the microscopical appearances. The main difference between scleroderma and morphœa was that, in scleroderma, the change began in the deeper parts of the corium and subjacent tissues; while, in morphœa, it began in the superficial plexus. The histology was the same in both, excepting this difference in depth of the disease. Dr. Crocker thought that, while the theory of a nervous origin of the disease fitted well the morphœa cases, the distribution of which often followed the course of a nerve, it did not agree so well with the cases of diffused scleroderma, which in a few days implicated the whole skin, often followed exposure to wet or cold, and were not unfrequently associated with acute rheumatism, or with peri- or endo-carditis without rheumatic symptoms. He thought that this pointed rather to blood-change, which produced a general lymphatic inflammation of the skin, blocking the lymph- and blood-vessels, and resembling phlegmasia dolens. As, then, morphœa and sclerodema were due to the same pathological condition, and differed only in situation, he thought it would be better to drop the meaningless term morphœa, and to speak only of diffused and circumscribed scleroderma.—Dr. T. C. Fox thought that the interest of Dr. Crocker's case lay in his showing that the circumscribed disease, morphœa, was identical with the diffused disease, scleroderma. It was important to note that there was not only an overgrowth but an atrophic process; in some cases one and in some cases the other of these processes being most marked, the difference probably depending upon the rapidity of the spread of the disease. If morphœa were of nervous origin, scleroderma must also be traced to this cause. Some cases are attended by intense pigmentation, and cases were on record where the whole body was quite black.—The PRESIDENT remarked that Dr. Crocker's report on the histology of the lardaceous patch was very valuable. He had himself no doubt as to the identity of local and generalised morphœa; it was merely a question of degree, and all gradations could be traced. It appeared to be a law that, the greater the extent of surface affected, the less was the evidence of local thickening (the lardaceous patch). In his lectures at the College of Surgeons, he had shown two women with general morphœa, both of whom had conditions of the hands and face similar to those shown by Dr. Crocker. He believed the disease was located in the nerve-trunk; the laws of distribution were almost precisely those of herpes zoster; the difference between the two appeared to be this, that, whilst the herpes eruption was probably due to the sensory filaments, their peripheral end-organs, that of morphœa was caused by disease of the vasomotor filaments, which travelled in their company. In each instance, he thought the disease lay in the nerves, and was not merely produced through their influence. Undoubtedly, the blood-vessels took an important part in the production of morphœa. Where the hands were affected, there was a close resemblance to "dead fingers". In one of his patients, the vesicular changes had been very rapid, the fingers being white and tallowy at one time, and then, half an hour later, quite florid. He thought the disease around the vessels was an important part of the process, but that it was secondary to, and located by, disease of the vaso-motor filaments. He had fully explained this view in his lectures at the College of Surgeons, and it was in advance of that contained in his earlier volume of clinical lectures.—Dr. CROCKER, in reply, said that, though he would not deny that disturbance of the sympathetic nerve might produce œdema and pigmentation, yet these might also be produced mechanically by pressure on the veins, the result of cell-exudation round them. He thought there were difficulties in the way of a complete acceptance of the theory of the nervous origin of the disease.

Colon of a Sheep in which Colotomy had been Performed by a Parrot.—Mr. WOOD showed the specimen, for Mr. De Lautour of Otago, New Zealand. In the mountains behind Otago, there was found a species of parrot, which formerly lived solely on fruit and insects. Since sheep were introduced into the colony, it had developed a taste for raw mutton, and it attacked live sheep, perching on the back, stripping the wool, tearing the flesh, and in many cases opening the colon, producing an artificial anus from which the dung came. This was the case in the present instance, the gut being adherent to the abdominal wall. It was a question whether the bird attacked the sheep for the sake of its flesh, or to get at the contents of the bowel. It probably ate the latter; but that it also liked flesh, was shown by its attacking the hides of sheep.

Affection of the Cranial Bones in Congenital Syphilis.—Dr. LEES showed the calvarium of a child nine months old, showing an early stage of syphilitic disease. There were increased vascularity and thickening of the upper part of the frontal, and of parts of the parietal, bones. The pericranium was unaffected, but the dura mater was abnormally adherent over the affected part. There was some asymmetry of the skull, and many small areas of cranio-tabes at the posterior halves of the parietal bones. The child had also a large liver, large spleen, and, when three weeks old, a rash on the genitals. The child was one of twins, the other twin being in a similar condition. There was no trace of rickets.—Dr. CROCKER mentioned a case of cranio-tabes he had seen, where there was meningitis of the vertex. There had been no trace of tubercle. He looked upon this case as probably syphilitic.

The following specimens were shown by card.

Dr. COUPLAND: Cancer of duodenum invading the bile-ducts.

Dr. COUPLAND: Diverticulum of ileum leading to volvulus of the small intestine.

Dr. COUPLAND: Hernia through a rent in the small intestine.

The PRESIDENT: Chronic enlargement of the bursa patellæ.

The PRESIDENT (for Dr. Keeling of Sheffield): Large recurrent enchondroma of upper jaw.

The PRESIDENT: Pigmented mole with elephantoid hypertrophy of the mons and labium.

Mr. RIVINGTON: Osteitis of the os calcis.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

OCTOBER 10TH, 1879.

T. PRIDGIN TEALE, F.R.C.S., President, in the Chair.

President's Address.—The PRESIDENT, in opening the session, reviewed the progress of the Society, and pointed out its chief uses and characteristics. By a catalogue of the papers which had been read during the previous year, he showed that the existence of the Society tended to encourage not only the trial of new methods of treatment originated elsewhere, but also the origination of new methods and ideas by members of the Society itself. There seemed, however, to be two particulars in which the Society had fallen short, namely, the exhibition of pathological specimens and the relation of the experiences of family practitioners.

Exfoliative Dermatitis.—Dr. EDDISON showed a case of (so-called) exfoliative dermatitis, formerly called pityriasis rubra. The patient was at present in the Leeds Infirmary. The disease was universal. No cause whatever could be found for its existence in this person, a woman aged 41. Dr. Eddison had seen three other cases, all of which were fatal, and he expected this to be so, treatment having hitherto failed to do her any good.

Knock-knee: Ogston's Operation.—Mr. JESSOP showed a lad aged 16, upon whom he had performed Ogston's operation for double in-knee. The feet had been thirty-five inches apart, but were now close together.—Mr. E. ATKINSON and Mr. WHEELHOUSE also exhibited similar cases.

Enlarged Spleen in an Infant.—Dr. CHURTON showed an infant aged sixteen months, whose spleen filled the left abdomen. The blood contained a large excess of leucocytes, and the red corpuscles were small and ill-formed. The lips were very white; the face had a yellowish earthy colour; the child's manner was preternaturally calm; it was not emaciated. There had formerly been some slight evidence of a syphilitic diathesis; therefore, five minims of liquor hydrargyri bichloridi, with a grain of potassium iodide and five minims of tincture of bark, had been given. Under this treatment, the spleen had in seven days become decidedly smaller, and the child had improved in appearance.

Extensive Ulceration of the Female Bladder treated by Dilatation of the Urethra.—Mr. J. W. TEALE read a report of this case. The patient was an unmarried lady aged 45, and the symptoms had been gradually growing worse for some years. At length, most agonising pain after micturition, scarcely relieved by large and frequent hypodermic injections of morphia, necessitated the operation three weeks ago; since which there had been no pain, and no morphia had been given. No incontinence of urine had resulted.—There was an active discussion; and at its close the PRESIDENT, replying chiefly to Mr. Robson, who had seen death rapidly follow this operation in two cases, and to Mr. McGill, who had in some cases found no benefit result from it, said that, of the cases operated upon, one-third were cured, one-third relieved, and in one-third there was total failure. The operation did not cause death, though, of course, the patient might die from other causes. What he feared was incontinence of urine following the operation.

Quiescent Scirrhus.—Mr. J. W. TEALE read a case of quiescent scirrhus. The patient was an unmarried lady aged 35. A cancer formed in her breast, causing retraction, and ultimately loss of the nipple; it ulcerated; some axillary glands enlarged, and the patient seemed about to die. But, in consequence, as it seemed, of the small quantity of food taken by the patient, the cancer was "starved"; t

atrophied slowly; and now, nine years after its first appearance, there was nothing but a hard cicatrix left in the breast and axilla.—Cases more or less similar were related in the discussion which followed.—Dr. EDDISON, however, remarked that cancer often occurred in chronically half-starved people.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, OCTOBER 28th, 1879.

ALEXANDER ROBERTSON, M.D., President, in the Chair.

Polypus of Stomach.—Dr. J. A. ADAMS showed a mucous polypus growing from the posterior wall of the stomach near the pylorus. It was pear-shaped, and in the fresh state measured about one-and-a-half inches long by half an inch in thickness. It had been obtained in the dissecting-rooms at the university from the body of a female aged 35. The only other example of this rare affection which Dr. Adams could find was recorded by Dr. Quain in the London Pathological Society's *Transactions*, vol. viii, p. 219.

Strumous Testis.—Dr. MACEWEN showed as a fresh specimen a tubercular testis removed from a patient aged 15. The proper gland-tissue was almost entirely destroyed, and replaced by a large sacculated abscess, surrounded by masses of tubercular matter in various stages of disintegration. Smaller masses of tubercle were also found in the epididymis and spermatic cord.

Ununited Fracture of Humerus.—Dr. CAMERON showed a patient with a very lax ununited fracture of his left humerus, complicated with paralysis of the musculo-spiral nerve. The patient could lift a considerable weight with his arm. To do this, he shortened the arm, so that the ends of the fragments overlapped, and then he flexed the elbow. Paralysis of the extensors and supinators of the forearm was almost complete. Dr. Cameron urged that, in such operations as excision of the elbow, considerable portions of the ends of the bones should be removed, as this case showed that a lax false joint was quite compatible with great strength of arm.

Purulent Discharge from Ear: Cerebral Abscess.—Dr. THOMAS BARR showed the left temporal bone of a young man aged 17, who died after a fortnight's illness. The patient had previously suffered from an offensive purulent discharge from his head for about two years. During the last ten days of life, he had suffered from vomiting, pain in the head, stupor, tremors, and convulsions. A small polypus was seen in the tympanic cavity, and the tympanic membrane was found to be destroyed. Dr. Coats found the left temporo-sphenoidal lobe of the brain adherent to the bone beneath, with its convolutions flattened and partially obliterated. On section of this lobe, the brain-substance was quite pulpy, and in its interior was found an abscess containing dirty greenish decomposing pus, which exhaled a most offensive odour. The abscess was lined by a soft bluish layer. Over the temporal bone, the dura mater was adherent, and of a blue colour. At one place it was softened and destroyed, so that a probe could be passed directly into the petrous bone. There were two carious openings of considerable size in the bone; one was in the roof of the tympanum; the other, in the groove for the lateral sinus, communicated with the mastoid cells.

Addison's Disease.—Drs. RENTON, WOOD SMITH, and FOULIS, showed the suprarenal capsules and solar plexuses of nerves from two cases of this disease.—In Dr. RENTON'S case, the patient, a girl aged 13, had a phthisical history. Her skin was deeply bronzed, more especially over the extensor aspects of the fingers and toes, the face, neck, abdomen, and the site of a blister on the epigastrium. Bluish marks were also seen on the lips and the inside of the cheeks. There was slight hypertrophy of the heart, and a mitral systolic murmur. During a temporary improvement, it was noticed that the pigmentation of the skin decidedly increased. *Post mortem* inspection revealed general lymphatic glandular disease, with the characteristic degeneration of the suprarenal capsules and the sympathetic ganglia, as described by Dr. Greenhow. The heart was slightly hypertrophied, and the mitral valve thickened. On sawing through the femur and patella, no degeneration of the medulla was found.—Dr. WOOD SMITH'S specimens were from the body of a man aged 60, whose skin showed large irregular dark brown patches, most marked on the anterior surface of the abdomen and thighs. Most of the patches had a well defined margin, and in some there were spots of a silvery white colour. These discolorations had been present for nearly twenty years, and had not been attended by any marked symptoms. The patient died after a month's severe illness, the symptoms being apparently due to cancer of the cardiac end of the stomach. Examination after death disclosed a mass of epithelial cancer surrounding this part. Two or three lymphatic glands in the neighbourhood were hard and slightly enlarged, but no cancer could be detected in any other organ. There was considerable cicatricial thickening of the solar plexuses, especially of the left. The right semilunar ganglion was also thickened, and there were hard nodules all round the left renal vein. The suprarenal capsules were not directly involved.—Dr. FOULIS commented on the appearances found at the *post mortem* examination, and observed that, with reference to Dr. Wood Smith's case, he saw no reason for not calling it Addison's disease. In Eulenberg and Guttmann's work on the *Sympathetic System*, a case was quoted in which Virchow had found "in an individual who had suffered from cancer of the œsophagus and bronzed skin, a hypertrophic hæmorrhagic swelling of the suprarenal capsules, accompanied by thickening of the solar plexus". This was closely analogous to Dr. Wood Smith's case; and both cases might very well be regarded as varieties of Addison's disease. He placed on the table minute dissections of normal parts to show the natural relations and thickness of the solar plexus, semilunar ganglia, kidneys, and suprarenal capsules. These were mounted upon sheets of blue glass, with black thread to stretch and hold the parts in position, so that the white tissues were clearly seen. He then showed similarly minute dissections of the solar plexus and capsules in the two cases before the Society. It was at once apparent that the nerve-sheaths in Dr. Renton's case were thickened and matted together; and that in Dr. Wood Smith's case, the lower end of the left suprarenal capsule and the lower part of the solar plexus were involved in a fibrous mass of apparently old date, which embraced all the tissues down to the left ureter. This ureter was in fact narrowed by the thickened tissue, and some dilatation of the renal pelvis had resulted. Dr. Foulis also showed, under the microscope, sections of the suprarenal capsules. In them the normal tissue was replaced by a dense tissue composed of small round cells, nuclei, and fatty *débris*. In no part of the dissections or microscopic sections had he found evidence of tubercular disease, if the word tubercle were understood as meaning miliary tubercle; nor did he regard the lesion as related to miliary tubercle in any way.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

FELLOWS' COMPOUND SYRUP OF HYPOPHOSPHITES.

THIS very elegant preparation consists of hypophosphites of iron and quinine, and strychnia, with manganese, lime, and potassa. The medium dose, one fluid drachm, contains one sixty-fourth of a grain of strychnia. A physician who has employed this preparation in certain suitable cases informs us that he has done so with benefit, and he feels that he can confidently recommend it as an excellent tonic in the debility of phthisis and strumous conditions generally. It is sold by Messrs. S. M. Burroughs and Co., 8, Snow Hill, Holborn Viaduct.

EXTRACTUM CINCHONÆ RUBRÆ LIQUIDUM.

WE have received from Messrs. Ferris and Co. of Bristol a sample bottle of the abovenamed preparation. It has been submitted to trial by a physician, who reports to us that, when mixed with water, a dense precipitate is thrown down, which is partially redissolved on the addition of an acid. He has given it in cases where the concentrated decoction and liquor cinchonæ are useful, and has found that it sustains the reputation which these pharmaceutical preparations have obtained.

GRANULAR EFFERVESCENT CITRATE OF CAFFEINE, AND EXTRACT OF NUX VOMICA.

WE have received through Messrs. Burroughs and Co. of Snow Hill, Holborn Viaduct, samples of the abovenamed preparations, manufactured by Alfred Bishop of Speek's Fields, Mile End Old Town. A drachm of each contains one grain of caffeine and one-twelfth of a grain of extract of nux vomica respectively. For ascertaining the exact quantity to take, each bottle is furnished with a wooden cap, which contains the dose, viz., one drachm. We have administered the caffeine in nervous headache, and in the *malaise* following an alcoholic debauch, with benefit. The bitter taste of the nux vomica is effectually covered. Both preparations will be found useful.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 8TH, 1879.

DIPHTHERIA AND MILK.

THE inquiry undertaken by the Committee of the Pathological Society in the early part of the year into the alleged connection between certain diseases of the cow and diphtheria in the human subject, does not seem to have as yet made much progress; and, indeed, it is doubtful whether any real addition to our present most imperfect knowledge on the subject will be effected within any reasonable time, unless Government takes up the question. There is a precedent for this course in the inquiry made by Dr. Thorne Thorne in 1869 into the effects produced in the human subject by consumption of milk from cows having foot-and-mouth disease; and it certainly seems desirable that the matter should authoritatively be set at rest without delay. It appears to us that some of the money annually granted by Parliament for auxiliary scientific investigations could be devoted to no better purpose than to ascertaining the precise conditions under which this article of universal diet becomes, when its purveyors neglect to take proper precautions, a fertile source and propagator of disease. Such an inquiry would, indeed, be only a part of a very large and promising investigation in the extensive field of comparative pathology, such as was shadowed forth by Mr. Simon so long ago as 1868. Commenting on the admirable report by Dr. Burdon Sanderson on the Communicability of Tubercle, contained in his tenth volume of *Reports to the Privy Council*, Mr. Simon observed that those investigations "suggested a speculation with regard to human tubercle, which may, indeed, extend to many human diseases which are called specific and zymotic; whether, perhaps, our pathological terms 'common' and 'specific' may not, more than has yet been supposed, be found variable with the particular animal spoken of as affected, rather than attaching fixedly to the given diseases; whether, namely, the 'common inflammatory' affections of some animals may not be the 'specific' affections of others; whether, for instance, some common 'traumatic' affection of this brute or that may not correspond in essential chemistry to this or that 'specific' zymosis of man, and even in some cases be the source whence the latter was first derived". It is not a little curious that these words of pregnant meaning should have lain fallow for so considerable a period without any steps being taken to test the accuracy of their conclusions; but nothing more seems to have been thought of the subject until the publication of Mr. Power's report on the diphtheria epidemic of North London drew the attention of the profession forcibly to it.

We are impelled to these observations by a study of some reports by Mr. E. L. Jacob on the circumstances of the prevalence of diphtheria at Weybridge, Addlestone, Leatherhead, and Sutton, in different parts of his combined district. On a particular day, ten persons in eight houses in the village of Weybridge were attacked with diphtheritic sore-throat, and fresh cases occurred daily in these and in other houses for nine days, after which the epidemic suddenly ceased. During that time, about sixty persons (nearly half of whom were adults), living in thirty houses, came under medical treatment for the disease. One of the earliest sufferers was a young man (a milk-carrier), who, with one other person, died from the disease. Those infected were found to be living in all parts of the village, and principally in houses of the better class, most of which had a separate water-supply and system of drainage. The only discoverable circumstance which they had in common was that they all had their milk from one dairy in the village. This dairy supplied about one hundred and fifty households, of which thirty (or 20 per cent.) were attacked; while the remaining three hundred and fifty families in the parish, which were supplied with milk from three or four other sources, entirely escaped the disease. This very unequal incidence of the throat-affection upon the two groups of consumers pointed very strongly to the milk as the cause of the epidemic. Moreover, amongst the customers of this dairy there were eleven families at that time which had stipulated for a supply of milk every day from the same cow. To meet their requirements, the milk of two or three particular cows was set aside and distributed separately, under the name of nursery milk; the surplus, if any, of such milk being added each day to the bulk of the supply. Out of these eleven families, nine (or nearly 82 per cent.) were attacked with sore-throats; while of the remaining one hundred and thirty-nine families who drank the rest of the milk from this dairy, twenty-one (or only 15 per cent.) were attacked. There was, therefore, a special incidence of the affection upon the consumers of the nursery milk—a circumstance favouring the idea that this portion of the milk had especially, if not solely, acquired infective properties, and that the admixture of it with the general mass of the milk explained the illness of those who did not stipulate for nursery milk. Amongst those who suffered from the throat-illness, were the dairyman, his female servant, the wife of his cowman, and one of the milk-carriers, the illness of all but the last named (who died from its effects) being extremely slight. Careful inquiry failed to elicit that any case of sore-throat had occurred amongst those employed at the dairy, or in any of their families prior to the day on which the disease appeared suddenly in eight houses. Neither could it be shown that the houses to which the milk had been distributed by this particular carrier had especially suffered. The water in use at the dairy was derived from a well on the premises, and was found to be much contaminated with sewage matters. There was no evidence that the specific poison of diphtheria could have got into the well before the outbreak, and no suspicion that any of the impure water had been added to the milk. In the yard at the back of the premises, where the milk-cans were cleansed and left to drain, was an untrapped inlet to the house-drain; and in the floor of the dairy was a gully leading to an unventilated drain. A week after the epidemic began, the cows were all examined by a veterinary surgeon, and pronounced to be in excellent health; none of them had been recently purchased, and no change had been made in their food. Adjoining the meadow, however, where they fed, is a lake which receives some of the sewage of the village. The result, then, of the inquiry was to show clearly that the epidemic was due to milk-pollution or milk-infection; but, though there was much ground for suspicion, there was not sufficient evidence to warrant any conclusion as to how the milk became polluted or infected. It must be remarked, however, that it is, of course, quite impossible to say with certainty that no impure water had been surreptitiously added to the milk. Moreover, as the dairy seems to have been under no scientific supervision, it is possible that some of the cows may have suffered from an undetected or unreported affection of the udder, from which they had recovered before the somewhat tardy visit of the veterinary surgeon.

The cause of the epidemic at Princess Mary's Village Homes, Addlestone, which affected in all forty-eight persons (forty-two of whom were between the ages of four and fifteen), is much less clear, but there are certain circumstances which lead to a strong suspicion of milk as the cause of the mischief. The water-supply of the farm which supplied the Homes (but no other house in Addlestone) with milk was found to be impure; one of the cows which supplied the milk had lately been suffering from garget; and the epidemic began rapidly to decline about eight days after the milk-supply had been discontinued, no other measures being simultaneously adopted which would account for its sudden subsidence at that time. Against the milk-theory was the circumstance that the infants, who were the greatest consumers of the milk, almost entirely escaped; but the force of this objection is diminished by the

consideration that their milk was always scalded before use, and that children under three years of age are known to be not very susceptible to the poison of diphtheria.

About the same time as the outbreak at Weybridge, there was a considerable prevalence of diphtheria at Leatherhead, though the epidemic was not so sudden either in its commencement or in its cessation. Fresh attacks were reported for about six weeks, and altogether, from first to last, about fifty-five cases in thirty-six houses were reported, with five deaths. Two houses had four cases in each, four houses had three cases each, five houses had two cases each, and twenty-five houses had only one case in each. Eighteen of the patients were adults, of whom two died; and thirty-seven were children, of whom three died. The infected houses were situated in all parts of the village, on every variety of soil, and were chiefly of the better class. In the matter of soil, water-supply, drainage, school congregation, or personal infection, they had nothing, or very little, in common; but they almost all had their milk from the same dairy-farm. Of about 530 houses in the parish, 280 are supplied with milk from one farm, and of these, twenty-nine out of the thirty families invaded during the chief stress of the epidemic were using milk from this farm. This very unequal incidence of the disease upon the two groups of consumers (coupled with the fact that the milk-supply was the only discoverable circumstance that the sufferers had in common) pointed very strongly to milk as the cause of the outbreak. As to how the milk became polluted or infected, however, nothing definite could be found. None of those employed in the cowsheds or dairy had had any throat-illness before or during the epidemic; all the cows were, and had long been, in good health; whilst the water in use at the dairy was derived from a soft water tank, and had at times smelt offensively, and the pipe from the sink at which the milk-cans were cleansed was not properly trapped and disconnected.

The outbreak at Sutton was not so extensive as some of the others, but it appears to lead to the same conclusion. Within two days, fifteen persons, living in eleven houses in different parts of the town, ten of them of considerable size, and nearly all having good sanitary arrangements, were attacked with diphtheria. All of them were supplied with milk from one dairy, but nothing could be learnt at the dairy which threw more light on the question. Its water-supply was good; the cows were healthy, and had had no change of food lately; no cows had been recently added to the stock, and no extra milk purchased from other dairies. The dairyman, his servants, and their families were, and had long been, all well.

Evidently in all these cases there was a noxious influence at work which has not been isolated. It is of the most crucial importance, if people are not to be poisoned wholesale by diphtheritic milk, that it should be isolated; and here, then, is a subject for investigation which it should be the earnest desire of our Government Medical Department to track out and thoroughly exhaust. Every epidemic of diphtheria in which infected milk can conceivably be the cause, should at once be inquired into on behalf of the Local Government Board; and in this way we might hope, not only to find a clue to the particular mystery which is now baffling us, but also some useful knowledge as to the general circumstances of the origin and spread of this still obscure disease.

FRACTURES AND FATTY EMBOLA.

THE occurrence of what in Germany is known as the "Fatty Embolon" has, up to the present time, been but little recognised in this country. The observation is not to be regarded as a novelty, for, in 1862, Zenker, when making a *post mortem* examination on the body of a man crushed between two vehicles, found that the pulmonary capillaries were filled with fat. At that time the fact was noted as a curious one, but was not recorded as anything of special clinical importance. In the same year, Wagner brought forward numerous examples of the same condition, but considered that the presence of the fat-cells was due to some change in the condition of pus, and conjectured that it might be a cause of pyæmia. Some years later, Wagner and Busch, of Königsberg, published, almost simultaneously, their researches with regard to the origin of fatty embola. These authors showed, by experiments and by clinical cases, that this form of embolon generally takes its origin from the fat cells forming the medulla of the bones, and that it is found most frequently in fractures and other injuries where the medullary canal is implicated. That the condition was not due to the physiological absorption of fat, was proved by the fatty embola being found to be present in direct proportion to the severity of the injury. It would seem that the fat-globules of the medulla, being set free by the injury, are taken up by the open vessels and carried by the blood-current until they are stranded in vessels too small to admit of their passage, generally the lung-capillaries; primarily, the cells are not absorbed in a state of emulsion. In order to ascertain the vessels by which the fat gained access to the circulatory system, Busch abstracted the medulla from the long bones of dogs, and filled the canal with olive oil coloured with vermilion. By these means it was discovered that only the large blood-vessels and lymphatics absorbed the fatty globules. Since the earliest records of cases, where the presence of this form of embolon has been demonstrated, more than a hundred and forty instances have been published, most of them emanating from German authorities.

In a recent number of *Le Progrès Médical*, in order, as it is stated, to draw further attention to this important subject, M. Déjerine has recorded two cases which have come under his own notice. A patient, aged 16, was admitted into the Hôtel Dieu, his right leg having been crushed by a tram-car. Death ensued in about an hour after receipt of the injury, the patient being sensible to the last; a certain amount of blood was lost at the time of the accident, but we are not told that the quantity was excessive. At the necropsy, both bones of the legs were found to be fractured about their middle third, a crack extending upwards into the knee joint. The blood in the right ventricle of the heart was discovered to contain fat-globules. The vessels of the lung, arteries, veins, and capillaries, were, by the aid of the microscope, seen to be filled with small adipose masses, which disappeared under the action of ether, and with osmic acid took on a black coloration. The same results were given on examining every portion of the two lungs. The second instance was that of a man who succumbed thirty-six hours after he had sustained a fracture. In this case, also, fat was present in the pulmonary vessels, although it would seem not to such a marked extent, the parietal bone only being the injured portion. The other organs and tissues were not examined in either body for the purpose of seeing if the embola were likewise present in them. From these two cases, and from others, it would seem that fatty embola, occurring as a complication of fractures, often speedily lead to a fatal termination; it being supposed that this is brought about by an important portion of the capillary system being practically obliterated and rendered useless by becoming clogged with an accumulation of fat-cells. Bergmann's experiments support this view. Small quantities of pigs' fat were introduced into the saphenous veins of cats by this investigator; the animals usually died in a quarter of an hour. In these the substance of the lungs was found congested, and the vessels of the organs filled with fat. In cases where the cats survived for periods varying from six to twenty-four hours, the vessels of the liver, the glomeruli and tubules of the kidney were invaded by fat-globules. In a second series of experiments, the animals living for a week or more, the vessels of the various organs were free, but the cells were discovered in the cellular tissue surrounding them. A point worthy of consideration with regard to the kind of embolon in question, is the effect of injecting recent compound fractures with strong solutions of carbolic acid, a plan adopted at the present time by surgeons who carry out the antiseptic method in the treatment of these injuries. Does the process favour or retard the formation of fatty embola? As far as we can ascertain, no investigations have as yet been made with regard to this; even the Halle clinic has no information to offer.

M. Déjerine states that, although the embolon occurs most frequently in bony injuries, yet it may also be found, if sought for, in other cases

where life is suddenly terminated by violence. This is confirmed by an observation of Dr. Hamilton, who showed last year, at the Medico-Chirurgical Society of Edinburgh, microscopical specimens of the pulmonary vessels plugged with fat, taken from a case in which the patient had died after rupture of a fatty liver. The report of Busch, composed of about 45 cases, is made up of 23 fractures, 3 cases of osteomyelitis, 2 of bony tumour of the lower extremity, 1 each of caries and tumor albus, 4 of abscesses in regions rich with fat, the remainder of patients with metritis and fatty degeneration of the arteries from Bright's disease. Considering the facts that have been here enumerated, it is more than probable that fatty embola are of common occurrence, as, it may be reasonably supposed that they are present more or less in nearly every simple fracture, and, therefore, in a minor degree, do not necessarily lead to a fatal termination. In severer injuries, the formation of the same may, in conjunction with the so-called "shock", lead to a speedy death; but it is difficult to understand how pulmonary capillary embola, of whatever nature, can *per se*, in a short space of time, cause a cessation of life. In the numerous large hospitals scattered throughout this country, in which deaths from violence are common, there should be no difficulty in endeavouring to throw more light upon this subject. Our clinical opportunities are at least equal to those possessed by continental observers, and no doubt fatty embola may be noted, if searched for with a corresponding amount of care.

OUR METROPOLITAN HOSPITALS.

We have so often drawn attention to the various defects connected with the administration of out-patient relief at our metropolitan hospitals, that it is gratifying to us to find the subject engaging the serious attention of the managers. Last summer, a Committee of Hospital Managers was formed, and met at St. Bartholomew's Hospital. Under its direction, a series of questions was addressed to the authorities of the chief London hospitals. The answers to these questions have been admirably summarised by Dr. Steele of Guy's Hospital and Dr. G. V. Poore.

The questions were forwarded to the twelve general hospitals which have medical schools associated with them, and to one special hospital —the Royal London Ophthalmic. Thus, the answers were drawn from very important sources, if not from a large number of institutions.

By an analysis of the returns, it was found that, in the year 1877, 539,311 out-patients were treated at the thirteen hospitals referred to. Of this number, 238,303 were furnished with cards for continuous treatment, while 301,008 were summarily dealt with on their first application, as casualties. There can, therefore, be no doubt about the enormous number of persons who resort to our charitable hospitals and dispensaries. It may safely be set down at one million.

It appears that the system of requiring governors' letters is being gradually abandoned. This is a step in the right direction, for the "ticket system" has been a great obstacle to reform. "In seven of the thirteen hospitals, the practice of requiring governors' or subscribers' recommendations before patients can offer themselves for treatment has been entirely given up, while in the remaining six the custom has been greatly modified. The total number who came fortified with these recommendations in the year under consideration (1877) amounted only to 55,000, or about one-tenth part of the entire number relieved."

The accommodation reserved for out-patients can scarcely yet be said to be all that it should be. Some, at least, of the large hospitals give very inadequate space. Thus the charges of overcrowding have not yet been fully met.

The time during which patients are kept at the hospitals, waiting to see the doctor or to receive their medicine, varies considerably—"the period ranging from a maximum of seven hours at Guy's to a minimum of two hours at St. Mary's and the Royal Free." Indeed, it seems that working people may easily spend half-a-day on a visit to the hospital. No wonder, then, that "at two large hospitals, where the patients are kept waiting longest, refreshment-bars have been established, where refreshments may be had at a trifling cost."

"Though it is pretty generally admitted that the numbers attending the out-patient department at all the hospitals are inconveniently large, there are only four at which patients are occasionally sent away without being prescribed for (Guy's, St. Thomas's, St. George's, and Westminster). The numbers so sent away average from 20 to 25 on special days of the week at each of the four hospitals; and, as a rule, are limited to the least urgent class of patients. It does not appear that patients suffering from ailments for which special departments are provided are ever sent away without being attended to."

With regard to "hospital abuse", special questions were put, to discover whether, and to what extent, out-patient privileges were sought after either by the well-to-do or by the destitute, and what means, if any, were employed to check such abuse.

Under the head of glaring instances of fraud, only three or four cases were reported. But the question is confessedly beset with difficulties, for the medical man's time and thoughts are fully engaged with the treatment of the case, and he has no opportunity of discovering the pecuniary resources of his patients. His opinions are mainly formed from their appearance and address, and these are as fallacious in hospital experience as in private life. On the question whether the patients are in a position either to remunerate the ordinary medical practitioner or to contribute the small sums required by provident dispensaries, the reporters say: "Five hospitals reply that many of their patients could contribute something; five others give vague or qualified answers; while the remaining three do not venture on a reply." On the whole, it seems to be allowed that many of those who now attend the charitable hospitals could well afford to pay a small sum for their medical treatment. What we want is the means of sifting out these persons, and referring them to separate institutions based upon a paying principle. If the recently formed Metropolitan Provident Dispensaries Association can point out the way in which this may be done, it will confer a great benefit upon the country.

Dr. I. Burney Yeo publishes, in the *Fortnightly Review* for November, a very interesting article on Winter Quarters.

THE LATE INSPECTOR-GENERAL DOMVILLE, C.B., R.N.

There is, we fear, but too much reason to believe that the death of the late Inspector-General Dr. W. T. Domville must be enrolled in the already too-long list of those who have lost their lives from faulty sanitary arrangements in a Government establishment. We are informed, on unquestionable authority, that the condition and construction of the water-closets in Dr. Domville's official residence, at Haslar, were defective, both in construction and working, in many important respects. In the first place, there was a constant insufficiency of water for flushing the soil-pipes and traps; and, to make matters worse, by order of an official of an economical turn of mind, the water-supply was cut off at stated times, and especially at night, so that there was frequently no water in the cistern. Inquiry has elicited the fact that, in consequence of this arrangement, which we feel inclined to characterise in very strong terms, the pans of the water-closet are often choked at night—thus forming a storehouse of mephitic gases to be diffused amongst the helpless sleepers in the sick wards. Examination of the drains in the late Dr. Domville's house shows a brick-drain running under the house to the main drain, with a fall of only from three to six feet in a length of at least three hundred feet to the sea. One of the closets in the house opened on to the main staircase; it had a soil-pipe of about five inches diameter, and at least eighteen feet long, which was trapped at the closet and trapped before entering the drain. There was a ventilating tube in the drain, but on the side of the trap furthest from the house. Here, then, we have all the favouring conditions for the generation of enteric fever: intermittent water-supply, preventing the due flushing of the closets and permitting the accumulation of gases in the cistern; old brick drains, probably allowing the accummulation of sewage under the house; faulty traps, admitting the flow of sewage-gas into the house under certain conditions of tide and atmosphere, converting a great length of soil-pipe into a reservoir of poisonous sewer-gas, having no

possible means of exit but the siphon or D-trap of the closet into the house. These arrangements, or misarrangements, were all carried out under official supervision three or four years since; and it is stated that former residents of the house have suffered from fever of a similar type to that which has just destroyed a valuable life in the zenith of its usefulness. We understand that an inquiry has been demanded into the circumstances of which we here give a sketch. We cannot doubt that it will be a full and fair one; and that the services of some well-known sanitary expert will be called in, as well as those of the departmental officials. There have been too many of these strictly preventable deaths amongst our military and naval officials in London and the provinces; and our boasted advance in sanitary science is indeed of little practical avail, if these simple structural defects, which are as patent as they are deadly, are allowed to continue in the official buildings throughout the country. With reference to the drainage at Haslar, an inquiry is now being made by order of the Admiralty.

TYPHOID FEVER AT CHESTER COUNTY LUNATIC ASYLUM.

WE have been favoured by Dr. Davidson, the medical superintendent, with the following particulars relative to the recent outbreak of typhoid fever at the Chester County Lunatic Asylum. Some time ago, very strong objections were raised in Chester to the sewage of the Asylum being, as it had been for nearly half a century, discharged into a brook which passes near the Asylum boundary and empties itself into the river Dee. The committee of visiting justices of the Asylum therefore decided to utilise the sewage on their own farm land, as the only way of getting over the difficulties with which they were surrounded. An entirely new system of drainage was forthwith carried out, under the directions of a competent engineer of large experience; and since July last, the whole of the Asylum sewage has been distributed over a portion of the farm land where green crops are cultivated, and where patients and attendants are more or less daily at work. With the exception of four cases of small-pox which occurred in December 1876, the institution has been singularly free from all kinds of zymotic diseases, until the beginning of October, when several of the staff gave unmistakable indications of fever of a typhoid character. At the date of Dr. Davidson's writing, two nurses (still in the Asylum) and six patients were suffering from attacks of the malady in a more or less aggravated form. Considerable difficulty has been experienced by there being no detached hospital for infectious diseases; but isolation, as far as possible, has been promptly attended to; while four of the male attendants, besides two servants from the house of the chaplain, have been removed for safety to the fever-wards of the Chester Infirmary. It is remarkable, though it may be only a coincidence, that those attendants first attacked were employed in the field where the sewage is distributed; and Dr. Davidson expresses himself as at present unable to account for the outbreak of typhoid fever in any other way than that it is in consequence of the sewage being diverted from its old course on to the farm land, or as a result of the defective state in which the drains at the house of the chaplain have been found. This house is situated about four hundred yards from the Asylum, and its drainage is in no way connected with the Asylum sewerage. In the absence of details, it is of course impossible to attempt to give any opinion as to the cause of this distressing outbreak; but we cannot but feel a little sceptical at Dr. Davidson's theory as to its causation by the utilisation of the sewage on the farm land. It is not as if the excreta of a whole town, where cases of typhoid might be present, were poured on the land. Here, only the sewage of the Asylum itself is thus utilised; and as Dr. Davidson tells us of no early case which might have set up the disease in others in the fashion that he conjectures, we should be inclined to look elsewhere for the causation of the outbreak. It must at the same time be admitted that there is at present a lamentable lack of knowledge as to the influence of sewage-farms on the health of the surrounding population. It occurs to us that this is an inquiry which might fairly be undertaken by the Medical Department of the Local Government Board, which alone has the funds and the time available for such a study. We can call to mind no inquiry of any sort on the subject, except one by Dr. Buchanan, made in 1873, into the alleged connection between an outbreak of enteric fever and sewage irrigation at Lodge Farm, Barking, which was rendered abortive by its being instituted too long after the occurrence of the cases. We observe that the Royal Commission of Agriculture have included sewage-farms amongst their heads of inquiry, and it may be worth consideration whether some preliminary particulars might not be collected by the Assistant Commissioners as to the influence of such farms on health which might serve as the basis for subsequent more exact study by a scientific medical observer.

BOYLSTON MEDICAL PRIZES.

THE Boylston Medical Prize Committee, appointed by the President and Fellows of Harvard University, Boston, offer a prize of 150 dollars in 1880 for the best essay on either of the following subjects: 1. Antiseptic Treatment: what are its essential details? and how are they best carried out in practical form? 2. Diphtheria: its causes, diagnosis, and treatment. For 1881, prizes of 300 dollars each are offered for the best essays on, 1. The Effect of Drugs during Lactation on either Nurse or Nursling; 2. Injuries to the Back without Apparent Mechanical Lesion, in the surgical and medico-legal aspects. Essays are to be sent to the President of the Committee, Dr. D. H. Storer, on or before the 1st April in each year. The Committee report that no dissertation worthy of a prize has been offered on either of the subjects proposed for 1879.

ARMY MEDICAL SCHOOL AT NETLEY.

THE thirty-ninth session of the Army Medical School commenced on the 1st instant. On all previous occasions, the winter session has been opened on October 1st; but this time the opening was delayed for a month, in the hope that the new warrant in the Army Medical Department would be brought out in the interval, and a supply of candidates for commissions in this branch of the service be ready to proceed to Netley. The hope has proved fallacious, notwithstanding the very long time which has elapsed since Lord Cranbrook, the predecessor of the present Secretary of State for War, informed the House of Commons that steps were being taken towards the introduction of a more satisfactory state of things in the Army Medical Department, and notwithstanding the repeated promises which have been since held out of the new arrangements being on the eve of publication. As a consequence, the only surgeons who have joined the school at Netley this session, as has happened during three previous sessions, are candidates for commissions in the Royal Navy and in the Indian Medical Service. The names of eight gentlemen of the former, and seventeen of the latter class, are shown on the printed lists of medical candidates. The work of the session commenced on the 1st of the present month, as above mentioned, but, as this day fell on Saturday, the formal introductory address was deferred till Monday, the 3rd instant. It was delivered by Inspector-General Dr. Macdonald, F.R.S., Professor of Naval Hygiene, who took a comprehensive survey of the many and various hygienic points on which the preservation of the health of bodies of men, whether sailors or troops, must depend when they are placed under the peculiar conditions to which they are subjected during voyages in ships of war and transports. A few visitors were present during the delivery of the address, in addition to the officers of the Royal Victoria Hospital and the staff of the school. After the lecture, there was a luncheon in the officers' mess-room.

HABITUAL DRUNKARDS.

WE learn, from an interesting article in a Brooklyn newspaper, that Mr. Stephen Alford of London, who has done so much to induce the British Medical Association to use its influence in support of the Habitual Drunkards' Act, is at present in New York, studying the management of the American institutions for the treatment of inebriates. Mr. Alford has visited the principal inebriate asylums of America, having gone to St. Louis, Boston, Brooklyn, and elsewhere, to observe for himself the working of institutions of the kind in those places. From the statements made by Mr. Alford to a reporter of the newspaper in question, it appears the different views expressed

by the many superintendents and physicians he has seen in the asylums he has visited leads him to conclude that there are no defined plans of treatment of patients. This at first surprised him, for the Englishman looked for method and system before anything else; but he supposed it was impossible to treat patients alike when their conditions varied as much in that kind of disease as in others. In one institution (the Inebriates' Home at Fort Hamilton), he found the disease-theory was acted upon; and that was the English view of the subject, as they believed that inebriety was a disease, and that there were chronic cases which could never be cured; hence the greater necessity for asylums of that kind. Mr. Alford spoke highly of the welcome he received at the hands of the physicians of Brooklyn and others interested in the work. The officials of the King's County Inebriates' Home appear to have issued invitations for a reception, at which a considerable number of physicians were present, including Dr. Parish, Dr. Cruthers, and others; and a series of resolutions, complimentary to Mr. Alford and of encouragement in the work in which he is engaged, were unanimously adopted.

CERTIFICATES IN LUNACY.

In the course of the case now in progress of Nowell *v.* Williams, the question came incidentally under the notice of the court, to which we referred lately as a question of practice in lunacy. We expressed then a strong opinion that, to satisfy the requirements of the law, it was necessary that the patient should be seen separately by each of the certifying medical men, and that they should give their certificates separately, without prior consultation. This opinion was very strongly dissented from by a correspondent at the time, and has been the subject of some discussion. It will be seen, however, from the subjoined dialogue, that Lord Justice Coleridge took occasion incidentally to express, in a very emphatic manner, the view which we suggested to be the correct one. The matter is of no small importance as one of lunacy procedure, and therefore we direct immediate attention to the observations of his lordship.

Lord Coleridge, who asked Dr. Sabben for his original certificate, was informed that it had been lost; but a certified copy was produced. His lordship now asked Dr. Newman for his original certificate, and, after some discussion, he was informed that this also could not be found. It was also said that it was the practice for the two certificates to be upon the same piece of paper.

Lord Coleridge said he should hardly think so.

A juror said he could confirm the statement that it was the practice.

Lord Coleridge: Then I say emphatically that it should not be. The object of the statute was that, before any subject of the Queen should have his liberty taken away from him, there should be two separate and individual examinations and certificates; and yet the practice is for two medical men to go together, and then sign two certificates upon the same piece of paper.

Mr. Serjeant Parry hoped that what had been said by his lordship would be made public, so that the practice might be reformed.

The witness, in answer to the foreman of the jury, said that he believed that in this instance the two certificates were upon the same piece of paper.

PRELIMINARY EXAMINATIONS IN AMERICA.

The *Boston Medical and Surgical Journal* of October 9th remarks, that the necessity of testing in some way the previous education of candidates for entrance to the medical schools has gradually been forcing itself on public attention. In the United States, the Michigan, Pennsylvania, and Harvard universities, and Yale College, have instituted preliminary examinations; and there are also similar examinations in Canada at Quebec, Ontario, and the McGill University in Montreal. At the McGill University, the requirements are practically the same as those of the Royal College of Surgeons of England. In Quebec, the subjects for examination are as follows: compulsory subjects—English, French, Latin, arithmetic, algebra, Euclid, history, geography, belles-lettres; optional subjects—Greek, natural and moral philosophy. In Ontario, we find again about the same. In the announcement of the Pennsylvania University catalogue, the following are the requirements stated: first, to write a brief essay, not exceeding a page of foolscap, which will serve as a test of qualifications in orthography and grammar; second, the elementary principles of physics as contained in Fownes' *Chemistry;* third, Latin prose (Cæsar) or any other language than English. At Yale, the following is the list: 1. Mathematics, algebra to quadratics, Euclid, two books; metric system of weights and measures; 2. Latin, translation of easy prose or of Virgil's *Æneid;* 3. Physics, Balfour Stewart's *Elementary Physics* or any equivalent work. At Bellevue, the examination next year will be English grammar and composition, arithmetic, including vulgar and decimal fractions, algebra, and geometry. At Harvard, the candidates are examined in: 1. Latin, the translation of easy Latin prose; French or German may be substituted; 2. Physics, Balfour Stewart's elementary works on physics; 3. English. Our contemporary considers that the amount of general knowledge in the United States is as yet very meagre, and remarks that at Harvard University the method of conducting the examination is so defective as to render it of little value.

HORSE-POX AND COW-POX.

M. Pingaud (*Bulletin de l'Académie de Médecine*, 2e série, tome viii, No. 22) has given an account of an epidemic of horse-pox which appeared in February last amongst the horses of the Setif stud in Algeria, and on which he has made some interesting researches. Struck by the perfectness and beauty of certain pustules, he had the idea of trying some inoculations on the human subject, and for this purpose decided to make use of a strong grey horse only four years old, and of which the excellent health had never changed for a single instant since it had been bought for stud-purposes five months previously. The cutaneous eruption was very mild in this animal; there were only a few crusted pustules in the folds of the pastern. But in the mouth, and especially behind the upper lip, the mucous membrane was loaded with innumerable acuminate pustules, red at the base, opaline and translucent at the apex. Assisted by MM. Viseux and Thomas, veterinary surgeons, M. Pingaud took, as subjects for experiment, seven young recruits who had never been vaccinated, and whose constitution did not show any apparent defect. Six days after inoculation, six of the patients showed vaccine pustules of small dimensions, but which had come out well, and of which the base was scarcely at all inflamed—contrary to what is frequently observed after arm-to-arm inoculation. Four of these subjects were used to inoculate, the next and following days, sixty-four men, of whom eight only had never been vaccinated. The success of the experiment exceeded all expectation; there were forty positive inoculations, or a proportion of 63 per cent. Some of the pustules took on a furunculoid appearance; but there was nothing further. At the same time and under the same conditions, M. Pingaud and his co-workers inoculated several heifers with this horse-pox, so that they had the opportunity of revaccinating a large portion of the garrison with cow-pox. The proportion of successful results yielded by these latter inoculations fell from 64 to 28 per cent. These important researches show that the inoculation of horse-pox is not dangerous, if care be taken to collect the transparent and serous liquid contained in the pearled vesicles of the horse's mouth. The same does not hold good of the virus taken from the pustules of the animal's skin. This latter, harmless in the case of the cow, may bring on more or less serious inflammatory symptoms in the human subject, especially with regard to the lymphatic glands. These may be due to putrid products formed on the spot at the level of the cutaneous pustules, and not to the equine virus itself. The process of inoculation presents two difficulties. As a matter of fact, the pustules of horse-pox, which abound on the internal surface of the lips and in the region of the canal of the tongue, necessarily encompass in their inflamed base a certain number of the salivary glandules of the buccal mucous membrane. It is only on their apex, which projects outward on the surface, that the infective liquid is formed, and that only in small quantity. On the other hand, the dry, fibrous, and hard substances which constitute the principal food of the horse open the scarcely formed vesicles, frequently without giving them time to refill. Thus it is essential to give the animal green fodder. It will be readily

understood, in presence of these difficulties, and, on the other hand, of the harmlessness of the inoculation of the pustules of horse-pox to the udder of the heifer, that the latter method of vaccine cultivation should be preferred, at the risk of obtaining a less active virus. The danger of transmission of glanders by horse-pox inoculation is extremely small, if the facility of diagnosis in this affection be taken into account. The guarantees against it are much more important than those against syphilis in infants. Horse-pox also, in nearly all cases, generally affects young horses; whilst glanders is, in the majority of cases, peculiar to adult and old age.

FALLACIES CONCERNING THE UNIVERSITY OF LONDON.

"A LONDON UNDERGRADUATE" favours us this week with a communication which we publish in another column, which will repay perusal, and which deserves a word of notice, because he expresses with all the *naïveté* of youth and undoubting confidence of an undergraduate, a view which the seniors with whom he is in contact very probably entertain, and which has been expressed from time to time, with more or less circumlocution and reserve, in many letters which have appeared in our columns. He says plainly, if every one is to have an university degree, of what use is it to anybody? The object of a distinction of this kind is, he thinks, "to separate superior men from the common run of practitioners; and this object would be quite frustrated if every man had a degree". He adds: "I declare emphatically that I rejoice to see the examinations increasing in difficulty year by year. The great advantage of the London M.D. is that it stamps its possessor at once, without further questioning, as a very superior man". This is a very intelligible view, and no doubt expresses roughly the idea floating in the minds of those who control the University at present. It is, in our opinion, however, a great and dangerous fallacy. In the first place, the London M.D. does not stamp a man at all as a very "superior man", but only as a man who has gone through a series of examinations spreading over some length of time, arranged, many of them, so as to be very inconvenient to students pursuing an ordinary course of medical education, and some of them touching upon subjects somewhat beyond the necessary bounds of medical education, and requiring a degree of knowledge in those collateral subjects which is probably unnecessary for practical purposes. But, even if it were true that the London University degree stamps a man as a very superior man, that would be to grant the postulate that this is the real object of an University degree, as distinguished from any other diploma; and that is a postulate which we should be very far from admitting. As a matter of fact, there is no degree in the world better considered, or which justly deserves to be better considered, than that of the University of Paris in France, or that of the University of Edinburgh in this country. The degree of the University of Paris requires five years of study, a good series of theoretical and practical examinations with a thesis, through which every student in France must pass before he can be admitted to practice. The examination, therefore, although especially well fitted for the purpose of requiring an adequate curriculum of education and of testing fitness to practise, and therefore eminently respected throughout the world, does not stamp a man as being a very superior man; and that is not the object at which any university has the right to aim. An university degree means nothing more, and should mean nothing more, than that those who obtain it are tinctured with letters and adequately educated for the profession for which it qualifies. On the other hand, its honours should mean much more; and here lies the distinction which "An Undergraduate" and those who argue with him fail to discern. It is the duty of an university, it is for the interest of the public and for the welfare of the profession, that its diplomas and degrees should be such as to be within the reach of every well-educated student, and that they should not aim at separating class from class, but at including all well-educated students; and an attempt to set up the degree of the University of London as something higher and apart from the diplomas of the medical colleges lies at the base of the present anarchy of medical degrees in London. It is a great reproach to the University of London that, of the large body of students obtaining diplomas in London through the colleges, only five per cent. are graduates of that University; and this reproach can only be wiped away by a thorough revision of the order, course, and method of examination. Of course, this will have to be said and repeated many times before it is done, as personal prejudices, private interests, and conservative instincts, will be arrayed against any such change; but it is palpable that, until some such change is made, the University of London must consent to be regarded as an institution which has distinctly failed in one, and that the greatest, of its purposes, however much it may have succeeded in others; and for so long it remains not an University *of* London, but only an University *in* London.

NEW BRANCH OF THE BRITISH MEDICAL ASSOCIATION IN SOUTH AUSTRALIA.

AT a meeting of many influential practitioners of the colony of South Australia, held at Adelaide, on August 13th, it was resolved to form a Branch of the British Medical Association. A preliminary meeting had been held on May 31st, at which the necessary steps were taken, and at which it was proposed that it should be called the South Australian Branch of the British Medical Association. A suitable series of by-laws have been framed, in accordance with the general constitution of the Association. Thirty members have been proposed for election, who were accepted as members of the Association at the last meeting of the Committee of Council. It is intended that the minimum annual subscription to the South Australian Branch shall be two guineas for country members, and three guineas for town and suburban members, which will not only include a weekly copy of the BRITISH MEDICAL JOURNAL by mail, but will also cover the expense of a special quarterly journal, which will be published in Adelaide in connection with this Branch, and which will contain a report of its proceedings and the text of the papers read. The following constitute the first Council of the Branch: Dr. Gosse as President; Mr. T. W. Corbin, M.R.C.S., as Vice-President; Mr. T. H. Hawkins, F.R.C.S., as Treasurer; W. L. Cleland, M.B., as Curator; together with Dr. Gardner, Mr. Clindening, and Mr. Way. It is an instruction to the Council to at once devote their best energies to use all legitimate efforts to amend the Medical Act. At the last meeting of the Committee of Council of the Association in London, it was resolved that, "in recognising the intimation of members of South Australia to form a second colonial Branch at Adelaide, the Committee of Council express their fullest satisfaction at such intention, and will gladly recognise such Branch when formed according to the by-laws of the Association". We feel sure that the members at large of the British Medical Association will learn with pleasure of the formation of this new Branch in one of our most thriving and important colonies, and will recognise with satisfaction the evidence thus afforded of the desire of our colonial medical brethren to enter into more direct professional union with the members of the medical profession in Great Britain. The contributions of our colonial members will always be received with interest and pleasure by our readers generally, and the further progress of these Branches will be watched with the utmost sympathy. Colonial members of the Association can always count on the most cordial reception at any of the meetings of the Branches, or any of the meetings of the Association, at which they may be able to be present in the mother country.

POISONING BY FISH.

A HORRIBLE catastrophe is reported to have occurred during the yearly fair held on September 22nd at the little town of Genitscheck, district of Melitopol, in South Russia. In one of the eating-houses, among other viands, was some whiting prepared in the same way as herrings. In the course of scarcely an hour after eating it, thirty persons died of poisoning, in great pain. The number of persons who became ill is unknown, but was probably very great. Eight peasants, three women, and three children, were overcome by the pain while returning home from the fair, and were found the next day lying dead in the street. It is not yet known whether the poisoning was due to decomposition, or to the introduction of such matters as arsenic and sugar of lead into the salt used in preparing the fish.

COMPULSORY VACCINATION IN INDIA.

THE Hon. Syed Ahmed Khan, C.S.I., has written an important memorandum on the question of making vaccination compulsory in India. He sums up the native objections, some of which are very curious, to the practice of vaccination, as follows: 1. The fear lest vaccination may prove injurious to the children in any way: 2. The suspicion that Government may have some other object primarily in view by thus marking the children: 3. The belief that vaccination interferes with their religion and caste, and that the child vaccinated becomes impure and liable to the wrath of Mata Debi (the goddess of small-pox): 4. The superstition that Government wants a quantity of human blood for the propitiation of a certain deity: 5. Carelessness and apathy in benefiting from vaccination: 6. Absence of a regular and efficient system. The second reason he declares, to the extent of his knowledge, no longer exists; and as to the third and fourth, he says the number who make these excuses must be so very small, and their social position so low, as not to entitle them to any consideration. He himself thinks that the small amount of success hitherto obtained is due exclusively to the causes mentioned in the last two reasons given above (5 and 6). In the Legislative Council held on September 30th, the same gentleman introduced a Bill for enabling local Governments to prohibit the practice of inoculation, and to make vaccination of children in certain municipalities and cantonments compulsory.

A MEDICAL AID SOCIETY FOR NECESSITOUS GENTLEWOMEN.

UNDER this title, a new charitable society has been formed, under the direction of a distinguished Committee, and supported by eminent medical men. "The object of the Society", the prospectus tells us, "is to provide necessitous gentlewomen with the best obtainable advice in time of illness, thereby saving them from the necessity of incurring obligations which, in most cases, would be a great strain on their limited means to discharge, or seeking relief from public charitable institutions, which, although valuable in themselves, being open to all classes alike, gentlewomen naturally shrink from. The Society will have the assistance of some of the most eminent physicians and surgeons in Londons, to act in consultation when desired with the medical officers of the Society. Patients will be required to attend at specified hours, and, where necessary, will be visited at their own homes. The prescriptions of the medical men will be dispensed by the Society's chemists. The physicians and surgeons, also all charges for medicines, will be paid for out of the funds of the Society. Every subscriber of one guinea annually to be entitled to one recommendation ticket; subscribers of two guineas, three tickets; subscribers of three guineas, five tickets. Every ticket will entitle the holder to treatment for a period of three months. Patients requiring treatment beyond that period must obtain a fresh recommendation. All patients must be gentlewomen, and approved by the Committee." These are the main points in the prospectus. Of the benevolent intention of the promoters there can be no doubt; and there can be no doubt, also, that "necessitous gentlewomen" deserve our compassionate sympathy. Yet we doubt whether the Committee of the Medical Aid Society have hit upon the best means of assisting them. The lines upon which this project is started have been tried on a large scale, and have been found very unsatisfactory. The "ticket system" is believed to degrade those who have to seek recommendations, to waste their time and energies in fruitless applications, and, after all, to afford no guarantee that the most urgent cases receive the promptest treatment. If it be bad for working people to go from one subscriber to another begging for a hospital letter, surely the task will be still more distasteful to necessitous gentlewomen. When they *have* obtained the necessary recommendation, they have the painful consciousness that they are being treated as "objects of charity"; and, when they return to their suburban lodgings from the central house where they have been for "the best obtainable advice", they will often find that what they have spent on the journey would have gone far to secure good local assistance on the ordinary terms. Under a somewhat similar title—the Mutual Medical Aid Society—an effort was made a few years ago by Mr. Stansfeld, Sir Sydney Waterlow, Sir James Hannen, and others, to enable persons of limited incomes, by a small annual subscription, to secure for themselves and their families efficient medical attendance and medicine without further cost. This Society came to nothing. Public opinion was not ripe for it. The principles of self-help and mutual assurance were not then so fully recognised in the administration of medical relief as they are now. Yet we cannot but think the Mutual Medical Aid Society aimed at helping persons of limited means in a wiser way than does the scheme before us.

PREVENTIVE MEDICINE IN THE INDIAN ARMY.

IT is notified in a general order by the Commander-in-Chief in India, that when troops are under orders for field service, and before they leave their cantonments, every commissioned officer, soldier, and camp-follower proceeding to the front, will be medically examined to test his physical fitness in every respect to undergo the fatigue and exposure of active service; such a precaution is essentially necessary to avoid crowding the hospitals and sick transport at the commencement of operations. Similar examinations will be made of every individual of the above classes who may join after leaving cantonments, and of individual officers or men specially detailed for field service.

THE RELATION OF PHTHISIS TO DAMPNESS OF SOIL.

ONE of the best pieces of work ever performed by the Medical Department of the Privy Council was the inquiry made by Dr. George Buchanan, in 1867, on the distribution of phthisis as affected by dampness of soil. Though Dr. Buchanan's investigations were limited to Surrey, Kent, and Sussex, the only three counties that at that time had had their minute surface-geology mapped out by the Geological Survey, the conclusions at which he arrived were at once accepted as applicable to the whole of England, and have ever since been a favourite text for sanitary lecturers and orators. That wetness of soil is a cause of phthisis to the population living upon it, which was the great outcome of Dr. Buchanan's inquiry, may now be taken as an axiom; and it has recently received striking corroboration from the reports of two skilled officers of health. The relation of geology to disease is a study of the first importance; and it seems hardly doubtful that some soils are greater predisponents of disease, both specific and non-specific, than other geological formations. As regards phthisis, however, the matter is not one of argument, but of fact. Dr. C. E. Saunders, in his last report on the health of the Watford district, adverts to the fact that Rickmansworth has again the highest death-rate of any place within the jurisdiction of the authority; and observes that it affords a good example of the variation in healthiness which may be expected in a place with a high and fluctuating subsoil water. During 1878, no fewer than 18 deaths from phthisis occurred in the parish (against 6 the year before), being nearly half the number of deaths from that disease throughout the district. Mr. J. M. Fox, the Medical Officer of Health for Mid-Cheshire, reports that phthisis is a complaint unusually fatal in that county, possibly due to the level contour of the soil favouring the retention of ground-damp. In the Nantwich rural district, 54 deaths, or 9.7 per cent.; in the Altrincham rural district, 10.6 per cent.; and in the Congleton rural district, 13.2 per cent. of the total deaths last year were due to this scourge. Mr. Fox very properly insists on the importance of drawing attention to any undue mortality from phthisis: first, because it has a distinct tendency to enlarge the area of pauperism, from the circumstance that it is a disease finding its prey exclusively in adults, lingering and disabling in its nature, and to ordinary persons incurable; and secondly, because much misconception exists as to the preventability of ph
Without denying the determining and sometimes fatal influence of hereditary tendency, yet it is no less an assured induction from a vast number of observations, not now recent, that the continuous breathing of a damp, sodden, and devitalised air has much to do with the promotion and development, if not the distinct origin, of this disease. In it we have throughout the country the outcome of overcrowding, the deficient drainage of the foundations of houses, absence of spouting, and inattention to the ventilation of living rooms and workshops. All these

matters are within easy scope of the powers of sanitary authorities, and attention to them has fortunately as much a tendency to the preservation of property as to the preservation of life. By every order, therefore, that such authorities give for the improvement of the drainage and ventilation of domestic premises, they are aiding in the abatement of a painful and pauperising complaint, now far too prevalent throughout the kingdom. Too much importance cannot be attached to measures controlling the presence of phthisis, as most of its victims are of the bread-earning class; and the influence of sanitary authorities, whether directly or indirectly exercised, may do much to abate the number of such victims.

ARSENIC IN PLAYING CARDS.

MR. JABEZ HOGG writes:—The BRITISH MEDICAL JOURNAL of the 18th ult. directs public attention to the dangers of poisoning by the use of arsenic in playing-cards. The following relates to a case of psoriasis unguium from the same cause. A lady, fond of a rubber of whist, for a considerable period suffered from a painful soreness of the tips of the fingers, extending to the roots of the nails, which became, in consequence, altered and misshapen. She had become convinced of the fact that an hour or two spent in card-playing increased the pain and tenderness; often so much so, that she was unable to deal. This went on, and in the meantime all kinds of domestic medicines were tried without effect. A medical friend, who was one of the party seated round the table, and into whose ear Mrs. W. (the lady in question) was pouring her distress, but whose eye just then caught the bright green backs of the cards as they fell on the table, half-jokingly remarked, "Arsenical cards". He said that the painful condition of his hostess' fingers was, in his opinion, due to the arsenical pigment on the backs of the cards. Mrs. W., it appeared, had a decided preference for green-backed cards. The next day, some of the pigment was scraped off a card and tested for arsenic, and an estimated quantity of arsenious acid crystals was produced. The discontinuance of the use of the cards soon led to a greatly improved state of the fingers. A pack of cards used by my children in a game of forfeits, the backs of which were of a bright green colour, on being examined, turned out to be coloured with arsenite of copper.—Dr. Wallace has sent specimens of the cards referred to in the JOURNAL of October 18th to Mr. Hogg. They are London-made cards; and it is a fact that manufacturers of repute send out hundreds of similar packs of cards, the backs of which are coloured with a poisonous arsenical pigment. Between the shuffling of the cards and the warmth and moisture of the fingers, a considerable quantity of arsenite of copper will be detached and inhaled during the evening. Arsenical poisoning by coloured sweetmeats is a source of danger against which parents should be on their guard. Dr. Russell, the Medical Officer of Health of Glasgow, has furnished Mr. Hogg the following particulars of the narrow escape of two children by sucking the coloured sugar off a toy-watch purchased at a sweet-shop. A medical practitioner reported that he had been called to see two children who seemed to be suffering from the effects of an irritant poison. On inquiry, it was found that they had quite recently eaten some sweetmeats made in the form of a watch. The parents produced one, the outer rim of which was composed of sugar coloured pink. The face was green printed paper pasted on behind, and overlapped the rim fully one-half its breadth. When this green paper was removed, a portion of the green pigment adhered to the sweetmeat; and, on submitting this to analysis, it was found to be arsenite of copper. The quantity on the entire face of the watch was estimated at eighteen grains of arsenic. Dr. Russell adds that "cases of poisoning from sugarsticks wrapped in striped green-coloured paper to attract the bairns" have also occurred. A gentleman also consulted Mr. Hogg for dimness of sight and a severe eczema of the forehead. The eczema had troubled him for several months. Since its appearance, the sight of one eye had become dim. The eruption proved very intractable; and, in one of his visits, Mr. Hogg questioned him closely about the wall-papers of his rooms; but these, he was assured, were non-arsenical. A visit to the country effected what medicine could not; it cured the eczema; but, on his return to his duty, the eruption reappeared. Three weeks ago, on entering Mr. Hogg's room, he placed his hat on the table; and, the bright moroon having at once attracted Mr. Hogg's notice, he suggested that the hat-lining was the cause of the eczema. A portion was removed and examined for arsenic, and a considerable quantity was found. The use of the hat was discontinued, and the eruption quickly disappeared. He was, however, curious about the matter, and thought he should like to be convinced of the poisonous nature of the lining. The hat was taken out; and, placing it on his head, he left home. The forehead became irritable, and on the second day the eruption reappeared. He was now thoroughly convinced. The improvement that took place when he went to the country is explained by the fact, that during his stay he almost invariably wore a wide-awake, and not the usual chimney-pot hat.

VIOLENT DEATHS.

THE deaths referred to different forms of violence in England and Wales, during the third quarter of this year, were 4,161, and exceeded the number returned in the previous three months by 133; they were equal to an annual rate of 0.66 per 1,000, and to 4.0 per cent. of the total deaths. In the agricultural counties of the South-western division, the death-rate from violence did not exceed 0.53 per 1,000; whereas it was equal to 0.82 in the North-western, and 0.84 in the Welsh registration divisions. In the twenty large towns, the deaths from violence were equal to an average annual rate of 0.73 per 1,000; the rates ranged from 0.32 in Leicester and Bradford, to 0.98 in Manchester, and 1.13 in Liverpool.

INQUESTS.

THE Registrar-General states that, during the three months ending September last, 5,913 deaths in England and Wales were registered from the certificates of coroners, being inquest cases; the proportion of inquest cases to total deaths was equal to 5.7 per cent., a larger proportion than in any quarter during the last nine years. In the twenty large towns, the proportion of inquest cases averaged 6.3 per cent.; it ranged from 2.9 in Bradford and 3.6 in Oldham, to 8.2 in Manchester and 9.1 in Birmingham.

DEATHS IN PUBLIC INSTITUTIONS.

THERE occurred last quarter in workhouse establishments, hospitals, and public lunatic asylums 10,163 deaths, or 9.8 per cent. of the whole number of deaths registered in England and Wales. The proportion of deaths in institutions showed a considerable increase upon that which prevailed in the summer quarter of 1878. The average proportion in the nine summer quarters of 1870-78 was but 8.1 per cent. In the twenty large towns, 5,157, or 15.3 per cent., of the deaths were recorded in public institutions; the proportion of institution deaths in these towns ranged from 8.4 in Portsmouth, and 8.6 in Bradford and Sunderland, to 18.4 and 19.7 in London and Wolverhampton. Excluding the twenty large towns, the proportion of deaths in institutions in the rest of England and Wales did not exceed 7.1 per cent.

THE MEDICAL USES OF MILK.

M. BIOT, in the *Revue Mensuelle de Médecine et de Chirurgie*, March, April, and May, 1879, gives a summary of the clinical facts scientifically observed at the Hôtel Dieu at Lyons on this subject. The deductions and conclusions drawn by M. Biot touching the nature of acute articular rheumatism and the efficacy of the milk-regimen in the course of this affection, are based on a number of analyses of urine made as completely as possible, since they give the amount of the total nitrogen, of the urates, of the total chlorides, and of the phosphoric and sulphuric acids. Hs theoretical and therapeutical views on the subject are thus summarised. The fever of acute rheumatism generally lasts two or three weeks, and consequently, either from the time it lasts or on account of the high rise in temperature, causes an enormous consumption of blood-corpuscles, which produces profound anæmia in the patient. The fall of temperature is the best criterion of the cure, and coincides exactly and constantly with the disappearance of the

pains. The tortures endured by patients suffering from acute articular rheumatism are in themselves alone of a violence and tenacity sufficient to induce the physician to endeavour to oppose to this disease a treatment which would unite the three qualities *citò*, *tutò*, *et jucundè*. The milk-diet seems capable of fulfilling this desideratum; it causes the temperature to fall rapidly below hyperpyrexia, and simultaneously assuages the pains in a period varying from three to eight days. The effects from these two points of view are more prompt and more powerful if the patient be submitted to the milk-regimen at the outset of the affection. This milk-regimen, without overcharging the stomach or raising the temperature, by its nutritive power and its facility of digestion, prevents in great measure that characteristic and generally troublesome anæmia left behind by attacks of rheumatism. Besides these general effects, milk-diet has a special action on the urinary function, which is clearly indicated in rheumatism. Milk strongly favours the elimination of all the waste principles accumulated in the organism; its exclusive use causes both the quantity of urine excreted in twenty-four hours and the quantity of all the saline principles dissolved in this liquid to increase rapidly; density, on the contrary, experiences a proportionate decrease. The impetus given to the urinary function by a milk-regimen allows a glimpse of the nature of rheumatism, its near and intimate causes. The analyses of urine seem to show that there is an accumulation of urates or uric acid in the organism of rheumatic sufferers, and that its diminution under the influence of milk is not one of the smallest benefits of this regimen.

UNIVERSITY OF VIENNA.

THE ceremony of inducting Professor Brücke as Rector Magnificus of the University took place on October 11th. The new Rector delivered an inaugural address, in which he advocated the view that medical men should have a sound classical education. The retiring rector, Professor Siegel, reported that during the winter session 1878-79, there had been 3,913 students in the University, viz., 159 in the faculty of Theology, 1,851 in that of Law, 864 in that of Medicine (including students of Pharmacy), and 1,039 in that of Philosophy. The number of students in the summer session was 3,509. During the academical year, the degree of Doctor had been conferred on 246 candidates: 138 in Medicine, 77 in law, 10 in Theology, and 21 in Philosophy.

SCOTLAND.

OPENING OF THE MEDICAL CLASSES IN EDINBURGH.

THE practice of having an introductory address by the principal of the university has now been quietly allowed to fall into abeyance. Each professor, therefore, met his class on Tuesday, October 28th, and either began his ordinary course prefaced with a few words of welcome, or gave an introductory on some special subject. In the Practice of Physic Class, Dr. Grainger Stewart followed the latter course by an interesting address on the history of the clinical teaching of the Edinburgh Infirmary. The classes are already unusually full; and the number of matriculated students is beyond that of any previous year at a corresponding date. The opening address in the Extra-academical School was delivered by Dr. Batty Tuke.

HEALTH OF GLASGOW, LEITH, AND EDINBURGH.

THE mortality in Glasgow last week was the lowest ever recorded in that city, being 14.3 per 1,000. In Leith, the mortality was 15 per 1,000; in Edinburgh also the mortality was 15 per 1,000; there were eleven deaths from zymotic diseases, of which diphtheria, scarlatina, and whooping-cough were the most fatal.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

AT the meeting of this Society, held on October 28th, some interesting specimens were exhibited in connection with the subject of Addison's disease. The first specimens were shown by Dr. Renton, and were from a young girl who died, suffering from the usual symptoms of that disease, the bronzing of the skin being very marked. These were followed by specimens from another case of disease of the suprarenal capsules, that had been under the care of Dr. Wood Smith. What lent considerable interest to the cases was the fact that Dr. Foulis, Pathologist to the Royal Infirmary, presented dissections of the kidneys and suprarenal capsules, especially with respect to the nerves, and showed normal dissections for comparison. On comparing the healthy and pathological specimens, it was shown how the nerves in the vicinity of the suprarenal capsules and kidneys, together with the semilunar ganglia and solar plexus, were involved in the morbid changes.

REGISTRAR-GENERAL'S RETURNS.

FROM the weekly returns of births, deaths, and marriages in the eight principal towns in Scotland, issued for the week ending October 25th, we find that the death-rate in these towns was 17.1 per 1,000 of estimated population. This rate is 2.5 under that for the corresponding week of last year. The lowest mortality was recorded in Greenock, viz., 12.2; and the highest in Edinburgh, viz., 18.9 The mortality from the seven most familiar zymotic diseases was at the rate of 3.0 per 1,000, being slightly under the rate for last week. Acute diseases of the chest caused eighty-four deaths, being nine more than the number recorded during last week. The mean temperature was 48.1.

THE POLLOKSHIELDS MEDICAL MISSIONARY SOCIETY.

AT the fourth annual meeting of this Association, held on the 1st instant, the annual report was submitted by Dr. Laidlaw, and was adopted. From it we learn that, during the past winter, the sum of £113 had been raised, which had enabled them to assist 126 cases, many of which had been supplied with clothing. There was a balance in hand of £56. At the meeting, a proposal was made to establish a convalescent cottage in connection with the Society, and steps were taken for soliciting subscriptions in behalf of the scheme.

TESTIMONIAL TO DR. FERGUS OF GLASGOW.

AT a meeting in the Merchants' Hall, Glasgow, this week, under the presidency of the Lord Provost, at which Drs. Cameron, M.P., Andrew Buchanan, Russell, Mackintosh, and many others were present, the friends of Dr. Andrew Fergus presented him with his portrait on the occasion of the twenty-fifth anniversary of his marriage, and as a testimony of their admiration of his high personal character, his public services, and professional skill. Dr. Fergus has filled the office of President of the Faculty of Physicians and Surgeons of Glasgow, and is a member of the General Medical Council and President of the Philosophical Society of Glasgow. The Lord Provost, in presenting the testimonial, laid especial stress on the practical value of the earnest and persevering labours of Dr. Fergus in improving the condition of public health, labours which constituted a permanent claim on the gratitude of his fellow citizens. He continued in the following words: "As a cultivator and promoter of general science, his services as a member and now as President of the Philosophical Society of Glasgow are well known and appreciated. His professional skill, and his valuable qualities as a friend, have attracted towards him the confidence and esteem of an extensive circle, embracing all ranks of society. It is upwards of two years since this proposal originated. It was on the eve of being carried into effect, when an event happened which would have quite paralysed most men in his position; and if there is anything that could raise him in our estimation, it would be, I might say, the heroism exhibited under the painful circumstances in which he was placed. Those who had occasion to come into contact with him at that time could not but admire the manner in which he surmounted the difficulties of his position. And now, Dr. Fergus, I have to ask you to accept this portrait of yourself as a tribute of the esteem in which you are held by us; and we trust that, when handed down as an heir-loom to your children's children, it will serve to recall with pleasant memories your well-remembered features, and distinguished and useful career." The inscription on the portrait is as follows: "Presented to Andrew Fergus, M.D., M.R.C.S.Eng., member of the General Medical Council of the United Kingdom; President, 1874-77, of the Faculty of

Physicians and Surgeons of Glasgow; President of the Philosophical Society of Glasgow, by private and professional friends, as a mark of their professional regard, and of gratitude for important public labours, especially in the cause of sanitary science. Glasgow, 1879." Dr. Fergus replied in suitable terms. Subsequently, the Rev. Mr. Taylor, in a happy speech, presented to Mrs. Fergus a service of plate, and a writing-table for Dr. Fergus. Dr. Andrew Buchanan and Dr. Cameron moved the customary votes of thanks to the Lord Provost and to the committee of organisation.

EDINBURGH DENTAL HOSPITAL.

THE formal inauguration of the Edinburgh New Dental Hospital and School, situated in Chambers Street, took place on Thursday, October 30th. The Lord Provost of Edinburgh occupied the chair, and was accompanied by the Presidents of the Royal Colleges of Physicians and Surgeons, the Earl of Rosebery, and other gentlemen. The Chairman intimated letters of apology from various gentlemen of standing unable to be present; he congratulated Mr. Imlach on being the first dental surgeon who had been raised to the presidentship of the Royal College of Surgeons, and spoke in favourable terms of the success which had attended the arrangements of the hospital. Mr. Imlach, in his speech, reviewed the changes and advances that had been made in dental surgery during the last few years by the introduction of more skilled practice, more perfect mechanism, and safer anæsthetics. He also referred to the importance of the study of dental pathology in connection with other diseased conditions of patients. Dr. John Smith also spoke, and referred to the history of dental surgery. Dr. Peddie proposed a vote of thanks to Mr. Imlach; and Lord Rosebery, in a humorous speech, proposed a vote of thanks to the Lord Provost; both votes were carried.

IRELAND.

SURGICAL SOCIETY OF IRELAND.

THE following gentlemen were elected by ballot, on Monday last, councillors of the Society for the session 1879-80: E. H. Bennett, C. Benson, P. Bevan, W. Colles, A. Corley, H. G. Croly, E. Hamilton, J. S. Hughes, A. Jacob, R. Macnamara, H. Minchin, E. S. O'Grady, G. H. Porter, W. Roe, P. C. Smyly, M. H. Stapleton, W. T. Stoker, W. Stokes, W. Thomson, W. Wheeler. *Honorary Secretaries:* B. W. Richardson, J. Tufnell.

THE DUBLIN INTRODUCTORIES.

THE Introductory Addresses in the Dublin Medical Schools were delivered on the 3rd instant by the following lecturers: School of Physic in Ireland, Dr. Macalister; Royal College of Surgeons in Ireland, Dr. Roe; House of Industry Hospitals, Dr. McDowel; St. Vincent's Hospital, Dr. Quinlan; Carmichael College of Medicine and Surgery, Dr. Gordon; Meath Hospital, Dr. J. W. Moore.

COFFEE PALACE AT RATHGAR, COUNTY DUBLIN.

OWING to the liberality of a lady resident in Rathgar, a coffee palace has been established recently in that locality. There are a public bar, billiard and bagatelle rooms, and a reading room; the latter being supplied with the daily and weekly papers. The situation has been admirably selected, placed as it is in the neighbourhood of several public-houses; and we trust its attractions may lessen the amount of intemperance by creating a demand for beverages of a non-intoxicating character.

SURGEON-MAJOR REYNOLDS, V.C.

THIS gallant officer, being an old Dublin student and well known to many of his professional brethren in that city, has been most enthusiastically received at the various introductory lectures delivered during the past week at which he has been present. On Saturday last, a dinner was given in his honour, especially, by the Councillors' and Examiners' Club of the Royal College of Surgeons in Ireland, in the Albert Hall of the College. The club had also invited a large number of distinguished guests, including the Right Honourable the Lord Mayor, and representatives of both Houses of Parliament, of the Bench and Bar, the College of Physicians, the Church, the Army, and the Universities. Covers were laid for one hundred and twenty, and the dinner was in every way a success. In returning thanks for the guests, Surgeon-Major Reynolds made an excellent and modest speech, which was received with much applause. He has been ordered to report himself for duty at the Curragh Camp.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS.

AT the annual general meeting of the above Society, held on the 29th ult., the following officers and Council were elected for the ensuing session: *President:* The President of the College *(ex off.)*. *Vice-Presidents:* the Vice-President of the College *(ex off.)*; Sir Dominic J. Corrigan, Bart., M.D.; Alfred Hudson, M.D.; and John T. Banks, M.D. *Council:* Drs. J. Hawtrey Benson, Fitzpatrick, Foot, Gordon, Grimshaw, Harvey, Henry Kennedy, Little, MacSwiney, J. W. Moore, Purser, and W. G. Smith. *Secretary:* G. F. Duffey, M.D.

EPIDEMIC OF MEASLES AT CAPE CLEAR.

AN epidemic of malignant measles (not typhus or typhoid fever, as reported) is at the present time raging in Cape Clear, a small island at the extreme south point of Ireland, about three miles from the mainland, and containing between six and seven hundred inhabitants. These are poor, deriving a precarious living from farming and fishing; and, as may be expected, their abodes are low, dark, and ill-ventilated, the whole family in many instances occupying one small sleeping apartment. Under these favourable conditions for the intensifying of an epidemic, it is unfortunately but little to be wondered at that, when measles was first introduced into the island by a young girl who had been visiting the mainland, it assumed an aggravated form, and spread rapidly. The epidemic is confined to one townland, and here every house has been visited by the disease, which would seem to point to some specially unhealthy conditions in this particular spot. Up to Monday evening, one hundred cases were reported, and twenty-two deaths, of which five were in one family. A building formerly used as a telegraph station has been turned into a temporary hospital, fitted up with twenty beds supplied by Sir Henry Becher. Dr. Donovan of Skibbereen, and Dr. Robinson, are in charge of this hospital, assisted in the nursing department by four sisters of mercy detailed for the purpose. Prompt means have been taken to destroy or disinfect all infected clothes and bedding; and it is confidently anticipated that these combined measures will arrest the further progress of the epidemic.

DUBLIN SANITARY ASSOCIATION.

THE Executive Committee of this body, at their last weekly meeting, having received the resignation of Surgeon-General Crawford as a member of the Committee, adopted the following resolution: "That the Executive Committee of the Dublin Sanitary Association, having learned with great regret that Surgeon-General Crawford is about to leave Dublin for India, hereby return him their best thanks for the interest which he has taken in their proceedings, and the assistance which he has rendered to the association during his residence in Dublin." At the same meeting, attention was called to the Registrar-General's returns for England, Ireland, and Scotland. The general death-rate in twenty English towns, for the previous week, was 22.1; in eight Irish towns, 26.7; and in eight Scotch, 17.1. The death-rate of Dublin exceeded that of London by 10 per 1000, and that of Edinburgh by 14 per 1000. Zymotic diseases in Dublin were twice as fatal as in London and Edinburgh. The registered deaths from zymotic diseases in Dublin during the week ending October 25th, were 49 in number, being 3 more than in the previous week, and 19 over the average number for the forty-third week of the ten years, 1869-78. They included 7 from small-pox, 9 from measles, 13 from scarlatina, and 5 from diphtheria. There were 78 cases of small-pox and 47 of scarlet fever under treatment in the Dublin Hospitals on the latter date.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At a meeting of the Fellows on October 31st, the successful candidates were admitted to the membership and licence.

The question of utilising reports on medical matters sent from the Colonial Office was referred to the Censors.

The documents from the Colonial and India Offices on Leprosy were laid before the College.

A communication was received from the President, relating to the publication of copies of the *Nomenclature of Diseases*, published a few years ago. It was stated that the new edition would probably be ready in two years; but there was a steady demand for a certain number of copies of the first edition, which proved that it was of value.

The following nominations were made by the President and Censors: for the Harveian Oration, Dr. John W. Ogle; for the Goulstonian Lectures, Dr. W. R. Gowers; for the Croonian Lectures, Dr. Cayley; for the Lumleian Lectures, Dr. W. Roberts, F.R.S., of Manchester.

The meeting closed with the report of the Treasurer, Dr. Farr.

DINNER TO SURGEON-MAJOR REYNOLDS, V.C.

The dinner will be held at Willis's Rooms, King Street, St. James's, on Wednesday, November 26th, at 6.30 for 7 o'clock precisely. It has been decided that the cost of the dinner-tickets shall be £1 5s. It is earnestly hoped that all members intending to be present will send their names at once to Mr. Francis Fowke, the General Secretary to the Association, 161A, Strand.

The following gentlemen, in addition to those mentioned in last week's JOURNAL, have notified their intention of being present: Dr. Begley (Hammersmith); Surgeon-Major Boileau; Dr. Bowles (Folkestone); Mr. J. M. Burton (Lee); Dr. R. T. Daniell; Dr. J. A. Eames (Cork); Mr. G. Eastes; Mr. J. Farrar (Morecambe); Dr. J. H. Galton (Anerley); Mr. E. Garraway (Faversham); Mr. W. J. Harris (Worthing); Mr. Ernest Hart; Dr. T. C. Hayes; Mr. W. Hoar (Maidstone); Dr. C. Holman (Reigate); Dr. H. M. Holman (Hurstpierpoint); Mr. J. R. Humphreys (Shrewsbury); Sir W. Jenner, K.C.B., Bart.; Mr. H. Ker (Dudley); Dr. Lanchester (Croydon); Mr. W. Mac Cormac; Dr. Withers Moore (Brighton); Mr. A. Napper (Cranleigh); Dr. G. E. Paget (Cambridge); Mr. J. V. Solomon (Birmingham); Mr. Nowell Stowers; Mr. W. J. Vance; Mr. Charles Vasey; Mr. Frederick Wallace.

ANIMAL VACCINATION.

We have the pleasure to state that M. Warlomont of Brussels has accepted an invitation, from the Chairman of the Parliamentary Bills Committee of the British Medical Association, to come to London in the course of the first week in December, with the view of laying before the Committee the information and experience which he has acquired during many years, in which he has been at the head of the Bureau of Animal Vaccination in active working in Belgium. M. Warlomont's experience is perhaps the most extensive and continuous in Europe, and he has devoted to the subject a vast amount of labour and personal attention. When Mr. Ernest Hart, the Chairman of the Committee, went last July to Brussels, he examined the working of the bureaux of vaccination from the calf in Belgium; he found these two in active operation in Brussels—the one presided over by Dr. Warlomont and the other by Dr. Jansens. Both appeared to be most successful in their operations; and, on inquiry amongst quite unprejudiced and impartial persons in the medical profession, it was found that animal vaccination has steadily gained in favour in Belgium, and that it was found to be both practicable and successful on a large scale. In view of the proposed renewal of Dr. Cameron's Bill for the purpose of facilitating animal vaccination, it seems extremely desirable that the medical profession in this country should be enabled, before the next session of Parliament, to form a judgment upon all the existing data. For this purpose, it is proposed to hold a public conference, at which M. Warlomont and others, probably Dr. Jansens and Dr. de Pietra Santa, both of whom have had much experience in the matter, will lay their conclusions before the profession in London for discussion; and, at the same conference, Dr. Cameron, the member for Glasgow, has consented to attend, in order to explain the provisions of his Bill. In this way, the Parliamentary Bills Committee of the Association will be enabled, in dealing with this important subject, to proceed with the greater security, after having obtained a thorough discussion of the facts, and afforded adequate opportunities to the members of the Association to assist the Committee by their personal judgments, of the data which will be presented. This meeting will be held probably on Thursday, December 4th.

On the subject of vaccination from the calf, Sir Thomas Watson writes this week to the editor of the *Pall Mall Gazette*: "Several letters have lately appeared in the *Times* newspaper respecting what is called animal vaccination. In one of the numbers of the *Nineteenth Century*, vaccination on and from the calf was earnestly advocated by me as carrying with it the potential extinction of the only valid objection that can be alleged against vaccination in general; and justifying, therefore, the needful compulsion of vaccination by force of law. The anti-vaccination party have attempted to enrol me among the writers who have adopted their views. I ask leave, therefore, to inform you and your readers that my sole object has been, and is, to prove that by vaccination, properly and universally effected, the hideous, disfiguring, dangerous, and, in a great majority of cases, fatal distemper small-pox may with certainty be extirpated from this country—I might say from this world."

OPENING OF THE NEW EDINBURGH INFIRMARY.

On Wednesday, October 29th, an event of the highest importance and significance in the history of the Edinburgh Medical School took place. The new hospital, which has occupied about nine years in building, was then formally opened by the Lord Provost, in the presence of the magistrates, town council, senators of the College of Justice, the University professional staff, presidents and fellows of the Colleges of Physicians and Surgeons, managers of the Infirmary, deputations from the several Presbyteries, and other public bodies. Although the day was dull and drizzly, a very large concourse of the general public, students of medicine, and others, assembled to witness the ceremony.

The Lord Provost, in declaring the buildings open, said that it was about a century and a half since the old infirmary was built. Its erection was the result of an effort worthy of Scotland and of the generation which then lived. Money flowed in for the buildings in a way that took the community by surprise, and tradesmen who had little money to give helped on the work by the labour of their hands. And when its doors were open, a corresponding spirit of liberality prevailed. As the old invitation expressed it, they were open "to all the curable distressed, from whatever corner of the world they came, without restriction"; for unlike many other hospitals, to it all were welcome, whatever was their nation or creed. Each year there were treated within the walls of the institution about five thousand suffering human beings, among whom were persons from all quarters of the globe; and, in addition, upwards of ten thousand out-patients obtained the benefit of high professional skill. The old infirmary consisted of a medical and surgical hospital. For a long time, it had been felt that the former was not adapted to the requirements of modern science, and it was resolved that it should be rebuilt on the old site. About ten years ago, a committee was appointed to raise money for this purpose. They held between fifty and sixty public meetings in Edinburgh and other places in Scotland, when the case was stated and assistance asked. The response to the appeal was worthy of the object, and a subscription was raised greater than had ever been obtained in Edinburgh for any benevolent object. In consequence of this great success, the original plan was abandoned, and it was resolved instead to erect a complete infirmary, having both medical and surgical wards. The late Mr. David Bryce was employed as architect; and, after visiting the principal hospitals in this country and elsewhere, he prepared plans which, having been carefully considered by the medical and surgical officers of the Infirmary, by the Royal Colleges of Physicians and Surgeons, and other persons qualified to give the best advice, were subsequently approved of by the managers. Much anxiety had been felt as to the means for supplying the furniture required, but that had happily been removed. The gratitude of the managers was due to the ladies of Edinburgh, to public bodies and private individuals, for all they had done; and the Lord Provost delighted to remember, in connection therewith, the fact that six thousand female domestic servants of Edinburgh voluntarily organised a collection among themselves, and handed over to the institution £534 to furnish two wards. Yet all the money that was required had not yet been got. He believed that the cost of the buildings and the necessary furniture, together with the grounds on which the hospital stood, measuring eleven and a half acres, would be about £345,000. After using the money at the disposal of the managers, and supposing the old infirmary realised when sold what was expected, there would remain a deficit estimated at not less than £30,000; and it was to be hoped that friends of the institution would make such contributions that this amount might be speedily found. It would be for the managers to take steps to preserve a record of the subscriptions received, so as to keep in permanent remembrance those who erected and furnished the magnificent hospital.

Hitherto there had been shown a wonderful liberality. He remembered large subscriptions, many of them £1000 each; ay, and one of £5000, which a lady gave to endow a ward, which ward she also furnished. He hoped that, like its predecessor, the new infirmary would, free from encumbrance, be bequeathed as a pious gift to posterity. He congratulated the University of Edinburgh on having such an institution in connection with its renowned medical school, whose union with the Royal Infirmary had from the very first been of the closest possible kind, each giving and receiving benefits from the other, and both of them flourishing and growing in strength together. He congratulated the Royal Colleges of Physicians and Surgeons, and the subscribers to the building and furnishing funds, on having an infirmary which stood in the front rank of all infirmaries. "And now, in the name of the managers, I declare it open for the reception of patients; and may God Almighty grant that its management and the support which it will continue to receive will be such that, as has been said in the past, it will in the future stand out from among all our charitable institutions, permanent as the Castle rock from the midst of our homes."

Dr. Peddie, President of the Royal College of Physicians; Mr. F. B. Imlach, President of the Royal College of Surgeons; and Sir Robert Christison, also spoke.

The Infirmary is placed in the grounds—about eleven and a half acres in extent, which belonged to a charitable institution for the board and education of young boys whose parents had belonged to the merchant class. Some time ago, several of these charitable institutions in Edinburgh were broken up to form day-schools; and in this way the managers of the Infirmary, chiefly at the instigation of the late Professor Syme, acquired the buildings and grounds. The buildings thus purchased have been utilised for the administrative department. In front of them, facing Lauriston and George Heriot's Hospital, are the four large pavilions and central tower which form the surgical part of the hospital; while behind them lie four equally large pavilions for the medical and gynæcological departments. All the pavilions are in communication by corridors, etc. The plan of arrangement is thus somewhat like that of St. Thomas's Hospital in London, only that the pavilions are longer and are arranged in two rows. The situation of the Infirmary is beautiful, and well adapted for the purpose. In front, it is bounded by George Heriot's Hospital; while behind there are large public parks stretching for a considerable distance south. The roads surrounding on three sides are only open to foot-passengers; while, in front, wood-pavement will dull the din of general traffic and give that quiet so essential to hospital patients. Each pavilion embraces, besides basement and attics, three extensive floors, and every floor constitutes a ward, complete in itself, and capable, if need were, of being isolated from the rest of the hospital. The several floors are connected by means of a spacious staircase, and each opens out from the wide corridor running at right angles to its upper end. In the corridor are openings communicating with hydraulic hoists—one for sending up the ward dinner, the other for the conveyance of patients. Other openings are intended for the disposal of soiled linen and of ashes and sweepings. There is also a set of fire-extinguishing apparatus. The ward proper is reached through a wide passage, on each side of which are apartments connected with its working; viz., a kitchen for special cookery in particular cases, a chamber with two beds for paying patients, and a room for convalescents. For the head nurse in charge there are a comfortable bed-room and a sitting-room commanding, through glazed openings, a full view of the ward; a similar apartment, on the opposite side of the passage, being appropriated to the doctor in attendance. There is also a large recreation-room for patients, and also for tutorial and clinical demonstrations. The ward proper occupies the remainder of the floor, its width being 28 feet; its length, in the Surgical House, 75 feet 8 inches; in the Medical House, about 36 feet more; and the height from floor to ceiling 15 feet. The walls are plastered with cement and faced with parian; while the floors are constructed of pitch pine well varnished. On each side are the windows, their upper sashes hung upon central pivots. Between the windows are placed the bedsteads; some being so contrived that the mattress and framework may be lifted bodily, and all fitted with screws by which a patient may be raised to the sitting posture. The heating of the wards is by four open fireplaces; the corridors are warmed by steam-pipes. Galton grates are largely used. Apertures close to the floor admit fresh air from the outside; while under each bed is an opening communicating with an extracting flue, carried up through the wall to one of the ventilating towers, where a warm-water cistern, connected with the heating apparatus, is expected to produce the necessary updraught. The gas-burners are fitted with hoods, through which the products of combustion may pass out of the ward. In the end towers are lavatories and other conveniences, cut off from the ward by intercepting lobbies, and fitted up with Jennings' apparatus; and here is a door giving access to the outer balcony, on which, in fine weather, patients whose cases allow it may enjoy the air and sunshine. In the attic of each block are dormitories for the nurses attached to the pavilion, with due provision of bath-room, lavatory, etc. In the basement of each pavilion of the Medical House is a large well-lighted room, with southern outlook, to be used by convalescents in connection with their visits to the airing-ground. There is ample accommodation for pathological and *post mortem* examinations, for surgical operations, and clinical medical demonstration and lectures. There are, in addition, the usual special wards for the eye, syphilis, etc. The total number of beds is about six hundred. The amount of space provided for each patient varies from 2,350 to 2,380 cubic feet. Of the class-rooms provided for surgical and medical teaching respectively, one in each house is to be allocated to the University, the other to extramural clinical lecturers. The clinical surgery lecture-rooms, especially the University one, in the east wing of the Surgical House, are considered excellently adapted for the purpose; and if those in the Medical Hospital should prove rather small, that defect can be remedied. The ample size and abundance of light in the wards will, it is expected, greatly facilitate ward teaching. Our readers will thus see that the Edinburgh School has made a vast stride in its means of surgical, medical, and gynæcological teaching. Professorial and tutorial demonstrations can now be given with an ease and satisfaction both to teacher and student which were unattainable in the old Infirmary. It must not be thought, however, that the medical staff and students have left the old Infirmary without regret. They must all feel that the grimy and dingy wards have had a great history which their new successor has yet to acquire. Liston, Lizars, Syme, Alison, Simpson, Bennett, Laycock, Begbie, and Christison, are some of the great names intimately bound up with its past career. Let us hope that the present and future staff of the most modern British hospital will gain for it as great a reputation.

THE OPENING OF THE NEW SCHOOL BUILDINGS AT ST. BARTHOLOMEW'S HOSPITAL.

On Monday last, November 3rd, this edifice was opened by the President of the Hospital, H.R.H. the Prince of Wales. The day was fine, considering the time of year, and the ceremony was extremely picturesque. It took place in the new museum, at one end of which a dais, covered with red cloth, was erected; upon this were placed two gilt arm-chairs, covered with crimson cloth, for the Prince and Princess, and seats for the treasurer and almoners. The galleries were lined with students, who greeted the entry of the illustrious visitors and of their own staff with the most hearty yet orderly applause. The ground-floor was covered with seats for members of the staff, students, old Bartholomew's men, and visitors, including a great number of ladies. Sir Sydney Waterlow, the Treasurer, addressed the Prince and the company, detailing the well known history of the hospital, naming illustrious members of its past staff, and noting the recent great increase of the yearly entries of students. The Prince replied by expressing his respect for the institution, and his satisfaction for the highly flourishing condition of the medical school, and declared the new buildings to be open. The opening ceremony was followed by a luncheon.

The new school-buildings constitute a fine, lofty, stone-faced block, the outer aspect of which is in Giltspur Street, on the site of the old entrance-gate so familiar to past students. The architect is Mr. I'Anson. There is no street-entrance to the new buildings, and the old hospital-gate facing Smithfield is now made the principal entrance, and admits carriages as well as foot-passengers into the hospital square. Over the granite slabs which lie above the uppermost windows of the new buildings is carved the inscription, "Schola Medicinæ Sancti Bartholomei, A.D. MDCCCLXXVIII". The entrance is close outside the south-west corner of the quadrangle, looking down the paved pathway in front of the old museum and dissecting-rooms. Its doors are of polished oak; and over them is a green marble-slab, bearing, in gilt letters, the text, "Whatsoever thy hand findeth to do, do it with thy might". The entrance opens on to a wing for the lift and the staircases, which are very wide. On the ground-floor is the library, which is a very handsome room, nearly a hundred feet in length, thirty-six feet wide, and twenty high. It has seven tall windows looking towards Giltspur Street, with three additional windows at the south end, and three towards the east aspect. All the woodwork, including the parquet floor, the book-cases, and railings of the gallery (which completely surrounds the room), are of oiled oak. The book-cases project from the walls towards the middle of the room, leaving between them recesses for readers, and are so arranged that the rows of books in contiguous shelves face each other across these recesses. The middle of the room is occupied by two stacks of hot-water pipes, covered at the sides with

iron-grating, and topped with Minton's tiles. At each end of the room is a fire-place, and the room can be lighted at night by three sun-burners, and also by gas-wings along the sides. On the landing of the staircase above the library, is a stone coffin, probably Roman, which was found in excavating for the foundations of the buildings, and contained two skeletons. The first floor is taken up by a large laboratory for practical physiology, which, by a sliding wooden partition, can be made into two, when an extra class-room is required, a separate door opening in that case into each division. Having large windows on three sides, this room is capitally lighted; its floor is of deal, and it is warmed by pipes, as in the library; it is fitted up with sinks and other necessary laboratory appliances. Above this laboratory is the museum, which, being very high, gives a very striking idea of the height of the building to the visitor, who has already passed two storeys in ascending the staircase. This museum somewhat resembles one of the larger divisions of the museum of the Royal College of Surgeons, but the entrance is by two glazed doors at one side; the floor is an oak parquet, not stone; the shelves are not only in the two galleries, but also along the sides of the room on the ground-floor. The ends, both floor and gallery, are taken up by glass-cases. The galleries are conveniently broad, which is calculated to put the glass bottles less in jeopardy than is the case at some other museums; their flooring is of pitch-pine, and there are broad mahogany shelves along the railings, arranged so as not to encroach on the footway by projecting too far inwards. The roof is a high lantern-light, with iron ties. No specimens had been transferred to the museum on the day of the opening. On the basement is the furnace, with a class-room, a room for students who may wish to enjoy for a few minutes between lectures a little leisure—*cum dignitate*, of course—and a spacious cloak-room, with lavatories.

During the afternoon, the quadrangle presented a most lively aspect, being thronged with merry students and splendid equipages, including the gorgeous coaches of civic dignitaries; and His Royal Highness left at three o'clock, amongst the cheers of the crowd within, and of the multitude without, the hospital.

BRITISH SURGERY IN AMERICA.

THE *New York Medical Record* for October 11th contains an interesting report of the opening of the new Library Hall, in which will be held in future the meetings of the New York Academy of Medicine. The chair was occupied by Dr. Fordyce Barker; and it appeared from the reports read that the entire cost of the new building and the improvements in the old building had been provided for by subscription without the creation of any debt. After an introductory address congratulating the Academy upon the building and library with which it was now endowed by the liberality of some of its members, the chairman presented to the Academy a marble bust of Mr. Spencer Wells. In doing so, he addressed the meeting in the following words:

"A few months since, a monument was erected in the town of Danville, Kentucky, in honour of McDowell, the surgeon who first successfully performed an operation which now must be conceded to be the greatest surgical achievement of the present century. It was a tribute due from the profession to one of its great men. The operation is now accepted as one of the valuable additions to our means of saving many loved lives. It has been successfully performed in this country in many hundreds of cases by Atlee, Kimball, Dunlap, Peaslee, and others. Many of us can remember when it was denounced by the most prominent men in the profession, both at home and abroad, as an operation so hopeless and desperate as to seem unjustifiable, even in the face of surely impending death from ovarian disease. Yet, within a recent period, T. Gaillard Thomas has performed the operation in twenty-two cases, with but a single death.

"The great work of our lamented Peaslee was dedicated to the memory of Ephraim McDowell, the Father of Ovariotomy, and to Thomas Spencer Wells, the greatest of ovariotomists. The latter has performed the operation nine hundred and fifty-eight times, and, according to the calculations of Lord Selborne, late Lord High Chancellor of England, made in 1875, and based on five hundred operations, he must now have added to the life of woman in Great Britain but little short of twenty thousand years of health, of usefulness, and happiness. His previous valuable contributions to general surgery have been comparatively forgotten in the great fame he has acquired as an ovariotomist. How it has happened that one whose name is one of the chief glories of England as a benefactor to humanity has not ere this received the highest honour which Government ever bestows upon medical men would be a mystery to us on this side of the Atlantic, did we not recall the fact that it has long been the custom of courts and of governments to confer the highest honours on those who are most successful in destroying life on a large scale, and not on those who save life. Feeling strongly, as I do, that it is a wise and good thing for the profession to cherish a warm admiration for those of our number who make positive contributions to our literature and to science, and who really accomplish great results, I beg leave to present to the Academy a marble bust of Mr. Spencer Wells. It must greatly add to the interest with which it is examined, when I add that it is the work of one of our profession, the artist being the eminent ophthalmologist Richard Liebreich, who, in addition to the laurels which he has earned in ophthalmology, in science, and in medical literature, must now add those of success in sculpture, which hardly any amateur has ever attained and most professionals might envy."

Subsequently, Dr. Acland of Oxford, who was present, made some observations upon the advantage of such institutions upon the ameliorations in the hospitals and colleges of America which had taken place during the time which had elapsed since his last visit to America, and referred to the advantages of combination of medical colleges, and the importance of the creation of a National Board of Health. Finally, in the name of his countrymen, he thanked Dr. Barker for the honour he had done to his friend Mr. Spencer Wells, and the Academy for the singularly pleasant illustration which had been given by the meeting, of the unanimity of result which might be obtained by those who contributed of their wealth, and those who prosecuted their profession in the saving of human life.

A telegram was received from the late Mr. Callender, who was at the time at Philadelphia, announcing his inability to be present on account of his serious illness. Dr. Gross of Philadelphia addressed the assembly; and subsequently Dr. Billings gave a brief report of the National Medical Library at Washington, which had been rapidly organised by him, and which contained about seventy thousand volumes, and about one thousand titles for cataloguing. This, he said, was probably the best practical medical collection in the world, and that fact was due to the completeness of its folios of journals and periodicals. The value of a library depended very much upon the nature of its catalogue. The index catalogue of the National Medical Library would give the names of authors and subjects, and there were probably about eight thousand subjects in the classification.

THE WAR IN ZULULAND: THE ADVANCE ON ULUNDI.

A CORRESPONDENT sends us the following notes.

I.

I must rectify a mistake which I made in my last letter, in which I stated that no ambulances accompanied the column from Entonganini Camp on the advance to Ulundi. I find that four were taken with the main body and four with the flying column: mule-ambulances, but having a span of eight oxen each instead of mules, in consequence of the difficulty about transport-forage, which was given by the military authorities as a reason against taking any ambulances. But the absolute necessity of having them was so strongly advanced by the medical department, that consent was obtained. I am quite of opinion that the difficulty about this transport-forage was imaginary, as the ambulances went down to the Umvalosi laager empty; and forage for ten days—the number for which rations were taken for the troops—could easily have been carried in the empty ambulances. But, when the medical history of the campaign is written, a great many errors will have to be recorded against the military authorities. If ambulances had been present inside the square on the day of the engagement, a shelter could have been provided for the dressing-station, which was absolutely under a heavy fire the whole time: the result of a want of forethought, although every argument was employed by the medical department for the purpose of taking a sufficient number of wagons. There were only four Ashantee cots and fourteen stretchers with the bearer company, and two per company regimental transport, making a total taken of fifty on the field. The wounded exceeded this number, for which bearers had to be even provided from amongst the European and native soldiers; and it was fortunate that so few were injured, or it would have been a serious question how to remove them. Many slight cases were carried on the ammunition mule-wagons; and it has been said, if mules for these carts were taken, why not mules for the ambulances also? As it happened, and with the strenuous exertions of the medical staff, every wounded man was provided for in the best possible manner. The number of killed amongst the white troops is not quite clear; but I should say about eleven, exclusive of two of the 13th Regiment who died next day. The wounded admitted to hospital I believe to have numbered forty-seven of both the main and flying columns; but this did not embrace many slight wounds which were dressed and the recipients discharged at once, or cases that attended hospital for a day or

two to be dressed. Ten officers were wounded, three of whom slightly. Including these, I believe that the total number of white troops injured exceeded seventy; with about twenty natives also hit (Native Contingent, Basutos, and hospital stretcher-bearers). It was surprising that the casualties were so few; but the Zulus are very inferior shots, or their bullets must have accounted for many another life. The admissions to hospital included one sergeant of the Royal Engineers, three men of the Royal Artillery, one officer and seven men of the 1-13th Regiment, one officer and six men of the 21st, one officer of the 24th, two officers and nine men of the 58th, five men of the 80th, one man of the 90th, eight men of the 94th, one officer and two men of the 17th Lancers, three officers and four men of the irregular forces; but others were only slightly hit and did not require admission. Many of the bullets came from behind, over the heads of the opposite face of the square. There were many wounds in close proximity to vital parts, which just escaped; two cases of wound of the head, with partial paralysis of the opposite side. The general damage done to bones was not excessive, according to the number struck; only nine were cases of fracture, I believe. The chest-wounds were all immediately fatal. One perforating wound of the liver and diaphragm did not kill its recipient for sixteen days. A pentrating wound of the head behind the right ear is doing well, with the bullet still lodged. I will write a longer account later on.

II.

In my last short letter, I promised to give you a brief account of the wounded. It is not an easy task, however, doing so, without being in some degree connected with them. The number of killed in all was about eleven, and two others died before reaching the encampment. One of the former was Captain Wyatt-Edgell, 17th Lancers; and almost all the fatal cases were from penetrating gunshot-wounds of the chest or abdomen. No wounds of the head were noticed amongst the killed, whether white or black. About sixty wounded were treated in the hospitals; but there were at least another twenty whose injuries were so slight that either a single dressing sufficed, or they were not brought under the surgeon's notice at all. Many were hits from spent bullets, producing only black marks. There is scarcely a doubt that, if the Zulus had been better shots, the casualties would have been five times as numerous. A great many bullets went just over the heads of the men aimed at, to drop into the centre of the square, or to strike from behind those men forming the opposite side. More than a third are believed to have been wounded from behind, and nearly another third from the side. This will at once give an idea of the sort of firing practised by the Zulus at Ulundi, and of the manner in which our soldiers escaped the bullets from the front, only to be hit from behind and from each side. I am told that Martini-Henry bullets caused many wounds; some of the former piercing through the structures of the limbs, and killing, by the violence of their transit, the vitality of a considerable portion of surrounding tissue; whilst other bullets of the Martini kind merely lodged, not as spent ones, as evidenced by the horizontal direction of the wounds, but having evidently been fired, not from a Martini rifle, but from some other sort of gun—probably one of the large elephant-guns in use by the Zulus, from which they fired two sorts of round balls, moulded and hammered.

Ten officers were wounded, of whom Lieutenant Pardoe of the 13th Regiment was most severely. A bullet crashed through both thighs, coming from the side, effecting a double perforation. The right femur escaped; but the ball, entering the left from the inside, shattered the bone, a spiculum of which wounded the femoral artery at Scarpa's triangle, causing a traumatic false aneurism to appear three days afterwards. It sensibly diminished, but suddenly burst on the ninth day. Amputation was done high up; but he never rallied from the shock of the operation. Lieutenant Jenkins (17th Regiment) was struck in the lower jaw by a spent ball, which broke the bone in two pieces; a piece of the ball still remains. Major Bond (58th Regiment) had his right forearm shattered by a large round ball. Lieutenant Liebenrood (of the same regiment) was wounded in two places in the left ankle, where the joint was spared; and also in the right arm, by an immense bullet. Captain Harbord (Natal Light Horse) received a bullet through the right elbow-joint, but was apparently doing well, I believe. Private Shepperd (13th Regiment) died seven days after the battle from a penetrating wound of the left chest. He latterly suffered from great syncope; and a blanched countenance, gradually intensified, revealed the fact that internal hæmorrhage caused death. Probably the internal mammary artery was injured. Private Maroney (58th Regiment) survived nine days with a penetrating wound of the left groin, but succumbed to peritonitis and gangrene. Private C. Johnson (94th Regiment), whose arm has been since amputated at the middle point, was hit by a ball, which passed throngh the front of the right forearm and passed out at the inner side of the olecranon, implicating the joint and injuring severely the ulnar nerve. Private Caldon (21st Regiment) has still a bullet impacted in the antrum of the right maxillary bone, which entered behind the right ear through the mastoid process. Private Penfold (94th Regiment) received a ball in the back at the left side of the spine, fracturing the tenth rib; it lodged beneath the skin, and was cut out over the middle rib of the right side, having passed through the diaphragm and the right lobe of the liver, without any abdominal symptoms being exhibited for sixteen days. He died, however, on the twentieth day after the receipt of the injury. Private J. Waite (17th Lancers) is doing favourably after a ball passing in under the angle of the left lower jaw, perforating the throat—that is, the pharynx—and making its exit under the angle of the right jaw. Private S. Swaine (13th Regiment) received a bullet behind the right ramus of the lower jaw, which was slightly fractured; it passed between the trachea and œsophagus without doing injury, and was removed from a position anterior to the left carotid artery. In the case of Private T. Smith of the 58th Regiment, a ball entered at the front of the shoulder below the acromial end of the clavicle. Passing downwards and outwards, it escaped below the posterior edge of the acromion. The head of the humerus was much injured, and profuse discharge resulted.

There were many simple perforating wounds of the limbs without fracture; and it was marvellous how, in many cases, the bone escaped being even touched, lying intermediately in direct line between the apertures of entry and of exit. There were four wounds of the head—none serious. One bullet came under the limber of a gun and struck Gunner T. Mareton, R.A., in the scrotum, denuding the left testicle, from which he suffered the greatest agony. Trooper Meyers of the Reafe's Rangers was hit on the outside of the left arm, the ball passing through and fracturing the humerus; then entering the chest, it escaped posteriorly near the outer border of the scapula. The lung was not injured. Trooper Khaus of the Natal Light Horse had an almost similar injury of the right arm, only that the bullet came more from the front.

In most of the cases of fracture, endeavours were made to save the limb, if possible, I am told; which accounts for the paucity of operations. Indeed, there were only a few cases of fracture of the arm—three, I think; and the symptoms were never such as to necessitate an early operation. The only two cases of fractured thigh were those of Lieutenant Pardoe and one of a wounded Zulu of the "N'gobamakosi" regiment, or "the Invincibles"; and amputation was done in both as secondary operations. There was no case, I believe, of fractured leg; but many bullets passed through the muscles.

Carbolised tow and tenax were largely used for dressing wounds; the latter being in many cases wrapped around the wounded parts, and thus destroying the odour of decomposition in a marked degree. The wounds took, nearly all of them, a healthy tone from the first, the men being generally in splendid health, well fed, and living in the open.

The cases were transferred on July 27th to the base hospital at Ladysmith.

HEALTH OF COLONIAL AND FOREIGN CITIES.

We learn from the Quarterly Return of the Registrar-General that "a summary of the weekly returns with which the Registrar-General is favoured by various authorities abroad shows that the average annual death-rate during the third quarter of this year in thirty-one colonial and foreign cities, having an aggregate population of rather more than thirteen millions, was equal to 27.0 per 1,000. In the twenty-one European cities, the average rate was 27.2 per 1,000, against 18.3 in twenty of the largest English towns. The lowest death-rates in the thirty-one colonial and foreign cities were 18.4 in Christiania, 18.8 in Geneva, 19.3 in Philadelphia, and 19.6 in Amsterdam; whereas the rate was equal to 33.4 in Berlin and St. Petersburg, 34.7 in Bombay, 36.1 in Buda-Pesth, 36.3 in Trieste, and 39.9 in Alexandria. Cholera caused 100 deaths in Calcutta, and 186 in Bombay. The prevalence of small-pox decreased considerably in the Indian cities and in Paris; in St. Petersburg, Vienna, and Buda-Pesth, the deaths from this disease showed a further decline from those returned in the two preceding quarters. The fatality of diphtheria in Paris, Berlin, Vienna, Naples, and New York, though lower than in the preceding three months, still showed a marked excess. Typhus and typhoid fever caused 231 deaths in St. Petersburg, against 460 in the previous quarter; and, in Paris, the deaths from these diseases, which had been 332 and 203 in the first and second quarters of this year, rose again to 307 last quarter. The deaths from measles were numerous in Paris, Hamburg, and Copenhagen. The returns from Berlin show an excessive fatality of diarrhœal diseases, to which 3,125 deaths, principally of infants, were referred during the quarter. The annual death-rate from diarrhœal diseases, which averaged but 1.22 per 1,000 in the twenty large English

towns, was equal to 6.81 in Trieste, 6.90 in St. Petersburg, 6.99 in Breslau, 7.27 in Brooklyn, 7.94 in Munich, 8.13 in New York, and 11.95 in Berlin."

ASSOCIATION INTELLIGENCE.

SOUTH OF IRELAND BRANCH.

THE fourth annual meeting of this Branch will be held at the Royal Cork Institution on Saturday, November 8th, at four o'clock P.M. An address will be delivered by the President, JAMES A. EAMES, M.D.

Business to be transacted :—Election of officers for 1880; election of new members; report of Council.

Dinner at 7 P.M., at Lloyd's Hotel. Charge, 7s. each, exclusive of wine.

Members intending to be present are requested to notify the same to Dr. P. J. Cremen, Camden Place, on or before November 4th.

P. J. CREMEN, M.D., T. G. ATKINS, M.D., *Honorary Secretaries.*

Cork, October 28th, 1879.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE next meeting of the above district will be held at the Bear Hotel, Lewes, on Wednesday, November 19th, at 3 o'clock P.M.: R. TURNER, Esq., in the Chair.

Members intending to make any communications, or to read papers, are requested to send notice of the same to the Secretary on or before Tuesday, the 11th instant, in order that they may be inserted in the usual circular.

Dinner will be provided at the Hotel at 5 o'clock.

As this will be the tenth anniversary of the establishment of these district meetings, it is hoped a large number of members with their friends will be present.

THOMAS TROLLOPE, M.D., *Hon. District Secretary.*

9, Maze Hill, St. Leonard's-on-Sea, Nov. 4th, 1879.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A MEETING of the above Branch will be held at the Myddleton Hall, Islington, on Thursday, November 20th, at 8.30 P.M.: JOHN WOOD, Esq., F.R.S., President, in the Chair.

Papers will be read by—

1. Dr. Fothergill: On Gouty Heart and its Treatment.
2. Dr. Dowse: On Neuralgic Headache and its Treatment.
3. Mr. Henry Baker will exhibit and explain his new invention for the Treatment of Talipes.

THOMAS S. DOWSE, M.D., *Honorary Secretary.*

2, Old Burlington Street, November 5th, 1879.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this Branch will be held at the County Hospital, Canterbury, on Thursday, November 27th, at 3 o'clock: President—Dr. GOGARTY.

Members intending to read papers are requested to communicate at once with the Secretary.

WM. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, November 3rd, 1879.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE second meeting of the Session will be held in the Examination Hall of the Queen's College on Thursday, the 13th instant. The Chair will be taken by the President, Dr. JOHNSTON, at three o'clock P.M.

The following papers are promised.

1. Mr. Bartleet: Notes of a Case of Femoral Aneurism in which the Common Femoral was ligatured, subsequently the External Iliac for Secondary Hæmorrhage.
2. Dr. J. W. Hunt: The Causes of Sudden Death.
3. Dr. C. Warden: Case of Contraction of Hands and Fingers—operation and after-treatment by a new apparatus.

Members are invited to exhibit patients, pathological specimens, new drugs, instruments or appliances, at the commencement of the meeting.

Members are requested to pay their subscriptions to Dr. Rickards.

E. MALINS, M.D., E. RICKARDS, M.B., *Honorary Secretaries.*

November 5th, 1879.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A MEETING of this district was held at Guy's Hospital, on Wednesday, October 22nd: S. O. HABERSHON, M.D., President-elect of the Branch, in the Chair.

Papers.—1. Mr. John Wood (President of the Branch): The employment of Double Extension in Cases of Disease and Injuries of the Spine and Pelvic Joints. A discussion followed, in which Mr. Noble Smith, Mr. Golding-Bird, and Mr. Wood, took part.

2. Dr. F. T. Roberts: Pneumonia of the Apex. The Chairman, Dr. F. Taylor, Dr. Goodhart, and Dr. Roberts, took part in the discussion which followed.

SOUTH MIDLAND BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Bedford Arms, Woburn, on Thursday, October 23rd, at three o'clock; G. P. GOLDSMITH, M.D., President, in the Chair.

Communications.—The following papers were read.

1. Dr. Goldsmith read short notes of two cases of Sacro-Iliac Disease. An interesting discussion followed.
2. Dr. Macdonald (Woburn) read a paper on Perinephritic Abscess. The patient was brought before the meeting.
3. Several instances of Chronic Peritoneal Effusion were related by Arthur H. Jones, M.B. (Northampton Infirmary).
4. Mr. Henry Veasey (Aspley Guise) gave his advice as to the treatment of Cholera and Choleraic Diarrhœa.
5. Mr. R. H. Kinsey (Bedford) related a case of Aneurism of the Posterior Tibial Artery.
6. Dr. Bryan (Northampton) gave the results of his treatment in a case of Intestinal Obstruction.

Vote of Thanks.—It was proposed by HENRY VEASEY, Esq., and seconded by Dr. PRIOR, "That a vote of thanks be given to the President for his conduct in the chair; also a vote of thanks to the officers of the Branch." This was carried unanimously, and the meeting, which was a most pleasant one, terminated about half-past five o'clock.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

ON Thursday, October 16th, this District held the opening meeting of its second session, at the London Hospital; JOHN WOOD, Esq., F.R.S., President of the Branch, in the chair.

The arrangement of the meetings for the session were considered.

Apprenticeship.—A paper on this subject was read by FREDERICK WALLACE, L.R.C.P.Lond. Having alluded to the history of the subject, Mr. Wallace insisted that an apprenticeship in some form should be made obligatory on all. Dispensing of their own medicines was a necessity for the great mass of practitioners, yet students were taught at hospitals merely to dispense drugs already prepared. Again, there were many diseases that could not usually be studied at hospitals—such as measles, scarlatina, etc.—and those formed a large part of everyday practice. There were also to be acquired general business habits; management of patients, or tact; and those could not well be acquired otherwise than in private practice. As to the duration and period of such pupilage, Mr. Wallace thought that it should be for one year, to intervene between the passing of the preliminary examination and entrance at a hospital. He proposed, further, to test the acquirements of pupilage by a matriculation examination, and to examine on anatomy and physiology at the end of the first year, thus shortening the course to those who might be able to pass.—Several gentlemen spoke on the subject, those engaged in general practice being in favour of a modified apprenticeship; those not so engaged being against it.—The PRESIDENT, in noticing some of the difficulties that had been brought forward, urged that the difficulties were fewer when medical education was begun by apprenticeship. Science was not necessarily medical; and probably there would in time be established, at the great centres, schools of science, where others, besides those intending to follow the medical profession, might study. Even board-schools now-a-days taught botany. After an apprenticeship, Mr. Wood considered there should be two years' study of anatomy and physiology, and then two years of hospital work. That the expense would be greater was true; but then all technical education was increasing in expense. In reply to the remark that it would be useless for consultants, Mr. Wood thought that it could do them no harm and might do them a great deal of good. It would enable them better to realise the difficulties of general practitioners.

A resolution was then proposed and carried, declaring that, in the opinion of the meeting, students should, as a substitute for the old term

of apprenticeship, serve a pupilage with a general practitioner, of the minimum duration of twelve months, previously to entering at any hospital school.

Next Meeting.—Dr. Mark Long was nominated to preside at next meeting, to be held on Thursday, November 20th, at 5 P.M., at the Bow and Bromley Institute.

CORRESPONDENCE.

THE LONDON AND THE VICTORIA UNIVERSITIES.

SIR,—In my letter on the degrees of the University of London which you did me the honour to insert in the BRITISH MEDICAL JOURNAL of October 11th, there is a slight misprint, which alters the meaning of the sentence in which it occurs. Speaking of the desire which apparently exists in some quarters for a lowering of the standard of examination, I expressed the opinion that the tendency of this would be to lessen the value of the degrees concerned, to abolish the honours (not "honour") of the profession, and to lower the standard of medical education in general. The examinations for the higher medical and surgical qualifications may be looked upon as bearing the same relation to those for the ordinary licence to practise as do examinations for honours to pass examinations; and the existence of such honours surely exercises a beneficial influence on those who aim at something beyond the mere licence to practise.

The fact appears to be sometimes overlooked, that a distinction possessed by everyone ceases to be a distinction; that an University degree placed within the reach of men who are content to obtain a qualification with the minimum expenditure of time and energy is no mark of higher mental culture and professional training, and therefore ceases to be of value.

The subject of the new Victoria University I did not touch upon in my former letter; but I must confess to my surprise at what seems to me an incongruity between the alleged want and the proposed means of supplying it. Judging from the correspondence which from time to time appears in your columns, what is chiefly desired is a medical degree which can be obtained by men who are already in practice, and who are willing to submit to sufficiently searching examinations, but are not prepared to sacrifice the professional position they have already obtained in order to enter upon the period of residence required by all the British Universities except the University of London. Probably there will always be many men who from various causes wish to obtain a degree under such circumstances. How does the new Victoria University propose to meet this want? By insisting upon residence either at Owens College or at certain other provincial schools.

It appears to me that the University of London, with its freedom from restrictions as to residence, ought to be the University of English medical men; and that, without any lowering of the standard of its more strictly professional examinations, certain difficulties that at present exist might be removed by a judicious revision of its regulations; as, for example, in the way suggested by your correspondent "L.R.C.P. Lond., M.R.C.S.Eng."—I am, sir, your obedient servant,

E. MARKHAM SKERRITT, B.A., M.D.Lond.,
Honorary Secretary and Lecturer on Medicine, Bristol Medical School.

Clifton, October 14th, 1879.

SIR,—In common, I presume, with every other member of the Association, I have read with great interest the letters in your columns respecting the proposed granting of a medical degree by the Victoria University. Conspicuous among these for good sense and sound judgment appear those of Drs. George Birt and Alfred Carpenter.

It seems to me that the need of another medical degree for the medical profession may be classed under two heads.

A man entering the profession wishes some stamp of his ability beyond the diplomas of College and Hall, which everyone takes as a matter of course. He may enter himself at a Scotch university; or he may, if he be otherwise disposed, work up to the high standard of the University of London. No one devoid of prejudice can fail to appreciate the large experience which a clever man can gain at a provincial hospital; why then should such a man, whilst admitted freely to the College and Hall, be practically debarred from an university degree?

Again, a practitioner arrived at middle age finds that his health does not allow or that his circumstances do not oblige him to slave longer in general practice; at the same time that his circle of friends, professional and social, afford him the assurance of a lucrative and pleasant life as a consultant. He would like to add M.D. to his name—a respectable, not a bogus M.D. Where is he to get it?

Let the Victoria University solve these two problems, and be assured that its medical degrees will be heartily welcomed by all who wish well to the medical profession of the future.—Yours truly,

J. CHARLES COMPSON, M.D.

Bridge of Allan, October 14th, 1879.

SIR,—During the last few weeks, I have noticed with extreme regret that many of your correspondents have taken to decrying the University of London, and that their opinions have been—partially, at any rate—endorsed in your leading articles. It would seem to be a common impression that a degree should be within the reach of every student who cares to try for it; but in that case, what is the use of an University degree at all? As I take it, the object of a distinction of this kind is to separate superior men from the common run of practitioners, and this object would be quite frustrated if every man had a degree.

Your correspondent "Edinburgh M.D." states that many consider the Edinburgh degree to be equal to that of London. Suppose, for the sake of argument, that this be true, then there is evidently no case against the University of London, for the value of a degree is estimated by the difficulty of its attainment; so that, according to your correspondent, the Edinburgh M.D. is as hard to get as the London one, hence anything he may have to say as to the stiffness of the London examination is put out of court.

You hinted in your leading article that the authorities of the University, having passed their own examinations, were making the work as hard as possible for their successors. Perhaps on this point my opinion may have some weight; and I declare emphatically that I rejoice to see the examinations increasing in difficulty year by year. The great advantage of the London M.D. is, that it stamps its possessor at once, without further questioning, as a very superior man. The gold medal is, as you say, to the medical profession what the senior wranglership is to mathematical men; and the M.D., without honours, is equivalent to the position of the other wranglers; but it does not follow that because the gold medal in medicine at the M.D. examination is the highest medical honour in the world, that therefore the ordinary M.D. must be made equal to the lowest—quite the reverse. The London University has taken up a position as granting the best degrees obtainable in all branches; and, so long as it fulfils this purpose, it performs the duty for which it exists.—I am, sir, yours sincerely,

A LONDON UNDERGRADUATE.

SIR,—There are no doubt many men who, like myself, have studied at schools not connected with an university, and taken the double diploma. Having entered practice, they afterwards find it would be to their advantage to acquire the M.D. By absurd regulations requiring residence, or limiting a man to forty years of age, they are debarred from obtaining it. The London degree can only be obtained by working up, step by step, from their school-boy days. Let the examination be made as stiff as they please; but why should a man, having taken out his full medical curriculum, be shut out from obtaining a degree? —I am, sir, yours truly, R. M.

THE TEACHING OF PSYCHOLOGICAL MEDICINE.

SIR,—I had no intention of entering into a controversy when I addressed a letter to your JOURNAL, in which I hoped to point out how Dr. Eames's suggestions might be practically carried out, regarding the teaching of psychological medicine. I can only conclude, from Dr. Dowse's reply, that he considers any tuition in this subject a bad and objectionable thing, and that he would prefer medical men to examine insane patients who have no qualification whatever to do so.

As Dr. Dowse has criticised my suggestions *seriatim*, I can only reply in a similar manner.

Dr. Dowse says, "It would be both unwise and unreasonable to submit a general practitioner to the especial study of psychological medicine".

Answer.—Considering the difficulty of the subject, the fact, which Dr. Eames mentions, that every medical man who has any practice at all must meet with insanity sooner or later, and considering the enormous responsibility connected with the steps necessary for incarcerating the insane, it is no more unreasonable to insist upon the general practitioner having a knowledge of insanity than it is to oblige a candidate to have taken so many cases of midwifery or of vaccination.

Dr. Dowse remarks, "The examinations, as at present conducted, tax an ordinary man's brain-power to the utmost".

Answer.—Yes, but upon many unnecessary subjects, as, for instance, an intimate knowledge of Comparative Anatomy, Botany, Latin, and Greek, for which a trifling knowledge of mental diseases might well be substituted.

Dr. Dowse states, "An intrinsic knowledge of varying mental de-

fects is not required to enable a medical man to fill up a certificate of lunacy".

The best answer to this statement which occurs to me at present is to quote a case which happened in my practice within the last month. A gentleman was brought to my asylum suffering from mania è potu. The certificates were filled up by his family doctor and the Medical Registrar of the Westminster Hospital. What the capabilities of the regular medical attendant may have been I know not, but I can answer for the Medical Registrar having diligently attended certain lectures on insanity, and for having, under the usual difficulties, certified to the unsoundness of mind of this patient in a manner that would subsequently clear all connected with the case from any anxious forebodings. It is only just to him to state that his interview with the patient was, as it were, impromptu, and that the usual adviser had had the patient for some days under his observation.

I have no hesitation in saying that the Medical Registrar would not have been able to sign so powerful a certificate if he had not had some preliminary training in this subject.

Dr. Dowse goes on to say, "No ordinary practitioner, who sees perhaps six cases of lunacy" (as I suggested) "in a lifetime, can be expected to do more than to state in plain words his reasons why he considers his patient to be of unsound mind, and a lunatic".

My answer to this is, that to have seen and certified six cases is better than to have seen and certified none. We all know what an impression one case of tetanus, of hydrophobia, or glanders, makes upon the sensitive student's mind, and that even a single case, carefully studied, of any disease, will enable the practitioner to diagnose a second such disorder when seen in after life, when he has no longer an able staff of physicians and surgeons at his back.

Dr. Dowse proceeds to say, "If the general practitioner have his doubts relative to the soundness or otherwise of the patient's mind, he would act most wisely in refusing to sign any certificate at all".

The reply to this statement is simple. In most cases, the practitioner need have no doubts if he were properly trained.

"Under such circumstances", writes Dr. Dowse, "every presumed lunatic should be referred to an expert."

In reply to this, I may state that a gentleman on one occasion refused to sign a certificate for a melancholy patient, who was afterwards admitted on two other certificates to my asylum. I considered this gentleman to be an expert in cases of insanity; but he, doubtless very properly, refused to sign. The relatives were subsequently of a similar opinion, and insisted that there was nothing the matter with the patient's mind. He was accordingly discharged, and, on the same evening, put an end to his existence by cutting his throat at dinner with the carving-knife, in the presence of all his family. I quote this case to show that an experienced expert may occasionally be unable to satisfy his own mind of the mental unsoundness of a patient who is in reality steeped in insanity.

Dr. Dowse concludes by saying, "The broad question at issue in signing a certificate of lunacy, has always appeared to me to consist in a general statement of facts (not theories), etc."

My reply to this is, that any general statement, as opposed to a particular one, is most objectionable, not only to those responsible for the detention of the lunatic, but also to the Commissioners. For example: "He is suffering from delusions of suspicion" would, to my mind, be an exceedingly weak statement in any certificate of insanity; but, to say that "he believes that his brother, with whom he was before on the best of terms, is endeavouring to poison him", would at once describe the delusion of the patient as regards a particular act and a particular person.

Apologising for the length of this letter, which I could not well make shorter, I am, sir, your obedient servant, H. SUTHERLAND.

THE ADMISSION OF STUDENTS TO THE METROPOLITAN SICK ASYLUMS.

SIR,—I notice in the *New Quarterly Magazine* for this month a good article entitled "Workhouse Visiting and Management during Twenty-five Years". Amongst the improvements and reforms suggested for sick asylums and infirmaries is this, that a slight alteration should be made in Mr. Gathorne Hardy's valuable Act passed in 1867, and these institutions opened to medical students for the *clinical* study of disease.

"It is proposed that students of third and fourth years should be admitted, as the larger institutions abound with interesting cases; and how valuable the assistance of these young men would be we need hardly urge, when we find that as many as five hundred patients are sometimes placed under the care of two medical men."

If this change were effected, it would not only be advantageous to the sick poor, but would also make these institutions serviceable for the study of disease, and indirectly a benefit to the public. These sick infirmaries are full of cases which are met with in private practice, but are never seen at a hospital.

The time squandered by students and clinical clerks struggling to see and hopelessly trying to get near a bed, during the rounds of one of the visiting staff to our London hospitals, would be far more profitably spent watching and observing disease in the roomy wards of the large London Sick Asylums; their visits, of course, being regulated under the direction and rules of the medical superintendent. The field of pathological study in these places can be best realised by a glance at the Pathological and other Medical Societies' reports for the past few years.

Further, these institutions, when under proper management, are admirably suited for the training of nurses; and there are numbers of women who would gladly avail themselves of these advantages if facilities were offered.—I am, sir, yours faithfully, SAMUEL BENTON.

Bennett Street, St. James's, S.W., October 29th, 1879.

*** In the paper on the Hospitals for the State in the *Fortnightly Review* of 1866, by Mr. Ernest Hart, which led, on the suggestion of Mr. John Storr, to the formation of the Workhouse Infirmaries Association, and in the programme of that Association, the precise advantages to which Mr. Benton points were much dwelt upon. The admission of students to the wards was insisted on as a matter equally important to the patients and to the general administration. The original draft of Mr. Hardy's Act also contemplated such admission; and it is a matter of great regret that it was subsequently resolved—very unwisely, we think—to close the doors of these institutions against medical students.

THE REGISTRATION OF DEATHS UNDER THE ACT OF 1874.

SIR,—The Registrar-General (George Graham, Esq.) was good enough courteously to acknowledge a letter which I forwarded to him on the 4th June last, suggesting that certificates of deaths should be numbered on the counterfoil and face of the certificate in the same way as bankers' cheques, and that the initial and concluding number of each certificate-book supplied by the district registrar to medical men should be noted by him in a book to be kept for that purpose, when certificate-books were handed out.

The tendency of recent legislation relating to the registration of births and deaths in England has been to obtain as complete and classified a register for public use as possible, and the legislature has been much assisted in this respect by the registrars who have so ably supervised and carried on the business of the office. In its provisions for perfecting and protecting this standard, the legislature has no doubt been sufficiently stringent, as far as the public is concerned, the penalties for false statements in relation to births and deaths being severe, the limit being penal servitude for a term not exceeding seven years. The fraudulent altering registers of births, deaths, and marriages, is also repressed by the 24 and 25 Vic., c. 98, sec. 36. Still, a glance through the statutes from 1836 to 1874 will satisfy a careful observer that the provisions for regulating the internal machinery of the statutes are either cumbrous or conspicuous by absence. The forms contained in the schedules are few and scanty, and insufficient for maintaining the objects of the Acts. By Sec. 44 of the 37 and 38 Vic., c. 88, the Local Government Board, or the Registrar-General with the sanction of the Local Government Board, is empowered from time to time to alter the forms in the schedules and to make regulations. Then any order made in pursuance of this section has to be published in the *London Gazette* within fourteen days after the issue of the same, or, if Parliament be not sitting, within fourteen days after the commencement of the next session. In fact, the discretion of the Registrar-General is unnecessarily fettered; instead of (as one would suppose) his being the final authority for the purpose of making and altering regulations under the Act, the exercise of his discretion for that purpose is subordinate to the Local Government Board.

The experience of the associations which I have represented has proved that the great omission in the working of the Act is the absence of directions to its officers (under which term I include medical practitioners) as to the form in which they should receive particulars of deaths. The provisions for the entry of these particulars when received are more explicit; but, query, how are the particulars to be entered unless they are received? The form now supplied to registered practitioners should be the only form receivable from them, and should only be used by them, under a penalty. These forms should be numbered in the same way as bankers' cheque-books, and should only be supplied to registered practitioners, whose receipt should be taken for them, and

a note made at the time by the district registrar of the inclusive numbers of the forms supplied. No information as to the cause of death should be accepted by district registrars from persons whom they know or have reason to believe to be unqualified practitioners. No certificates of death should be accepted signed in the name of a registered practitioner, "per or pro A. B.", an evasion of the law which is now frequently practised. The form of the certificate supplied to registered medical practitioners should be slightly altered by substituting "I *personally* saw and attended" for "I attended A. B., etc." If these few simple reforms were effected, it would prevent the recurrence of such cases as the following, which I have selected as illustrating the necessity of the alterations I have suggested.

In a populous mining district in Wales, an unqualified practitioner has for many years carried on a large practice in medicine and surgery, and virtually, if not actually, holds the appointment of surgeon to certain tin mines. He is "covered"—to use the popular expression—by a registered practitioner. In June last, this person saw and attended a child, whom I will style H. M. D., for what he treated as bronchitis, and under his treatment the child died. Thereupon the unqualified practitioner presented to the relatives of the deceased, to hand to the registrar of the district, one of the usual forms of certificates supplied to practitioners, filled up in the usual way, stating the cause of death to be "bronchitis, six days", and signed as follows :

W. H. C., pro H. D.,
(Registered qualification) Physician, etc.,
Blankton.

And the district registrar made the following entry concerning the death in the register on the information of the child's father : "Cause of death, 'Probable' bronchitis, six days".

Now, 1. If the form upon which this certificate was filled up had been numbered and its receipt acknowledged to the district registrar by the "covering" registered practitioner, it would have been proof positive of that fact against him, and no qualified man in his senses would willingly risk the consequences of such evidence.

2. If the district registrar had been forbidden to receive particulars as to the cause of death of a person whom he knew or had reason to believe to be an unqualified practitioner, the entry in this case would not have been made; for it is evident, from the mode of entry, that the district registrar knew he was in fact dealing with an unqualified practitioner.

3. If certificates of death signed as in this case were expressly forbidden, and were numbered as I have suggested, the filling up of the certificate by the unqualified practitioner would have incurred a penalty against both registered and unqualified practitioner.

4. If the present form of certificate were altered as I have suggested, no unqualified practitioner could fill it up, as in this case, for it would be an absurdity on the face of it ; and moreover, no registered practitioner could state that he had *personally* seen and attended a person attended *entirely* by an unqualified person.

I will merely state, in conclusion, that the proofs of the above case are in my possession.—I am, sir, your faithful servant,

CLEMENT J. C. PRIDHAM,
Solicitor to the Medical Defence Association.

6, John Street, Bedford Row, W.C., October 13th, 1879.

THE POROPLASTIC SPINAL JACKET.

SIR,—From a paragraph in your issue of this date, I observe that Dr. Sayre has explained his reasons for condemning the poroplastic spinal jacket. Will you permit me briefly to state that, since first bringing this jacket before the notice of the profession, I have used it in some hundreds of cases of Pott's disease with perfect success? A badly fitted poroplastic jacket is of course useless, equally so is a support ill-made of plaster; but taking the best samples of each appliance, I prefer the poroplastic. I have no personal interest in this "battle of the jackets", the poroplastic felt being no invention of mine ; in judging of the merits of the two materials, I have therefore been uninfluenced by partiality.—I am, sir, yours obediently, FRED. R. FISHER.

79, Grosvenor Street, W., October 11th, 1879.

PRESENTATION TO Dr. A. H. MCMURRAY.—Last week, an address, accompanied by a handsome gift, was presented to this gentleman from the "Alexandra" Tent, Independent Order of Rechabites, Belfast, in appreciation of his services as medical officer. The address stated that for the past ten years, during which he had acted as medical officer, he had contributed in no small degree to their prosperity, their members numbering upwards of two hundred; while his sick brethren he had attended most assiduously, and by his professional skill and kind sympathetic manner had gained an enduring hold on their affections.

PUBLIC HEALTH AND POOR-LAW MEDICAL SERVICES.

THE Carrick-on-Shannon guardians having recently reduced the salaries of their medical officers of health, last week received a sealed order from the Local Government Board fixing the salaries at £20 each *per annum*.

SALARIES OF MEDICAL OFFICERS OF HEALTH, LISBURN UNION.

THE guardians of this union, a short time since, fixed the salaries of their medical officers of health at a yearly sum of five guineas each. This absurdly low remuneration was brought under the notice of the Local Government Board, who took another view of the duties to be performed by the medical officers, and, in a recent communication to the guardians, observed that they could not approve of the proposed reduction, and requested them to reconsider the matter. The Local Government Board further state that if the guardians adhere to their resolution on the subject of the proposed reduction, that they will feel it necessary to exercise the powers vested in them by the eleventh section of the Public Health Act, 1878, and issue an order fixing salaries for the medical officers of health commensurate with the duties which they will now be called upon to discharge.

The Irish Medical Association have recently drawn attention to this subject, and in communications to the Local Government Board remark that unless and until reasonable and equitable remuneration is allowed to the medical officers of health, it is futile to imagine that the provisions of the Public Health Act can come into effective operation. Also, in considering the salary proposed to be given to each individual medical officer of health by the sanitary authority of the district, they consider that due regard should be had to the extent and population of the district of each officer ; that each case should be dealt with according to its merits; and that if a fixed scale or rate were used in the estimation of such salaries, it would be at variance with the wording and intention of the Act.

THE DISRUPTION OF COMBINED SANITARY DISTRICTS.

AN unpleasant rumour lately reached us that another large combined district—that served by Dr. Baylis in West Kent—was threatened with disruption. Knowing Dr. Baylis's work and the energy which he throws into it, as we do, we could not but hope that the rumour was unfounded ; but we now learn that although the calamity of Dr. Baylis's enforced retirement has not actually come to pass, his re-appointment for another three years was only carried by a narrow majority. Dr. Baylis's work is shown by his annual reports to be of the most thorough and conscientious kind, and as his district appears to be a workable one, it seems simply absurd that his tenure of office should not be made permanent, instead of being subject to the caprice of sanitary authorities every three years or less. It is, indeed, humiliating to have to chronicle these triennial hopes and fears with regard to the continuance of combinations. Sanitary authorities are devising every excuse to back out of them, and meet with no real opposition from the Local Government Board. In Devonshire, the Okehampton and Torrington rural authorities are fortifying themselves by statistics against the appeal of Mr. Courtenay, the Local Government Board inspector for the district, to reappoint Mr. Wynter Blyth. Here, as elsewhere, the main reason for the disruption of the district, which, although not an accomplished fact, will no doubt take place after Christmas, is the fact that neighbouring unions are allowed to do as they like, and appoint the district medical officers as medical officers of health with a percentage on their Poor-law salaries. Thus the farmers who constitute the great bulk of the guardians in the combination area, seeing that their neighbours manage their health affairs at a far less apparent cost, have of course taken advantage of the present depression in agriculture to upset the combination in favour of some cheaper, though of course less efficient, arrangement. The real cause of the break-up is undoubtedly the want of uniformity in the administration of the law; and until the present system be altered, there cannot but be the greatest confusion. A case that would be simply amusing, if there were no principles at stake, occurred recently in Westmorland, the whole of which, with two adjoining unions, has up to the present been under the sanitary charge of Dr. David Page. When Dr. Page's reappointment came up for consideration, the Kirkby Lonsdale Local Board declined to have any-

thing more to say to him, notwithstanding that Dr. Page was dependent upon them for so large a proportion as £12 out of his salary of £600 a year. *Primâ facie*, this would appear to have been just the case where the Local Government Board might have exerted its powers of compulsory combination. But the local board was allowed to have its own way; the vital statistics for Westmorland as a whole will no longer be available; and the absurd principle of allowing districts within a combined area to be excluded from the combination has been admitted in another district that has up to the present been happily exempt from it. There will inevitably be questionings as to these matters when Parliament reassembles.

HOW NOT TO DO IT.

A RECENTLY published report by Dr. Ogle, on the sanitary state of Holyhead, reveals a wrong-headedness in the sanitary administration of that place which is not only disheartening, but, in view of the constant throng of travellers through the place, a matter of very serious general concern. A case of small-pox, which was doubtless caught at Dublin, broke out at an overcrowded lodging-house in Holyhead, and subsequently attacked four other inmates of the house. Notwithstanding the fact that a hospital existed in the borough for the isolation of infectious cases, and the patients were willing to go to it, all applications to the local authority and to the inspector of nuisances, there being no medical officer of health, were fruitless. Instead, the authority gave orders that the occupants of the house should remain strictly confined within doors, and apparently these orders were more or less fully obeyed. It need hardly be said that the attempt to stamp out an outbreak of small-pox by imprisoning all occupiers of the house where it occurs strictly within the premises, is clearly futile. Independently of the cruelty of such a measure, were it practicable, there is no legal power of enforcing it. Moreover, even if it could be carried out completely, it would merely be a putting off of the evil day. How long, Dr. Ogle asked, was it proposed in the present instance to keep the occupants of this overcrowded tenement in their stifling rooms, and what was it proposed should be done as to their bedding, furniture, and clothes, when the last of them had sickened, and recovered, or died, as the case might be? To these inquiries he could get no reply, nor do we see how they were to be answered. It is impossible to understand what the authorities can have been thinking about not to have the first case that occurred at once isolated in the hospital which was in readiness for the purpose. A probable explanation is, that the Board have provided no ambulance for the conveyance of infectious cases, so that the building for their reception is practically useless. Unless a patient is well enough to walk thither, he cannot avail himself of it, and the natural consequence is, that the hospital, which the munificence of Lady Willoughby de Broke provided, is of no use whatever.

POOR-LAW MEDICAL APPOINTMENTS.

*BELFIELD, C. W., M.R.C.S., appointed Medical Officer to the South District of the Clifton Union, *vice* *W. E. Day, M.R.C.S., deceased.

GRACE, W. G., M.R.C.S., appointed Medical Officer to the North District of the Clifton Union, *vice* *W. E. Day, M.R.C.S., deceased.

*WILKINS, G. H., M.R.C.S.Eng., appointed Medical Officer to No. 10 District of Lambeth Parish, *vice* *W. E. Farnfield, L.R.C.P.Ed., resigned.

MEDICAL OFFICER.—A medical officer's total net income being below £150, he should certainly appeal.

L. M. F.—1. It would be extremely dangerous to do what our correspondent would desire to do. Should it ever become known to the Board of Guardians or the Local Government Board that he had obtained a profit by supplying any instrument for the use of a pauper, he would be called upon to resign his appointment immediately. A remarkable instance of this character occurred some years ago, when a workhouse-surgeon was called upon to resign, he having been found to have obtained a commission for the purchase of a water-bed. 2. It is required by the Poor-law regulations that the medical officer should fill in the column named; but in the vast majority of instances it is never done, guardians not caring for the information.

OWENS COLLEGE MEDICAL STUDENTS' DEBATING SOCIETY.—The sixth session of this Society was inaugurated on the 26th October by an address from Dr. W. Roberts, F.R.S., senior physician to the Infirmary. The first ordinary meeting was held on Monday evening, the 3rd instant, when a paper was read by Dr. H. Tomkins, the retiring president, on the "Possibility of the Extinction of Infectious Disease". The Society is now both financially and numerically in a most flourishing condition, upwards of sixty ordinary members being already enrolled this session. Mr. A. T. Wilkinson, B.A., B.Sc., M.B., has been elected President for the coming year.

MILITARY AND NAVAL MEDICAL SERVICES.

SHEPHERD MEMORIAL FUND.

WE have much pleasure in being able to announce that the appeal made for this fund has everywhere met with a cordial and liberal response from medical officers of the army and numerous private friends of the late Surgeon-Major Peter Shepherd. Although the limit to subscriptions was nominally 10s. 6d., the amount realised has warranted the executive committee in adopting the following resolutions to carry out the object: 1. A marble tablet with suitable inscription in Lochiel Cushnie Church, Aberdeenshire; 2. The offer of a "die" for gold medal, and sum to be invested to produce about £6 6s. annually, to the University of Aberdeen, to enable a "Shepherd Medal" for Surgery to be competed for annually; 3. Surplus, if any, for a brass in the chapel of the Royal Victoria Hospital, Netley.

AID TO THE SICK AND WOUNDED.

SIR,—"'Tis not so deep as a well, nor so wide as a church-door, but 'tis enough, 'twill serve." Some years ago, I recollect a medical officer in Her Majesty's service having been what is called "wigged" for presuming to take a fee for attendance on a civilian, it having been reported to head-quarters by a practitioner, as taking the bread out of his mouth. A notice was issued then to the effect that military and naval surgeons were not to interfere in private practice. The British Medical Association, headed by its indefatigable editor, Mr. Ernest Hart, to whom the thanks, at the very least, of the whole service are due, has, I am delighted to say, supported not only the claims but the prestige of the medical officers of the army and navy. It is much to be lamented that there should be necessity for civil aid to the sick and wounded of our small army. There is a National Aid Society, a Stafford House Society, the order of St. John, etc.; all, I cannot help saying for the soldiers' sake, necessarily organised (for they "all have work to do") to help the medical department of the army. Being a necessity, is it (I allude to small campaigns) a slur, or is it not? To the credit of the medical profession, there never was a call for medical aid that it was not obeyed cheerfully, yet civilian surgeons are not sensible of the fact that, by doing duties purely military, they are in a great measure frustrating the rise and progress of military medical prestige and advancement in the army. Yea, every doctor who attends a military detachment (and many do for a most trifling remuneration), is frustrating military medical prestige. I am aware—in fact, I know it—it is not thought of by the civilian practitioner, who rather pulls up his shirt-collar and mounts patent-leather boots for the occasion, but it is undoubtedly the aim of the present administration to obtain all the aid that can possibly be had, by hook or by crook, cheap; yet (and it is scarcely to be credited) insinuations were actually made against the necessity for His Grace of Sutherland's kindly and liberal forethought. Oh, everything was there, ready; we can know to a ligature where and how the Stafford House "luxuries" were necessarily laid out, and thankfully received by Private Atkins and Co. I can only say respectfully to my civilian brethren in practice that military medical officers assist—do not trade—as a rule, in civil life.—Yours faithfully,

September 22nd, 1879. REDIX.

PUBLIC HEALTH.—During last week, 3,517 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living; it was 16 in Edinburgh, 14 in Glasgow, and 31 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth 14, Plymouth 15, Oldham 16, Wolverhampton 17, Leicester 21, Bristol 21, Birmingham 21, Sunderland 21, Bradford 21, Nottingham 21, London 22, Salford 22, Norwich 22, Hull 22, Newcastle-upon-Tyne 23, Brighton 23, Sheffield 24, Leeds 24, Manchester 25, and the highest rate 26 in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.1 per 1,000 in the twenty towns, and ranged from 0.0 in Portsmouth and Plymouth to 5.3 both in Sheffield and Newcastle-upon-Tyne. In London, 1,501 deaths were registered, being 76 below the average, and giving an annual death-rate of 21.6. The 1,501 deaths included 1 from small-pox, 42 from measles, 69 from scarlet fever, 15 from diphtheria, 37 from whooping-cough, 32 from different forms of fever, and 30 from diarrhœa; in all, 226 deaths, against 220 and 224 in the two preceding weeks. These 226 deaths were 29 below the average, and were equal to an annual rate of 3.3 per 1,000. The deaths referred to diseases of the respiratory organs, which had been 190, 318, and 396 in the three preceding weeks, further rose to 402 last week, and exceeded the corrected weekly average by 50; 266 resulted from bronchitis, and 99 from pneumonia. Different forms of violence caused 44 deaths. At Greenwich, the mean temperature of the air was 46.6°, and 1.3° below the average. The general direction of the wind was easterly, and the horizontal movement of the air averaged 11.3 miles per hour, which was 0.11 below the average. Rain fell on three days of the week, to the aggregate amount of 0.06 of an inch. The duration of registered bright sunshine in the week was equal to 12 per cent. of its possible duration.

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted as Members on October 30th, 1879.

Henderson, George Courtenay, M.B.London, University Hospital, W.C.
Smith, William Wilberforce, M.D.Heidelberg, 2, Eastbourne Terrace, W.

The following gentlemen were admitted as Licentiates on October 30th.

Ashby, Thomas Harry, M.B.Toronto, Cheltenham
Ballance, Charles Alfred, Stanley House, Lower Clapton, E.
Bradford, Cordley, Smethwick, Birmingham
Butler, Gamaliel Henry, Westminster Hospital, S.W.
Campbell, Robert Huntly, Gilling Rectory, York
Dalgado, Daniel Gelasio, 30, Palace Road, Lambeth, S.E.
Da Silva, Pascoal Manoel, Bombay, India
Fischer, Carl, M.D.Würzburg, 62, Gower Street, W.C.
Fisher, Frederick Bazley, Queen's Road, Clapham Park, S.W.
Gofton, Joseph Edward, 22, Borough Road, North Shields
Greenwood, Frederick Stowell, M.D.McGill, 149, Kennington Road, S.E.
Howell, Thomas Arthur Ives, Old Vicarage, Wandsworth, S.W.
Lithgow, Thomas George, Farnborough Station
Robinson, George Somerville, 47, Claverton Terrace, S.W.
Sheild, Arthur Marmaduke, 88, Warwick Street, S.W.
Smith, Sydney, 54, Camden Road, N.W.
Weakley, Arthur, Forest Gate, E.
Wright, John Wellington, M.D.McGill, 149, Kennington Road, S.E.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ABBEYLEIX UNION—Medical Officer for Ballyroan Dispensary District, at a salary of £100 per annum, with £20 per annum as Medical Officer of Health, and the usual Registration and Vaccination Fees. Election on the 18th instant.

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

BAILIEBORORGH UNION—Medical Officer for Kingscourt Dispensary District, at a salary of £90 per annum, with £22:10 as Medical Officer of Health, together with Registration and Vaccination Fees. Election on the 11th instant.

*BRISTOL ROYAL INFIRMARY—House-Surgeon. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before December 1st.

BURY DISPENSARY—House-Surgeon. Salary, £100 per annum, with apartments, etc. Applications to the Secretary on or before November 29th.

*CARLISLE DISPENSARY—Junior House-Surgeon. Salary, £90 per annum, with apartments, coal, gas, and attendance. Duties to commence on Dec. 1st.

*CLAYTON HOSPITAL AND DISPENSARY, Wakefield—House-Surgeon. Salary, £120 per annum, with residence, coals, and gas. Application, with testimonials, on or before November 13th.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

*HOSPITAL FOR WOMEN, Soho Square—Assistant Physician. Applications to the Secretary on or before November 12th.

*INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST—Visiting Physician.

*JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer. Salary, £120 per annum, with furnished rooms, attendance, coal, and gas. Duties to commence December 1st.

ROYAL FREE HOSPITAL, Gray's Inn Road—Assistant Surgeon. Applications, with testimonials, on or before November 26th.

*ROYAL LONDON OPHTHALMIC HOSPITAL—House-Surgeon. Applications on or before November 22nd.

*TORBAY HOSPITAL AND PROVIDENT DISPENSARY—House-Surgeon. Salary, £100 per annum. Also, Non-Resident Dispenser; salary, £55 per annum. Applications, with testimonials, to the Honorary Secretary not later than November 17th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*EASLEY, R. K., M.D., appointed Honorary Physician to the East Suffolk and Ipswich Hospital, *vice* C. M. Durrant, M.D., resigned.

*OLIVER, Thomas, M.B., appointed Lecturer on Practical Physiology in the University of Durham College of Medicine, Newcastle-upon-Tyne, *vice* D. Drummond, M.D., resigned.

FENWICK, Samuel, M.D., appointed Physician to the London Hospital.

SWEETING, R. D. R., M.R.C.S.E., appointed House-Physician to the London Hospital.

*WARNER, Francis, M.D., appointed Assistant-Physician to the London Hospital, *vice* S. Fenwick, M.D.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

UNDERHILL—CHARLTON.—On October 29th, at Tydd St. Giles, Cambridgeshire, T. Edgar Underhill, M.B., C.M., of Tipton Green, Staffordshire, to Mary Isabel, second daughter of the Rev. S. Charlton, M.A., Rector of Tydd St. Giles.—No cards.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. Richard Davy, "Osteotomy of Femur to rectify Distortion following Morbus Coxæ"; Mr. Fisher, "On Lateral Curvature of the Spine and the Jacket Treatment".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. Lawson Tait: Second Successful Case of Gastrotomy in Extra-Uterine Pregnancy. Mr. Lawson Tait: Case of Cholecystotomy performed for Dropsy of the Gall-Bladder, due to the Impaction of a Gall-Stone. Mr. Henry Morris: Two Cases of Carcinoma of the Breast, preceded by so-called Eczema of the Nipple and Areola. Mr. John Gay will show Two Specimens of Stricture of the Rectum removed during life.

WEDNESDAY.—Hunterian Society. 7.30 P.M.: Council Meeting. 8 P.M.: Mr. Gilbert, "A Case of Fever"; Dr. Pye-Smith, "On the Treatment of Internal Aneurism".—Medico-Psychological Association, 8.30 P.M. Dr. Wilkie Burman, "On the separate Care and Treatment of Acute and Curable Cases in Asylums; with Proposals and Suggestions for a Detached Hospital, for special purposes, in connection with every large Public Lunatic Asylum"; Dr. Hack Tuke, "A Brain preserved by Giacomini's method".

FRIDAY.—Clinical Society of London, 8.30 P.M. Dr. Crocker: A Case of Congenital Sebaceous Disease of the Scalp. Mr. Spencer Watson: A Case of Acute Ophthalmitis affecting both Eyes: Treatment by rapid Mercurialisation and the instillation of Duboisin. Surgeon-Major Alcock: A Case of Perforating Wound of the Lung. Mr. Norton: Case of Removal of the Frontal Bone, Left Wing of Sphenoid, Ethmoid, large part of the Superior Maxilla, and one Eye, followed by complete restoration to health. (Patient exhibited.) Dr. Goodhart will exhibit a case of unusual development of Keloid in Small-pox Scars. Mr. Balmanno Squire will exhibit a case of Portwine-Mark cured at two operations by Linear Scarification; also, a Calotte after use in the Treatment of Ringworm.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

THE MEDICAL ALLIANCE ASSOCIATION AND FOREIGN DEGREES.

SIR,—Twelve years ago or more, a series of anonymous letters were published in the *Durham Chronicle*, assailing a Licentiate of the London College of Physicians for using the prefix title of "Dr." In the course of time, it was discovered that Mr. Easby, who was only a L.R.C.P.*Edin.*, and L.R.C.S.*Edin.*, was one of the Licentiate's assailants, and, strange to say, was himself using at that very time the same title. The licentiate assailed was myself; and the correspondence, on my part, was continued for long after those who had commenced it had, one by one, retired from it. During this correspondence, I stated that some hundreds of the Fellowships of the London College of Surgeons had been purchased, without examination, for £10 each; and Mr. Easby, innocently enough, no doubt, now asks whether my statement was a statement of *fact*, and to which I reply, "Yes." Mr. Easby then inquires whether another statement I made—viz., that in 1860 one thousand licences had been purchased of the Edinburgh College of Physicians, without examination, for £10 each, was a statement of fact; to which I reply again, "Yes", and that I believe I was the first to publicly make the statement. Mr. Easby then observes that, from such statements as these, people may suppose that a certain class of medical men had only to present themselves at the colleges with their money and obtain their diplomas. Just so, and such "people would suppose" exactly what was right, for it was precisely in that way the licenses were bought. If Mr. Easby—Mr. William Easby, I mean—will look over page 9 of Mr. Nelson Hardy's most excellent pamphlet on *The Amendment of the Medical Act of 1858*, a copy of which I have forwarded to him (and I will forward a copy for twelve postage stamps to any other person), he will see that Mr. Hardy states that the Edinburgh College of Surgeons have for some years been doing a little business in the same kind of way, and that during the past seventeen years they have added £7,957 to the College funds by selling their Fellowship-diplomas. All these *facts*, and very many more *facts* of a similar character, support our arguments and efforts for the establishment of a conjoint board, or, better still, a State examination; but they are in no way related to the past and present most scandalous traffic in foreign bauble degrees.

Mr. Easby is certain, so he says, that the diploma of which I have given a translation is a forged diploma, whilst I say that it is a genuine document, granted according to the regulations of the University of Jena. I observe that Mr. Easby attaches to his name the degree "M.D.", without saying whence he obtained it. Is it a London, or an Oxford, or a Cambridge, or a Scotch degree? I cannot find it in the *Medical Register*. Is it, then, a foreign degree? Will "Member of B. M. A." favour your readers with a translation of the whole of his Jena diploma?—I am, sir, your obedient servant,

R. H. S. CARPENTER.

130, Stockwell Road, S.W., November 3rd, 1879.

MR. JAMES POLLARD (Torquay).—The members of a provident dispensary, which is under public management, cannot be considered private patients. Though, within certain limits, they can choose their own medical attendant, they are patients of the institution; and the house-surgeon of the dispensary, though he is debarred from private practice, may properly be employed in visiting them.

THE LATE MR. J. C. COPLAND.

AT a preliminary meeting held at the house of Dr. Semple, on the 29th ultimo, it was resolved to raise a subscription to be presented to the widow of the late Mr. James Charlesworth Copland. Mr. Copland was the author of the abbreviated edition of the well known *Medical Cyclopædia* of Dr. James Copland, and was a nephew of that distinguished physician and lexicographer. He served as a surgeon in the Crimean war; he was afterwards a member of the Court of Examiners of the Society of Apothecaries, and was rapidly making a name in medical literature when he was attacked with an intestinal affection; and, after a few hours' illness, was cut off in the prime of life on the 18th of September last, leaving a widow and five children almost unprovided for. Dr. Semple was requested to act as treasurer, and Mr. Arthur Norton as secretary. The following donations were announced.

John S. Stocker, M.D.	£10	0	0
Algernon C. W. Norton, M.D.	10	10	0
Arthur T. Norton, F.R.C.S.	5	5	0
R. H. Semple, M.D.	2	2	0
W. F. R. Burgess, M.D.	2	2	0
J. C. Thorowgood, M.D.	2	2	0
Stephen H. Ward, M.D.	2	2	0
John Randall, M.D.	2	2	0
Thomas R. Wheeler, F.R.C.S.	1	1	0
Henry Bullock, F.R.C.S.	2	2	0
Robert Fowler, M.D.	2	2	0
Charles Taylor, M.D.	2	2	0
Joseph S. Lavies, M.D.	2	2	0
	1	1	0

Subscriptions may be forwarded to the Treasurer, 8, Torrington Square, W.C.; or to the Secretary, 6, Wimpole Street, Cavendish Square, W

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

CALF-LYMPH.

IN reply to "Stockport's" query in the JOURNAL of October 18th, it may be stated that the best authorities now agree that, except under special circumstances, animal vaccination is no more intense than typically perfect vaccination should be. Dr. Seaton, after his famous inquiry in 1869, reported that neither in the size of the vesicle, nor in the intensity of the local symptoms, nor in the length of period which the eruption took to run its course, was there any notable difference between calf and humanised lymph. Dr. Martin of Massachusetts alleges, indeed, that animal lymph is infinitely less liable to be followed by troublesome and irregular sequelæ than that of long humanisation; and that it has most unexpectedly, but most undoubtedly, proved to be exempt from "that miserable complication, the pest of vaccinators, erysipelas". This does not seem to have been publicly corroborated by English experience; but the matter is one of importance, and will probably come up for discussion next session, when Dr. Cameron's Bill is introduced. Meanwhile, it may be observed that the disadvantages at present imputable to animal vaccination are its various peculiar liabilities to failure: first, that apparently even able and painstaking operators may find it impossible to transmit successive vaccination from calf to calf without very frequent recurrence of failures and interruptions; and secondly, that the transference of infection from the calf to the human subject, even under the most favourable circumstances (*i.e.*, by experienced operators, and with lancet direct from calf to arm), has in it great risks of failure; and thirdly, that the calf-lymph, as compared with ordinary lymph, is particularly apt to spoil by keeping, so that tube-preserved lymph can be but little relied on. If "Stockport" desire to study the literature of the question", he may profitably read the report of Dr. Seaton, contained in the Twelfth Report of the Medical Officers of the Privy Council, with Mr. Simon's remarks thereon; and an elaborate monograph by Dr. Martin on the same subject, in vol. xxviii of the *Transactions of the American Medical Association*; see also a paper by Mr. Greene of Birmingham in the JOURNAL for June 22nd, 1878, page 889.

DR. WILLIAMS.—From a return published in 1864, it appeared that the number of Fellows who voted in that year for seats in the Council of the College amounted to 289—viz., 111 Fellows by examination and 178 honorary and elected Fellows. There were then 1296 on the list—viz., 300 by examination and 996 by election; and of this number, 489 resided in and within twenty miles of this metropolis, 626 beyond that distance, 57 in the army, 12 in the navy, 65 abroad, and 47 whose addresses were unknown.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.

SIR,—In reply to applications received for copies of our tariff, will you kindly allow us to state that it can only be obtained from our publishers, J. E. Cornish, 33, Piccadilly, Manchester, and Cornish Brothers, 37, New Street, Birmingham?—We are, sir, yours truly,

A. WAHLTUCH, M.D.,
J. BROADBENT, M.R.C.S., } Hon. Secs.

27, King Street, Manchester, October 30th, 1879.

CONVICT SERVICE.

SIR,—In reply to the letter in your issue of the 18th ultimo, respecting the treatment of assistant-surgeons in Her Majesty's Convict Service, I may state that the pay in most cases commences at £150 a year, with an annual rise of £10 up to £200. In answer to the second question, I should think that it depended much upon the prison, there being in some greater responsibility and danger than in others. A house is supplied, free of rent or taxes; but the assistant has to find rations, fuel, etc., out of the above salary. Altogether, it is not a bright look-out; for, after eight or ten years' work, on promotion, a man is simply, as regards pay, placed on a par with a deputy-governor on entering the service, with less responsibility, and often little to do. I have only further to add, that I am not connected with the service.—I am, sir, yours, etc.,

NEMO.

THE BATH IN COLD WEATHER.

SIR,—Now that the weather is becoming very cold in a morning, the question of giving up the cold sponge-bath, or converting it into the tepid bath, forces itself upon the attention of many, who, without being invalids, are not in such robust health as to enable them to establish a reaction after even temporary immersion in cold water. The French method of providing a small tub of warm water to stand in whilst dressing, on returning from a bath in the sea, is a luxury few will forget who have once experienced it. This method of standing in warm water is one that might with advantage be more frequently followed during the winter months by all who indulge in cold bathing. In place of sitting in an ordinary sponge-bath of tepid water, a far more invigorating plan is to fill the handbasin with cold water, pour a small canful of warm water into the bath placed close to the washhand-stand, then stand in this, and sponge with the cold water from the basin. Where the full-length bath is employed, a momentary immersion in water at 50 deg. Fahr., and then getting out into a foot-bath in which a little warm water has been placed, when soap or a flesh-brush may be used and another immersion in the cold water resorted to, enables one to enjoy the invigorating effects even in the coldest weather.

Thinking it possible there may be many who will be glad to avail themselves of the hint, I venture to draw attention to the subject.—I remain, yours obediently,

November 1879. ARTHUR W. EDIS, M.D., F.R.C.S.

SUNDAY ADULTERATION.

IT is certainly calculated to interfere with a man's devotions (says the *Daily Telegraph*) and to abstract his attention from the words of the preacher, that, according to the report of a public analyst, Sunday is the great field-day with habitual adulterators of milk. A mere dash of the New River Company's elementary fluid may satisfy those delinquents on a week-day. Perhaps fifteen per cent., or even ten, may be the most ambitious point to which their nefarious minds aspire from Monday morning to Saturday night. But on Sunday, when religious consciousness prompts the usually careful housewife to pretermit her daily visit of inspection to the kitchen and the larder, and, instead of busying herself with mundane affairs, to devote her mind to higher things in church or chapel, the proportion of water to the morning and afternoon milk is enormously increased. Mr. J. Carter Bell, who does the public analysing for Salford, has informed the Town Council that fraudulent milkmen attempt even to impose upon him. Aware of his devotional regularity, and presuming therefrom that he would be at church when they might otherwise expect the embarrassing honour of a visit, they turn on the tap with considerable freedom, and punish the milk as mercilessly as did Mr. Squeers when he revenged himself on it "for being so dear"

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

FEES FOR ATTENDANCE ON SERVANTS.

WE have received several communications in reply to the letter of "The Senior Physician to one of the London Hospitals', published in the JOURNAL of October 25th.

"ANOTHER SENIOR PHYSICIAN TO ONE OF THE LONDON HOSPITALS" writes:—While sincerely sympathising with your correspondent, I must admit he has greatly contributed to his own discomfiture, and has thus deprived himself of that sympathy to which he would, under other circumstances, have been entitled. When he diagnosed the case to be "one of typhoid fever", he should have frankly told "the lady" what the case was, what would be its probable issue, the professional care it would require, and what would be his fee per visit if he continued in charge of the case. This would have given an opportunity of retaining or declining his professional services. If the former, "the lady" would have fixed her husband with the responsibility of paying the fees; if the latter, he (the doctor) would have taken his fee then due, and have left "the lady" to make her own arrangements as to the future care of the patient. The plea for continuing to attend the case without any kind of understanding as to how he was to be paid is altogether inadequate—viz., "that the patient did not speak a word of English, and that he was familiar with German". It is my privilege to know many general practitioners in London who are sufficiently "familiar with German" to enable them to speak the language exceedingly well. Having learned that the "wealthy Lancashire manufacturer" had "telegraphed that everything that was necessary should be done for the girl", your correspondent appears to have taken it for granted that his professional attendance was implied in the request "telegraphed", and therefore he continued his services without question until "she had drawn her last breath". Your correspondent appears to have "counted without his host", as he soon learned to his cost; for he tells us that when he "mentioned forty-two guineas for as many visits, Mr. —— appeared horror-struck". The result was just what might have been expected. The "wealthy Lancashire manufacturer", in characteristic terms, doubtless, declared "he would not pay, and finally left me, after having put on my table a most inadequate sum". The unanimous verdict of the professional brethren of your victimised correspondent will, I feel sure, be, "We find it serves him right". It will be observed that forty-two guineas were charged for less "than three weeks' attendance"—more than two guineas a day for attending a servant. Twenty guineas would have been fair and reasonable, and would, doubtless, have been paid.

A JUNIOR PHYSICIAN TO A LONDON HOSPITAL writes:—The objection taken by the master to the charge of forty-two guineas for attendance on the servant during typhoid fever, seems not unreasonable. It is certainly the custom among general practitioners to charge less for attendance on servants than on their masters: probably few general practitioners would think of charging more than five shillings a visit. The "Senior Physician to a London Hospital" made himself, for a time, a "general practitioner", entering into competition with his "friends" the general practitioners of the neighbourhood, and certainly ought not to have expected physician's fees, unless he had distinctly intimated his intention at the commencement of his attendance, which would probably have been quickly dispensed with, in spite of his ability to speak German. Surely the latter fact was scarcely a sufficient reason for his taking charge of the case. It is the conduct of such "senior physicians" in taking sole charge of patients who ought to be under the care of general practitioners, which constitutes the real obstacle to the establishment of proper fees for out-door work, and of a proper feeling between general practitioners and consultants.

"E. T. W." writes:—At first sight, I considered "The Senior Physician to one of the London Hospitals" an ill used man; but a more careful examination of all the circumstances of the case leads me to the conclusion that he has over-reached himself. From the apologetic manner in which he refers to his single-handed management of the case, it is clear that he is conscious of the propriety of a "senior physician", etc., confining himself to the position of consultant in a case which, like enteric fever, must require constant watching, and, necessarily, frequent visits. Surely, if your correspondent knew no general practitioner who could speak German, some of his professional friends could have told him of some such persons; or he might have been aided by consulting the *Medical Directory*. The patient being so fortunate as to secure (apparently by mere accident) the attendance of a "senior physician" who spoke her own language, and whose visits would probably not exceed the space of one hour in each day, it seems hard that she should possibly have been lost for want of some medium of communicating her feelings and necessities to those about her during the remaining twenty-three hours. In many country places, the scope for consulting practice is so limited that the physicians and surgeons of the local hospitals must take "family practice"; and if the wealthy Lancashire manufacturer is from some place of this kind, it may well have appeared to the lady that your correspondent was acting in just the same manner as her own local doctor would have done; and it would not, therefore, be surprising that she should fail to recognise any superiority of the "Senior Physician" in town over the gentleman holding the same honourable position in the country. As regards the general question, I should say, from a pretty extensive experience, that it is almost universally the practice to charge less for medical attendance on servants than on their employers; for the reason that the former are unable, and the latter unwilling, to pay so much. Moreover, employers are, as a rule, careful to avoid committing themselves, unless they have a definite understanding. Lastly, it would, in the majority of cases, be impolitic to sue the employer, and too frequently impracticable or unprofitable to county court the servant. My own custom is to charge for servants at one-half the rate I charge for their employers. In many cases I do not consider myself adequately compensated; but, practically, I avoid unpleasant disputes, and, as I think, receive, in the end, more for my services than I could obtain by standing out for higher charges. I trust your correspondent will abandon the idea of sending the inadequate fee to the poor-box. I would counsel him, as he cannot now escape from the affront put upon him, to pocket the money together with it, or to send it to the Medical Benevolent Fund, so that—being for professional services—it should not be wholly lost to the profession.

Mr. WILLIAM SEDGWICK (Park Place) writes:—The question whether a reduction is habitually made "for attending servants employed in well-to-do families", may be decidedly answered in the affirmative. The custom has been established, and has been more or less strictly observed for very many years; and it would be a subject for a regret if the feelings of sympathy and goodwill through which it has been originated should be abruptly checked or superseded by any hard-and-fast regulation for charging and exacting full fees. With respect to the case of typhoid fever affecting a German maid unable to speak English, it must be admitted that "The Senior Physician to one of the London Hospitals" was unhappily placed in a somewhat false position. The forty-two fees for as many visits were evidently allowed "to run", without any distinct understanding that a fee of one guinea would be charged for each visit; and your correspondent throughout the case, and up to the time of death, acted simply as a family doctor, and not as a consulting physician. The increasing tendency of late years for consultants to act as family doctors has led to other difficulties connected with medical ethics besides those referred to in your JOURNAL; and the "horror-struck" appearance of the head of the family when called upon to pay forty-two guineas for three weeks' attendance upon the lady's maid, showed, when it was too late to rectify the mistake, that such a charge had taken him by surprise. It may be a fair subject for consideration whether a "Senior Physician to one of the London Hospitals" should, as a rule, take less than his usual fee when asked to see (in consultation) a servant; but there is no need for hesitation in this respect on the part of the family doctor, who, whether able to speak German or not, has usually and ungrudgingly made some reduction in the customary charges for attendance.

JUSTUS writes:—Let the "Senior Physician of a London Hospital" place himself in the position of the master of the servant, and tell us what his feelings would be if an account of £44 2s. were sent him for an attendance of less than three weeks on his wife's maid. I am confident that most practitioners, whatever their position in the profession may be, do not expect the same remuneration for attendance upon a servant as they would for attendance on the master. The "Senior Physician" erred in not handing over the case to a general practitioner, as his conscience appears to have suggested to him; he erred in thinking a knowledge of the German language was confined to himself; and he erred most of all in not handing over the "most inadequate sum to the poor-box of the nearest police-station", or in accepting it.

STUDENTS AT THE LONDON HOSPITAL.

SIR,—Will you kindly correct an incomplete return of the entries of students at the London Hospital in your issue of October 18th, p. 632? Instead of 106 full students, it should read—61 full entries and 50 special entries: total, 111. The discrepancy between the total numbers in the two reports is owing to a few having joined since the previous return.—Believe me, faithfully yours,

26, Finsbury Square, E.C. STEPHEN MACKENZIE, M.D.

MR. CAMPBELL.—The celebrated Erasmus Darwin, M.D., F.R.S., was born in 1731, and died in 1802. The lines will be found in the *Botanic Garden*, Cant. ii:

"Onward he steps; disease and death retire,
And murmuring demons hate him and admire."

A SHIPWRECKED DIPLOMA.

SIR,—Perhaps I might be informed what is best to be done under the following circumstances. A few days ago, having got charge of a passenger-ship bound for Wellington, New Zealand, I deposited my surgical diploma, of the Queen's University of Ireland, with the captain. A few days after arriving there, I was hastily requested to take charge of another, when the diploma could not be found; and she was wrecked two days' sail from Wellington, as a certificate I have since got from the captain testifies. My diploma is registered; but I fear applying for a public appointment, as it may be required. Can one be had, or something equally good?

—Faithfully yours, K. A.

*** Our correspondent should send a statement of the facts, together with the captain's certificate of the shipwreck (or an attested copy thereof), to the authorities of the Queen's University, and ask them for a copy of the diploma, or a certificate of his having obtained one. A surgical diploma obtained after examination from any other medical examination in the United Kingdom would be equally good.

THE TEMPERANCE MOVEMENT.

SIR, —I was rather surprised, on reading your article on the above subject in the last number of the JOURNAL, that no reference was made to Dr. Lettsom's very ingenious and humorous pamphlet on the subject. I enclose a copy of a letter of mine, in which I quoted some extracts from the pamphlet, a copy of which you will find in the library of the College of Surgeons. You are at liberty to make any quotation from my letter you think proper.

With reference to the declaration said to be made in 1839 by several eminent men, including Mr. Bransby Cooper, I beg to remark that, if that gentleman ever signed the declaration, he very soon recanted. I knew him intimately, have dined with him at his own house and also at his club (the Athenæum), and he took wine as liberally as anyone else. He was also in the habit of prescribing it for his patients in the hospital, just as freely as the other surgeons and physicians. So I suppose his pledge-keeping was of but short duration.—I am, sir, faithfully yours, J. H. SHORTHOUSE.

Croydon, October 11th.

THE SPREAD OF INFECTION.

THE Rev. E. Olivey writes to the *Western Morning News* of Friday, Oct. 17th:—It is no longer a mystery to me how infectious diseases are propagated. I was called in to-day to baptise a sick child. I found the child suffering from scarlatina, having been ill about a fortnight. The hands were then peeling, and I should conclude that the disease was in its most infectious stage. I asked if any disinfectants had been ordered by the medical man in attendance—one from Redruth. I was answered no; and this in the face of the fact that other children of the family were just recovering from the same disease. The child was with three other children in the family room, where baking, butter-making, and the family meal were then going on. I do not blame the mother for any of the foregoing facts. She was evidently ignorant of what to do, and did not apprehend the need of doing any other than she had been told. Of what use is all the expense and trouble incurred in our sanitary districts if disease is to be scattered broadcast by ignorance or negligence?

*** Mr. Olivey has concluded too hastily, from the answer given to him, that the medical attendant was really in fault. The letter, however, is an useful and satisfactory evidence that intelligent men outside the medical profession are becoming alive to the necessity of preventing the spread of infection by proper precautions.

AN IMPROMPTU TOCOPHELIA.

SIR,—As nothing in midwifery practice is unworthy of record, I beg to name the benefit I lately experienced by tying a long roller-towel round the near edge of the bed, directing the patient to place her feet in the loop thus formed and pull at the extremity of the roller. By a little further extension, I think it would not be difficult to apply a coil round the loins as well, when a very efficient tocophelia would be made. If any of your readers think this not beneath his notice, I hope he will give it a trial.—I am, sir, your obedient servant, WM. WOODWARD, M.D.

Worcester, October 16th, 1879.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

THE PARTHENOGENETIC DEVELOPMENT OF DERMOID CYSTS OF THE OVARY.

SIR,—I think, in justice to the late Dr. Charles G. Ritchie, you will allow me to state that the credit of this explanation of these anomalous tumours is due entirely to him. At page 175 of his *Ovarian Physiology and Pathology*, he says: "Every dermoid cyst of the ovary is an ovum which has undergone a certain amount of development; that it is a perverted attempt at parthenogenesis." Dr. Ritchie's theory is more fully worked out in my own papers on the "Pathology and Treatment of Diseases of the Ovary" (Hastings' Essay) in the JOURNAL for 1873. I am quite sure Mr. Savory will forgive me for calling attention to the claims of an old friend, now unfortunately no longer able to advance them for himself.—I am, etc.,

November 3rd, 1879. LAWSON TAIT.

CROUP AND DIPHTHERIA.

SIR,—It seems to me that Dr. Semple and those who think with him do not bear sufficiently in mind the fact that idiopathic membranous laryngitis, in its characteristic form at least, comes mainly, if not entirely, under the notice of country practitioners, who have not the opportunities for *post mortem* examinations, notes of cases, and subsequent reports to periodicals and societies, that their more fortunate brethren in large towns have. The same does not apply to laryngo-tracheal diphtheria, but the contrary. The evidence obtainable on the one side might therefore be fairly expected to be much greater than on the other. As a firm believer in the existence of idiopathic membranous croup apart from diphtheria, I much regret that neither in the laboriously prepared report of the Committee of the Royal Medical and Chirurgical Society, nor in the subsequent discussion, has the evidence on this side of the question been as conclusive as one could have wished. At the same time, I cannot but regard the conclusion of the Committee, "that membranous laryngitis may arise from a variety of causes", as quite satisfactory.

The distribution of the disease to which I have alluded is not, I think, to be wondered at, when we consider that genuine inflammatory croup is prone to occur only in full-blooded robust children: such at least has been my experience. Moreover, it attacks them at an age at which the tendency to diphtheria is admitted to be very slight, and most certainly it has no infectious properties. I have attended cases under circumstances in which such tendencies, had they existed, could not have failed to be made apparent.

Such cases are generally met with in connection with keen winds and variable temperature in bleak exposed situations on the damp clay soils; frequently in isolated places away from all suspicion of zymotic influence. In them the symptoms, when fully established, are strongly sthenic, and continue so almost to the last. It is one of the few diseases that I have ventured to treat antiphlogistically; and if such treatment be not speedily useful, I look upon tracheotomy as our most valuable resource. I have performed this operation successfully and unsuccessfully under such circumstances.

The character, and even the existence, of the membrane is in my opinion entirely dependent on the plethoric condition of the sufferer and the intensity of the inflammation. I have never seen weakly children afflicted with this form of croup; but should expect the symptoms in them to be of a milder type, more amenable to treatment, and likely to be associated with catarrhal exudation rather than with fibrinous membrane.

It was remarked in the course of the discussion, that membranous croup appears to be a very rare disease, instead of, as was generally supposed, a very common one. It is, I believe, very much more rare than it formerly was; and this, I think, is due to the fact before mentioned, that true membranous laryngitis is an affection which occurs only in connection with robust plethoric subjects. In these days of overwrought nervous systems, imperfect suckling and improper feeding, such infants are rare, so that membranous croup threatens to become an extinct malady, like the legendary three-bottle gout. The remarks in your Editorial notice on the different climatic, sanitary, and dietetic conditions of our French neighbours indicate quite sufficiently, to my mind, the source of the altered views entertained by their observers. We, like them, bid fair to possess only one form of croup very probably, but I resent *in toto* the idea that the older writers, keen observers that they were, could have made the very great mistake the advocates of the "identity view" would wish us to believe. Very probably, when diphtheritic outbreaks first became prevalent in this country, thirty or forty years ago, cases of that disease presenting croupy symptoms were wrongly ascribed to croup, which in them was only a symptom. Not only have, in my opinion, cases of true acute idiopathic laryngitis largely decreased in number amongst us, but most undoubtedly diphtheritic cases of all kinds have very largely increased; and I am fully aware that the vast majority of cases presenting croupal symptoms, which come under the notice of hospital physicians and others practising in large towns, are undeniably of a diphtheritic character. In the country, also, one sees many more instances in the present day of laryngeal diphtheria than of pure croup; and as population increases and imperfect systems of water-conveyance of sewage are perpetrated, we must expect diseases like diphtheria to spread and increase. By the aid of water-closets, with complex drains, which too often never properly empty themselves; with our sewer-traps, which are sources of danger rather than of safety, with our cesspits playing the part of retorts, sewer-gases continue to be developed on a yearly increasing scale. The cases related by my friend Dr. Johnson, and others, go to prove how constantly the germs, thus developed no doubt, seize on abraded or irritated surfaces, and how ready they apparently are to impart a type to disease alike in the slums of Drury Lane, the palatial residences on the borders of Hyde Park, or the cottages in the country. The eau de Cologne, in the case so fully related in the report, clearly acted in this way, and afforded a starting point for the poison ready at hand. The character of the cases, however. thus occasioned is very different, I maintain, from what has been so forcibly impressed on one's memory in connection with true croup. The victims generally present a great contrast to the sufferers in the other cases. The conditions throughout are those of asthenia; we see little of that fight between the physical strength and the relentless disease, though the age of those attacked is greater. There are probably fœtor *ab ore* and enlargement of glands. The pathological differences are as great as the clinical divergencies; for the result of an acute inflammation of the larynx in a plethoric child is a tough fibrinous closely adherent covering, of which nothing is seen during life, and which possesses little proneness to separate, whereas in laryngeal diphtheria the process partakes more of a necrotic character, the membrane is more like a slough, and is prone to detachment, often in a wholesale way, forming frequently a complete cast of the part, whilst in many of the cases in which recovery takes place sequelæ occur.

I hope, Sir, that the recent action in this matter will serve to kindle enthusiasm amongst the members of the Association, and that sufficient evidence may be adduced by them to prove to our still doubting friends, "that the formation of a false membrane in the larynx and trachea is merely a mode of reaction of the mucous membrane, which may be set up by a variety of conditions of which undoubtedly the poison of diphtheria is one, but assuredly only one".—I am, Sir, etc.,

Weybridge, 1879. GEORGE J. SEALY, M.D.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: DIPLOMA IN DENTAL SURGERY.

THE following were the questions on Anatomy and Physiology, and Surgery and Pathology, submitted to the candidates on October 24th, when they were required to answer at least one of the two questions in each department between the hours of two and four. *Anatomy and Physiology.* 1. Describe the curves of the spinal column. State generally how the vertebræ are articulated with each other. 2. State the composition of atmospheric air, and what changes are effected in it by respiration.—*Surgery and Pathology.* 1. Describe the characters of (*a*) a spreading ulcer, and of (*b*) a healing ulcer. 2. What are the signs of fracture of a bone? What are the general indications requiring attention in the treatment of fractures? The following were the questions on Dental Anatomy and Physiology, and Dental Surgery and Pathology, submitted to the candidates the same day, between five and eight o'clock, when they were required to answer at least two out of the three questions in each.—*Dental Anatomy and Physiology.* 1. Describe microscopic specimens, 1, 2, 3. 2. Give examples of birds having teeth, and describe them. 3. What are the processes by which the temporary teeth are removed and replaced by the permanent? Give the histological characters of the structures involved.—*Dental Surgery and Pathology.* 1. Describe, in the order of occurrence, the symptoms and results, local and general, arising from caries extending to the pulp in a third molar and in a permanent central incisor. 2. Mention the affections of the gums—whether arising from local or general causes—which it is desirable that the dental surgeon should recognise. Describe briefly their chief characteristics. 3. What are the mechanical injuries to which teeth are liable, the consequences arising from them, and the treatment to be adopted in each kind?

L. M. CASTEAR.—When a surgeon undertakes the duties of house-surgeon, we apprehend he undertakes also the legal responsibilities of the office, and probably the coroner is therefore right.

THE TITLE OF DOCTOR.

SIR,—As the title of Doctor is still giving rise to much controversy, as the title is absolutely necessary (from long usage and the custom of all countries) to the qualified physician, and as it is refused by many to the physician unless he be a Doctor of Medicine of an university, a short *résumé* of the legal authority for its use by diplomates of a college of physicians might not prove unacceptable.

After much research, I have been able to collect the following evidence. The legal proof, I need scarcely remark, must rest upon the charter of the college interpreted by high legal authority. Failing this, as the title is refused on the grounds of custom and courtesy, nothing is left but for the L.R.C.P. to fall back upon his own proper title, that of physician. The charter of the College of Physicians secures to its members all honours, titles, and privileges granted by any other college of physicians in Italy or elsewhere. Now, as there are several colleges of physicians in America which give the title of Doctor of Medicine to their members, it is manifest that, by the terms of the charter, the members of the English college must have a right to the title. Accordingly, the college in the charter is declared to be a perpetual college of doctors (*collegium perpetuum doctorum*). This title, as well as that of *medicus*, consequently passes on to the successors of the founders; since the present Lord Chancellor says that whatever titles or honours the Crown confers upon members of a college in their corporate capacity, continue so long as the college shall exist. Again, in this same charter, the founders are twice entitled doctors, as "Doctors (doctoribus) J. Chamber, T. Linacre, Ferdinand de Victoria, our physicians; Nicholas Halswell, J. Francisco, and Robert Yaxly, physicians." That they were called doctors on the ground of being graduates of an university is excluded, from the fact that only some of these gentlemen were graduates of even foreign universities, and not one was a graduate of an English university. Their description as "physicians" indicates the ground upon which they are addressed as doctor, and proves beyond doubt that the title flows from the description and both rest on the same authority—the Crown. Persons licensed by the Bishop of London as physicians are the only ones recognised under the charter.

My own opinion can, however, be of little value unless supported by legal authority.

Lord Chief Justice Coke, in Dr. Thomas Bonham's case (November 10th, anno 4 Jacobi, see 8 Io. Rep. 114), made these remarks: "Much was said in commendation of the doctors of physic of the College (of physicians) in London, and somewhat (as he conceived) in derogation of the doctors of the universities; he first attributed much to the doctors of the said College in London, etc." In these words of the highest legal authority of the time, members of the College are not only called doctors, but contrasted with those of the universities, so that the idea that they are called doctor on the ground of being university graduates is absolutely excluded.

Rex *v.* Pordicto (1669). Pordicto, Doctor of Physic of the College in London, was appointed Constable in the county of Berks. It was ruled that he should be discharged from the office. Thus we have a gentleman discharged from the office of Constable on the ground of being a "Doctor of Physic of the College in London".

Groenoelt *v.* Dr. Burwell. The Court ruled that, by letters patent dated 23 September, 10th Henry VIII, the king granted that they, viz., the Doctors of Physic of the College in London, should be a body and perpetual community.

Return to Habeas Corpus (Goodall, 46). The Censors of the College are thus described: "Otwiele Meverell, Lawrentii Wright, Edmund Smith, Willielmi Goddard *in medicinis doctor' Collegii Medicor' in London.*"

Censors' Warrant, 1638, against Christofer Barton. In this warrant, the Censors are thus described: "We, Otwall Neverell, Lawrence Wright, Edmund Smith, and William Goddard, Doctors in Physic and Censors of the College of Physicians in London."

University of St. Andrews. The University agrees to confer the degree of Doctor of Medicine on Mr. Hugh Moises of Pimlico, on testimonials from George Pearson, M.D., of the College of Physicians, London, and Andrew Thyne, M.D., of the College of Physicians, London (extracted from University record by John Cook, Clerk to University of St. Andrew's, March 21st, 1799). Here the members of the College of Physicians are recognised as Doctors of Medicine equally with their own graduates.

Lord Ellenborough held (Lipscombe *v.* Holmes) that a person, by writing "Doctor", was passing himself off as a physician, and must take the character *cum onere*. How a person can pass himself off as a physician by the use of a title which does not belong to a physician, it is difficult to conceive.

Lord Denman.—Dr. Collins brought an action against another practitioner for

slander for saying of him, "I know no such person as Dr. Collins, but I know such a person as Joseph Collins, who calls himself Doctor Collins". Lord Denman, ruled that Dr. Collins, being only a M.D. of St. Andrew's, and not a member of the College, could not maintain the action in a profession which, by law, he could not exercise (Collins *v.* Carnegie, 1831).

Lord Mansfield said: "If the defendant" (a Scotch M.D.) "be not a Licentiate of the College of Physicians, he is in England merely a Doctor by courtesy."

These cases show that: 1. It would have been slanderous to say of a Licentiate of the College of Physicians that he was no doctor; 2. A Scotch M.D., before the Medical Act of 1858, was, in England, only a physician and doctor by courtesy.

The Hon. Mr. Deasy, late Solicitor-General for Ireland, said: "I think the Charter and Acts of Parliament relating to the King and Queen's College of Physicians in Ireland confer on its Licentiates the title of Doctor of Physic." The above opinion was only intended to show that persons in becoming Licentiates of the said College became Doctors, and that the title flowed from the qualification much in the same way that the title of Esquire flows from being admitted as barrister, or as the title of Physician flows from the degree of Doctor of Medicine. But there was nothing in the Charter empowering the College to confer the degree of M.D. in a direct and formal way, any more than the Inns of Court could grant the diploma of Esquire, or the universities the title of Physician. The College, however, mistaking the purport of this opinion, granted in a formal way the diploma of Doctor of Medicine, and were very properly restrained by injunction from Chancery. This judgment did not affect the question of Licentiates being Doctors by virtue of their licence.

Mr. Hugh Weightman, Barrister-at-Low, author of the *Medical Practitioners' Legal Guide*, 1870, after endorsing much of what has been above stated, observes: Every duly recognised "medicus" is, if one of the College of Physicians, also a Doctor of Physic in all its branches, including surgery, though not a Doctor of Medicine *par excellence*, which special designation pertains alone to doctors of the universities. "Medicus" and "Doctor" are both used in the Act of Henry VIII, incorporating the College of Physicians, and the body itself is declared to be "*Collegium perpetuum doctorum*". Medicus has always been considered as implying the style and title of "Doctor of Physic". The Licentiates, then, with of course the higher grades of Member and Fellow, might assume the title at least of Doctor without incurring any penalty, and indeed as of right (*Legal Guide*, pp. 153-155).

I make no remarks on the above evidence.—I am, etc.,

ST. JOHN GAGE PARSONS, M.D.St.Louis, L.R.C.P.

ENQUIRER (Liverpool) should address R. H. S. Carpenter, Esq., 130, Stockwell Road, London, S.W.

SURGICAL OPERATIONS AND NEWSPAPER PARAGRAPHS.

A SUBSCRIBER has forwarded to us a newspaper cutting from the *South Wales Weekly Telegram* of Friday, October 4th, in which an operation, apparently for epithelioma of the lips, is described in glowing terms, Dr. Quirk's cleverness and success being praised, and the account of the operation capped by the announcement that "this is another feather in the Doctor's cap, and adds to his already acquired reputation". We should imagine that Dr. Quirk would be very much better pleased if his newspaper friends would let his cap alone, and not decorate it in this unpleasant manner. It is a sort of feather which he would certainly not prefer to wear in this manner, and would be far from adding to the professional admiration of it. It is a great annoyance to medical men that such paragraphs should be published about their operations, for there are always enough ill-natured people about to make it extremely unsatisfactory they should appear at all, and no doubt Dr. Quirk will take means to express this sentiment to the editor of the paper.

DISEASE FROM A KISS.

DR. R. L. PAYNE, of North Carolina, calls attention, in the North Carolina *Medical Journal*, to the danger of conveying disease by kissing. He would do away with this custom. He gives this case and comments. A young man came to me with a neglected case of syphilis. He was already in the secondary stage of the disease, and among other symptoms which presented, had several mucous patches upon his lips and within his mouth. He had a little cousin, a girl child of sixteen months of age, who was still at its mother's breast. They were very fond of each other, and he was frequently in the habit of fondling and kissing the child. Of course, I knew nothing of this intimacy, or I should have warned him of the danger. Some weeks after this, I was called to visit the child and its mother. I found the little one with enlarged cervical glands, sore mouth, sore eyes, etc., and its mother said to me, after I had prescribed for the child: "Doctor, please look at my nipple, I believe I am going to have cancer of the breast." Her nipple was sore indeed, and her axillary lymphatic glands were enlarged and indurated, not from cancer, however, but from a characteristic chancre. I treated them all for syphilis, and the good results of the treatment verified my diagnosis. I have seen many similar cases during the last twenty-five years, and many more might be cited from the authorities upon this loathsome disease, but the above are sufficient for my purpose.

Very many other diseases may be conveyed by the act of kissing, and I might go on at length enumerating them; but my object is simply to call attention to the truth which lies in this direction, and to testify most solemnly against a practice so fraught with danger, so pregnant with death. The act of kissing is never, under any circumstances, indispensable, and the indiscriminate practice is not only unnecessary, but is also foolish, dangerous, and very often insincere.

CHLOROFORM AND POST PARTUM HÆMORRHAGE.

SIR,—I have only now seen a letter from Mr. Thomas McClure, in the JOURNAL of October 18th, in which he asks "whether chloroform tends to cause *post partum* hæmorrhage". For years in India I used chloroform, or combinations of it with ether, etc., in almost every case of labour I attended. Few ladies then, in my part of India, thought of enduring the pain and peril of childbirth without chloroform; and I had important experience with it in native women. After a lengthened experience, then, extending over the period since Sir J. Simpson introduced chloroform into midwifery practice, I have never had a case of troublesome *post partum* hæmorrhage which I could attribute in any degree to its influence. I have had bad cases of flooding, all of them occurring at an altitude of seven thousand to eight thousand feet above sea-level—a factor this in producing hæmorrhage well known to practitioners at such elevations—but in no one of these could chloroform be blamed. The worst occurred where chloroform had not been given at all; and not one was fatal. I have given chloroform in all stages of labour, and for periods varying from half an hour or less, near the completion of the birth only, up to twelve hours and upwards of almost constant administration. In two special and peculiar cases, I gave it for twelve hours, almost continuously, without any bad effect. The first of these was in the labour of a very small and delicate girl about twelve years of age, who appeared to be *in extremis*, with violent and almost unintermittent convulsions, when carried into hospital. Bleeding and other heroic remedies were contraindicated, but I kept the convulsions under perfect control till delivery (instrumental) was accomplished, with perfectly satisfactory result, and with a good recovery. In the second, the lady, an American, was also a primipara, aged about 27, of exceedingly nervous temperament, who would not hear of any pain, and to whom I administered a mixture of chloroform, ether, and spirit, from 4 A.M. till 4 P.M., with the effect, I imagined, of rather retarding labour, but without the slightest bad symptom following. In neither case was there any *post partum* hæmorrhage. I venture thus very succinctly to record these facts, as it seems to me that a strange and unwarranted fear of the use of chloroform in midwifery, especially in natural labour, has grown up here in England. I look upon chloroform, if carefully used, and not left to incompetent nurses, as not only safe but harmless; so at least it has proved in my hands in many a trying hour of midwifery practice. I would only add, as to *post partum* hæmorrhage, that I think all precautions should always be taken to prevent it; that I have always taken, and always do take, these, as if expecting flooding to follow; and that, during my experience of above thirty years in midwifery, I have never had a fatal case, either in the tropics or at home.—I am, sir, yours faithfully,

JAMES DONALDSON, M.D.

42, Belsize Road, N.W., October 27th, 1879.

L.R.C.P. (London) will receive, on writing to the Registrar of the University, either of Edinburgh or Cambridge, full details of the course of study necessary for the sanitary science certificates.

S. S. C. (Cambridge).—We entirely agree with our correspondent, that it is extremely desirable that anyone intending to take part in the public health services should, for his own sake, go through a course of study, and pass the examinations in sanitary science, at one or other of the universities.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. William Roberts, Manchester; Dr. John Cockle, London; Dr. J. W. Miller, Dundee; Dr. Dougall, Glasgow; Dr. A. Buchanan, Glasgow; Dr. Warlomont, Brussels; Dr. Edis, London; Dr. Kelly, Taunton; Dr. A. Wahltuch, Manchester; Mr. James Pollard, Torquay; Mr. James Startin, London; Mr. Nelson Hardy, London; Mr. A. S. May, Forest Hill; Mr. Samuel Benton, London; Mr. A. S. Verity, Bridgend; Dr. de Pietra Santa, Paris; Dr. F. A. Mahomed, London; Dr. Wolfe, Glasgow; Dr. James Gardner, Bath; Dr. Lush, Weymouth; Mr. J. Hogg, London; Dr. G. Parsons, Bristol; Mr. S. H. Munro, Tunbridge Wells; Dr. Skerritt, Clifton; Dr. Cash, Torquay; Mr. Grant, London; Dr. Shorthouse, Carshalton; Mr. Lawson Tait, Birmingham; Dr. Tripe, London; Mr. F. J. Gant, London; Mr. E. Nettleship, London; Dr. Hoggan, London; Enquirer; Mr. J. Brindley James, London; E. S. K.; Dr. Walter G. Smith, Dublin; Dr. H. Rayner, Hanwell; Mr. J. H. Casson, London; Mr. R. D. R. Sweeting, London; Dr. Haddon, Manchester; Mr. Theobald A. Palm, Niigata, Japan; Mr. G. P. Field, London; Dr. F. J. B. Quinlan, Dublin; Dr. Balthazar Foster, Birmingham; Mr. J. W. Hulke, London; Dr. Ranking, Chester; Mr. L. Armstrong, Newton Abbot; Mr. Balmanno Squire, London; Mr. Otto Hehner, London; M.R.C.S. & L.S.A.; Dr. Shuttleworth, Lancaster; Dr. O'Neill, Lincoln; Dr. Meredith, Taunton; Dr. Hardwicke, Sheffield; Dr. D. N. Knox, Glasgow; The Secretary of Apothecaries' Hall; Dr. Baldwin, Ohio; The Registrar-General of England; Dr. D. B. Lees, London; M.D.; Dr. Clement Godson, London; The Registrar-General of Ireland; Dr. Francis Warner, London; Mr. G. Eastes, London; Medical Officers; Mr. Berkeley Hill, London; Dr. C. Neill, Ryde; Dr. W. T. Fernie, Great Malvern; Dr. W. B. Cheadle, London; L. M. T.; Mr. Treves, Margate; Dr. Graily Hewitt, London; Mr. G. J. Hamilton, London; Dr. Cameron, Glasgow; Mr. James T. Stodart, London; Dr. J. M. Finny, Dublin; Mr. Morrant Baker, London; Dr. Casley, Watford; Dr. Cole, Bath; Dr. M. M. Bradley, Jarrow-on-Tyne; Mr. Davies-Colley, London; Dr. A. Carter, Birmingham; Mr. W. Trenerry, Bristol; G. F. D.; Mr. E. Hawker, Chard; Our Edinburgh Correspondent; L.K.C.P.Lond.; Dr. C. Hogg, London; R.; Our Glasgow Correspondent; S.S.C.Cantab.; Mr. J. B. Noble, London; Our Dublin Correspondent; Dr. Macnaughton Jones, Cork: Mr. William Snell, London; Dr. E. Copeman, Norwich; Mr. R. S. Fowler, Bath; Dr. Sutherland, London; etc.

BOOKS, ETC., RECEIVED.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M.D. Third Edition. Glasgow: James Maclehose. 1879.

Annals of Chemical Medicine. Edited by J. L. W. Thudichum, M.D. London: Longmans and Co. 1879.

The Treatment of Uterine Myoma by Abdominal Section. By Thos. Savage, M.D. Birmingham: Josiah Allen. 1879.

Sanitary Fallacies: an Address delivered before the Congress of the Sanitary Institute of Great Britain at Croydon on Thursday, October 23rd, 1879. By W. H. Corfield, M.A., M.D. London: H. K. Lewis. 1879.

Two Lectures on Ringworm and other Diseases of the Skin due to Vegetoid Parasites. By J. Startin. London: Baillière, Tindall, and Cox. 1879.

Lupus and its Treatment. By J. Startin. 1879.

CLINICAL LECTURES
ON
STRICTURE OF THE URETHRA.

Delivered in University College Hospital.

BY BERKELEY HILL, M.B., F.R.C.S.Eng.,
Professor of Clinical Surgery in University College.

I.—MEASUREMENTS OF THE URETHRA?

IN the remarks I am about to offer you concerning stricture of the urethra, I shall mainly direct your attention to the conditions which relate to close or narrow stricture; but, before doing so, I shall advert to the natural width or natural variations in width of the urethra—for two reasons: one, because I believe a knowledge of that width is necessary to appropriate treatment of the stricture; and the other, because I think the urethra is commonly supposed by surgeons to have a narrower calibre than it really possesses. On the other hand, it must be borne in mind that the urethra, when not in use as a tract for the urine or semen, is not an open tube at all, but a chink of which the sides are in close apposition. This condition is well seen in a transverse section of the penis. Moreover, each successive portion of the canal, when not distended by fluid passing through it, spontaneously closes by its inherent contractility. Thus, when urine begins to flow from the bladder, it dilates the chink to an open tube as it passes towards the meatus; when the supply from the bladder ceases, the urethra, except perhaps the prostato-membranous portion, closes directly behind the flow. This mode of closure of the urethra can easily be watched through the endoscope as that tube is withdrawn. The prostato-membranous part, as you well know, is cleared by voluntary effort of the perineal muscles after the flow from the bladder has ceased. Undoubtedly, therefore, the size of the urethra, for purposes of micturition, means the width to which the closed chink must be opened to allow an unimpeded escape to the urine. We have no reason to suppose that the stream of urine ever expands the healthy urethra to its utmost limit. Indeed, the contrary is much more probably true. The elastic urethra may be likened to an artery. The elastic and contractile fibres may be considered to keep a tonic pressure upon the stream flowing through its interior, to maintain the force with which the urine is ejected from the bladder and eventually from the body of the patient. In other words, a bougie or urethrometer can be made to expand the urethra without injury, to a wider calibre than the bladder requires while expelling the urine; and our researches must be directed to discovering how much expansion is customary or necessary when devising means for giving free flow to the urinary stream. For of this be assured, that, if the balance between the expelling force of the bladder and the friction of the urethra be disturbed in favour of friction, the bladder grows tired and irritated, the kidneys are not properly disembarrassed of their secretions, and thus begins that series of events which ends not unfrequently in death.

Nor must we delay treatment until difficulty in voiding urine is apparent, because the urethra may have lost much of its customary natural distensibility, and thereby injuriously affect the bladder before the size of the urinary stream is sensibly diminished. Such losses of elasticity can be detected only by instruments which measure the natural distensibility of the urethra; but, as the exact extent to which the urethra should yield before the stream is unknown to us, and as even slight losses of expansibility do seriously impede the flow and harass the bladder in some cases, our aim in treating stricture should be to restore the urethra nearly, if not quite, to its extreme capacity, in order to remove all hindrance to an easy yielding of the passage before the flow of urine, and thereby to ensure that the strictured parts shall open during micturition as much as do the healthy parts. Keep this steadily in mind.

The urethra, I need hardly remind you, is divided into prostatic and membranous parts behind the anterior layer of the deep perineal fascia, and into a spongy portion in front of that limit. With the prostatic portion, stricture has nothing to do; and with the membranous part only in severe cases, by extension of the stricture from the bulb. These two portions are in all persons, moreover, decidedly wider than the spongy portion. Therefore, in speaking of the urethral measurements, I limit my remarks to the spongy portion. This spongy part may, for convenience, be divided again into bulbous and antescrotal segments.

The anatomists tell us that the bulbous portion is somewhat wider than the rest, having an internal circumference of seven-tenths of an inch; and that the remaining part is smaller by one or two tenths. The meatus does not exceed one-quarter of an inch in width. These measurements are laid down in the books as being liable to little variation, notwithstanding the great variations of the size of the penis. Most writers on stricture have not attempted to ascertain the full distensile capacity of the urethra, but have assumed, possibly from the measures of the anatomists, that the living urethra when dilated measures in circumference between eight-tenths of an inch and twelve-tenths of an inch, or between No. 12 and No. 15 or 16 of the English catheter scale. Long ago it was observed by some surgeons that, at least occasionally, urethræ are met with which easily admit sounds of much greater calibre. In Sir Everard Home's works are drawings of wax casts of an urethra, of which the expansile capacity went much beyond the limits just mentioned (*On Stricture*, 1805, vol. i, p. 566). Mr. Guthrie also drew attention to the great variation of the urethra in different persons, stating it to be between three-twelfths and six-twelfths of an inch in diameter; that is, from three-quarters of an inch to an inch and a half in circumference (*Lancet*, May 24th, 1851). He remarks, moreover, that the meatus must frequently be cut before the stricture can be properly treated. Though Mr. Guthrie pointed out this varying expansibility of the urethra, his remarks have been generally overlooked by anatomists and surgeons. Of late, there has been a tendency to grant a larger capacity to the urethra, especially by American surgeons. Messrs. Van Buren and Keyes, in their recent excellent work on *Genito-urinary Diseases*, estimate the diameter of a "fair average well-formed urethra at three-eighths of an inch", thus giving to it a circumference of over one inch and a quarter. Dr. H. B. Sands, in the *New York Medical Journal*, March 1876, has delineated casts of four urethræ obtained by wax injections, which varied in size according to the amount of pressure used in injecting. The result of his experiments showed that the expansile capacity must be set at a considerably higher value than the anatomists' measures indicate. During the last four or five years, Dr. Fessenden N. Otis of New York, following in the path which Reybard took in 1852, has set himself to ascertain, by a large number of measurements of the urethra in the living subject, its average distensile capacity. The measurements thus obtained match those claimed as exceptional many years ago by Guthrie.



Fig. 1. The Urethrometer.

For carrying out his observations, Dr. Otis has invented the urethrometer. Here it is. (Fig. 1.) It consists of a slender cannula marked in inches and half inches, within which a stylet can be pushed backwards and forwards by turning a screw at the handle. The moving to and fro of the stylet causes some watch-spring segments of a bulb to draw together or to spread apart, thus forming a bullet-sound, of which the circumference may be varied between two-thirds of an inch and one inch and three-fourths or more. While altering the size of the bulb, the screw also turns an index round a scale, and thus shows the amount of dilation at each turn of the screw. When in use, a thin India-rubber stall covers the expanding part. The scale of this instrument is graduated according to the French scale. In this scale, each size increases in *diameter* by one-third of a *millimètre*, so that the number of the size denotes pretty closely in *millimètres* its circumference—so nearly that, for practical purposes, it may be assumed that such is the case, when estimating the capacity of a given urethra. I may here also observe that a *millimètre* is almost the one-twenty-fifth of an English inch. This methodical scale is gradually gaining general adoption in England, and it is the one I shall employ in speaking of the capacity of the urethra.

Dr. Otis has published measurements of the distensile capacity of the urethra, taken in one hundred individuals who had no history of previous gonorrhœa or symptom of contraction (*Stricture of the Male Urethra*, New York, 1878, p. 200). His measurements were in all cases verified by witnesses. In these hundred cases, measured by the urethrometer, the average distensile capacity was thirty-three *millimètres* (about one inch and one-third) in the antebulbous part, and thirty-six *millimètres* in the bulbous part; the minimum being twenty *millimètres*, or four-fifths of an inch; and the maximum being forty *millimètres*, one inch and three-fifths. An urethra thus gauged by the urethrometer shows that the most

expansile portion is the bulb, from which point outwards the urethra slowly narrows for about two inches; thence it retains the same capacity to the end, unless the meatus be itself contracted. In such cases of narrow outlet, the urethra, Dr. Otis says, is dilated into the boat-shaped hollow in the roof. This fossa navicularis, described as a normal feature by anatomists, Dr. Otis believes to be the result of pressure of the stream when the outlet has been narrowed, as he could find no such fossa in infants, nor in the fœtal urethra. But this suggestion requires further examination. It is one to which I hold little; for I have seen the fossa navicularis well developed in cases of hypospadias, where the urine has always escaped before reaching the glans penis. Besides measuring these hundred cases of normal urethræ, Dr. Otis states that he has measured five hundred others, in which disease might or might not have previously existed. The results of his measurements in this large number of cases showed that the urethra could be distended, without pain to the patient; by instruments of a much larger calibre than has been hitherto supposed possible. But, as no relation exists between the meatus urinarius and the calibre of the urethra, the size of the meatus is no gauge for that of the interior parts; and, until an instrument was devised which could pass through a narrow orifice and then be made smaller or larger at will, the calibre of the meatus controlled the size of the instrument to be passed. Hence no contraction of the interior of the urethra that was not also smaller than the meatus could be detected by the sound; unless, indeed, Mr. Guthrie's advice was put in practice, and the meatus was cut before the dilatation of the stricture was commenced. The expanding bulb at once reveals the fact that a narrow meatus often terminates a canal along which a widely dilated bulb will pass freely.

As to the normal width of the meatus, Dr. Otis believes that naturally it may be slightly smaller than the urethra; but that, in its most perfect form, it has the same calibre as the last two inches of that passage. He explains the fact of its being very frequently much narrower than the rest, by supposing balanitis in infancy to have developed a ring of cicatricial tissue at the orifice. This solution I cannot accept, especially as traces of balanitis are often impossible to find in cases of small meatus; and I believe that the meatus may be naturally considerably smaller than the rest of the urethra. But, however this narrowness of the outlet be produced, the most common size of the meatus is twenty-four to twenty-five *millimètres*, or as nearly as possible one inch in circumference; and it may vary from a mere pin-hole to an inch and three-quarters.

By the measurements which I have made with the urethrometer, not so numerous as those of Dr. Otis, but exceeding two hundred, I have satisfied myself that the dimensions claimed by that gentleman for the urethra and meatus really exist in many cases, though I should set the usual maximum of distensibility somewhat lower than he does—placing the average at thirty *millimètres*, or slightly less, instead of at thirty-three *millimètres*. But I am convinced that the only exact mode of learning the size of a given urethra consists in measuring it with the urethrometer. By this means alone can we ascertain the distensile power of the urethra, or the precise situations of the unyielding parts which may have formed along that duct. As an useful aid in this investigation, Dr. Otis points out that the external circumference of the flaccid penis is a tolerably accurate indicator of the distensile capacity of the urethra. Thus, a small penis of three inches in circumference has an urethra of thirty *millimètres;* one of three and a quarter inches, thirty-two *millimètres;* and so on. He thus sets the maximum outside and inside measurements at four and a half inches and forty *millimètres* respectively.

In examining the spongy portion of the urethra, three points are to be ascertained: first, the natural distensibility of the healthy portions; next, the position of unyielding parts; lastly, their calibre. The size and shape of the instruments employed in this examination are of great importance; indeed, unless you provide yourself with suitable instruments, you will not gain any precise knowledge of the condition of the urethra you are asked to treat, and will probably bungle in your treatment. Bullet-sounds with slender stems (*sondes à boule*), some flexible, some rigid, are requisite in addition to the urethrometer. For searching for stricture, I discard instruments with tapering points or of equal calibre throughout—the ordinary so-called French and English bougies or sounds; they are deceptive in several ways. For example, an instrument of which the stem and point are of equal thickness is gripped the whole time it is passing through the stricture, and the presence of other non-expanding points behind the first notified by the sound is not perceptible; unless, indeed, they be narrower than the first, when they stop the further progress of the instrument. The shape of the bullet of an exploring sound best suited for its purpose is that of a turkey's egg, which is a little more pointed than that of the common hen. The circumference of the big end corresponds to the number of the sound. The bullet is attached to a slender stem no thicker than No. 5 French. When made of flexible material, the stem should be marked in inches and half-inches by white rings, the fifth inch from the point having a wider ring than the rest, to serve as a landmark. The position of any obstruction can at once be noted by observing how many rings have passed the meatus. Again, the bulb at the end of a slender stem transmits impressions from only that part of the canal against which it is pressed; and, as it passes along the canal, it is checked by an unyielding point, or gives slight pain to the patient while it traverses an inflamed area. Directly the wide bulb has passed these situations of disease and reached a healthy part of the urethra, no sense of resistance is felt, and no discomfort experienced by the patient until the bulb arrives at the next diseased locality, because the slender stem does not distend the urethra. Thus the bulb and graduated stem enable the surgeon to ascertain the number, length, and exact position of the indurated or inflamed patches of the urethra. When no stricture is present, no difficulty checks the passage of the bulb to and fro in the urethra, if the triangular ligament be not passed. At that point, the change of direction, and often a slight diminution of calibre of the urethra through the orifice in the anterior layer of the perineal fascia to twenty-seven or twenty-six *millimètres*, usually check and sometimes stop the passage of a bullet-bougie, and pain is felt by the patient. But it is seldom, if ever, necessary to pass the triangular ligament to discover unyielding parts of the urethra. Old well-marked strictures do invade the membranous portion, it is true; but such have so greatly altered the form of the urethra in front as well as behind the perineal fascia, that their detection is easy, and the bullet-sound is not needed to discover such indurations.

With these prefatory remarks, I shall now demonstrate the method of ascertaining the expansibility of the urethra, and the possible existence of stricture, in patients introduced into the lecture theatre for that purpose. All of them complain of discomfort or pain associated with a gleet that has lasted, even in the cases of shortest duration, more than twelve months. I shall first introduce the urethrometer in its contracted state along the urethra as far as the bulbous portion, and then slowly expand the instrument until the patient acknowledges a sense of fulness at that part. The instrument is then gently withdrawn. If any sensation of clinging be felt by the operator, the bulb will be slightly diminished, until it slides along the passage without giving pain to the patient. Let us examine first this case, which is instructive and interesting from the fact that the patient has been for some time under treatment at different hospitals for gleet and for stricture of the bulbous portion of the urethra. In curing the latter, what is called a full-sized instrument by many surgeons has been gradually reached; namely, a No. 11 English steel sound was passed about four weeks ago, before the man came under my care. You see a bullet-sound, No. 25, just passes through the meatus, and is stopped at half an inch along the canal; but that a No. 23 bullet-sound can be coaxed through this constriction, and then runs freely down the passage. You will notice, in passing, that No. 23 bullet-sound has much the size of No. 11 English steel sound. We cannot, therefore, measure the calibre of the urethra behind the constriction at half an inch, unless we use an expanding bulb. To do this, I will introduce the urethrometer. This, when passed for five inches—that is, to the bulbous part—expands easily to No. 32, and can be withdrawn at that size as far as two inches from the meatus, where it must be diminished to 30; and so travels outwards to half an inch from the meatus, where we know the calibre is only 23, and the meter must be screwed down to that size before it can be withdrawn. This unyielding point shall be divided by a touch of the probe-pointed bistoury. Now this has been done, you see that a tapering bougie, No. 27, passes easily into the bladder, and thus demonstrates the absence of stricture at the bulb, to cure which he has been submitted to much assiduous instrumentation. The patient shall now lie down for an hour or two by the ward-fire before he goes home, and be told to come here again in three days' time for the passage of No. 30 sound through the incised part of the urethra only, not down to the bulb, where there is no stricture. This division of the stricture near the meatus will probably suffice to cure the gleet and the irritability of the urethra, for which he seeks relief. In order to test Dr. Otis's dictum, let us measure the circumference of this patient's flaccid penis. It measures three and a quarter inches, and thus tallies with the observation of our American *confrère;* three and a quarter inches (eighty-one *millimètres*) outside, and thirty-two *millimètres* inside.

[Other patients were examined by the urethrometer; and urethræ that permitted dilatation at the bulbous portion to thirty-five *millimètres*, and even more, without pain, were found to contract at three or two and a half inches from the meatus to thirty-two or thirty-one, and henceforth maintained this lesser calibre until the meatus was approached. In most of the patients examined on this occasion—sufferers from long-

lasting gleet—the urethra suddenly narrowed at some point in the last inch of the urethra, sometimes at the meatus itself; and the meter had to be diminished to twenty-one or twenty to permit its exit from the canal. The external circumference of the flaccid penis in these patients corresponded also with the dilatability of the urethra as stated by Dr. Otis. One patient was found to have a meatus of twenty-seven, a calibre at four and a half inches of thirty-three, contracting at one inch to twenty-four. Behind four and a half inches, the urethra for about three-fourths of an inch was only seventeen. This was an example of stricture of the bulbous portion.]

ABSTRACT OF LECTURES

ON METALLOSCOPY.*

Delivered at La Pitié Hospital, Paris.

By DR. DUMONTPALLIER,

Physician to the Hospital; General Secretary of the Society of Biology, Paris.

M. DUMONTPALLIER commenced by pointing out that Dr. Burq's system of metallo-therapeutics is a new method founded on two laws. The first law is, that the patients have a certain aptitude for metals; that is to say, every patient seems to be influenced in a certain way by the external application of a metal, which, however, is not in all cases the same metal. The second law consists in the fact that, when a metal has acted by its application to the surface of the skin, and has brought back sensibility, muscular force, and temperature, this same metal must be given internally to obtain similar and continued results. Thirty years ago, M. Burq studied all the facts relating to metalloscopy, especially at the Salpêtrière Hospital, and noted all the phenomena peculiar to nervous, hysterical, and hystero-epileptic patients. M. Dumontpallier then pointed out the different symptoms of hysteria which may be promptly changed in certain determinate cases by external applications of a given metal, or by the same metal administered by the mouth. Hysteria is now, he said, divided into two principal forms: common hysteria, which is met with in every hospital; and hysteria major or hystero-epilepsy with all its varieties.

After describing the special mental characteristics of hysteria, which are well known, M. Dumontpallier passed to the modification of the general sensibility, which is frequently found in cases of hysteria. In these cases are found all varieties of hyperæsthesia, every kind of neuralgia, and especially the intercostal, ilio-lumbar, and occipito-frontal forms, more particularly neuralgia of the fifth pair; and finally neuralgia of the ovary, on which M. Charcot has laid much stress, and to which he has given the name of *ovarie;* a neuralgia which perhaps is not always seated in the ovary itself, and has a great influence over the determination and cessation of the attacks. Finally, instead of an increase of sensibility, there may be anæsthesia; and it is of great importance to attend to this anæsthesia and the muscular weakness, so as to recognise the phenomena which are amenable to metallotherapy. At other times, there are dysæsthetic phenomena, that is to say, perversions of sensibility, so that patients feel a sensation of heat when cold is applied, and *vice versâ*. Special sensibility is no less affected in hysteria: hysterical patients suffer from amblyopia, dyschromatopsia, or achromatopsia; modifications of the smell and taste; and finally perversions of the touch, which interfere with their sensibility to the variations of temperature and to their power of distinguishing the forms of objects. There are also other symptoms, connected with motor power. Muscular contractility is deeply involved in hysterical disorders, and here also exaltations, diminutions, and perversions will be found present; for instance, paresis simulating muscular weakness, true paralysis, paraplegia, and hemiplegia. At other times, we find an excess of action—convulsions, contractions, and spasms. The muscles of organic life are sometimes the seat of spasms and contractions. The mucous membrane of the pharynx is often affected with general and special anæsthesia; patients no longer perceive the difference between sweet or bitter substances placed in contact with the mucous membrane of the pharynx. At other times, dysphagia is present, and the patients swallow with difficulty. The stomach is the seat of very important modifications. Nearly all hysterical patients are dyspeptic, and frequently suffer from constant vomiting. MM. Charcot and Fernet have published some remarkable cases in which the vomitings coincided with hysterical anuria. In these cases, chemical analysis has shown that the vomited matters contained considerable quantities of urea. Flatulent distension of the stomach and intestines is common in hysteria; and the excessive swelling of the abdomen, which is due to a secretion of gas and to paralysis of the muscle of the intestine, may have very distressing consequences, from the difficulty it may cause in respiration and circulation. The enumeration of symptoms of hysteria which are amenable to metallotherapy would be incomplete without speaking of the cough and hysterical aphonia, which are owing either to spasm or to paralysis of the muscles of the larynx. But frequently the muscles of the larynx are not alone affected; the diaphragm and the intercostal muscles are modified in their functions; and then the hiccup and hysterical cry (*aboiement*) will be met with, which, according to M. Dumontpallier, may be cured by metallotherapy.

Cutaneous perspiration is considerably modified in hysteria, and the hand of an hysterical patient feels like the skin of a batrachian, that is to say, damp and cold; this being a defect in secretion due to a modification of the circulation of the palmar region. Another important function which is often disturbed in hysteria is the secretion of the ovaries and ovulation; and in some hysterical patients a copious leucorrhœa seems for some time to replace, at least during a certain time, the menstrual flow, which is often suppressed for some months. The vaso-motor nerves are seriously involved, and this modification shows itself sometimes by a remarkable rise and sometimes by a fall in the temperature. In reference to the appearances produced on the skin of hysterical patients by the derangement of the vaso-motor nerves, M. Dumontpallier called attention to the emotional or vaso-motor appearances frequently observed on the anterior portion of the chest. M. Dujardin-Beaumetz has, it appears, lately shown, at the Société Médicale des Hôpitaux, a patient on whose skin all kinds of signs could be traced, because, owing to the vaso-motor modifications of the peripheral circulation, the impressions produced by a projecting body were shown by pimples. These are peripheric vaso-motor disturbances which are controlled by the nervous system.

When this condition of the nerves is suspected in a patient, when it is likely to be hysterical, sensibility, muscular power, and temperature should be interrogated if it be required to know what can be effected by metalloscopy and metallotherapy; the sensibility especially should be carefully examined. So long ago as 1848, M. Beau compiled an interesting work on this subject, which M. Burq completed in 1849 by his metalloscopic studies. Muscular sensibility, sensibility to pain, and tactile sensibility must be noted; and subsequently the order in which these different sensibilities disappear. Generally, analgesia is the first demonstration; then tactile anæsthesia ensues; and finally loss of muscular sensibility. M. Charles Richet, in his inaugural thesis, has carefully drawn attention to this order of progression in the loss of the different sensibilities. Analgesia may be present over the whole surface of the body; but, as a rule, it is in hysterical patients limited to half the body (hemianæsthesia). When there is general anæsthesia, some remnant of sensibility is sometimes found in the upper and inner part of the thigh or in the epigastric region, as M. Beau has already remarked. In order to discover hemianæsthesia, the use of a pin will suffice; or, better, the instrument to which M. Burq has given the name of æsthesiometer. This, which is the analogue of Weber's compass, has at its ends two blunt ivory points, intended to study tactile sensibility; and, without the patient's knowledge, a needle may be made to project from either, by which sensibility to pain may be explored. Dr. Burq's æsthesiometer is in the form of a compass; it is furnished with a graduated scale, by which the distance at which the two points can be felt distinctly is accurately measured. Generally, sensibility is so much weakened, that a more extensive separation of the ends is needed in order that the two points may be simultaneously felt. However, a long needle will enable any one to study cutaneous sensibility by superficial punctures, and the sensibility of the subcutaneous parts by deeper ones. The skin, in hysterical patients, may frequently be pierced, or even the muscles may be penetrated, without producing pain. In these cases of anæsthesia, there is no flow of blood in the situation of the punctures. It has been asserted that hysterical patients can, by an effort of will, conceal pain. M. Dumontpallier would rather think that they suffer from intellectual disturbances of such a character, that they are able to struggle against pain, and almost to say, "Pain, thou art but an expression". But there are conditions, which will be pointed out further on, in which the patients cannot be accused of deception, and in which they cannot easily lead the medical observer into error.

The general sensibility of the skin and of the mucous membranes in relation to pain, tactile sensibility, and temperature, is modified in hysteria, and special sensibility may also be affected in a very remarkable manner; recently, attention has principally been called to the modifications of the sight in hysteria. This is an almost novel fact; formerly, amblyopia and weak sight were only noted. At present, all

* *L'Union Médicale*, August 30th, September 9th, 13th, and 20th, 1879.

the phenomena which occur with reference to the eyes have been studied; the extent of the field of vision has been studied; and a very interesting variety of Daltonism has been noted in hysterical patients, one which is of considerable value in the diagnosis of hysteria.

The sense of hearing may also be modified in an important way; and, in the same way as oculists now have methods and apparatus for measuring acuteness of vision, M. Gellé has invented a very simple instrument which permits the measurement of the acuteness of hearing with great ease, and it can be used by the operator placing himself behind the patient, so that deception is rendered impossible. The instrument consists of an India-rubber tube about three feet and a half long, of which each end is introduced into the corresponding ear. The operator places himself with this interauricular tube behind the patient. A watch is then passed along this tube, and the distance at which the ticking of the watch is heard on the right hand and on the left by the patient is noted.

To demonstrate the presence of hemianæsthesia of the tongue and nostrils in hysterical patients, M. Dumontpallier uses ether in preference to ammonia, because the evaporation of the latter may have a caustic action on the nasal mucous membrane.

In conjunction with these modifications of sensibility, we find, with regard to the muscular system, that weakness of the muscular contraction which M. Burq has denominated amyosthenia. This amyosthenia generally shows itself on the hemianæsthetic side only, and on this side a lowering of the temperature will generally be found. This muscular weakening can be measured by the aid of a dynamometer, invented by M. Burq. The use of this instrument will show that a patient who is hemianæsthetic on the left side will only give a pressure of from fifteen to twenty *kilogrammes* at the beginning of the experiment; whilst at the end, when sensibility was restored, the dynamometric pressure sometimes rose to thirty, thirty-five, and even forty *kilogrammes* on the side to which the metals have been applied.

The modifications of sensibility and muscular force may be simulated. On this point, it is not wise to despise objections; they must be accepted and replied to by physical experiments like the variations of the thermometer. M. Dumontpallier affirms, in the strongest manner, that he was only convinced of the truth of M. Burq's doctrines on metalloscopy and metallotherapy when he saw all the modifications of temperature revealed by the thermometer, which can neither be the accomplice of the patient nor of the physician, proceeding in a parallel course with the phenomena of sensibility and of muscular force; when he saw that, while sensibility and muscular force were being restored, there was a rise in the temperature. From that time, M. Dumontpallier no longer had any doubts; and from that time forward he devoted himself, so far as he could, to the defence and promulgation of M. Burq's doctrines. In fact, the thermometer cannot possibly err. When, in a patient who is anæsthetic and amyosthenic on the left side, a thermometer is placed in both hands; when on the right side the temperature rises progressively and rapidly to 36 deg. Cent. (96.8 deg. Fahr.), whilst on the left side the temperature rises more slowly and stops at 34 or 34.5 deg. (93.2 or 94 deg. Fahr.); and when on the application of the metals the rise of the temperature is seen to be more rapid on the left, that is to say, the affected side, than on the right or healthy side; and when, at a given moment, the temperature of the affected side even exceeds that of the healthy side;—it is not possible to doubt the phenomena induced by the application of the metals. The important point is, that the rise in temperature takes place at the same time as the return of sensibility and muscular power, during the whole time of the application of the metallic plates on the skin, and during a certain time after their removal. Consequently, the thermometer is expressly calculated for demonstration in the present case, and no scientific man can refuse to believe in it when he has witnessed the experiments and has taken the trouble to repeat them himself.

The next point to be determined is, what metal is likely to affect the patient, or, to use the recognised phrase, how the individual metallic aptitude is to be discovered. Experiments have not been made with all the metals, but with the most ordinary ones. These have been arranged in a scale, according to the frequency of their action; and experience shows that in ordinary conditions we should begin with iron. Copper, gold, zinc, silver, tin, and platinum have been used experimentally by M. Dumontpallier. These different metals are placed successively on an anæsthetic region, and the effects produced are observed, whether positive or negative. Originally, the method was simple and sufficiently expeditious, and consisted in placing simultaneously different metals on the anæsthetised half of the body, on the calf, thigh, forearm, and trunk. In this way, it was thought to be practicable to ascertain quickly, perhaps in a half-hour or an hour, the appropriate metal. This, however, was erroneous; and the Commission appointed by the Société de Biologie to study all the metalloscopic phenomena discovered by M. Burq, of which M. Dumontpallier was one of the members, discovered, in the course of their experiments, that when a neutral metal (one producing no effect) and a positive metal (one exercising an action on the patient) were placed simultaneously on the same region, the phenomena could be modified in such a way that the effects produced by the positive metal would be rendered nugatory. From this fact, M. Dumontpallier drew the conclusion that a certain interval must be allowed between the experiments, and one metal only applied at the same time. When, therefore, a metal has been applied and a negative result obtained, another metal should only be tried after an interval of two or three days, so that it may be absolutely independent of the metal previously applied, and the patient may be in a condition as if she had not been subjected to previous experimentation. Under these conditions, M. Dumontpallier has found that in the place where the metal has been applied—the forearm, for instance—the patient, at the end of a period varying from two to ten or fifteen minutes, as a rule, feels a sensation of heat, then of weight. These are the subjective phenomena: there are also striking objective phenomena. The skin will redden in the neighbourhood of the metal; and if it be pricked, although bloodless before the experiment, it will bleed, and sometimes copiously, at the smallest puncture. The return of sensibility invades the limb from below upwards, and from above downwards; and, at the end of twenty, thirty, or forty minutes, it will be generalised over the whole of the side which was at first insensible.

In certain conditions, the return of insensibility not only affects the general, but also the special sensibility. Moreover, in speaking further on auricular and ophthalmoscopic metalloscopy, it will be seen how the return of retinal sensibility may be hastened by applying the metal to the frontal and temporal regions, and the return of the sensibility to smell by placing the metal on the mastoid or retroauricular region. When these methods are adopted, sensibility and muscular power will progressively return, in about from five to ten minutes, at the same time as the rise of the thermometer takes place. Under these conditions, the patient cannot deceive, and the rise of the temperature furnishes a demonstration of the value of the experiment.

All these phenomena proceed in a parallel fashion, and so to say, join hands. At other times (but these cases are more rare), sensibility does not change, whilst the muscular power progresses and testifies to the action of the metal. Experience has established that in these cases the metal administered internally may in its turn bring on the return of sensibility. In other still more rare circumstances, the external application of the metal on the insensible part neither brings back sensibility nor muscular power; and, as M. Burq has lately noted in a patient at the Hôtel-Dieu, it is temperature alone which has the task of demonstrating the action of the metal. In this case, the metal of which the external application has brought on the elevation of temperature should be given internally, and the return of sensibility and of muscular power will be seen on the next or following day.

The counter-proof must now be considered. It has been seen that these phenomena are fixed in certain conditions by placing a neutral metal on an active metal, or replacing the active metal on the skin by a neutral one. It was necessary to ascertain what would occur if these plates were reversed. In doing this, no results were obtained. In order that fixation should take place, it is necessary that the active metal should be in relation with the skin when the two plates are superposed, or that the active metal should be taken away and replaced *in loco* by a neutral metal.

M. Gellé, in studying the auditory phenomena, has arrived at the important fact of transfer for the sense of hearing; M. Landolt has furnished very interesting facts of the same order as to the sense of sight; M. Vigouroux, who has special ideas on static electricity, has made an application of his knowledge by discovering, or rather by confirming, the phenomenon of fixation of the phenomena obtained. M. Dumontpallier has also constructed a theory. When a neutral metal is superposed on an active metal, the phenomena are fixed; and it will be very interesting to see what will occur if a plate of neutral metal be placed at a certain distance from the active plate, and at a point nearer to the nervous centres.

Before, however, relating the results of the various experiments which have been made, it will be well to describe the special condition under which these experiments have been made. The hysterical patients were in a state of apparent cure; that is to say, after having accurately followed the internal metallotherapic treatment, they recovered sensibility in all parts of the body. Now experience has likewise taught that those patients may afresh and at will be rendered insensible by the external application of their metal. This secondary experimental insensibility has been denominated postmetallic, because it has been observed after apparent cure by internal metallic treatment, and because it has been brought on by the external application of the metal. In these conditions,

the patients were sensitive in all regions of the body; and M. Dumontpallier's experiments were intended to study the phenomena of fixation and of arrest of postmetallic anæsthesia.

M. Dumontpallier proceeded as follows. Having applied a plate of active metal, he saw sensibility begin to disappear; then, having applied, at a distance of some *centimètres*, and above, a plate of neutral metal, he saw the arrest of the phenomenon. This is what he has called the phenomenon of arrest. In this case, the postmetallic anæsthesia remained limited there to that point to which it had been brought in the first phase of the experiment; and it may be said that the neutral metal arrested the ascending action towards the nervous centres.

When the counter-proof is performed—that is to say, when the active metal is applied to the upper portion of the forearm and the neutral metal to the lower portion of the arm—the production of the phenomena is by no means prevented, the action still progressing towards the centres; that is to say, the postmetallic anæsthesia progresses and becomes generalised. M. Dumontpallier has also tried whether he could neutralise the ascent of the phenomena towards the centres by acting on the opposite side of the body. On the left arm of an hysterical patient, apparently cured, and who had recovered sensibility, he placed a piece of gold, and on the right arm a neutral piece. There was no postmetallic anæsthesia; the patient remained sensible on the right side, and on the left side, as if the metal applied to the right had neutralised the anæsthetic action of the metal applied to the left.

Finally, in another case (though this experiment is of less importance, because M. Dumontpallier performed it once only), he applied to one of the arms of a patient, who had recovered sensibility, a bracelet composed of pieces of gold and pieces of copper superposed, or a bracelet of pieces of gold and copper, in which the two metals were separated by a layer of silk; then a bracelet of gold on the other arm; and in this experiment he only obtained a return of sensibility on one side.

Objections have been made to all these experiments. The English, amongst others, have asserted (and, M. Dumontpallier adds, this should be said with all the scientific respect which is due to them) that all these results obtained on hysterical patients were results arising from what they call expectant attention. M. Dumontpallier has tried the experiment for himself, and has not succeeded. It appears that when one looks at the forearm with the idea that an itching sensation will be produced in that place at the end of a certain time, an impression is produced in the brain that the forearm is itching. Then the English physicians say, patients, knowing that sensibility will return with the use of a certain metal, feel the sensibility because they are in a state of expectant attention of the phenomenon, and therefore the phenomenon is produced. This objection, however, finds an absolute refutation in the phenomena of transfer, and in what passes for organic hemianæsthesia. It has also happened that errors have been committed in the experiments, and that a neutral metal has been employed instead of an active one. In this case, no results have been obtained.

M. Vulpian and M. Dumontpallier have also made an experiment in which, without saying anything to the patient, they have been able to substitute a neutral metal for an active one. Under these conditions, the phenomena were not produced; but, as soon as they replaced the active metal, the phenomena were again observed. Consequently, M. Dumontpallier does not think it necessary to enlarge at greater length on the value of the objections to *expectant attention*.

M. Burq has discovered latent metallic aptitudes; that is to say, aptitudes difficult to demonstrate. In certain cases, they are made evident by muscular power; in others, by temperature. In other circumstances, when muscular force and temperature only give feeble indications for the manifestation of these aptitudes, the internal administration of the metal which is supposed to be active must be resorted to, according to M. Burq's former practice, and the return of sensibility and muscular force, and a gradual rise of temperature, will soon be apparent. M. Burq now employs a rather more expeditious method. As the absorption of the internal medicine may take a certain time, perhaps two or three days, to produce any action, he administers a metal by subcutaneous injection; and from this expedient he has seen, under certain conditions, temperature, muscular force, and sensibility return with great rapidity. When the action of a metal on sensibility, muscular force, and temperature is thus proved, we must still not be satisfied. Four or eight days afterwards, the counter-proof must be made. We must try if other metals do not also produce a certain action. If they have no action, we shall then be entitled to believe that the first metal is the right one. If, on the contrary, one of the metals applied to the skin in the counter-proof have some action, there will be the operation of a new fact—polymetalism. As a matter of fact, patients are met with who are sensitive to two metals, and sometimes to three metals, though this idiosyncrasy is very uncommon. In these cases, it will be necessary to discover which has the most powerful action. Unless this be done, only relative success will probably be obtained; whilst if the most active metal be employed in the first instance, much more rapid and complete success will be the result. This occurred to M. Charcot at the Salpêtrière Hospital, in the presence of Claude Bernard and M. Vulpian, in the case of the hysterical achromatoptic patient named Morosot. She had first shown sensibility to gold: the external application of small plates of gold and the internal administration of the same metal having given satisfactory results; the dyschromatopsia having rapidly disappeared, as well as the general anæsthesia and the amyosthenia. But it was soon discovered that these results were not lasting, and that silver had a much stronger action. The patient herself had found that a silver thimble which she wore modified the sensibility of the thimble-finger. From that time, silver was given internally and applied externally. An interesting phenomenon then occurred. This young girl, who was a linendraper's shopwoman, and could no longer supply the customers with ribbons of the colour they required, because all colours were confused in her sight, completely recovered her perception, and the state of her eyes showed to what a degree she had recovered her health. Desirous of obtaining rapid results, M. Burq has lately conceived the idea of having recourse to the subcutaneous injection of mixed metals. M. Dumontpallier does not approve of subcutaneous metallic injections in metallotherapy, because, if these injections hasten the result at the commencement of experiments, they may possibly be the occasion of certain errors. In fact, a subcutaneous injection is a complex act. The prick of a needle, and still more strongly the subcutaneous injection of a metallic mixture, may cause reflex actions which may lead the experimenters into error; there are likewise metallic mixtures, such as solutions of nitrate of silver, which often bring on local inflammation. He is therefore of opinion that it is preferable to be rather more deliberate, and to search for the individual metallic aptitude by the external application of plates to the surface of the skin. We have then proved the return of sensibility, of muscular force, and of heat after the application of metallic plates.

M. Dumontpallier then describes certain phenomena which are occasionally met with. At the end of half an hour, or at the most thirty-five minutes, when the metal has produced the anticipated effect, the patients often close their eyes and appear to be going to sleep, as if they were fatigued. If efforts be made to awaken them, they beg to be allowed to sleep; and yet if, in this period of tendency to rest, the sensibility of these patients be examined, it will be seen that it has returned. If they be made to touch the dynamometer, it will be seen that muscular force has increased; and if the thermometer be consulted, an increase of temperature will be found. It will thus be found that metals have not only a local but a general action, which is shown by fatigue, a tendency to sleep, and inaptitude for work, which prevented the patient from gaining the small payment granted to them by hospital authorities for their needlework. Sometimes, when the experiment is prolonged during the application of the metallic plates, the insensibilty that was present at first, and amyosthenia, and even lowering of the temperature, may again occur. M. Burq called these symptoms the return-phenomena of metalloscopy. Finally, when the metallic plates are removed, the patients fall back into the anæsthetic and amyosthenic states. The Commissioners of the Société de Biologie profited largely by these relapses, and were able to repeat their experiments at the end of from four days to a week.

Coincident with these return-phenomena, there are phenomena which have been carefully studied by M. Gellé with the interauricular tube, and by M. Landolt with ophthalmological apparatus.

M. Dumontpallier again refers to the astonishment of himself and his colleague, when they placed the thermometer in both the hands of their patients, to discover that the rise of the temperature on the affected side was sometimes greater than on the healthy side.

M. Dumontpallier has noted an important fact, the entire importance of which, however, he has not yet thoroughly understood. Dr. Gellé noted that if, before the application of the metal, an auditory acuteness of from five to six *centimètres* had been noted, at the end of the experiment an acuteness of from thirty-five to fifty *centimètres* was found to exist. He also found that on the side on which the auditory acuteness was normal at the commencement, at the end of the experiment it had diminished in an almost proportional degree to its increase on the affected side on which it had operated with the metal. M. Dumontpallier immediately took a patient with whose metallic sensibility he was acquainted, and applied the metal on the anæsthetic side; and in the same degree that sensibility returned on that side, it disappeared on the opposite side in the corresponding points; consequently what the patient gained on the one side was lost on the other. The phenomenon of transfer was discovered. This discovery of M. Gellé and of the Commission of the Société de Biologie is of very great

physiological importance, and certainly will furnish therapeutical indications to those who wish to study.

M. Dumontpallier subsequently requested M. Landolt to test, by experiments on the sight, the correctness of what M. Gellé had discovered with regard to hearing, and what he had himself found out in the general sensibility. The results obtained by him were absolutely of the same order; that is to say, M. Landolt discovered that when sight was restored on the affected side, it was lost on the other, and this in fixed proportions. The phenomena of transfer disappeared with sensibility; that is to say, at the end of two or three hours, sometimes at the end of one day, things returned to their original condition; the affected side again became insensible; the phenomena of transfer disappeared.

The transfer which exists in hysteria is not produced in hemianæsthesia from poisoning, nor in hemianæsthesia due to cerebral organic lesions. This is important; because, as soon as transfer has been discovered, we may in general pronounce the case to be hysteria.

By the side of these facts may be placed what may be termed supplementary facts, which one day, it is to be hoped, will have a therapeutic application. These supplementary facts, or at least some of them, have already been foreseen by M. Burq, but they have only been scientifically established by the Commission of the Société de Biologie.

There was in M. Charcot's wards a woman who was attacked with left ovarian pain, with left hemianæsthesia, and who had hystero-epileptic attacks. This patient presented the singular phenomenon that, when the metal (gold) which affected her was applied on the forearm, at the end of a minute sensibility returned; but this return of sensibility lasted only one minute, and during the second minute the skin had again become insensible. This M. Burq has called return-insensibility. It was not easy to make experiments on this patient, in whom the phenomena changed every minute. There was scarcely time in her case to measure the temperature or the muscular force; it was only possible to note sensibility and insensibility. M. Vigouroux has recalled to memory that M. Burq had discovered, under certain circumstances, it was possible to fix the phenomena produced. He had seen that sensibility, once recovered, could be fixed by applying a plate composed of two metals. M. Vigouroux then had the idea of making the following experiment. The woman in question was alternately sensible and insensible from one minute to another. The experimenter took each of these phenomena during the minute it lasted, and fixed it by placing on the active metallic plate a neutral one. He was able to note, by operating in this way, that sensibility lasted during half an hour, and that insensibility could be made to last the same time by proceeding in the same way. M. Burq has lately applied these phenomena to therapeutic purposes on the woman Morissot, the patient who at first was sensitive to gold, and then went on to be acted upon by silver. He fixed these phenomena by applying on the skin during the period of sensibility a plate of German silver. Sensibility, which had returned, lasted, and remained so long as the patient continued to wear the plate.

METALLOSCOPY IN HYSTERICAL HEMI-ANÆSTHESIA.*

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The interest which has been aroused within the last year or so by the researches of M. Charcot and his collaborateurs at the Salpêtrière, on the effect of the application of coins and metallic *plaques* over the phenomena of hysterical hemianæsthesia and hemianalgesia, and the varied results which have been obtained by the British physicians who have had the opportunity of pursuing this investigation, induce me to bring under your notice the particulars of a rather well marked case of this peculiar affection, which afforded an opportunity (rather infrequent in this country) of repeating some of the now well known experiments which have given rise to so much conjecture and speculation. For being enabled to do so I am indebted to the kindness of my colleague Dr. Connolly, in whose wards in the Waterford Union Hospital the case came under observation.

Previous History.—Margaret Walsh, aged 18, is a member of a healthy family; her parents are living, and, together with her brothers and sisters, are in the enjoyment of good health. As far as I can learn, there is no neurotic taint, nor any hereditary tendency to nervous disease. The girl states that she first menstruated when between thirteen and fourteen years of age; and about three years ago the periods became shortened, the menses sometimes appearing every week, and being followed by a white discharge. She does not appear to have suffered any inconvenience from this condition of things for two years, and never applied for treatment. On June 10th, 1878, she began to suffer from pain in the left hip and knee, which soon so interfered with locomotion that she had to seek aid, and was admitted into the Leper Hospital, Waterford, where she was believed to be suffering from the earlier stage of morbus coxarius. In August 1878, the pain being somewhat relieved, she returned home. In a little time, however, the pain again returned: it used, she says, to start from the inner surface of the left knee, and pass rapidly up the thigh and hip and along the side to the neck, when she would begin to tremble convulsively all over and scream out. These spasmodic attacks became very frequent; and she states that she used to lose consciousness momentarily. During this time, the menstrual irregularity continued. Early in the present year, she became so ill that she sought admission into the Union Hospital, and came under Dr. Connolly's care on his appointment to the hospital, with whom I first saw her on March 22nd.

Condition on March 22nd, 1879.—The patient was a florid-looking girl, with red hair, freckled face, and a rather strumous cast of countenance; square set jaws, and *retroussé* nose: she had, however, no physical indications of struma, and was healthy looking, being by no means anæmic or wasted. She was now suffering from the spasmodic seizures above alluded to, which had recently become considerably intensified. The attack commenced with a starting pain on the inner surface of the left knee, which immediately radiated upwards, and caused the entire body to be thrown into a momentary spasm, which was accompanied by a short but sharp cry, and a feeling of exhaustion after the spasm passed away. When the surface of the knee was even lightly touched, it at once determined the occurrence of a seizure; and the same was the case when pressure was made on a point a little above the great trochanter on the left side, and over each ovarian region. Deep pressure was better borne than superficial manipulation. At points over the lower cervical and middle dorsal regions, pressure also caused spasmodic jerking of the body; and the cutaneous surface of the entire left side was decidedly hyperæsthetic to the touch. There was no paralysis of motion, nor of any of the special senses. Mentally, the girl was generally bright and cheerful when not in pain, and was by no means emotional or easily excited. She was quite unsophisticated, and did not betray any of the *bizarre* freaks or eccentricities which so frequently characterise cases of exaggerated hysteria. At this time, the patient was treated with bromide of potassium and liquid extract of ergot: and the continuous galvanic current from ten and fifteen cells of a Leclanché battery was applied on a few occasions. Under this treatment, the cutaneous hyperæsthesia, the ovarian tenderness, and the spasmodic jerkings diminished, and finally ceased altogether; and she left the hospital three months after admission, walking home. The catamenial periods then for a time became less frequent. After a fortnight's residence at home, and feeling herself strong and well, she endeavoured to do some whitewashing in her father's house, mounting a ladder for the purpose; but almost immediately on her doing so, the pain in the knee and hip recurred, with even greater intensity than before, so that she was only able to barely limp about, and was in consequence again admitted to hospital; the physician who saw her outside suspecting hip-disease. Soon after her readmission, she became affected with almost momentarily recurring spasm of the diaphragm, which was very exhausting; and at this time she again came under my observation. Under treatment, the diaphragmatic spasm gradually subsided; but on the 16th June, she began to notice a loss of power of motion and sensation in the left leg, which gradually increased, the anæsthesia extending over the entire of the left side, and being sharply demarcated by the middle line of the body, while the arm still retained a certain degree of motion.

Condition on June 23rd, 1879.—Motion. There was complete hemiparaplegia of the left leg. She could not raise the limb from the bed nor bend the knee, nor bring into voluntary action any of the muscular groups. She could raise the left arm, and bring it to her face slowly and with evident difficulty. Her grasp was feeble in the extreme; the muscular power was not, however, determined by the dynamometer. There was no difficulty in articulation; but the tongue, on protrusion, pointed towards the right side.

Sensation.—Hemianæsthesia on the left side was complete. She was perfectly insensible to touch on any part of the left half of the body, while at less than a quarter of an inch to the right of the middle line she was acutely perceptive. She was similarly insensible to painful impressions, being completely hemianalgesic. Needles pricking the skin were unfelt, and no blood followed on the punctures. She could not distinguish the presence of a highly heated metallic spoon; while on the right side she winced, and cried out from its momentary contact. Tickling the soles of the feet produced no effect.

Special Senses.—There was no diminution in the power of sight, nor

* Read in the Section of Psychology at the Annual Meeting of the British Medical Association in Cork, August 1879.

was there any achromatopsia. She readily distinguished different colours; the latter, however, were of bright and decided tones (reds and browns. She could detect no sound through the left ear, not even a loud-ticking watch on contact; while the functions of taste and smell were similarly obliterated on this side—those on the right being normal. The menstrual irregularity had returne l. The girl was generally cheerful, but shy and retiring when questioned, and she evinced no desire to obtrude her symptoms or exaggerate her condition. Such being her state, it was determined to try the effect of the application of metallic discs, after the manner of M. Charcot. Accordingly, I had a number of pieces of copper and zinc cut from rather old and tarnished plates of these metals, each somewhat larger than a shilling; and on June 25th, there being no difference in the symptoms, they were applied as follows: four discs of zinc were fastened round the left forearm, about four inches above the wrist, and at the same time a band of copper was placed round the leg above the ankle-joint. In about fifteen minutes, the girl complained that she had lost all power in the arm, which she could previously move partially, and that she could neither bend nor straighten the limb; on raising it from the bed, the elbow-joint felt quite rigid, as if contracted, and the fingers were similarly circumstanced, though to a lesser degree. After a little time, under pressure and with apparent effort, the patient lifted the arm from the bed and was able to bring it slowly up to the head. She was now left for an hour; at the expiration of which time, I again examined her condition. The anæsthesia was still complete, but under the discs she could distinctly feel the prick of a needle and winced slightly; while the puncture became marked by a bleeding point, and the skin was flushed in the neighbourhood. There was no change in the sensibility of the lower limb. I now removed the copper band and replaced it by an anklet of zinc discs, those on the wrist remaining as before. On visiting her in the evening, I found that there was now sensibility to touch and to pain from the elbow down, the upper arm being still anæsthetic; and the power of motion had not only returned to its condition previous to the application of the metallic plates, but had, the girl averred, increased. She could move the arm much more readily, bring it over her head, and her grasp was distinctly more powerful. She could now feel the leg being pinched and pricked, but could not distinguish a touch. The back, neck, ear, and side were still quite anæsthetic. The next morning (June 26th), the discs having been worn through the night, the sensibility had considerably increased, and spread over the entire of the affected side, with the exception of the back of the neck and ear, which were still quite anæsthetic; and, further, she could raise the paralysed leg slightly from the bed. Tickling the sole now produced involuntary motion of the foot, and the application of a heated spoon caused her to wince. The metallic discs were now removed, to watch whether the results thus obtained would be permanent. In the evening, the sensibility had further increased; she could pick up a needle readily, and was able to rise from bed and move about a little with assistance; there was no return, however, of taste, hearing, or smell on the left side, and the auricle and back of the neck were still anæsthetic. The next day (27th), there was further improvement in the power of motion, and she was able to walk out a little in the grounds with assistance, the difficulty in walking being now rather of the character of a limp, rather than of a paralytic dragging of the leg. I now fixed one zinc disc on the ear and three on the back of the neck. On the 29th, there was no effect from these. The improvement in the power of locomotion had so far continued that she was able to walk unaided, and with very little noticeable defect. On the 30th, she could feel when the ear and back of neck were pinched, but she could not distinguish when the parts were merely touched. She also stated she could now hear the watch on contact, and that taste and smell had returned on the affected side. The discs had fallen off, and were not reapplied; her power of locomotion was almost normal; and she employed herself knitting, using the previously anæsthetic hand and fingers readily and well. On July 2nd, the condition of the ear and back of neck was unchanged, and she had a tendency to sickness of stomach. On the 5th (when this report was written), the sensibility of the ear and neck to touch was quite normal; she was, however, still deaf in the left ear, but I ascertained she was always a little so in that ear. She had a slight recurrence of the spasmodic hiccough on the 4th. In all other respects she appears to be now convalescent. The last menstrual discharge appeared on June 22nd.

REMARKS.—This case, is clearly one of those instances of so-called hysteria, or in some of its features allied to hystero-epilepsy, accompanied by those peculiar functional nervous disturbances which have of late aroused such interest and attention. Without entering minutely into the question of the origin or causation of those symptoms, it may, I think, be shortly said that the menstrual irregularity played an important if not the sole part in their production; and it will be noticed that, on each occasion on which amelioration or disappearance of the nervous troubles ensued, the menstrual periods resumed their normal course and the ovarian tenderness diminished or ceased. It is now, I believe, universally acknowledged, that any error of menstruation, be it defect or excess, is peculiarly active in developing every variety of cerebral and spinal irritation, and sometimes involves psychical life to such a degree as to impair consciousness, perception, and volition. How far the effects, in the present instance, were mental and how far purely physical, and why at one time the symptoms took the form of excess or irritation of nervous function, expressed in the spasms and electric pains, and at another, the form of depression of function, expressed by the motor paralysis and anæsthesia, is most difficult to estimate or judge. But be this as it may, the uncertain character of the symptoms, and the part which the mental bore to the bodily condition, seems to me to be an important element in the result which accrued from the application of the zinc discs as I have described. The particulars of the case are brief, and, from the results which followed the single application of the metal, have afforded but little opportunity for anything like an extensive repetition of the now numerous experiments which have been conducted on cases of this kind. That the hemianæsthesia in this girl was real, and not feigned or dependent on any purely emotional condition, is beyond any uncertainity; the girl was unsophisticated, perfectly unacquainted with any of the eccentricities of the affection, or of the effects which were to be looked for from the application, though of course, from frequent examination and constant prickings and pinching to elicit sensation, she subsequently became aware of what we were striving to bring about. That she was aroused from the condition of paralysis of motion and sensation *during* the application of the metallic *plaques* is equally certain. And then, having come so far, the question at once arises: was this restoration of motor and sensory power, so rapid and so far complete, due to and brought about by the peculiar action of the metal, either through the induction of electric currents of an obscure kind, or through its influence on the circulation? or was it the result of the action of the mind on the body, of the will overcoming the conditions dependent on emotional states of a finer and hidden kind, which are not expressed in outward and purely mental manifestations? It is needless for me to occupy your time by recalling the experiments made by M. Regnard to determine the presence of electric currents produced by metallic applications, or the hypothesis which he has offered as to the different effects of different metals on different individuals being due to the interference of the currents produced on the sensibility. On all hands, the possibility of mental influences playing a part in the results obtained has not been lost sight of, and recently the experiments and investigations of British physicians have strengthened this view. In an interesting article in the *Journal of Mental Science* for January of this year, Dr. Hack Tuke records carefully what he witnessed at the Salpêtrière, and, while unwilling to come to a positive conclusion, suggests that to the influence of expectant attention on the part of the patient may be ascribed the very curious phenomena produced. Dr. Hughes Bennett, who has published interesting papers on the question in the JOURNAL of the Association, and in *Brain* (October 1878), is of the same opinion, and others who have since written coincide in this view.

Reviewing the facts of the case under consideration without any preconceived opinions, it is difficult to conceive that the mere application of the zinc discs could have brought about the results which I have recorded, and which, so far as their extent and permanency go, exceed any with which I am at present acquainted; and yet it would seem that the presence, if nothing more, of the discs had some influence, as the condition of anæsthesia persisted in the ear and the back of the neck until the metal was applied and its application continued. In favour, however, of the view of mental influence is the fact that, when the girl's attention was first directed to her condition by the placing of the discs on her wrist and before she was at all aware of the effects they were supposed to produce, the arm on which they were fixed became helpless and rigid; and it was only after being assured that she could use it, and *concentrating* her attention on it, that she began to try, and finally succeeded in doing so; and, from the subsequent and rapid restoration and increase in the power of motion, as well as of sensation, which followed, I cannot but think, while at the same time quite open to conviction, that this concentration of attention on the affected limbs, even while she was ignorant of the exact results looked for, played a considerable part in the subsequent events. It is, I believe, a well established fact, that certain hysterical patients can, under the influence of a powerful effort of the will, control and nullify some of the phenomena of their affection; and may it not be here that the attention which was directed in this girl's mind to the powerless and anæsthetic limb, and the desire which naturally followed to be rid of this condition, induced a volitional impulse sufficiently powerful to release the inhibitory or arresting action which was taking place in the cerebral

centres? As evidence of this volitional effect, I have heard since that the girl, after the recovery of motor power, was on one occasion in the hospital-kitchen, and declared to the cook that she was about to vomit; and, on being informed by the cook that she could not do so there, she so far controlled herself that she made no further allusion to the matter and did not vomit.

This case illustrates the fact that sometimes the chamelion-like symptoms of hysteria will simulate and may be mistaken for diseases of serious import, such as disease of the hip or other joints; and it may be that the very influence on her mind on being told this contributed to increase the symptoms, while the subsequent assurance that nothing of this kind was wrong with her aided in the restoration of the arrested powers. The facts as to the actual effects of the metallic applications in this case are so far very meagre; the rapid recovery from the anæsthesia, and the permanence of this up to the present time, removing the opportunity of making further trials and experiments. Should there, however, be a recurrence of the symptoms, I shall pursue the matter, as the patient is likely to continue or again come under observation.

P.S.—October 21st, 1879, I have seen the girl to-day. She has had no recurrence of the hemianæsthesia since, nor any apparent loss of motor power; she, however, complains that the electric pains in the legs sometimes suddenly seize her, and that for short intervals the left foot becomes numb, she looks well but is stated to be nervous.

DISINFECTION BY ACIDS.

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[*Concluded from page 728 of last number.*]

Acids have an action on putrescible fluids which seems to me of much value in a sanitary sense. I have already referred to this in my paper on the Science of Disinfection,* and the numerous experiments by which it was discovered are detailed in my paper on Putrefiers and Antiseptics.† A few remarks on this point may not be out of place. If a clear, fresh, putrescible fluid be set aside for a short time, and then examined by the microscope, it will be found swarming with bacteria and their allies in active motion, fœtid, and opaque. Its reaction is neutral; but these changes would ensue though it were made moderately alkaline or *very faintly* acid. If it be now exposed in a cool dark place for from nine to twelve months, and then examined, it will still be found swarming with life, cloudy, fœtid, and containing albumen. In a few months later, putrefactive reduction is completed. The solution may be still cloudy, but is now almost free from fœtor; a bacterium is only seen here and there; a faint trace of albumen may or may not be detected; and its specific gravity, at first perhaps about 1.6, is now probably about 1.1 or 1.2. Such are the chief physical phenomena of putrefaction. As regards its chemical aspects, the chief elements in animal matter are oxygen, hydrogen, carbon, nitrogen, phosphorus, and sulphur. The hydrogen unites with the oxygen to form water; with the nitrogen to form ammonia; with the sulphur, phosphorus, and carbon, to form sulphuretted, phosphoretted, and carburetted hydrogen gases. The oxygen also unites with the carbon to form carbonic anhydride. In course of time, the ammonia is oxidised into nitrous and nitric acids and water; the sulphuretted hydrogen into sulphurous and sulphuric acids and water; the phosphoretted hydrogen into phosphoric acid and water. These free acids then at once combine with any bases present to form their respective salts. Putrefaction is thus seen to be a process of reduction; and the greater the number of equivalents of elements forming the atoms of a compound, the more easily does such a compound decompose. This instability is increased in animal substances by their containing nitrogen, which has less tenacity in its affinities than any of the elements. The large quantity of water present also forms a most favourable medium for putrefaction, which only takes place at death, as then the chemical forces by which the living tissues act on vital organic compounds cease, and the elements of the original compounds unite to form bodies less complex, but more stable, as described above.

If to another portion of the same clear, fresh, putrescible fluid, a quantity of acid, mineral or vegetable, be added, so as to cause marked acidity, and the mixture be then placed under the same conditions as the former, then in a day or two it shows quite a new set of changes. One or more small tufts of mycelia are present, their silky filaments radiating from a tiny nucleus; also numerous free spores and double torulaceous cells. If the proper quantity of acid have been added, no bacteria are present, and the fluid, instead of becoming hazy, becomes clearer and sparkling. Its reaction is of course distinctly acid, its odour somewhat mouldy, but not at all unpleasant; while, in about four months, it ceases to respond to albumen tests, indicating that decomposition is completed. This is fermentation. Again, if to a portion of a putrefying fluid a slight excess of acid be added, putrefaction is soon arrested, and the mixture, instead of being then fetid, has an odour like that of oil of spiræa. And if to separate portions of a fresh and of a fermenting albuminous fluid, a larger quantity of acid be added than is sufficient to cause fermentation alone, then the fresh fluid neither putrefies nor ferments; fermentation is arrested in the fermenting fluid; and both mixtures remain in this antiseptic state for an indefinite time, and latterly cease to respond to albumen tests.

Now, these results seem to me strong proofs that putrefaction and fermentation, whatever be the chemical changes they produce on solutions of animal fluids, are distinct processes. There is abundant evidence that putrefying matter is very injurious to health, but there is little or none to show the effects of fermenting matter in this respect. It is obvious, however, that fermentation must be harmless as compared with putrescence. Putrid matter evolving noxious effluvia for nearly twelve months* must be more hurtful than the same matter when fermenting, it being always almost odourless and fully decomposed in about four months. Moreover, as already observed, acids added in excess both prevent and arrest putrefaction and fermentation; and this not by antiseption but by destruction, as is shown by the animal solution ultimately ceasing to respond to the tests for albumen, without the physical signs of either putrefaction or fermentation having been present.

Convinced of the truth of these facts and deductions, I have now for a number of years exclusively practised them in every form of infectious disease, for which there has been ample opportunity both in my capacity as medical officer of health and in private practice. I have watched the effects with scrupulous care and an unprejudiced desire to learn whether, and if so how far, theory and laboratory experiments were confirmed by practice. My experience and observations have further convinced me that disinfection by acids is cheap, quick, easy, and certain: and I have frequently been struck with the summary manner in which an infectious disease has been thus arrested, under circumstances most favourable for its propagation.

About eight months ago, I attended a girl, aged 6, suffering from scarlatina. The family—besides the father, mother, and a servant girl—consisted of eight children, four older and three younger than my patient, none of whom had the disease. The house contained four small rooms and kitchen. The girl was kept in a room by herself; none of the family were allowed to see her; but during her illness, which lasted about a month, they remained in the house. The mother nursed the sick girl, at the same time mixing freely with the other children, four of whom had to stay from school, thus greatly increasing their risk of being infected; but as yet none of them have taken the disease.

About five months ago, I attended a male, aged about 18, son of a sanitary inspector. I found him very prostrate, and covered with a livid scarlatinal rash. Next day, he was greatly worse, and the case looked hopeless. The house consisted of two rooms and kitchen, and contained, besides the father and mother, four children, excluding my patient, whose ages ranged from six to sixteen, none of whom had the disease. Two days afterwards, a brother of the patient turned ill and was fevered. It was assumed that he also was sickening with scarlatina, and hence was put in a bed in the same room with the patient; but recovering in a couple of days, he was removed to a friend's house. Briefly, my patient, after a rather protracted illness, with profuse desquamation of the cuticle, quite recovered. The other children lived in the house, and as usual were kept from school. The mother nursed the patient, mixing freely with the rest of the family; and yet, up to the present, none of them have taken the disease.

About two years ago, I attended a girl, aged 12, ill of typhoid fever. The house consisted of four rooms and kitchen. Besides the father, mother, two servant girls, a sick nurse, and my patient, there were five young children staying in the house. The patient's bowels were very loose for about three weeks. She ultimately recovered; the children were kept at home during her illness; none in the house previously had, nor subsequently took, the disease.

About four years ago, I was hurriedly called to see a boy, about six years old. I found him in a state of collapse, and covered with a petechial scarlatinal rash; he died next day. The house consisted of

* *Transactions of the Social Science Congress.* Glasgow: 1874.
† *Glasgow Medical Journal*, November 1872, and February 1873.

* I have a bottleful of beef-juice prepared about five years ago, which is still quite putrid: its contents have, however, been kept from air and light. From this can be inferred the time which animal solids may lie festering in a choked or improperly flushed drain.

two rooms and kitchen; besides the father, mother, and my patient, other four children stayed in the house, none of whom were sent away, nor had the disease previously, nor were affected soon afterwards. About twelve months subsequently, however, the family still residing in the same house, and the mother having had another child, I was called to see a boy of the same family, aged about five years. He was covered with a bright scarlatinal rash, and ultimately had slight albuminuria during copious desquamation, but made a fair recovery; the domestic arrangements were the same as with the first case. None of the rest of the family were affected.

I could relate a great number of similar cases, but that is unnecessary, as it seems to me obvious, from the highly favourable conditions, surrounding those detailed, for the spread of infectious disease; that its arrestment must be greatly, if not solely, attributed to the means of disinfection employed. I do not, however, wish it to be understood that I have been so successful in all my cases of infectious disease, the subtlety, attenuation, and extremely obscure modes of operation of zymotic poisons being such as frequently to baffle most, if not all, attempts to modify or prevent their action. Again, it is next to impossible to get some people to bother themselves in carrying out systematic instructions as to disinfection; they do it either spasmodically or imperfectly. In these latter cases, I usually find the results much more unfavourable than where the instructions are faithfully attended to. On the other hand, so far as I can remember, every focus of infection under my care, the spread of which had been so suddenly arrested under conditions most favourable for its transmission as to impress it on the memory, was disinfected entirely to, and sometimes, I thought, beyond, my satisfaction. Moreover, every year of increased experience confirms me in these views.

For disinfecting, I advise the use of three acids—hydrochloric, sulphurous, and aromatic glacial acetic. The hydrochloric consists of one of the strong acid to twenty of water, and is used chiefly to disinfect typhoid excreta, and the bed and body clothes of persons with infectious disease. In typhoid cases, a large cupful of this fluid is put in the vessel before it is used. After being emptied down the watercloset, it is rinsed with another cupful, which is also at once put down the closet, the water running while this is being done. In using this fluid for clothes, these only require to be sprinkled with it, so as to sensibly damp them, allowing them to remain so for about four hours; but of course saturation for about an hour is preferable. With thick woollen clothes, such as blankets, however, an inconveniently large quantity of the acid fluid is needed for saturation. It is worth remembering, in such cases, that wool resists the action of acids far more than cotton or linen, and as this material is more likely, from its porous nature, to retain infection than the latter, it should be subjected longer to the action of the acid. Boiling water is afterwards poured over the acidified clothes, which are allowed to stand for an hour. They are then thoroughly rinsed with warm water till all the acid is got rid of, when soap with soda or potash may be used to wash them. If the acid be not removed, the soap will not form a lather. The solution of this acid may also be used for sprinkling on floors, pouring down sinks, etc.

The sulphurous acid is used exclusively for aërial disinfection, which is done morning and night during the patient's illness, not only in the patient's apartment, but in every room in the house. The process is simple; a piece of live coal is placed on a shovel and powdered sulphur sprinkled on it. The sulphurous fumes thus generated should be made to impregnate the entire atmosphere of the house, until it becomes somewhat irritable. If more fumes have been generated than can be tolerated, the excess is easily got rid of by opening the doors and windows, and by allowing what may be still forming to ascend the chimney. Fifteen minutes is sufficient to allow the acid to act each time it is used; but if the apartment be empty, it may be used some hours. Mattresses and carpets can be disinfected with sulphur fumes by suspending them spread out by the four corners with ropes, and allowing the acid to float thickly along the lower surface for ten minutes, then turning them upside down, and repeating the process. Bright metallic surfaces are darkened by sulphurous acid.

The aromatic glacial acetic acid, though more than a hundred times the price of the others, gives great satisfaction in the using, its well known grateful cooling odour forming a pleasant contrast to the repulsive emanations from the body of an infectious patient. It consists, besides the acid, of the oils of rosemary, neroli, cinnamon, cloves, bergamot, lavender, and rectified spirit. I frequently use this acid as an occasional aërial disinfectant, but never to the exclusion of sulphurous fumes. It is directed to be dropped on a hot shovel and volatilised through the house daily, which is the more effective way; or, where its price is a consideration, a little may be poured occasionally into a small vessel of hot water, placed over the gas, in the patient's room, by which means it becomes more gradually dissipated, producing at the same time a constant pleasant odour in the apartment. I have had much satisfaction also in using it dilute—one drachm to one ounce of water—for sponging the body, by which two objects are attained—lowering of the temperature and disinfection of the skin. Almost without exception, patients like this process, and are usually much refreshed by it. In all scarlatinal cases, more especially during desquamation, I invariably direct this to be done twice daily. The practice, so much in vogue, of smearing the skin of a scarlatinal patient during desquamation with lard or warm suet, to prevent the morbific epithelial *débris* from scattering, seems to me highly calculated to injure the sufferer. By this means the mouths of the sebaceous and sudoriparous glands, the very channels through which, in all probability, the poison finds egress from the blood, are plastered up; so that, besides the unpleasantness it causes, it is an effectual way of sealing the infective matter in the body. It looks precisely analogous to hermetically closing every door, window, crack, and crevice in a room where a person is lying soaked with infection. On the other hand, by sponging the skin with the aromatic acid, the infectious scurf is permanently deprived of its dangerous properties, while, at the same time, the numerous orifices of the gland-ducts are cleared of their morbid secretions, thus giving free exit to the poison from the blood. Moreover, it is well known, and has been proved experimentally, that the evaporation and oxidation of most perfume-yielding oils, including those in aromatic acetic acid, generate ozone—a powerful disinfectant. Here, then, is another strong recommendation for sponging the body with the substance in question, as by this means an atmosphere of ozone may actually be made to evolve gradually and constantly from the patient's skin, floating under the bedclothes and enveloping every part of the body.

It has been urged, as a fatal objection to the use of acids in disinfecting enteric excreta, unsupported, however, by any experimental or practical data, that they corrode and destroy the metallic fittings of the water-closet. That this objection, applied to hydrochloric acid, is, for all practical purposes, quite groundless, I have proven hundreds of times; hence it seems to me entirely superfluous to give examples to confute it. One, however, may be cited. A few years since, during an epidemic of typhoid, I attended a young man ill, and who at last died, of the disease. His bowels were very loose, moving more or less about ten times in twenty-four hours for nearly three weeks. During this period about three-quarters of a gallon of strong hydrochloric acid, diluted in the proportion of one of acid to twenty of water, had been used to disinfect his excretions, all of which was put down the watercloset without affecting the fittings in the least perceptible degree.

In order, however, to obtain some exact results on this point, the following experiments were made with the metals used in closet-fittings. Pieces of brass, of copper, of lead, and of cast-iron, each measuring two inches in superficies, were weighed and immersed in two ounces of a liquid consisting of one part of hydrochloric acid in nineteen of water, for twenty-five hours. After this, they were washed in pure water and again weighed, when the weight of the brass, copper, and lead, was found unaltered, while the iron had lost thirteen grains, or 4.33 per cent. of its weight.

I submit that these results are a sufficient answer to those who aver that closet-fittings are injured by at least hydrochloric acid, the substance I prefer, as it is by far the cheapest of the mineral acids. In putting the acid fluid down the closet, the first metal it touches is the copper pan, containing usually several ounces of water, by which it is at once more diluted; then, when the handle is raised, there is a rush of water, causing a further great dilution; and the fluid is next carried into a cast-iron basin, thence through a leaden trap, into an iron or glazed sewer-pipe. The lever and other movable apparatus of the closet are of iron and brass; and they, being situated externally to the pan and basin, the acid fluid does not touch them at all. Now, as iron was the only metal affected of the four used in the experiment, hence it is the only one likely to be affected in the closet; but the iron pan is about a quarter of an inch thick and the soil-pipe about one-eighth, while the acid fluid as it passes over the iron basin is diluted to at least 1 in 100, and when it goes down the iron soil-pipe to at least 1 in 500; moreover, the time of contact is but a few seconds. Hence it is obvious, considering that the iron in the experiment was in contact with the strong acid fluid for twenty-five hours, that the action of this fluid on the iron of a water-closet must be extremely little. Even supposing the strong acid fluid were to act *per se* on the iron of a closet, say for ten seconds ten times daily during three weeks, as might be required in a bad case of typhoid, and as was in the case I mentioned; yet, on the data of the experiment with the iron, it would take nine hundred days, or about two years and a half, at this rate to dissolve six-and-a-half grains off each square inch of surface of the iron.

In conclusion, it may be stated, as a summary of the foregoing, that putrefaction may be prevented, neutralised, or arrested, or its odour

masked or neutralised, and yet any infective matter present, be, in all probability, unaffected, preserved, or only made dormant for a brief period, as exhaustive experiments with carbolic acid and infective fluids, more especially with vaccine, show; that to use purely antiseptic substances as antizymotics is highly paradoxical, preservation being practised and destruction anticipated; further, that the mineral acids are true disinfectants, operating by both physical and chemical destruction, and also by transformation, of organic molecules, as in fermentation; hence, they prevent and arrest putrefaction, they transform putrefaction into fermentation; they deodorise; and, moreover, they are highly antizymotic as regards vaccine, virus of glanders, virus of infective inflammation, and therefore, by inference, as regards all other infections.

ENLARGEMENT OF THE BRONCHIAL LYMPHATIC GLANDS WITH RELATION TO WHOOPING-COUGH.

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THE theory that compression or irritation of the vagus nerve by enlarged bronchial glands is the cause of the spasmodic cough in whooping-cough, advocated by Dr. Gueneau de Mussy and combated by Dr. Barlow, is no new one. Some quarter of a century ago, Dr. Ley, having observed the frequent association of laryngismus stridulus with swelling of the glands of the neck and chest, and the entanglement of the pneumogastric nerve or its branches amongst them, attributed the temporary closure of the glottis in this affection to pressure made by these enlarged glands upon the recurrent laryngeal nerve, or some part of the eighth pair. And again, later, finding a like condition of these structures in whooping-cough, he suggested that the enlargement of these glands from a specific poison, similar to that of the parotid gland in mumps, might after all be the essence of whooping-cough. These views were brought forward and favoured by Sir Thomas Watson in his well known lectures. The revival of the theory by Dr. Gueneau de Mussy gives it fresh prominence and importance.

Now, I think, most pathologists would agree upon two primary propositions connected with the question, viz.:

1. That the spasmodic cough and laryngeal spasm of whooping-cough are due to some morbid influence acting upon the vagus;

2. That enlarged bronchial glands are constantly found on *post mortem* examination in all fatal cases of the disease.

The single instance of well marked whooping-cough in which a *post mortem* examination shall show this last condition to be absent, required by Dr. Gueneau de Mussy to refute his theory, will, I imagine, be sought in vain.

The absence of such evidence against the hypothesis does not, however, establish its correctness.

The evidence of physical examination during life supports that obtained *post mortem*, and I believe that, in whooping-cough, enlarged bronchio-tracheal glands are always present. But it by no means follows that the two conditions stand in the relation of cause and effect. They are rather, I think, both effects of a common cause.

The difficulty in the way of what may be called the compression theory is precisely that put forward by Dr. Barlow and Dr. Archambault, and combated so ingeniously by Dr. Gueneau de Mussy; viz., the fact that a similar enlargement of the bronchio-tracheal glands is commonly met with in other pulmonary affections besides whooping-cough. And, even further, I think it may be stated as a general pathological law that, *whenever there is prolonged inflammation or irritation of the bronchial mucous membrane in children, enlargement of the bronchial glands certainly follows.* We see it in the *post mortem* room as the accompaniment of bronchopneumonia, of phthisis, of measles, of whooping-cough. Swelling of the bronchial glands, indeed, results from an inflamed bronchial mucous membrane, just as certainly as swelling of the cervical glands follows an inflamed scalp. This enlargement, then, being present in many disorders other than whooping-cough, without any spasmodic cough (as Dr. Gueneau de Mussy fully allows), if the tumefaction of the glands be the cause of the spasmodic cough in one case and not in another, it must be due to some special conditions present in the one instance and not in the other. It is in this respect that Dr. Barlow's case is so valuable. It clears the ground by showing positively that mere mechanical pressure is not the determining cause.

Dr. Gueneau de Mussy suggests that the determining conditions may be some qualification of pressure; as that the compression acts on certain points of the nervous cluster, or that it acts in certain special degree, or that it produces a certain kind of stimulus which may depend upon the nature of the morbid process. It is difficult to see how such variations of pressure could produce the effect, and still more difficult to conceive how the nature of the morbid process could modify the influence of pressure by an enlarged gland; but, granting that such variations might afford a reasonable explanation of the phenomenon, they rest so far on pure hypothesis. Under ordinary circumstances, the act of coughing is excited by stimulus applied to the peripheral twigs of the pneumogastric, either those of the superior laryngeal in the larynx, or the pulmonary branches to the bronchi; or, in some cases, possibly by irritation of the gastric portion in the stomach; or again, the stimulus may be reflected, as, for instance, in cough caused by the act of laughing. Cough is set up in the same way in whooping-cough, by the stimulus of accumulating mucus in the larynx, trachea, or bronchi, or a blast of cold air, or a full meal, or a fit of laughter. It seems more reasonable to suppose that the peculiar spasmodic character of the cough is due to the special action of a special virus upon the terminal fibres, or to an irritable condition established by its influence on them or in the nerve-centres, rather than to the rough mechanical influence of gland-pressure. In the parallel case of the pressure of an aneurism or other tumour upon the recurrent nerve, we have spasmodic cough indeed, but not until the pressure has become extreme enough to produce paralysis of the vocal cord and persistent hoarseness and stridor of respiration. Then accumulating mucus in the narrowed glottis *does* produce violent cough. But in whooping-cough, there is no such evidence of persistent pressure. The only way in which it seems to me probable that enlarged bronchial glands can play any active part in the matter is, that the turgescence of the vessels and tissues of the neck, which results from the successive expiratory efforts, may so temporarily increase the pressure upon the inferior laryngeal, as to produce a momentary spasm of the glottis, and thus cause the characteristic whoop. But then closure of the glottis is part of the act of coughing, and the whoop would be accounted for by the spasm set up by special or extreme irritation being more persistent than that of ordinary cough. The occurrence of cough simulating whooping-cough is explicable in the same way, by excessive irritation and irritability of the nerve-fibres or centres involved. The recurrence of spasmodic cough, too, with each successive catarrh, months after the original attack of whooping-cough has ceased, is as easily explained by a persistent irritability of nerve-structures, as by a persistent tumefaction of bronchial glands. I agree with Dr. Gueneau de Mussy that these relapses of whooping-cough are not contagious; I have long been in the habit of allowing patients thus affected to mix freely with others, both in private practice and in hospital, and have never yet seen the disease communicated thereby.

A CASE OF PLEUROPNEUMONIA WITH EFFUSION TREATED BY THE ERGOT OF RYE: RAPID RECOVERY.

By ALEXANDER BOGGS, M.D., Paris,
Late of Her Majesty's Indian Army.

UNTIL now, the ergot of rye has been employed principally as an ocytocic, sometimes as a hæmostatic, and in certain affections of the spine. It has recently been employed as a febrifuge in typhoid fever, and as a local application in ophthalmia; but, having read of its utility in pneumonia, I determined to try it in the following case.

On May 20th last, I was called to see a young married woman aged 28, suffering from symptoms of some pulmonary affection. On examination, I found she had all the signs of the commencement of pneumonia of the right lung, the left being unaffected. She had been ailing for about eleven days, and, thinking she had only a "cold", continued her occupations as usual. On the 19th, however, finding herself prostrated with intense fever, she was obliged to lay up, and sent for me the next day. She complained of great pain in the lower and back part of the chest, accompanied with slight oppression and a continual cough; and as she was in a state of great agitation, with a full soft pulse and dry skin, I gave her a mixture composed of bromide of potassium, liquor ammoniæ acetatis, digitalis, and morphia, in some syrup and water, of which she took a tablespoonful every two hours. This had the effect of quieting the patient, but the other symptoms had not much abated. At my visit on the morning of the 25th, I noticed that the sputa were mixed with blood, and signs of the supervention of pleurisy of the same side became evident, accompanied with considerable effusion of fluid. I then prescribed a combination of the liquid extract of ergot of Bonjean with liquor ammoniæ acetatis, which she was to take every two hours. On the morning of the 26th, the patient was more oppressed, the effusion considerably increased, extend-

ing to the top of the scapula; the cough was still frequent; the sputa, however, were less tinged with blood and less viscous. I called Professor Sée in consultation. He saw the patient on the morning of the 27th, and confirmed my diagnosis, and prescribed the same mixture with slight modification, the ergot of rye, however, the principal ingredient, being retained. On leaving, M. Sée promised to return in three days, to decide as to the necessity of performing thoracentesis; but, at his visit on the morning of the 30th, he was surprised to find the patient in a state of convalescence, for resorption of the fluid had almost completely taken place; and indeed, since the 28th, there was complete defervescence, the sputa were free from blood, and the patient continued to progress steadily towards recovery. I saw her two or three days ago, and found her in perfect health.

The rapid cure in this case may certainly be ascribed to the ergot of rye; and it is the more remarkable as it was effected without the intervention of the orthodox remedies usually employed in such cases, such as bleeding, repeated blistering, tartar-emetic, etc. No other medicine than those named above was administered, but I prescribed as adjuvants good Bordeaux wine, brandy and water, milk, beef-tea, etc., to keep up the patient's strength. One single case is hardly enough to establish the ergot of rye as a specific in pneumonia, but the cure in the above instance is to my mind sufficiently encouraging for other practitioners to give the remedy a fair trial. The known physiological action of the drug would warrant its application to inflammation of the lungs, whether simple or complicated, as indeed it will be found useful in all cases of congestion or inflammation of other organs. Moreover, being a vascular remedy, and in this resembling quinine, it is a powerful febrifuge, and may in certain cases be substituted for that alkaloid. This is worthy of consideration, as the cinchona bark and its derivatives are always expensive.

CLINICAL MEMORANDA.

NOTE ON THE TREATMENT OF MUCOUS POLYPUS OF THE NOSE.

In some cases of polypus of the nose, I have recently been adopting a treatment which has given good results. In structure, these growths consist of but little more than connective tissue infiltrated with serum, and enclosed in something resembling mucous membrane; when removed by avulsion and exposed to the atmosphere, they rapidly shrivel by the escape of their serum; their distended grape-like appearance being exchanged in a short time for that represented by little more than a few shreds of connective tissue. The treatment to which I refer consists in freely puncturing these growths from the anterior nares by means of an ordinary acupuncture-needle, thus allowing the fluid of which they largely consist to drain away. To prevent them from refilling, I follow this up by ordering the patient to inject into the nostrils a solution of carbolic acid and glycerine, which has a most marked drying-up effect, and to continue to do this daily and thoroughly for some time. In this way, I have been able to deal successfully with some cases where the growths have been of a limited nature, and the patient averse to their avulsion. In the last case, I made the punctures with one of Southey's trocars, which answered well, the serum escaping through the cannula. I have thus, in treatment, regarded these as being local and limited œdemas, rather than hypertrophies, and as being, when once emptied, curable by astringents. It is not always possible, from their position, to subject all these growths to puncture, otherwise I believe this plan would be found generally successful.

Reginald Harrison, F.R.C.S.,
Surgeon to the Liverpool Royal Infirmary.

TYPHOID FEVER IN ADVANCED LIFE: THROMBOSIS: GANGRENE: AMPUTATION: RECOVERY.

Mrs. Y., aged 74, sent for me May 6th, 1879. She had been "out of sorts" some days. On the 5th, she sat out on the grass in the garden. On coming home, she felt giddy and faint, vomited, and had severe diarrhœa, with rigors. Her face was pale; tongue furred; pulse 110; temperature 103 deg. Her previous health had been very good; she had had no illness, except slight bronchitis. From May 7th to 12th, the temperature in the morning varied from 101.8 deg. to 102.8 deg.; in the evening, 103 to 104 deg. On May 12th, there were three characteristic rose-spots on the abdomen. The tongue was brown, thickly coated; the lips dry. She had three loose grey motions. Pulse 100. From May 12th to 25th, the temperature ranged from 99 to 101 deg. She had loose and very offensive stools, three times a day. On the 19th, a fresh crop of well-marked spots appeared, and faded on the 25th. On May 30th, the temperature was normal; the tongue was cleaning. The motions were of better colour, and more formed. She rapidly improved in look, weight, and strength up to June 12th, when the evening temperature was 103.6 deg. She complained of pain on the inner side of the left thigh. I found there a hard painful swelling. On the 13th, the temperature was 104 deg. She had great pain all along the course of the femoral vein, and down to the toes. The foot was dusky. The swelling had increased in size, and fluctuated. The left leg measured fifteen inches and a quarter round over the swelling; the right, twelve inches and a half at the same place. On the 20th, the left leg measured seventeen inches and a half. Two ounces of grumous pus were removed by the aspirator. On July 3rd, I evacuated about half a pint of grumous pus by an opening beneath the hamstring tendons, and injected the cavity with carbolic lotion (one in forty), and dressed with carbolised oil. This produced great relief. The foot was dusky, but warm. From July 3rd to 8th, she was improving, slept well, and took food. On the 8th, the urine was scanty and high coloured; it did not contain albumen. On the 9th, in the evening, she was restless and delirious. At 5 A.M., on the 10th, she was unconscious; her breathing was stertorous. The pupils were contracted, insensible to light or touch; the face was suffused. Pulse 90, full, hard. At 9 P.M., she was roused, and took food. In the next twelve hours, passed forty-eight ounces of pale clear urine, of low specific gravity, without albumen. On the 14th and 15th, two attacks of venous hæmorrhage came on from the leg, and were restrained with difficulty. From this till August 1st, the temperature was usually below normal; prostration was great. The foot was gangrenous; a line of demarcation was beginning at the ankle. Under careful feeding and stimulation, she improved in health. On August 17th, the line of demarcation was well established. Operation was requested by the patient, consented to by the friends, and decided upon in consultation, as giving the best chance. On the 24th, assisted by Messrs. Turner and Reid of Portsmouth, I amputated the left leg at the upper third by flaps, under strict antiseptic precautions. The patient was under chloroform twenty-two minutes. There was some venous bleeding after the removal of Esmarch's bandage; the arteries were secured by torsion, and the wound closed by silver sutures; no drainage-tube was used. After the operation, the temperature never rose above normal. The stump was dressed under the carbolic spray three times. The sutures were removed on September 4th. On the 24th, the patient got out on to the sofa. On the 30th, the wound was quite healed, and I left off attendance.

Remarks.—The points in this case seem to be: the patient's age; the typical course of the fever; the thrombosis of the femoral vein, followed by gangrene of the foot; and the attack of coma and recovery therefrom, when profuse diuresis was established; and the rapidity of recovery after amputation, under the circumstances. In the treatment, at first dilute mineral acids (nitro-hydrochloric and phosphoric) were employed; afterwards, tincture of baptisia and tincture of cinchona. Later, she had dialysed iron. During the coma, turpentine on hot flannel was applied over the region of the kidneys, and ten minims tincture of digitalis were given every hour. Feeding and stimulation were carried out regularly every two hours. As to the efficiency of the nursing, I need only say that, during the whole course of the illness, the patient was not troubled by bed-sores. The nurses were from St. John's House.

Channing Neill, M.D., Ryde, Isle of Wight.

THERAPEUTIC MEMORANDA.

KOUMISS IN OBSTINATE VOMITING.

The following case well illustrates the value of koumiss in cases of obstinate vomiting.

S. B., aged 28, has been for seven years under my care, at the St. George's Dispensary, suffering from advanced phthisis. Four months ago, vomiting of all kinds of food and medicine commenced. Milk, beef-tea (in the smallest quantities), hydrocyanic acid, opium, bismuth, and other drugs, were all rejected. Having seen the value of koumiss in cases of alcoholic insanity with vomiting, I tried it in this case, and, I may say, with success, considering the incurable nature of the case. For four months, with the exception of a little wine occasionally, the patient has taken no other food but koumiss. She says she should have died long ago, if she could not have retained this on her stomach. I must add, however, that she is fast losing flesh, and that she can only now take a pint of koumiss *per diem*, instead of a quart. She naturally takes a dislike to a food that has been so long administered.*

H. Sutherland, M.D.

* I think it only fair to Messrs. Chapman to state that, as the patient is not rich, they have allowed her to purchase the remedy at half the usual price; and, I believe they are prepared to make reductions to medical men and public institutions.

SURGICAL MEMORANDA.

DISLOCATION OF THE EXTERNAL SEMILUNAR CARTILAGE OF THE KNEE-JOINT.

JOHN J., aged 21, a labourer, presented himself among my out-patients in April last, complaining of pain and loss of power in his right knee. He gave the following history. About two years before, in an attempt to get out of a hole in the ground, he had thrown the whole of his weight on the inner side of his right leg and foot, and thus "ricked" his knee. He was weak in the knee for some weeks after, but had felt no ill effects for months before he met with a second injury. This occurred three weeks previously to his seeking advice at Guy's Hospital. He was descending from a ladder, and, in doing so, gave his leg a twist, which "ricked" his knee a second time. He described the sensation as of the knee becoming suddenly locked, causing a loss of power in the limb. When first seen, there was some slight effusion into the joint. He complained of little pain; but, on flexing or extending his joint, a curious phenomenon occurred. When the knee was about half flexed, the leg and foot jerked inwards with a sudden shock, and, at the same time, a projection occurred on the outer side of the patella, which could be seen and felt. "Now", said the patient, "my knee is locked"; but flexion, with assistance of the hand, could be completed without any great discomfort. On extension, the leg and foot jerked suddenly outwards, and the semilunar cartilage went back into its place. I sent this patient to the Royal College of Surgeons for clinical examination; and it was an occasion to me of regret that I was unable to be present to hear the opinion of the examiners at what is perhaps the best surgical consultation in the world. I was given, however, to understand that, though there was some discussion on the case, the examiners for the most part agreed with my diagnosis. The patient's knee was strapped and retained on a back-splint for two or three weeks; but, on removing the bandages, it was found that the semilunar cartilage slipped in and out as before. I therefore ordered his knee to be again strapped, and then encased in a plaster-of-Paris bandage. This was kept on for four months, and at the end of this time passive motion was commenced. On October 30th, he had quite regained the movements of his joint, and there was no longer any tendency to displacement of the cartilage. The joint moved perfectly smoothly, and without pain or discomfort. He was therefore discharged cured, six months from the time that he first sought advice.

The symptoms present in this case were somewhat similar to those of loose cartilage; but the cartilage, when protruding, never varied its position, and was uninfluenced except by movements of the joint. The constant recurrence of the same phenomena during flexion and extension could, to my mind, admit of but one explanation; viz., that when, during flexion, the leg and foot received a sudden twist, and a shock was communicated to the hand, the convex part of the external condyle of the femur had slipped behind the posterior rim of the semilunar cartilage; and that when, during extension, the leg became straight with a similar, though less evident, jerk, the condyle had slipped back over the cartilage, and the parts had resumed their normal positions.

R. CLEMENT LUCAS, B.S.Lond., F.R.C.S.,
Assistant-Surgeon to Guy's Hospital.

ON THE CAUSE OF EVERSION AFTER FRACTURE OF THE NECK OF THE FEMUR.

IN opposing the view advocated by Mr. Owen that, in fracture of the neck of the femur, "eversion is due solely to the force of gravity", I did not intend to affirm that the exact converse is the case, and that the deformity is caused only by muscular action. My view is that, in fractures without impaction, there are two factors present, which, in varying degrees, contribute to this condition. These are the action of gravity and the spasm of the muscles, which, by shortening the limb, make tense the transverse band formed by the quadratus femoris and its immediate neighbours. In any particular example, it will be easy to ascertain to which factor we should more especially refer the deformity. If there be but little opposition to the inverting of the foot by the surgeon, it must be the force of gravity which has produced the eversion. If, on the other hand, considerable force, or the exhibition of an anæsthetic, be requisite to restore the normal position, then I consider that we should be justified in ascribing it chiefly to muscular action. In such an instance, I should not expect that chloroform would at once restore the limb to its proper position; because the action of gravity would still tend to maintain the displacement. In fractures below the trochanters, I agree with Mr. Owen that gravity is the chief cause of the external rotation; for, according to my experience, the limb can be readily replaced by the surgeon in the normal position. The subsequent restoration of movement, which enables a patient with an old ununited fracture of the cervix to rotate the foot inwards, is, I presume, due to the cessation of spasm, and the gradually lengthening of the formerly stretched muscles.

In impacted fractures of the neck of the thigh-bone, I agree with Mr. R. Parker that eversion is due to the relative weakness of the back part of the cervix; but I cannot see how this helps us to determine whether, in an unimpacted fracture, the eversion is due to the action of the muscles or the force of gravity. I have never seen an unimpacted fracture of the neck without shortening; but, if I were satisfied that the absence of shortening was not due to a previous inequality in the length of the limbs, or to the difficulty of accurate measurement, I should be prepared to find in such a case that the eversion was readily removable, and that it was due only to the weight of the limb.

N. DAVIES-COLLEY.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

MANCHESTER ROYAL INFIRMARY.

RIGHT LATERAL LITHOTOMY: STONE REMOVED BY MANIPULATION, AND WITHOUT THE USE OF FORCEPS.

(Under the care of Mr. W. WHITEHEAD.)

W. P., AGED 3, had suffered from symptoms of vesical calculus for twelve months, when admitted into hospital on October 29th, 1879. He was sounded the same day, and a calculus, probably uric acid, about an inch long, diagnosed. On November 8th, he was operated on in the following manner. A staff, shortly to be described, was held perpendicularly in the right hand. The knife, in the left hand, was thrust directly into the groove of the staff three-quarters of an inch above the anus. The staff was then withdrawn an inch, by which means the stop in the groove was brought into contact with the point of the knife. The stop being filled with lead, the point of the knife became embedded and fixed in an oblique direction. The staff and knife were then, as though one instrument, passed through the prostate. This was accomplished by depressing the staff, and keeping the knife in strict contact. Without altering the relative position of staff and knife, they were withdrawn about an inch, when the knife was drawn downwards and outwards, leaving the external incision midway between the anus and right tuber ischii. The left forefinger was then introduced along the staff into the bladder, and the stone touched. The right forefinger was introduced into the rectum and placed behind the stone, easily felt through the walls of the rectum and bladder. The stone between the two fingers was manipulated through the wound, and the operation completed. The latter procedure had been suggested by Mr. Lund. The calculus was uric acid, and measured one inch less a sixteenth.

The peculiarity of the staff used in this operation consisted in the groove deflecting at the curve from a posterior to a left lateral aspect, and, instead of the groove being continued to the end of the staff, it ended an inch beyond the curve in a *cul-de-sac* filled with lead.

The arguments in favour of this plan of operating will be published hereafter.

ST. GEORGE'S HANOVER SQUARE DISPENSARY.

CASE OF REMENSTRUATION AT FIFTY-NINE, AFTER EIGHT YEARS CESSATION.

(Under the care of Dr. SUTHERLAND.)

ELIZA G., aged 59, began to menstruate at twelve years old. This then produced most debilitating effects, the patient being obliged to be carried about, as she was unable to walk.

She married at twenty-seven, and had seven children and one miscarriage. She was regular up to the age of fifty-one. Then the catamenia ceased until she was fifty-nine years old, when they began again. She has had a very troubled anxious life, which may possibly account for this abnormality.

For a year, she has been unwell every three, four, or five weeks, the discharge being somewhat paler than usual, although at the commencement of this remenstruation it was of a normal red colour.

She complained of pain in the abdomen, which was relieved by purgatives—bismuth and peppermint.

A month later, she continued to mens'ruate. Her general health was improved.

INTRODUCTORY ADDRESSES AT THE MEDICAL SCHOOLS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.

AN interesting introductory address was delivered in the Class of Medicine by the Professor, Dr. T. GRAINGER STEWART.

After alluding to the anticipated opening of the new Infirmary, he said that, two hundred years ago, the University was already a century old. It was doing excellent work in its Faculties of Arts and Divinity, but afforded no opportunity of instruction in medicine. From the report on historical manuscripts, he found that, in various parts of Scotland, the office of coroner existed in the fifteenth and sixteenth centuries. But one of the most curious facts, in a medical point of view, laid before the Commission by Mr. Fraser in his report on the Argyll papers, was, that an office existed, appointed by royalty, entitled "principal physician within the isles of Scotland". In 1681, the physicians of Edinburgh, who had long been aiming at incorporation, received from Charles II a charter constituting them the Royal College. In these days, the surgeons learned their work by the system of apprenticeship, but their class education must have been very deficient. Although the teaching of anatomy was contemplated from the time of the incorporation of the surgeons, it must have been very inadequately performed; for, in 1671, a skeleton of a Frenchman brought from Paris was regarded in Edinburgh as a very great curiosity; and the fact that wealthy Scots sought to secure the services of foreign physicians, that sometimes they went abroad in order to consult individual practitioners, and that in one instance a rich Archbishop of St. Andrew's called, for consultation, a physician from beyond the Alps, showed that the repute of native doctors was not then very high. In 1720, Dr. Andrew Sinclair, a graduate of Angers; Dr. John Rutherford, a graduate of Rheims; Dr. Andrew Plummer, a graduate of Leyden; and Dr. John Innes, a graduate of Padua, began, with the approval of the Town Council, to teach the theory and practice of medicine and chemistry in rooms connected with the old hall of the College of Surgeons; and, after a few years' work outside, the four teachers, upon their petition, supported by the Royal College of Physicians, were admitted within the University as professors. In 1728, the first steps were taken for the establishment of the Infirmary, and an arrangement was made whereby the apprentices of the surgeons and the students of physic should have the opportunity of observing the practice at the bedside. In 1748, Dr. John Rutherford, then Professor of the Practice of Physic, established a series of lectures; the Professor of Practice of Physic was not long left to conduct the clinical course alone, and soon a number of colleagues were associated with him. Ideas as to clinical teaching gradually advanced. Mere *ex cathedrâ* statements by professors, however experienced, no longer sufficed; and the system which had been considered so nearly perfect in the middle of the last century was rather lightly esteemed in the beginning of this. Speaking of the new Infirmary, Dr. Stewart said that now the bedside teaching was to be conducted under conditions vastly superior to those which had hitherto existed. When he thought of the discomforts of the old Infirmary, of its cubic space of something like one thousand feet for each patient, of its deficient ventilation and superabundant draughts, of its inconvenient water-closet and lavatory arrangements, and its scarcely accessible baths, he felt that they could not be too grateful for the generous efforts which had been made, without Government aid, to provide in the capital of Scotland a noble institution, open to every comer if only he was sick and poor, and, for the great Medical School of Edinburgh, a hospital which could hold its own with any in the world. They looked forward with much pleasure to the whole Medical Faculty occupying soon the new University buildings, which were in course of erection, and in which they should find abundance of space, and every other facility for teaching and for research. As to the systematic lectures on medicine, he hoped that ere long attendance during two sessions would be made compulsory, and the occupant of the chair be thereby enabled to do more justice to the many important subjects included in the department of Practice of Physic. In the clinical course, he hoped to see each of the clinical professors supplied with an ample number of beds, and with a full staff of assistants. It was, he had no doubt, much regretted by the managers of the Infirmary that they had been compelled to refuse to open one male ward more. He was sure that its opening would not be long delayed if once it was understood that, not only was teaching hampered, but that many an urgent case must be refused admittance, although spacious wards were standing empty, merely because of the poverty of the institution. Longer attendance in the wards was also desirable, and, if the number of students went on increasing, a further development of the tutorial system might be required. The time had now come, in fact, when the period of study for the degree of Bachelor of Medicine should be extended to five years. The amount of information presented to the student was so great that, were it not for the improved modern methods of teaching, it would not be possible for him to acquire an adequate knowledge of it. And even with the advantage of these methods, to the average student the work was very severe. But, if more time could be allowed, so that at the end of the third year he could have finished with the purely scientific departments, and could proceed during the remaining two years to the study of the practical subjects, his work throughout would be less arduous and the education more complete.

SCHOOL OF MEDICINE IN EDINBURGH.

THE introductory address of the session was delivered on October 28th by Dr. BATTY TUKE, in the Royal College of Surgeons. Dr. F. B. Imlach, President of the Royal College of Surgeons, occupied the chair.

Dr. Batty Tuke remarked that six years ago Dr. George Balfour, in his introductory address, drew a vivid picture of Hippocrates, released for a space from Hades, walking into one of the clinical wards of the Royal Infirmary, and surveying with silent, yet dignified, wonder the changes which had taken place in the methods of diagnosis and treatment of disease during the intervening 2,300 years. But he (Dr. Tuke) would picture to his audience the Syme, the Bennett, the Alison, and the Henderson of 1850, stepping into their wards at the present time. Let them picture to themselves Syme, who was wont to amputate a limb in simplest fashion, surveying the Annandale of to-day performing the like office, shrouded in a halo of carbolic spray generated by a steam-engine, laving himself and his instruments and his dressers in mysterious lotions, suspending the limb to be removed from a gallows, and investing the stump in complicated dressings. The professors of 1850 would not be one whit less dazed in 1879 than Hippocrates was fabled to be by Dr. Balfour. Nor would they be dazed merely by apparatus, but even more by the results produced. When he reflected on the spaces which had been traversed by medical explorers during the last quarter of a century, he stood somewhat appalled at the future of the medical student. He stood appalled even at his present position, when he reflected how very much more scientific knowledge he had to acquire than the student of thirty years ago; how little improvement had taken place in the direction of his education, towards a proper understanding of the science of physic, by means of which the advances in medicine and surgery had been mainly made; and how heavily he was overweighted by having to acquire a vast amount of non-essential knowledge. Year by year, the student of medicine was becoming more heavily weighted in the essentials also. Dr. Batty Tuke argued that, while every one should take an University degree who could spare the time and the money necessary to secure it, those who could not should content themselves with one or more of the licences of the various corporations who granted qualifications in medicine and surgery. By taking a licence instead of a degree, a man was more likely to gather in four years a practical knowledge of his profession, than by forcing into the same time all the essential and non-essential subjects demanded by the University curriculum. The practical knowledge of which he spoke was not to be obtained by merely "walking the hospital". There they would only meet with the more grave forms of disease. It was in the dispensary where they could acquire an insight into those minor complaints which formed the staple of everyday practice, and in the proper diagnosis of which mainly depended their after-success. After bidding the students welcome to the Medical School, Dr. Tuke concluded by referring to the opening of the new Infirmary—a noble monument of Scottish benevolence. Proud as they would all be at the event, the older hands amongst them would experience twinges of regret at seeing the old place empty and deserted—tenanted only by the memories of the past. For there they spent many happy days, although surrounded by disease—happy in the fulfilment of duty, and in the study of a noble profession; there, were many life-long friendships made; there, worked the heroes of their youth; there, many made their fame. Let them hope that, in the new hospital, as many victories over disease and death would be gained; that as many and more onward strides would be taken in the science of medicine.

ANDERSON'S COLLEGE, GLASGOW.

THE winter session was opened on Tuesday, October 28th, the introductory address being given by Dr. ANDREW BUCHANAN, President of the Faculty of Physicians and Surgeons of Glasgow. The lecturer took for his subject "The Present Age"—by which he meant the times in which we now live—"considered as the age of Biology: the advantages

to the members of the medical profession resulting therefrom; and the correlative duties imposed upon them thereby". In the course of his observations, he referred to the statement made about two years ago by Dr. James Russell, the able sanitary officer for Glasgow, that milk might be the means of propagating enteric fever; and asked whether it was to be supposed that the endemic fevers of this country proceeded from causes quite different from those that produced the endemic fevers of other countries; or, on the other hand, that in all those countries the drinking of milk was the common cause of, or at least one of the means of propagating, endemic fevers—that it produced the fevers of Cyprus, the malarious fevers of Rome and Florence, the yellow fever, and the bubonic plague? Milk had been known from time immemorial to be a bland nutritious liquid, and was instinctively recognised as such by all the creatures of the mammiferous class; and no attempt had been made to define accurately the conditions under which it became deleterious, and only a theory of the very vaguest possible kind had been put forward to account for its transformation. In considering the question as to the share which milk had in any outbreak of endemic fever occurring in a large city like Glasgow, there were two fundamental facts which were indisputable, but not remarkable for novelty. The first was, the fever always arose and prevailed in a certain district of the town; and the second was, that the inhabitants of the said district were supplied with milk more or less exclusively by a certain dairyman, who bought it wholesale from whatever farmers would sell it to him at the lowest price. He referred to the alarm produced by Dr. Russell's statements; and expressed disapproval of the attempt to legislate on the subject, and of the formation of milk companies, which he believed to interfere with an important branch of industry. He next spoke of the movement for the prevention of drunkenness and its consequences, and lamented the display of angry passion on both sides which had taken place. Fortunately, however, the age of biology had arrived; and an enlightened public will decide questions which rest on a physiological basis, without passion, on the ascertained principles of physiological science. The whole argument is comprised in the three following questions. Is alcohol food? Is alcohol poison? and, Should the use of alcohol be restricted by legal enactments, as dangerous to civil society? The first question he answered by putting another question. Is fat an article of food? No physiologist could hesitate in answering the latter question in the affirmative, and the scientific answer was in accordance with universal experience. Fat could not indeed produce bone or muscle; but it generated heat and vital force. Alcohol consisted of the very same elements, varying somewhat in proportion, but alike fitted to undergo combustion within the body, and so produce the same salutary effects. In one respect it was much superior, for it was more immediate in its action, which was of great importance in all cases of sudden emergency. If he were asked whether alcohol were a good or a bad thing, he was bound to answer, in accordance with the evidence of history, and in accordance with his own experience and the experience of many trustworthy men, that it was a good thing—a good gift of God to man, which human perversity alone had converted into an instrument of evil. It was quite clear that all who entertained these views of the beneficial action of alcohol upon the human body ought to partake of it; that they had a double sanction, moral and religious, in so doing; and that for any man, directly or indirectly, to prevent them from doing it was contrary to the dictates both of morals and of religion. On the other hand, it was admitted on all sides that alcohol taken in excess was a poison, and destroyed every year innumerable human lives; and that it deprived a man of the use of his reason, and so rendered him dangerous to himself and to all who come near him. Alcohol was, therefore, a full and ever-flowing source of disease, of immorality, and of crime. It was no overdrawn picture to say of alcohol that it filled our gaols and our poorhouses, our hospitals and our churchyards; and that it would subvert civil society in this country altogether were it not for the vast police force we were compelled to maintain to keep it down. This state of society, seeing that the cause from which it proceeded was fully ascertained, surely presented a wide and promising field for wise legislation; and surely all good men would unite in asking such legislation from Government. But the two great parties could not agree upon first principles, and therefore they did nothing. One party would accept nothing short of total abstinence from all alcoholic liquids. This requirement would never be acceded to by the vastly more numerous body of plain men, who felt in their own persons that alcohol did them good, and many of whom had a rational conviction that it was eminently fitted to act beneficially. Such was the unfortunate dilemma in consequence of which legislation had become impossible. "But let us take courage, and even be of good cheer. The age of biology has arrived; and when we can clearly trace the finger of Providence in the train of events that ushered in the dawn, let us devoutly trust that the same Almighty power will bring also the full brightness of noonday. The mists of error and prejudice in which both parties are now enveloped will at length be dispelled; good men will see and recognise each other, and, joining hands like brothers, will act in concert in framing a code of wise laws for the repression of intemperance."

INTRODUCTORY ADDRESSES AT THE MEDICAL SCHOOLS IN DUBLIN.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

THE Inaugural Address in this School was given by Dr. ROE, Professor of Midwifery in the College.

After enlarging on the importance to the student of moderate steady work, Dr. Roe stated that the professors of the College had resolved to resume the prize-system, which had been for a short time discontinued; and that, in April next, they would offer prizes to the amount of £65, as well as certificates of merit. These would be divided into three classes for students of the first, second, and third years, as follows: first year—first prize, £10; second prize, £5, certificates; second year—first prize, £14; second prize, £6, certificates; third year—first prize, £20; second prize, £10, certificates. The subjects for examination would be as follows: first year—anatomy, physiology, surgery; second year—anatomy, physiology, surgery, botany, materia medica, chemistry; third year—anatomy, physiology, surgery, midwifery, medical jurisprudence, medicine. The period of the early struggles of the student was undoubtedly a trying time; but he should calmly wait and patiently employ the various professional talents with which previous study had furnished him. There was no royal road to learning; and although a genius might occasionally spring up, even he had to work like others for what he acquired. The medical press was an important engine of progress. It was an embodiment of the opinion of the profession, and when it ceased to be so it must fail in its influence. The lecturer then proceeded to speak of the lack of honour awarded by the State to the medical profession, and to the scanty and disheartening recognition, as a rule, of the services of officers in the Army Medical Department. He referred, amid loud applause, to Surgeon-Major Reynolds, V.C. (who was present on the occasion), as one whose remarkable intelligence, coolness, and tact, when placed in a position of the utmost danger, had won for him the praise of all. In alluding to the members of the profession who had died during the past year, Dr. Roe particularly mentioned Dr. Ambrose Hamilton Kelly, one of their own licentiates, the medical officer in charge of the ill-fated Cabul Embassy. He was a native of Dublin, and received his medical education in Steevens' Hospital, where, from his genial manner and kindliness of heart, he made many friends. Although he only entered the Indian service in 1869, he was present in two campaigns, for which he was decorated with medal and clasp. No braver or better officer ever served Her Majesty; and no man in the service enjoyed a greater amount of esteem and respect. Many others, he said, might be mentioned whose bravery and devotion to duty should fill our hearts with pride.

THE HOUSE OF INDUSTRY HOSPITALS.

DR. MCDOWEL, Physician to the above hospitals, delivered the Introductory Lecture.

He dwelt upon the importance of bedside instruction combined with clinical lectures in the theatre of the hospital; and illustrated the advantages to be gained by such a system of education. He was strongly in favour of didactic lectures, and thought that, if students knew how much time was generally given to their preparation, they would be more appreciated than they often are. There was much to be learned, and but a short time, comparatively speaking, to accomplish the task. Now more than ever, he said, was there need for steady persevering work, for year by year medicine and surgery had been making great advances. There was but one road by which success could be attained, and that was the one which was hedged in by perseverance and industry on the one hand and by self-denial on the other. The means of acquiring a competent knowledge of the medical profession, in even a comparatively short time, was within the reach of every industrious student. It consisted in the acquisition of experience, which fortunately did not necessarily depend on lapse of years, but on the accumulation of facts acquired by observation at the bedside. This was available to all, but there was an immense advantage in the position of a resident pupil or clinical clerk, who in the discharge of his duties had unrivalled opportunities, during his term of office, of acquiring practical knowledge and experience. In looking with gratification to those gentlemen who had discharged their duties in the House of Industry Hospitals, no one, Dr.

McDowel said, would complain if he mentioned Surgeon-Major Reynolds, one of their residents of former years. In conclusion, Dr. McDowel took the opportunity of publicly noticing and acknowledging the admirable manner in which, during the small-pox epidemic of last session, the duties of clinical clerk were performed by Mr. Sullivan and by Mr. Denehey. Exposed daily to dangers, none the less real that they were unseen, those gentlemen discharged the duties intrusted to them with a zeal and devotion which has never been surpassed. They had served the institution whilst they had benefited themselves; and in acknowledging their merits, he could only hope there would be many to follow their example.

ST. VINCENT'S HOSPITAL.

THE subject chosen by Dr. QUINLAN, who gave the Introductory Address in this Hospital, was the high death-rate of Dublin. This he attributed to the general insufficient sanitation of the whole community. He described, in detail, the chief of the sanitary shortcomings, and the remedies for their removal. These, however, being now so well known, as Dr. Quinlan himself said, and without doubt or dispute, need not again be referred to here. At the conclusion of the address, Dr. Quinlan formally declared the session open; and called for a cheer for Surgeon-Major Reynolds, V.C., who was present on the occasion.

THE CARMICHAEL COLLEGE OF MEDICINE AND SURGERY.

THE Introductory Address for the session 1879-80 was delivered in the theatre of the new College buildings, Aungier Street, on Monday, November 3rd, by the President, Dr. GORDON. The President of the Royal College of Surgeons, several leading members of the profession, and other gentlemen, and a large number of students, were present.

Dr. Gordon said it was unusual in their School to have addresses introductory to their session, but it had been adopted in the present instance, in consequence of the altered conditions under which the institution was presented to the favourable notice and consideration of the students. The credit of carrying out all the arrangements connected with the transfer of the school from the north-west corner of the city to its present more central and more eligible site was due to Dr. Reuben Harvey, whose energy and enthusiasm had sustained everyone concerned in the transfer. He recalled the circumstances under which the old proprietary Carmichael School was founded half-a-century since, and pointed to the distinguished success which had attended its teaching. The records of the school disclosed a bead-roll of illustrious names not surpassed by any similar institution in the United Kingdom; and from the ranks of its pupils and teachers every professorial chair in Ireland had been filled. Their alumni had always done their duty, whether it lay in the dissecting-room, in making dangerous chemical experiments, in general practice, or in the army braving the dangers incidental to the life of a combatant and medical officer in the theatre of war. Amongst their students, he first named Dr. Robert Bentley Todd, who became eminent both as a practising physician and still more as a teacher in London, and whose *Cyclopædia* and *Clinical Lectures* would remain as specimens of high intelligence and almost oracular penetration. Next, there was Dr. Thomas Andrews, late President of the Queen's College, Belfast, whose investigations into ozone, heat, and the changes undergone by matter in passing from the liquid to the gaseous state, were invaluable. Then they had Dr. Allman, who first projected a Pupils' Medical Society, and whose recent address, at Sheffield, as President of the British Association, on Biological Science was one of the most remarkable utterances on that most important subject. The names of Richard Carmichael and Robert Mayne should never be forgotten in connection with the school—the first as one of its greatest benefactors, and the second as one who conferred valuable advantages in the way of prizes, left a bright example to all pupils, and might be regarded as the first who reduced physical diagnosis to a system. With such giants gone before, what chance had the present staff of the College of achieving success? To begin with, they had tried men as demonstrators of anatomy, one of them being an eminent surgeon in an adjacent hospital. In Anatomy, all he had to say was that the chair was occupied by Dr. Loftie Stoney. As teachers in Surgery, there were Dr. Barton of the Adelaide Hospital, and Dr. A. Corley of the Richmond Hospital. Dr. Fitzgerald, Oculist to the Queen, would conduct the studies in Ophthalmic Surgery; Dr. Moore in the science of Medicine; Dr. Jennings and Dr. Macan in Midwifery; Professor Tichborne in Chemical demonstrations; Dr. Duffey in Materia Medica; Dr. M'Nab in Botanical science: Dr. Harvey, in Pathology and Physiology. They had a valuable and extensive library, a well appointed laboratory, and a museum replete with all subjects connected with physiological histology. These were the advantages offered by the institution, and he could only say that he believed he expressed the general opinion when he said that it would not be the fault of the professors if it did not prosper.

MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

THE one hundred and twenty-ninth medical session in this institution was opened on the 3rd inst. with an Address by Dr. J. W. MOORE, Physician to the Hospital.

Having welcomed the new students, Dr. Moore alluded to the change in the staff resulting from the lamented death of Mr. R. P. White, one of the surgeons to the hospital; and, after some remarks as to the decorum which should characterise students in their intercourse with the sick, he proceeded to speak on one of the most prominent questions of the day in relation to the progress of medical science, by ably summarising the present state of our knowledge respecting what might perhaps, he said, be termed the "Microcosm of Disease". He adopted Dr. Billings' classification of the causes of disease from a sanitary point of view, viz., 1. Hereditary; 2. Physical and chemical; 3. Organised or vital; and 4. Mental or emotional. The third class of causes—those which were known or supposed to be organised or vital in character—was the most important. Dr. Moore epitomised the present state of our knowledge respecting this class of causes of disease. He showed that there was good reason to believe that in the septic group of diseases, in relapsing fever, in malaria, in noma, and in some forms of diarrhœa, the presence of microphytes in the blood or other fluids of the body had an intimate causal relation to the phenomena of these several affections—the microphytes either exciting the disease themselves, or playing the part of a ferment which set going the development of the specific poison or virus of the malady. He showed also that in the contagium-diseases the contagium was particulate, incapable of reproduction outside the body, and although not referable to the lower forms of fungi, nevertheless a "contagium vivum", growing and multiplying indefinitely when placed upon a congenial soil. What then, he asked, was the practical bearing of these researches? The expressions "preventable disease" and "preventive medicine" had of late years become "familiar as household words", and the lecturer could not help thinking that they were now likely to acquire a fuller and more precise meaning than they ever possessed in times past. Some men, even at the present day—conscientious, intelligent, and otherwise well informed men—objected to the use of such a phrase as "preventable disease" on the ground that it was, to say the least, irreverent. They pointed to that close analogy which existed between the moral nature and the physical nature of man, both subject to laws which could not be broken or violated with impunity. Any infringement of the Divine moral law was followed by spiritual disease and death. No less certainly would the violation of the equally Divine physical law be followed by bodily disease and death. And it might be believed that every earnest effort made to prevent disease and the misery it brought in its train has the Divine sanction and approval. In striving to attain the prevention of disease, it might be hoped, 1, so to modify the nature of the contagium as to render it inert or comparatively innocuous; 2, to destroy it absolutely, either *(a)* without the body or *(b)* within the body; 3, so to counteract its effects upon the organism as to save the patient's life or even to cause the symptoms quickly to disappear. Dr. Moore quoted from a lecture delivered by his predecessor, Dr. Stokes, a passage relating to the germ-theory of disease, which he characterised as being almost prophetic; and concluded his lecture with an eloquent panegyric on that distinguished physician.

SCHOOL OF PHYSIC, TRINITY COLLEGE.

THE courses of lectures in this School of Medicine were inaugurated by Dr. MACALISTER, the recently appointed Professor of Anatomy and Surgery in the University of Dublin.

Having shown the importance to the surgeon and physician of an accurate and intimate acquaintance with anatomy, and the kinds of knowledge required by the students, he commented on some mistakes into which students were apt to fall, of regarding their studies simply as preparations for examinations, instead of viewing these studies as fitting them for their after career: of burdening their memory with mere names, instead of engaging in practical work. The lecturer then defined the place which anatomical lectures should occupy in medical teaching, and referred to the history of the school, which, he said, was nearly if not quite two centuries old. He alluded particularly to that period when the chair of which he was now the twelfth successive holder was filled by the illustrious Macartney, whose fame raised the school to a foremost place among the medical schools of Europe. He also paid a

well merited tribute to his immediate predecessor, Dr. M'Dowel. As long as the literature of anatomy was studied, so long would the monograph of Dr. M'Dowel on the venous system and his other anatomical works be regarded as classical models of anatomical description, which for erudition, clearness, and completeness, have been seldom equalled and never surpassed. In conclusion, Dr. Macalister observed that it had always been a characteristic feature of this school that its teachings had been of a practical description, and that what might be called the laboratory mode of instruction was put foremost, instead of the prelectional. He dilated on the facilities for teaching in the school, where concentrated in one area there was a suite of departments for practical work which might challenge comparison with any in Britain. If the students took advantage of all these opportunities as they ought, the school would continue to send forth year by year a body of medical practitioners second to none in the world.

MATER MISERICORDIÆ HOSPITAL.

THE introductory lecture in this Hospital was given by Mr. KILGARIFF, who commenced by a feeling allusion to his predecessor as Surgeon to the Hospital—the late Henry Tyrrell. The remainder of the address was chiefly occupied by a discussion on the relationship of medicine to the science of Christian theology; a subject which he treated, as it seems to us, in a manner more suited to the atmosphere of a religious debating society than that of the theatre of a general hospital.

THE CATHOLIC UNIVERSITY SCHOOL.

"THE necessity of Mental Culture for Professional Students" was the subject chosen for his address by Dr. CHRISTOPHER NIXON, in opening the session in this School. He said there was no danger of any depreciation of the status of the medical as a learned profession as long as its members maintained the standard up to which the profession was by gradual and successive steps being raised. He sketched, by familiar examples, the wide connection which medicine has with other sciences, and traced the influence which it has exercised upon society because of its embracing most of the known branches of knowledge subservient to the interests of mankind. Further, he indicated the method of investigation employed in the study of physiology and pathology, and pointed out the influence which these branches exert upon each other, and touched upon the subjects of evolution and the so-called physical base of life. Finally, he concluded that Medicine was a learned profession, and one of advancement. There is scarcely a branch of human knowledge, he said, to which it is not in some way bound. Its progress is not limited by the domain of physical science; it travels insensibly into the regions of mind, and is intimately associated with the greatest problems which can engross man's attention—religion and morals. It has been not inaptly termed the metropolis of human knowledge, of which we are the privileged denizens. But how are we to fit ourselves for the duties of citizenship? Great results are not to be expected from minds untrained. It is quite true that men deficient in preliminary culture may attain some proficiency in learning the technical details of a special pursuit, but instead of following it with ease and a feeling of conscious power, they have always that sense of mental strain and diffidence which renders the work irksome and monotonous, whilst they can never hope to become original observers. It is, in the one case, like learning to swim with bladders; in the other, it is as though you commenced dancing with loaded shoes. The remainder of the address was occupied by a consideration of the position of Roman Catholics in Ireland with regard to their obtaining higher education.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 11TH, 1879.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

Cancer of the Rectum.—Mr. JOHN GAY showed a specimen of cancer of the rectum, taken from the patient whose case he had described at the last meeting of the previous session of the Society (*see* JOURNAL, June 14th, page 895). The woman recovered from the operation—in which a complete ring of the rectum was removed—so far that the bowel performed its functions normally; but she had since died of a return of the disease, which extended to the uterus. He did not recommend that such an operation as he had performed should be undertaken unless under very urgent circumstances; but the case showed how tolerant the system was of injury to the rectum.

CHOLECYSTOTOMY PERFORMED FOR DROPSY OF THE GALL-BLADDER, DUE TO THE IMPACTION OF A GALL-STONE.

BY LAWSON TAIT, F.R.C.S.ED.

The author referred to the success attending ovariotomy, as leading to the adoption of abdominal section for other pelvic and abdominal tumours likely to affect seriously the life of the patient, unless of a cancerous nature. Dr. Handfield Jones had the merit of first suggesting the extension of it, particularly to cases of threatened death from impacted gall-stone. Dr. Marion Sims was the first to follow out the plan, but unsuccessfully; and the present case was the first successful one. The patient had been married eighteen years, had borne six children, and menstruation was normal and health good till the summer of 1878. At that time, she had spasmodic pains in the right side, aggravated by walking and lifting slight weights. A swelling, noticed in September, slowly increased; and during last winter pain became more intense, and she presented a cachectic appearance, suffering from incessant headache, sickness, and obstinate constipation. The seat of pain was over the right kidney, where there was a heart-shaped tumour, firm and elastic without fluctuation, tender to the touch, and movable to each side. The urine gave only negative results. After consultation with Dr. Edgington on August 23rd, the abdomen was opened in the middle line to the extent of four inches. The tumour was found to be a distended gall-bladder containing a white starchy looking fluid and two large gall-stones, one lying loose, and the other impacted in the entrance of the duct, and adherent to the mucous surface. The latter was removed by being carefully broken up. The stone and fragments weighed 6.11 *grammes* (94.3 grains). The wound in the gall-bladder was stitched to the upper end of the wound in the abdominal walls by continuous sutures; the aperture into the bladder was left open, and the rest of the abdominal opening was closed in the usual way. The operation was performed antiseptically, under ether. The patient rallied completely in a few hours, and the dressings of the wound were found stained with healthy bile. The flow of bile from the wound continued till September 3rd. The wound was completely healed on September 9th, when the patient began to take solid food, the diet having up to that time been restricted to milk and beef-tea. On the 30th, she went home quite restored to health. A temperature-chart indicated the evenness and the rapidity of the recovery. An entire absence of symptoms of gall-stone rendered an accurate diagnosis impossible; but this was of less importance, as the improvements in abdominal surgery made an early exploratory incision for ascertaining the true nature of the disease feasible. The author, in stating that he always used rigid antiseptic precautions in his abdominal sections, expressed some doubts as to his success being attributable in any way to them.

Dr. COUPLAND believed that impaction of gall-stones in the entrance of the gall-duct often did not give rise to symptoms. He asked whether surgical interference would be possible in cases of an acute kind. If so, much relief might be gained and life saved; but there would probably be a difficulty in operating on such cases, the gall-bladder not being distended.—Mr. HULKE congratulated Mr. Tait on the result of his operation; and, while giving due credit to Dr. Handfield Jones for suggesting operative measures in such cases, pointed out that Petit in 1743 had recommended a similar proceeding. The fact that the obstruction was in the cystic duct rendered Mr. Tait's case favourable for operation, because in such conditions the gall-bladder became a mere mucous cyst.—Mr. KNOWSLEY THORNTON asked Mr. Tait for an explanation of his views regarding the value of the antiseptic method in abdominal surgery. It seemed to be a very general opinion that exploration of the abdomen was justified if antiseptic precautions were followed.—Mr. HENRY MORRIS agreed with the remark that much success was attributed to the antiseptic treatment. But some time ago a case was reported in the BRITISH MEDICAL JOURNAL by Mr. George Brown, in which cholecystotomy had been performed successfully without the use of antiseptics. He asked whether there was much hæmorrhage, and whether there had been much dragging on the gall-bladder when attached to the abdominal wall.—Mr. SPENCER WELLS said that he was consulted some years ago with regard to the case of a patient who had several stones in the gall-bladder. It was decided not to operate, as there was cancer of the liver. He would have made the opening by means of potassa fusa, in order to obtain adhesion of the peritoneal lining; and would still be inclined to operate in this way rather than by incision. He asked how long the discharge of bile continued in Mr. Tait's case.—Mr. A. BARKER doubted whether jaundice was an invariable effect of impaction of a calculus in the neck of the gall-bladder. He believed that the late Dr. Murchison taught that it was not. He had brought a case before the Pathological Society in which a gall-stone had ulcerated into the intestine, and in which there was no history of jaundice.—Mr. TAIT did not know whether jaundice

was to be regarded as always a symptom of impacted gall-stone. His impression was that gall-stones were formed in the gall-bladder and not in the liver. He thanked Mr. Hulke for calling attention to Petit's proposal, of which he had not been aware. He did not find much difficulty from hæmorrhage in making incisions in the median line; and there was no trouble from traction in his case. The discharge of bile ceased when antiseptic dressing was discontinued and the wound allowed to heal. Although he followed out Mr. Lister's practice rigidly, he did not think that there was anything more than a general impression as to his views on the subject. Mr. Knowsley Thornton had said lately that he had never lost a case of uncomplicated ovariotomy since he had used antiseptics; but the only fatal case which he (Mr. Tait) had had was one in which strict antiseptic measures (with thymol) had been carried out. In his private practice, he had not had greater success with than without antiseptics. In his hospital practice, he at first operated under very unsanitary conditions, and a number of cases were fatal. Subsequently, his operations had been performed in a house provided for the purpose in the country; and the amount of success in his ovariotomy cases had since resembled that of Mr. Spencer Wells and Dr. Keith. The improvement, however, was not so great as to be placed to the credit of antiseptics rather than to increased experience and improved skill in operating; but if the idea that antiseptics lessened mortality after operation was supported by facts, he would willingly accept it.

A SECOND SUCCESSFUL CASE OF GASTROTOMY, IN EXTRA-UTERINE PREGNANCY. BY LAWSON TAIT, F.R.C.S.E.

This case was intended to emphasise the propriety of operating by median abdominal section, and the necessity of leaving the placenta untouched. The patient was a worn-down anæmic married woman aged 30, seen for the first time on March 1st; married three years, she had had no children, and her menstrual periods had been perfectly regular till September 1878, when they ceased; the abdomen enlarged, and she thought herself pregnant. There was a large tumour, reaching above the umbilicus, fixed in the pelvis, of uniform solidity. The uterus was of normal size, bent backwards, and the tumour was adherent to the anterior wall and slightly movable. It was diagnosed as hæmatocele. The tumour subsequently increased to double its original size, apparently from the sudden formation of a cyst on its upper surface, in which some solid fluctuation was perceptible. An incision was made into the abdomen, with antiseptic precautions, on April 30th, and a cyst full of fresh blood-clot opened. This was explored, but nothing throwing light on the case was found, and the wound was closed. She rallied from the operation, but the pain was still intense. On May 2nd, red serous fluid began to ooze from the wound, and it was clear that the cyst cavity was suppurating. On the 6th and 7th, several large clots came from the wound, and the cavity was cautiously syringed out with an antiseptic solution of phenol twice daily. On May 16th, a fœtal skull-bone was removed, and an entire fœtus was drawn out through a hole in the original tumour which led into the cyst previously opened. The fœtus, which was not more than three months old, was macerated and rotten. On the 17th, eight or nine inches of the umbilical cord came away. On the 18th, the patient was anæmic and exhausted, and, for the next eight days, extremely ill, but began to rally on the 26th; and, on the 29th, a large piece of placenta was extruded. The discharge then ceased, she began to take her food well, and the wound became healthy, and on June 10th had rapidly contracted. The diagnosis was approximately correct, in so far that the lesion was one of the forms of hæmatocele, and the abdominal section was accidentally the means of saving the patient. The author made it a rule to open the abdomen in all doubtful cases as to the nature of the tumour, where there seemed a possibility of benefit from operative proceedings; and, in between fifty and sixty cases, he had no reason to regret the proceeding. A temperature chart was attached to the paper.

Mr. ALBAN DORAN believed that the recurrence of symptoms of pelvic hæmatocele in the course of a few months, in a married woman, was strongly indicative of extra-uterine fœtation. He had seen a case, in consultation with Dr. Conolly and Mr. Spencer Wells, in which the patient died in a third attack of hæmatocele. At the necropsy, he found a large quantity of fluid blood in the abdomen. Beneath this, in Douglas's pouch, was a minute layer of decolorised fibrin—the remains of the second hæmorrhage; and beneath this again was the residue of the first hæmorrhage, in the form of another decolorised layer of fibrin. A fœtus of about six weeks' growth was found in one of the Fallopian tubes. Considering the great mortality attending extra-uterine pregnancy, he thought that, in all cases where this condition was believed to exist, an abdominal incision should be made, under the antiseptic spray.—Dr. HEYWOOD SMITH thought that it was a rule that the placenta should not be interfered with in such cases.—Mr. KNOWSLEY THORNTON referred to a case which had been sent to the Samaritan Hospital as one of ovarian disease. There was a large doughy mass in front, without distinct fluctuation, and a solid mass was felt in Douglas's pouch. He thought that it was a malignant growth; and an exploratory opening was not made. After she had been a few days in hospital, she died of pelvic hæmorrhage. At the *post mortem* examination, there was found to be extra-uterine gestation; the fœtus was a monstrosity. In this case, there had been repeated hæmorrhages.—Mr. SPENCER WELLS said that an operation was proposed in Dr. Conolly's case (referred to by Mr. Doran), but was objected to by the patient and her friends. He had seen a similar case, with Mr. Coates of Salisbury, where there had been repeated signs of pelvic hæmatocele, in which also the proposal to open the abdomen was negatived. The proved safety of making abdominal incisions, under antiseptic precautions, would justify the surgeon in urging the proceeding on patients and their friends more strongly than could have been done two or three years ago. He had performed ovariotomy under the antiseptic method in eighty-one cases, with only six deaths; but, before he used antiseptics, he had never had a lower death-rate than 10 per cent. Increased experience and skill might have something to do with the reduced mortality; but he did not think that they would account for the great reduction which had taken place in two years.—Dr. MATTHEWS DUNCAN had met with three cases of extra-uterine fœtation in London. In two of them, the fœtal heart-sounds were heard; but, while he was delaying operation until the period of viability, the children died. The women were now apparently quite well. The third patient was still in hospital. She had lately had another attack of hæmatocele, blood being discharged from the rectum, but was going on well.—Mr. HOLMES said that, the more he heard of the value attributed to antiseptics, the more he was convinced that much depended on impressions rather than on demonstrated facts. He thought that the reduction of mortality in Mr. Spencer Wells's cases, from 9.8 to 7.4, was not enough to prove anything. The increased proportion of recoveries might arise from accidental circumstances rather than from the use of anæsthetics. No physical proof of their influence was at present available. He believed that the success of antiseptic surgery depended in great measure on the fact that attention was given to details by the surgeon, and that interference by other persons was prevented.—Mr. RIVINGTON thought it had long been held unwise to interfere with the placenta in cases of extra-uterine pregnancy.—Mr. TAIT said that the principle of non-interference with the placenta was laid down by Kœberlé in 1869 or 1870. He thought that the value of antiseptic treatment lay much in attention to detail. He carried out this principle rigidly himself. One day, however, he did not test the ligatures, and broke three in tying the pedicle; he found that they had been imperfectly dried and had become rotten. If minute details were attended to by the surgeon himself in other operations, there would be increased success, even without antiseptics. In Dr. Duncan's cases, the recovery was only apparent. He did not think that operation should be delayed until the fœtus became viable.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 5TH, 1879.

W. S. PLAYFAIR, M.D., President, in the Chair.

Fibrous Tumour of Ovaries.—Mr. CULLINGWORTH of Manchester showed a specimen of fibrous tumour of both ovaries, removed after death from a woman aged 36. The tumours were solid throughout, with the exception of a small serous cyst an inch in diameter, which was present in one of them. The microscopical characters of the growths were fibromyomatous.—Mr. LAWSON TAIT thought the growths were malignant.—Dr. CARTER had removed a simple fibroma of the ovary weighing over fifteen pounds.—The specimen was referred to Messrs. Doran and Knowsley Thornton for examination and report.

Ovarian Tumour.—Dr. GALABIN showed under the microscope some sections of an ovarian tumour which had been removed by operation. The cyst had been tapped previously, and from the low specific gravity of the fluid and the absence of albumen it was held to be probably par-ovarian. It soon refilled, and when removed was found to be a multilocular true ovarian cyst.

Detached Uterine Decidua.—Dr. PLAYFAIR showed several portions of uterine decidua which had been cast off without abortion resulting. They were of interest as showing the extent to which the ovum may be damaged without abortion ensuing. The uterine sound had been passed on the supposition that pregnancy did not exist. Nevertheless, the pregnancy had gone on to term.

Uterine Dilator.—Mr. LAWSON TAIT exhibited his instrument for dilating the uterine canal by continuous elastic pressure.

Repair of the Female Perinæum.—Mr. TAIT read a paper on a new method of operation for repair of the female perinæum. He divided

the lacerations into two classes: 1. Cases in which the laceration is complete; 2. Cases where it is incomplete. The chief points in Mr. Tait's operation were: that no tissue was removed, flaps being made and left; and that the sutures were placed in the axis of the wound so as to be practically continuous, instead of, as in the usual operation, being passed through the thickness of the flap. He laid stress on the daily administration, after the operation, of small enemata of oil, to guard against the accumulation of hardened fæces. The stitches remained *in situ* for fourteen days.—Dr. EDIS agreed with the author of the paper, that the bowels should be moved daily after operations for the restoration of the perinæum. The practice of sealing up the bowels with opium was dangerous, inasmuch as the newly united tissue was liable to give way when suddenly put to so severe a strain as was the case after several days of enforced constipation.

Expression of the Umbilical Cord.—Dr. MATTHEWS DUNCAN read a paper on this subject. He said the cord might be previous like the placenta or a limb. The cord might extrude itself as in simple prolapse, but it might also be squeezed out by the uterine contractions. This expressing power of the uterus explained the difficulty of keeping the cord back in the uterus by the genupectoral position. Under the influence of pressure, the most mobile parts of the fœtus advanced quickest. This part might be a limb, or the cord, and its progress might go on to complete prolapsus.—Dr. BRAXTON HICKS had taught during the last ten years the difference between a prolapsed cord and a cord squeezed out by uterine action. The two conditions were different. —Dr. GEORGE ROPER had brought the subject of prolapsed funis before the Society in a paper published in vol. xvii of its *Transactions*. He there described the difficulty of retaining it in position after it had been replaced, as the next pain would force it down or express it.

MANCHESTER MEDICAL SOCIETY: MICROSCOPICAL SECTION.

TUESDAY, OCTOBER 21ST, 1879.

D. J. LEECH, M.D., President, in the Chair.

Glomerular Nephritis. — Dr. LEECH read a paper on glomerular nephritis. Having first of all sketched the normal histology of the glomeruli, he related the clinical features presented by two cases of nephritis recently under his care, and the appearance presented by a microscopical examination of the kidneys after death. The first case was a youth, aged 17, who, about two months before coming to hospital, had noticed general œdema; and on being admitted, his face was extremely bloated and his body anasarcous. There was but a small quantity of urine passed, with fifty per cent. of albumen. There was no history of scarlatina. *Post mortem*, the heart was found to be enlarged. The kidneys were white, not very large; the cortex was thickened. Microscopically, the glomeruli presented a large quantity of fibrous tissue, compressing the vascular tufts; the capsular epithelium presented several rows of cells, the latter being larger than leucocytes. There was also an excess of interstitial fibroid material throughout the kidney. The second case resembled the first in there being no history of scarlatina, much œdema, and small quantity of urine. The microscopical characters were proliferation of capsular epithelium and nuclei of the vascular tufts, fibrous changes in the glomeruli and in the rest of the kidney. The cases were of interest as showing the small quantity of urine passed was due to changes in the glomeruli, that made secretion of urine through them a physical impossibility.

Scarlatinal Kidneys.—Dr. HUMPHREYS exhibited sections of kidneys from cases of scarlatina, showing accumulation of cuboid cells inside the capsule.

Tumour of the Liver.—Dr. DRESCHFELD exhibited a tumour of the liver, which he classed as one resembling both adenoma and cancer. The specimen had been seen both by Recklinghausen and Rindfleisch, who agreed with Dr. Dreschfeld as to its dubious nature and extreme rarity. It was taken from a patient who had died of what was supposed to be a primary cancer of the liver. The sections presented an alveolar structure; the alveoli were lined by cubical epithelium and filled with some colloid material, the result of degeneration of some cellular material; the stroma contained nuclei. At the periphery of the tumour were masses of epithelial cells; and in the neighbourhood of the tumour were enlarged dilated bile-ducts and flattened liver-cells. Dr. Dreschfield thought that the origin of the tumour was in the capillary bile-ducts.

Cancer of the Skin.—Dr. DRESCHFELD exhibited a section of cancer of the skin. The tumour presented an alveolar arrangement; but as the epithelium of the skin over the tumour was intact, it was evident that the cells in the alveoli were not epithelial.

Aneurism of Aorta.—Dr. BRADSHAW exhibited a specimen of an aneurism of the aorta bursting into the left bronchus. The inner coat had apparently given way first; the bulging of the outer coat had ulcerated through the bronchus, and finally burst into it.

HOSPITAL AND DISPENSARY MANAGEMENT.

A NEW COTTAGE HOSPITAL AT BOURTON-ON-THE-WATER.

THANKS to the exertions of Mr. John Moore, a cottage hospital was opened at Bourton-on-the-Water twenty years ago. From that time, the little institution has gone on growing. Its usefulness has been abundantly proved. Seven hundred persons have received treatment within its walls; and now that it has become necessary to provide a larger and better building, the gentry of the whole surrounding neighbourhood seem to have united in aid of the Cotswold Cottage Hospital. The squire of Bourton has kindly given a suitable site; a plain building has been erected, in which the utmost attention has been paid to sanitary arrangements; and, on September 26th, it was opened with much ceremony. The ministers preached on its behalf; the doctors pointed out its medical value; Mr. Henry Burdett of Greenwich extolled cottage hospitals in general, and the Cotswold Cottage Hospital in particular; and the gentry drank a bumper to its prosperity. After such an auspicious opening, what more can be desired? Only this: that the institution may have a long and useful career, working in happy harmony with all around; and that the managers may not forget the excellent advice given by Mr. Burdett, but may teach the poor habits of prudence and self-reliance, while they aid them in their times of sickness and suffering.

THE BATTERSEA PROVIDENT AND SELF-SUPPORTING HOSPITAL.

CANON ERSKINE CLARKE reports that the out-patient department of this hospital, which is conducted as a provident dispensary, is now in full work and has more than seven hundred members. A well qualified medical man resides in the hospital—Bolingbroke House, as it is called —and attends to the out-patients. The mansion is spacious enough to receive fifty in-patients, and solid enough to admit of additional building, if it should be required. It stands in about an acre of ground, fronting Wandsworth Common. It is situated in the centre of a middle class neighbourhood, at a distance of about four miles from the nearest hospitals. It is proposed that the in-patients should pay such a sum as will meet all the expenses of maintenance, nursing, and medical attendance. Already a sum of more than £3,500 has been subscribed; but as the Provisional Committee are anxious that the hospital should start rent-free and fully furnished, they are desirous of raising £1,500 more. This they hope to accomplish during the next few weeks, so as to open the in-patient department with the New Year.

THE CHILDREN'S HOSPITAL, DERBY.

THE second annual report of this institution gives a very satisfactory account of its progress. During the year, sixty-eight in-patients were admitted, and four hundred and eighty-five children were treated as out-patients. The number of cots is limited to eight; yet, during a great part of the winter, there were nine in-patients. The extra number were received at a real inconvenience. The Committee have, from time to time during the year, considered the question of procuring a site for the erection of a hospital, or of purchasing a house which might be converted so as to answer the purpose. The present accommodation is so inadequate that something must shortly be done. In view of this necessity, the Committee have been raising a building fund, which already stands at £1,197; and it is proposed, during the coming year, to make a special effort to raise this fund to the necessary amount. The general financial position of the Hospital is satisfactory; and when the accounts were audited, there was a balance in the hands of the treasurer of £125 18s. 6d.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 15TH, 1879.

NEW CONDITIONS OF SERVICE IN THE ARMY MEDICAL DEPARTMENT.

AT last, after eighteen months' anxious deliberation on the part of the authorities, and no less anxious expectation on the part of the service and the profession, and strong remonstrance from the Parliamentary Bills Committee of the British Medical Association, the War Office has made public the new conditions of service in the Medical Department of the Army. This "schedule of qualifications", with "rates of pay and retired pay", has not appeared a day too soon. This important branch of the public service was rapidly sinking into a condition that reflected anything but credit on those responsible for army organisation. We congratulate the War Minister, the profession, the army, and the public in general, that what we believe to be an effectual remedy for this unhappy state of matters has at last been found.

We must, in the first place, express our satisfaction that the Secretary for War has finally decided not to dispense with open competition. The Committee appointed by his predecessor to report on the department expressed a decided opinion that one cause of the unpopularity of the service was the London examination, and they urged its abolition. The subject was discussed by us on more than one occasion, when we controverted the opinion of the Committee, and argued that a return to nomination would be a false step, prejudicial to the interests of the service, the profession, and the public. This view was earnestly pressed on the Government by the Parliamentary Bills Committee of the Association; it was adopted by the Association at Cork; and was strongly expressed by influential correspondents in this JOURNAL, in opposition to Surgeon-General Crawford, who warmly argued for a return to nomination, this being the side taken by the War Office Committee. We are convinced that the profession and the service have alike reason to rejoice that our view has prevailed against the powerful influences which aimed at abolishing competition. It is a notable fact that, although the Committee argued against any entrance examination at all, an additional subject—namely, Chemistry—has been added to it.

We give below the rates of full pay, gratuity, and retired pay. We have no hesitation in saying that they are just and liberal, and we may go so far as to say that now, in our opinion, little, if any, cause of complaint remains either on the score of service pay or of retired pay.

We note with satisfaction that the course of special training at Netley remains an integral part of the scheme. No one could read the report of the Committee without seeing that they would gladly have seen this part of Lord Herbert's scheme for the better education of army medical officers abolished. At best, they "damned it with faint praise"; and it was clear to all who could read between the lines, that the Committee did not think that army medical officers, who have to serve in every climate and under conditions differing essentially from those in civil life, require any special training for their duties. It is matter for hearty congratulation that, in this matter also, common sense has prevailed over the narrow views of the War Office Committee.

Although it is not so stated in the schedule under notice, we hope that the vexed question of forage allowance has been settled once and for all; and that every surgeon-major will henceforth, as a matter of right, be entitled to this allowance.

We also venture to hope that henceforth another grievance, which no Royal Warrant can redress, will never again be heard of. It is a matter of notoriety that army medical officers who of late years have had to visit the head-quarters of their department on business, or in search of information on points relating to their destination, have often had reason to complain that they have not been received with the consideration and courtesy to which, as officers and gentlemen, they are entitled, and which is invariably extended to all who, for like purposes, have occasion to visit the Horse Guards. This is not a pleasant subject to dwell on, and we dismiss it in the confident belief that it will be heard of no more. The other part of Lord Herbert's Warrant we wish to see restored, viz., that the Roster Book be once more placed on the waiting-room table of the Director-General's office, so that every medical officer may know as of right, and not as now as a matter of favour, his position on the roster.

In conclusion, we must express our hope and confident expectation that for many a long day we shall have to write no more about the grievances of army medical officers. We have done our utmost to obtain redress for them; and now that these grievances have been redressed, and justice done to a noble science which has met with undeservedly scant consideration, we trust that the concessions now indicated will restore contentment and efficiency. The services of the Parliamentary Bills Committee and the columns of the JOURNAL have been always at the service of those who had grievances of a substantial character. We believe that these are now in the main adequately redressed.

In this article, we have done little more than call attention to the new rates of pay and retired pay. The Warrant itself cannot be much longer delayed; when it is published, it will be our duty to make some further remarks on the subject.

The following rates of pay, retired pay, and grades of relative rank have been sanctioned for officers of the Army Medical Department. *Full Pay.*—Surgeon-General (daily), £2 15s.; Deputy Surgeon-General, £2; Brigade Surgeon, £1 10s.; Ditto after five years in the rank, £1 13s.; Surgeon-Major, £1; Ditto after fifteen years' service, £1 2s. 6d.; Ditto after twenty years' service, £1 5s.; Ditto after twenty-five years' service, £1 7s. 6d.; Surgeon (yearly), £200; Ditto after five years' service, £250; Ditto after ten years' service (daily), 15s.; Surgeon on probation, 8s. This scale does not include allowances for lodging, fuel and light, and for servant.

Gratuity and Retired Pay.—Surgeon and Surgeon-Major, after ten years' service, £1,250; Ditto after fifteen years' £1,800; Ditto after eighteen years' service, £2,500; Surgeon-Major, after twenty years' service (daily), £1; after twenty-five years' service, £1 2s. 6d.; after thirty years' service, £1 5s.; Brigade Surgeon, after twenty years' service, £1 7s. 6d.; after thirty years' service, £1 10s.; Deputy Surgeon-General, £1 15s.; Surgeon-General, £2.

Temporary Half-Pay.—A Medical Officer under five years' service (daily), 6s.; after five years' service, 18s.; after ten years' service, 10s.; after fifteen years' service, 13s. 6d.

Relative Rank.—Surgeon-General as Major-General; Deputy Surgeon-General as Colonel; Brigade Surgeon and Surgeon-Major of twenty years' service as Lieutenant-Colonel; Surgeon-Major of less than twenty years' service as Major; Surgeon as Captain; Surgeon on probation as Lieutenant.

BENGAL BRANCH OF THE BRITISH MEDICAL ASSOCIATION.

We see with pleasure in a recent number of our able and interesting contemporary, the *Indian Medical Gazette*, that it is proposed to bring into more active life the Bengal Branch of the British Medical Association, a Branch which exists now only in name, no meeting having taken place for some years. The number of members of the British Medical Association in India is now so much larger than it was when that Branch was formed, and the JOURNAL goes now into the hands of so considerable a majority of the medical members of the Indian army, that there can be no doubt that the effort to revive the meetings of the Bengal Branch will meet with many more elements of success than in past years when the Branch was first started. Our contemporary points out that, with the large number of medical men practising in Calcutta and its vicinity, and with the large and important hospitals of that metropolis, which daily yield facts and experience of the utmost value, and with an important college and full staff and appurtenances to serve as a nucleus and rallying ground, such meetings should be both popular and successful. The *Gazette* expresses the earnest hope that the commencement of the coming winter session will be signalised by the revival of the dormant energies of the local Branch of the British Medical Association; and that it will not again be allowed to slumber for lack of interest. Valuable experience, it points out, is now being lost to the medical community, which the instrumentality of the Medical Society would diffuse and appraise. The Society will also constitute a common meeting ground for medical men of all colours, castes, and nationalities, and promote fellowship among men whose lives are devoted to one and the same purpose. Questions affecting the status and privileges of the profession, and touching medical ethics, might also be discussed and settled. In this excellent programme, our contemporary fully appreciates the uses to which an active Branch of the British Medical Association might be put in this important part of the empire.

It will have been observed that, in the new South Australian Branch, that Branch proposes to carry on its own periodical with the view of ensuring publication of all the abundant material at disposal; and we are inclined to think that, for the more distant Branches, this is a good precedent. Summaries of the proceedings, and reports of certain important papers or addresses, might, of course, find a place in our columns, in which we should always be happy to offer them hospitality to the utmost extent of our space; but it is probable that these distant Branches, seated in great cities and practically independent scientific centres in distant parts of the empire, will be able to supply an abundance of material by which the local medical periodicals ought to profit. The *Indian Medical Gazette*, which is now conducted with great spirit and intelligence, would form an excellent medium for the rapid and immediate publication of many of the proceedings of the Branch, whilst summaries and selected parts of the proceedings might, in the discretion of the Branch, be transmitted to the home centre. In any case, we should hail with great satisfaction renewed activity on the part of our Indian Branch; and it might be hoped that, if the renewed experiences of the Bengal Branch be successful, other Branches might be formed with equal advantage in the other presidencies of the Indian Empire. It need not be forgotten that the political influence of such Branches may be made available, not only for the purpose of stimulating and controlling the sanitary authorities, but also with the view of bringing to bear the influence of the civil profession on behalf of the medical departments of the army and the civil servants of the Government. In England, it has been found that this part of the functions of the Association, conducted by the Parliamentary Bills Committee and other Committees, has been of imperial value, and has played a large part in the progress of public hygiene, in the promotion of the welfare of the medical services, and in securing for medicine and for the medical profession their just place in the councils of the State.

THE ARMY IN AFGHANISTAN.

THE new campaign in Afghanistan, already begun by the advance of our troops along the Khuram and the Khyber routes, was sadly deferred owing to the difficulty of transport; camels and mules having become scarce along the frontier, owing to the great mortality among them in the late campaign. What is to be said of our army organisation when a strong portion of the Khuram force was not kept ready, at any cost, with transport and everything complete, for an immediate dash upon Cabul, the necessity for which might in all reason have been kept in view? A month after the news of the massacre stirred the blood of our troops, the foremost of our columns was only just approaching Cabul.

As to medical organisation, it was to be hoped that some improvement in transport for the sick would have arisen from the abundant experience gained in all three of our invading columns in the late campaign; but, as yet, there seems little chance of this being effected. The time-honoured dooly and the undisciplined hosts of bearers still exist as the means of sick transport; not useless certainly, but cumbrous, and a source of unlimited vexation. In the late campaign, some doolies of improved construction were seen; but the dooly-bearers are still an undisciplined mob. In all our wars in India, the dooly has done good service; and the poor dooly-bearers do wonders of endurance with our armies. Considering the treatment they sometimes meet with on active service, it is a wonder that they come forward so freely. In the late campaign, many of these poor men had a great deal to endure. Large bodies of these men, natives mostly of Lower India, had to endure the greatest hardship from cold, unsupplied with their full supply of warm clothing until long after the campaign began. Those who have witnessed the patient endurance of these feeble-looking folk in carrying the sick under extreme difficulties, as in the rugged highlands of Abyssinia, and in some parts of the late campaign, are not likely to forget it. But, surely the time has long ere now arrived for making the most of the dooly, if we cannot devise a better means of sick transport. There is yet ample room for improvement in the dooly itself; and the bearers must cease to be an undisciplined mob, a source of heart-breaking to all who have to do with them in starting on a march and along the line of march, if not in camp as well. The transport of the sick could be greatly facilitated in the present campaign by organising a train of ambulance-carts for service along parts of the route where the road is suitable. There is no reason why the road up the Khyber should not be made practicable for ambulance-carts; in many parts it already is so. This would release great numbers of doolies and bearers for service at the front, where wheeled carriages could not be employed. Ambulance-carts of a kind were employed to some extent between Peshawar and the Khyber in the late campaign; but the carts were cumbrous, slow, and inconvenient, and ought to be superseded by some of the improved patterns in vogue in Europe.

No statement of an official nature as to the losses by death among the troops engaged in the late campaign in Afghanistan has as yet appeared; but it is certain that the loss has been much greater than the public are prepared to expect. It has been roughly estimated that, in the Khyber column alone, about five hundred British soldiers died, chiefly from disease; not to speak of the losses in the Native troops. The disastrous, although perhaps unavoidable, march back to India, in the terrible heat of June, along a cholera-infested route, amidst trials of the severest description, was the sad cause of the greater part of this mortality. Several corps lost from twenty to seventy men each on this march alone; and the mortality amongst officers of the force at the end of the campaign was very great. In the light of these facts, the statement made in Parliament by a Cabinet minister, that the reports as to the sickness of the troops on the occasion in question had been exaggerated, must be pronounced as incorrect. When the losses by death in the three columns of our late army in Afghanistan come to be summed up, it will be found that our political triumphs, which recent events have embittered, have not been bought without a goodly price.

Several of the corps composing the columns again invading

Afghanistan took part in the late campaign, with its hardships and its protracted periods of inaction so prejudicial to troops. It is greatly to be regretted, in the majority of cases, that these troops were selected to serve in the new campaign, especially in the case of troops which served in the Khyber column, in which sickness was more prevalent. Their experience in the nature of the service will certainly be invaluable; and, other things being equal, such troops would be preferable to others for the work; but the campaign, upon the whole, had a very trying effect upon the health of the troops in general; and few corps escaped general impairment of health towards the end of the campaign; while the time which has elapsed since then has not been sufficient to thoroughly restore health. It is only to be expected that such troops will succumb, to a considerable extent, to disease whenever they have to encounter privation or trying climatic conditions. In this respect, the lessons of the late campaign were abundant and clear, but seem to have been overlooked.

THE HYGIENE OF PHOTOGRAPHY.

THE hygiene of this interesting profession has been for the first time studied with care by Dr. Zanetti. He points out that there are in the establishments, and especially in the laboratories, of photography a great number of chemical products, of which some are extremely volatile. Among these products may be cited ether, collodion, ammonia, acetic acid, and alcohol, as deserving particular attention by virtue of their great volatility and their frequent employment in photography. These products diffuse, especially during the warm days of summer, vapours which, mixing with the air of the laboratory, give rise in those who breathe them to the following morbid symptoms. First of all, a sense of oppression is complained of, with painful constriction and itching in the throat. Then nausea, giddiness, and general uneasiness supervene. Ordinarily these symptoms do not last, and the workmen end by becoming acclimatised. It seems, however, that they only become so after having already contracted the germs of affections which sooner or later show themselves in a serious form if they continue to live in so deleterious an atmosphere. We might cite examples of photographic operators being obliged to renounce their profession, or to continue it in a new way, in order to escape from the injurious effect, especially of the vapours of ether and alcohol, that is the great danger to health without proper precautions. The accidents which may be caused by the contact of non-volatile toxic substances may easily be avoided; but, in spite of good ventilation, it is very difficult to escape completely from the subtle vapours of ether and alcohol. Those who are exposed to them, suffer from vertigo, nausea, vomiting, and insupportable headaches when they are in their laboratory. Other photographers, who do not experience either headache or nausea, suffer from a diminution of appetite, nightmare, or the almost complete loss of sleep. In others, the permanent inhalation of ethereal vapours produces cerebral irritation, which differs little from drunkenness.

How then can these inconveniences incident to the profession of the photographer be avoided, or at least lessened? In the first place, it is desirable to avoid, or to use only with extreme moderation, alcoholic liquors; for the alcohol drunk cannot fail to join its action to that of the respired ether, and even to sometimes provoke the morbid phenomena already mentioned in individuals, who, had they been more temperate, would perhaps have escaped. The beverages advisable to use in order to avoid the inconveniences of the prolonged etherisation are lemonade, or natural or artificial mineral waters. To combat the loss of sleep, it is sometimes necessary to employ opiates, associated, according to the advice of Dr. Zanetti, with aconite or antimony. He says he has not had any success with other hypnotics. For disorders of the stomach, such as loss of appetite, nausea, vomiting, a bitter drink is recommended, consisting of a pint of water, two ounces of dry coffee, with three drachms each of quinine and quassia bark, the mixture to be left for some days, and filtered; and a wine-glass of it be taken every morning. For the intense headaches frequent amongst photographers, some relief is obtained by drinking a glass of sugar-water, to which a few drops of vinegar or sal volatile are added. The most certain remedy, however, is the employment of methods which exclude the injurious substances alcohol and ether. The use of new methods for negative photography which do not require the employment of ether and alcohol will produce valuable hygienic results in this disease. Where, however, the old method of operating has still to be employed—that is to say, where ether and alcohol must be used—the danger must be lessened by maintaining free ventilation in the laboratories. As it is often impossible to operate in a draught, it is desirable to arrange, in the lower parts of the laboratory on the level of the soil, a means of extracting the air communicating with the outside atmosphere. The vapours of alcohol and of ether, which are heavier than those of the air, form a layer near the floor, which can be drawn off by such suction-tubes. This is, however, only an insufficient palliative; and the best plan is to renounce, as soon and as completely as possible, the collodion method, and to employ the gelatine methods, which give now excellent results.

A CONTRIBUTION TO THE THERAPEUTICS OF MIGRAINE.*

IN a pamphlet of eight pages, Dr. E. C. Seguin prints a short address on this subject, read before the New York Academy of Medicine, November 20th, 1877; and the facts he puts forward well deserve the attention of practitioners. Briefly stated, his thesis is "that, by the long-continued use of cannabis Indica, migraine or sick headache may be cured, much relieved, or mitigated in severity." This use of Indian hemp was suggested by the experience of Dr. Richard Greene, of the Sussex Lunatic Asylum, recorded in the *Practitioner* (vol. ix, 1872), and which Dr. Seguin thinks has been too much overlooked. He and his friends, Drs. Draper and Kinnicutt, have employed it ever since with most satisfactory results. After identifying genuine migraine by a brief sketch of its symptoms and pathology, Dr. Seguin proceeds to consider the treatment of the malady under three heads: "1. Treating the patient, and removing all exciting causes; 2. Treating the attacks themselves; 3. Treating the disease, or the supposed fundamental pathological state in the nervous system." It is this last indication which he believes to be satisfied in a remarkable manner by Indian hemp, and by no other remedy. Referring to the parallel which has been often drawn between migraine and epilepsy, he compares the influence of this drug in the former affection to that of belladonna, and to that of the bromides in the latter; thus, in his opinion, fortifying by analogy "the proposition advanced, upon empirical grounds, that cannabis is useful in the treatment of migraine".

The method of administration is important. "The principle of treatment is to keep the nervous system steadily under a slight influence of cannabis for a long period of time; in other words, we are to employ the 'continued dose' of the remedy, as Clarke and Amory say in speaking of the use of bromide of potassium in epilepsy. I give to adult females one-third of a grain of the alcoholic extract before each meal, increasing the dose after a few weeks to one-half grain. Males can generally begin with one-half grain; and it is well to give them three-quarters of a grain in two or three weeks. These doses must be taken with the greatest regularity, just as faithfully and regularly as bromides in epilepsy. Indeed, when beginning such treatment, I usually obtain a promise from the patient that he will regularly take the pills for a period of three months. As a rule, no appreciable immediate effect is produced by the above doses, though I have known lightness of head and slight confusion of mind to result from an initial dose of one-half grain three times a day. Under this apparently and essentially simple plan of treatment, I have known what may be termed excellent results to be obtained." In other words, Dr. Seguin feels certain that about

* Read before the Section on Practice of Medicine in the New York Academy of Medicine, November 20th, 1877. By E. C. Seguin, M.D., President of the New York Neurological Society.

one-half of his cases have been relieved, and the relief has been more or less permanent. He "thinks we may say of cannabis for migraine that it is nearly as efficacious as the bromides in epilepsy. Both *may* cure, both *do* bring about remarkable interruptions in the series of attacks, both must be employed in the shape of the continued dose". When we consider the vast aggregate of suffering which this malady occasions, and, we fear we must add, the unsatisfactory results of all methods of treatment hitherto proposed, at least in many of the severer forms of the affection, where relief is most urgently called for, we think Dr. Seguin's concluding appeal to his professional brethren, "to give the cannabis treatment of true migraine a critical trial", is abundantly justified.

Another point in this paper is deserving of notice. Speaking of the treatment of the paroxysm, Dr. Seguin says: "I would add that there is very probably a real ultimate usefulness in shortening or preventing every attack which may threaten to occur during the systematic treatment of the neurosis; we may thus be doing a good deal to interrupt the *morbid habit* which the nervous centres have acquired." This we think a very just remark. The drugs on which Dr. Seguin mainly relies for arresting or shortening a paroxysm are guarana, caffein, and croton-chloral; employing morphia with atropine hypodermically very reluctantly. With regard to guarana, when given in the early stages of an attack, he says: "I think I may report that nearly one-half of my patients have derived great relief from the same preparation of guarana; and that, in several of them, attacks have been absolutely prevented, and they have been enabled to go about on the same day." Our own experience of this remedy in the severer forms of the malady, given both in this way and during the intervals, is, we regret to say, far less satisfactory.

DR. KELBURNE KING has been elected Mayor of Hull for the ensuing year.

DR. WILLIAM HAY of Carlisle was found dead in bed, on Wednesday in last week, from inadvertently taking an overdose of chloral.

DR. HUGHLINGS JACKSON and Dr. Buzzard have commenced a course of lectures on Diseases of the Nervous System, to be continued on successive Thursdays, at the Hospital for Paralysis and Epilepsy at Queen Square. These lectures will be found of great interest and utility to practitioners interested in these diseases.

THE anti-vivisectionists pursue, with singular persistence, the course of unblushing calumny and misrepresentation. Not content with violent abuse of Canon Duckworth, they now resort to the expedient of direct misrepresentation of the opinions of eminent living surgeons and of the statistics of modern operations. The letters of Mr. Erichsen and Mr. Spencer Wells, which we publish, relate to the most recent of these misrepresentations.

IT will be seen that the announcement of an early examination for the Army Medical Service is made by advertisement, concurrently with the satisfactory intimation, which we are enabled to give in another column, that new and satisfactory conditions of service in the department have been determined. We anticipate that this satisfactory intimation will at once produce a good harvest of eligible candidates. The full scheme of the new conditions may be obtained on application at Whitehall Yard.

DR. THOMAS RICHARDSON COLLEDGE, F.R.S.Edinburgh, died on October 28th, at Cheltenham, in the eighty-third year of his age. He was a pupil of Sir Astley Cooper, and entered upon his profession sixty-two years ago. While practising in Canton and Macao, he established the first infirmary for the indigent Chinese, which was called after him "Colledge's Ophthalmic Hospital". He was also the founder of the Medical Missionary Society in China, and continued to be president of it to the time of his death. He remained in Canton and Macao for more than twenty years.

IT is not satisfactory to read, in the last report from Port Blair, that the mortality among newly arrived convicts reaches seven per cent. The *Indian Medical Gazette* observes that Europeans have often remarked that culprits asked rather to be hanged than transported; and it would seem from this report that they may have some reason for the preference.

WE have received a card of the arrangements of the Medical Society of University College for the forthcoming session. The papers promised appear to us to be well chosen and of unusual interest, including, as they do, many physiological, pathological, and anatomical subjects, especially well suited for discussion in such societies. Among the papers promised, are communications by Mr. Martin on Yokes and Yoke Spherules; by Mr. Ottley on the Comparative Anatomy of the Muscles of the Eye; and by Mr. Horsley on Physiological Food. The annual address will be delivered in January by Sir William Jenner.

HUDDERSFIELD does not seem to be remarkable for the intelligence of its guardians; at any rate, some of them entertain views with respect to infectious disease which require a good deal of revision. At a recent meeting, a Mr. Clayton seems to have undertaken to enlighten the guardians and the public on the question of small-pox and vaccination. "Small-pox", said Mr. Clayton, "was not infectious or contagious. The Board might walk through a typhoid fever ward, and all catch the disease; but if they went through a small-pox ward, unless they touched the patients they would not catch it. It was time that people knew that fact." It is difficult to conceive how any man can talk nonsense at once so atrociously ignorant and so dangerous. So far as the facts go, they are precisely and exactly the opposite to that which Mr. Clayton either stated or is made to state in this report; and under any circumstances, the publication of such mischievous trash as this is dangerous, and it is to be regretted that it should have appeared in a recent number of the *Huddersfield Chronicle*, from which we extract it.

WE notice, on looking through the summary of analysts' reports in the *Analyst*, that the percentage of adulteration of food, which, according to the analytical results of Mr. Wigner, had declined from 14.5 per cent. in 1874 to 9 per cent. in 1877 on all the samples taken, began to look up again in 1878, when it made a sudden spurt to 16.5 per cent. This appears to show that Messieurs the Adulterators are always on the look out for any relaxation of vigilance; and having reason to suppose, owing to the difficulties which were raised in 1878 by an interpretation of the law which rendered it doubtful whether an inspector could be prejudiced in the legal sense by any deterioration of what he purchased, they took advantage to considerably increase their average rate of adulteration of articles of food. No doubt the new law will render them again more cautious. It will not, however, be safe for the public analysts to relax their vigilance. Mr. Carter Bell, for instance, reports that when his inspector took samples on Sunday, when the milkmen thought he was in church, one of the samples of milk obtained on that day was found to contain as much as 35 per cent. of water.

HEAVY MORTALITY IN THE PUNJAB.

THE last returns of the Sanitary Commission at the Punjab show the frightful mortality of 12,370 deaths for the preceding week, giving an annual death-rate of 36.7 per 1,000. For the fifty principal towns, taken as a whole, the death-rate was 53 per 1,000. At the town of Karnal, it was as high as 249 per 1,000; at Rawul Pindi, it was 170 per 1,000. There were no fewer than 9,048 deaths registered from fever in that week. The number of deaths from fever in the district of Gargaon alone being not less than 1,394; giving an annual death-rate of 104 per 1,000 of the population. The table showing the progress of cholera in the Punjab indicates that the total number of cholera-deaths reported since the commencement of the present epidemic have amounted to no less than 24,737. This is a most lamentable state of things; and, seeing that this district includes Delhi, Balla, Rawul Pindi, Peshawur, and other great military stations, such a report cannot be looked upon without serious alarm.

MR. LUTHER HOLDEN.

WE understand that it has been resolved, at a meeting of the staff and senior students of St. Bartholomew's Hospital and School, to present Mr. Luther Holden, Senior Surgeon of the Hospital and President of the Royal College of Surgeons of England, with his portrait by an eminent artist. It is proposed that the portrait shall be hung in a suitable place in the School, and a replica be given to Mrs. Holden. The staff and the Treasurer constitute a Committee for the purpose of raising the necessary funds, and contributions (limited to three guineas) are invited from old students and friends of Mr. Holden. Mr. Langton is Honorary Secretary.

MILK AND TYPHOID FEVER.

AT the St. James's Vestry recently, Dr. Edmunds, the medical officer, reported a case of typhoid fever at a milk-shop, which he stated had already given the Vestry much trouble. He visited the place, which he found very dirty. Under the recent orders of the Metropolitan Board, he found that he had no legal power to interfere, and could only use moral pressure. He succeeded in getting the woman to shut up the shop, and he then communicated to the Metropolitan Board, urging them to take action.—The Chairman said he understood that typhoid fever was a disease absolutely preventable.—Dr. Edmunds said he should not like to go so far as that. He had done all he could in this case to enforce sanitary precautions, but not without much difficulty.

M. PAUL BERT'S NEW METHOD OF ANÆSTHESIA.

M. PAUL BERT'S new method for producing anæsthesia — nitrous oxide used under pressure—has been introduced into the Paris hospitals. Last week, M. Léon Labbé performed seven surgical operations, of which the duration varied from five to thirty-two minutes, in the movable chamber put up at the Lariboisière Hospital by Dr. Fontaine for the surgical and medical employment of compressed air. As in the operations already performed at the medico-pneumatic establishment in the Rue Chateaudun by M. Péan, the success of this new anæsthetic method was complete. On the 29th ult., M. Labbé removed a cancerous breast, the operation lasting for one hour and four minutes; this is the greatest success recorded up to the present time. Some days since, the same surgeon performed an operation in a private house into which the movable chamber had been taken, removing a tumour of the breast which had grown again after having been operated on twice under chloroform. The patient had on both occasions suffered for forty-eight hours from the effects of the anæsthetic employed. On this occasion, however, there was no such inconvenience. Consciousness returned quickly, and there were no consecutive ill effects. MM. Labbé and Péan will continue to operate in M. Fontaine's movable chamber at the Lariboisière and St. Louis Hospitals.

SOCIETY OF ARTS.

THE arrangements for the forthcoming session of the Society of Arts include papers by Major-General Scott, entitled Suggestions for dealing with the Sewage of London; by Mr. H. Carr on Domestic Poisons; and a course of Cantor Lectures by Dr. Charles Graham on the Chemistry of Bread and Bread-making.

IMPROVEMENT OF THE BLIND.

A SOCIETY has been formed under the name of the "Society for Improvement of the Physique of the Blind", for the purpose of giving the blind better health, independent power of using their bodily faculties, in order to enable them to be less dependent upon others, and thus to contribute to the general welfare of thirty-five thousand to forty thousand blind people in Great Britain. The first object is to improve the physique of the adult blind of both sexes; the second, to assist the physical education of blind children; and the third, to prevent blindness in children, as far as possible, by removing ignorance regarding the hygiene of the eyes, which is probably—besides accidents and disease—the most fertile cause of blindness. The means to be applied are: 1. To train a few blind and seeing teachers in the elements of hygiene and physical development; these teachers to be employed in the various centres where blind people congregate, for the purpose of giving the adult the necessary instruction in health and in the mode of systematically exercising all parts of the body; models and raised drawings of the various positions and exercises will assist the oral instruction; 2. To induce the principals of blind institutions to introduce the free exercises as an obligatory part of the education of the young blind of both sexes; 3. To collect information about the origin of blindness, and the means of preventing it in the various injurious trades and occupations. Mr. John Jervis Beresford, B.A., 4, Gloucester Crescent, Hyde Park, is the treasurer of the Society.

GUY'S HOSPITAL.

THE old *post mortem* room of Guy's Hospital, in which the great discoveries of Bright, Addison, and Hodgkin were made, and which in later years witnessed the earnest labours of Wilks and the brilliant teaching of Moxon, has, within the last few weeks, been completely demolished, and nothing now remains to mark its site but the old cemented floor. The necessity for its removal had long been felt, for not only did the effluvium arising from it penetrate to the library and reading-room, to the great discomfort of the occupants, but occasionally, when the wind was westerly, it was even to be detected in some of the wards. The governors have acted wisely in removing this centre of decomposition from the immediate vicinity of the surgical wards, and, now that it has been removed, one can scarcely imagine how it could have been so long tolerated. The new *post mortem* room in the course of construction is being erected on a plot of land recently added to the hospital grounds, and situated behind Petersham House. It will be more commodious, and in every way better adapted for teaching, than the old one; the situation is well chosen, both by reason of its distance from the wards, and its seclusion.

SCARLET FEVER IN LONDON.

THE fatal cases of scarlet fever in London, which had been 79 and 69 in the two preceding weeks, rose to 101 last week, and exceeded the corrected weekly average by 15; they exceeded the number returned in any week since December 1875, and included 7 in St. Pancras, 4 in Islington, 5 in Shoreditch, 7 in St. George-in-the-East, 7 in Stepney, 7 in Bow and Poplar, and 16 in Southwark. The deaths of a police-sergeant and his wife from scarlet fever occurred at 26, Myrtle Street, Shoreditch, on 4th and 6th instant; and in four other instances two deaths from this disease were recorded in the same family. The largest proportional fatality of scarlet fever occurred in the East group of districts. The Metropolitan Asylum Hospitals contained 259 scarlet fever patients on Saturday last, against 275 and 257 at the end of the two previous weeks; 46 new cases were admitted during the week.

THE METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during October, that, taking the average amount of organic impurity in a given volume of the Kent Company's water, during the nine years ending December 1876, to represent unity, the proportional amount of such impurity in an equal volume of water supplied by each of the other Companies, and by the Tottenham Local Board, was: Colne Valley 1.2, Kent 1.6, Tottenham 1.6, New River 2.6, Lambeth 3.4, East London 4.0, West Middlesex 4.1, Grand Junction 4.3, Southwark 4.6, and Chelsea 5. The waters drawn from the Thames and Lea were efficiently filtered before delivery; that delivered by the New River Company, however, contained filmy particles of carbonate of lime. The waters delivered by the five Companies drawing their supply from the Thames were of nearly the same quality as in the previous month; those, however, delivered by the Chelsea and Lambeth Companies showed an improvement. The Lea water supplied by the New River Company was much superior to the best sample of Thames water, that supplied by the East London Company, but only very slightly better than average Thames water. The deep-well waters delivered by the Kent and Colne Valley Companies, and by the Totten-

ham Local Board of Health, were of their usual excellent quality. The Colne Valley Company's water had been softened previously to delivery. —Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town was clear, and of about the same quality as during the previous three months.—Dr. Mills reports that the Loch Katrine water supplied to the city of Glasgow was "light brown in colour, and contained very little suspended matter", and that the "quantity of organic nitrogen was exceptionally great".

REVACCINATION OF SCHOOLBOYS.

WE know so much of the prevalent carelessness of the public with regard to revaccination, and of the perfunctory and sham revaccinations that are performed by wholesale under the panic of small-pox, that we cannot but entirely applaud a circular letter which has been issued by the Principal of Ampleforth College, York, to the parents of his pupils. In this letter, the Principal, the Very Rev. T. S. Kearney, draws attention to the fact that to give perfect security against small-pox, vaccination must be repeated at about the fourteenth year, at which age, of course, the majority of boys are at school or college. Dr. Kearney quotes Dr. Seaton, the Medical Officer of the Local Government Board, to show the advantage of revaccination being done leisurely, and he accordingly asks the sanction of the parents to the revaccination of their boys now that small-pox is completely absent from the village. This seems to us to be a very useful and sensible piece of advice, and we should much like to see Dr. Kearney's example extensively followed.

A QUESTION FOR CLUB-DOCTORS.

WE elsewhere publish a letter from "One of a Contented Firm", which deserves the attention of club doctors. It suggests a method of meeting some of the evils of club practice, and we should be glad to receive the opinions of other members upon it, more particularly of those who are connected with clubs in large towns. It would not remove all the difficulties of this class of practice. Indeed, it would not touch that which is the greatest grievance of all, namely, that the doctor has no control over the class of persons who are admitted to the benefits of the club. As "A Disgusted Club Doctor" says, "the number of well-to-do tradesmen who expect professional attendance is a yoke hard to bear". Still it would be a great thing to get rid of unnecessary and vexatious calls—particularly night-calls; and this might perhaps be done by adopting some such system as "One of a Contented Firm" recommends.

LINCOLN'S INN FIELDS.

THE familiar name of Octavia Hill will be welcomed by many, reappearing, after a period of enforced rest, at the foot of a characteristic communication to the *Times*, in which the writer pleads for the opening of the splendid garden—we might almost call it park—of Lincoln's Inn Fields at certain hours, for the use and recreation of the inhabitants, and especially of the children, of the crowded neighbourhood around. Lincoln's Inn Fields is the finest open space in London surrounded by brick. Immediately around it are the densely crowded neighbourhoods of Carey Street, Clare Market, and Holborn. To open it would be an immense boon, and it really seems cruel and indefensible to keep closed all the year round a piece of ground which, for purposes of health and recreation, would be simply invaluable, if thrown open as Leicester Square is, and as many of the little gardens in Paris. Well cared for, unfenced, but properly guarded by keepers, this open space would be an inestimable delight, and an invaluable source of health and pleasure to the thronging children of the poor around. No doubt, to make this public use of this now almost unused piece of ground, would involve a certain sacrifice on the part of a few. For that sacrifice, they have a right to ask an indemnity if they choose to do so; and we feel sure that there would be no difficulty in securing such indemnity for them; but we doubt whether they have a moral justification for retaining for the occasional use of a few an open space which seems to be almost the natural right of the many, who hunger and thirst for it, in the poor and squalid district which surrounds Lincoln's Inn.

LAND-SCURVY.

LAND-SCURVY is reported to have appeared in the regiments on the Indian frontier, especially at Vitakri and in the Peiwar brigade. This appears to be the result of the deficiency of vegetable matter and the sameness of the rations to native soldiers and camp-followers. Lime-juice and sugar are now issued; an ounce of the former every second day to the sepoys, and half an ounce to each camp-follower. The lesson is instructive to those who, like Captain Markham on the occasion of the outbreak of scurvy which defeated the advance of the last Arctic expedition, attempted to argue that scurvy was a disease produced by dampness, darkness, etc. It is true, that the proofs are overwhelming; but they were so already before that argument was employed, and it is as well to accumulate the evidences of the fallacy.

AN EXTRAORDINARY EMPIRIC.

A SINGULAR account of the doings of a female charlatan, styling herself Madame Enault, who has been making a great stir in Birkenhead, has been forwarded to us. It is alleged that Madame Enault, who has been in Rome, where her father is a physician, has studied medicine in Paris, Italy, and Belgium, and possesses the medical diplomas of these countries. She has, it is announced, practised in Rome for eighteen years; and, adopting the somewhat remarkable *rôle* of a female Dulcamara, has travelled throughout France, Austro-Hungary, and the southern parts of America, reaping, we are told, both praise and profit by her labours. It may, however, be noted that, in her foreign travels, the lady was accompanied by her husband and by a "Dr. Paul Duflot"; the latter is now with her in England, and, the same account informs us, has on several occasions proved himself an excellent substitute for Madame Enault, when she was indisposed. At Birkenhead, this lady, who talks little or no English, but converses in French or Italian, has taken up her abode at one of the principal hotels. There she receives patients afflicted with such ailments as she undertakes to cure, but which, we are oddly informed, must not be of an internal nature. Her charge is five shillings a visit, and she declines to receive more than fifty patients at a time; but the account from which we gather these details states that, on the occasion of the reporter's visit, four hundred persons were besieging the door. Her diagnosis would seem to be extremely rapid; for we are told that she can invariably "tell at a glance" what to do with her patients and what they require. As, however, her materia medica, as will be seen later on, is of a somewhat limited character, this perhaps is not so much to be wondered at. Not content, however, with her main practice, Madame Enault takes her "rides abroad" to heal the sick. This is done in true Dulcamara style: a large carved, gilded, and decorated chariot, drawn by three horses abreast, fantastically caparisoned, receives the lady, as well as eight bandsmen, who are disposed of in the back part of the chariot. Attired in ruby silk and cloth of gold, a tiara of pearls and silver on her head, and attended by M. Duflot, she drives down to the ground selected for her operations, where she covers her gorgeous attire with a professional Mackintosh apron with pockets, arranges instruments, lint, and other necessaries, and then announces her willingness to extract teeth without fee or reward. On the occasion described, we are told that, for more than an hour, she was extracting teeth as fast as people could open their mouths to receive the forceps. All this time, an enormous mass of patients are waiting their turn, including poor creatures afflicted with deafness, blindness, rheumatism, tumours, and various enlargements of the head and neck. Now comes the tug of war, or rather the means of providing its sinews. Madame begins a speech in French, which is interpreted sentence by sentence as she goes on. In it she vaunts the "Indian Malachite, contained in small bottles, as a cure for toothache, inflammation of the lungs, loose teeth, headache, neuralgia, dizziness, cuts, burns, scratches, rheumatism, earache", and *hoc genus omne*. Nor does she content herself with simply vaunting its virtues; she borrows a knife, cuts her finger, places on it some lint steeped in "Malachite", and in a few minutes shows the cut to be quite healed. She then proceeded to make an apparently lame man walk; removed a tumour from a man's head, after an application of "Malachite", to the intense admiration of the crowd,

who, it seems, were full of tales of wonderful cures effected by Madame Enault. And now came the moment to reap the harvest produced by all these *gratis* wonders. Hundreds of buyers are eager for a bottle of "Indian Malachite", at the low price of two shillings; and, to show the immense extent to which this so-called remedy is sold and these poor people are duped, the manufacturers of the bottles in which it is put up state that they have delivered upwards of fifty thousand of them to Madame Enault during the last few weeks.

THE YOUNG PRINCE OF ABYSSINIA.

We understand that the young Abyssinian Prince, now residing at Leeds, whose severe illness has attracted much sympathetic notice, is suffering greatly after a severe attack of broncho-pleuropneumonia, in which he has been attended by Dr. Clifford Allbutt of Leeds and Sir William Gull, who, being in that part of the country last week, was asked by Dr. Allbutt to see the young patient in consultation. He was at that time in a very critical state; the respiration 51, temperature 103, pulse 125. The right pleura had been tapped, and about ten ounces of pleuritic fluid had been withdrawn. Very assiduous care has been necessary under such circumstances to sustain the vital powers and afford a chance of recovery. We learn, however, that the high temperature and prostration continue, and the physical signs give reason to fear constitutional disease of the lung. The young prince takes food well and gets much sleep, and encouraging rallies occur occasionally; on the whole, however, Dr. Allbutt is of opinion that he is losing ground rapidly.

AN ILLUSTRIOUS VIVISECTOR.

Bologna has erected to the memory of the illustrious Galvani, the great discoverer of animal electricity, a monument in which he appears in the act of touching with two different metals the lumbar nerves of a vivisected frog. It will be remembered that it was accidentally, and in the course of a series of vivisections of frogs conducted for quite another purpose, that Galvani observed accidentally the twitching of the muscles of the limb of the frog as it swung backward and forward; and the bare sciatic nerve touching the metal, the first inkling came to him of the discovery of the form of electricity which is known by his name, and out of which has sprung those great applications of electricity to industry and to science, such as the electric telegraph, with all the other applications of electricity to the purposes of life. The statue, which was publicly unveiled on Sunday in Bologna, stands as a living testimony to the truth which the Commissioners on the subject of the experiments on animals affirmed in their Parliamentary report, that vivisection is necessary, not only for the purpose of the immediate investigation of palpable problems in life, but also for the mere purpose of gaining new knowledge; for it was in the course of such an investigation that this illustrious discoverer first hit upon the clue which has led to perhaps the grandest series of researches and the most valuable results ever attained by any one scientific research.

EVIDENCE IN FAVOUR OF VACCINATION.

A letter addressed to us by the Clerk to the Metropolitan Asylums District Board, and published in another column, places before the public and the profession an amount of evidence in favour of the protective power of vaccination which cannot be gainsaid. Of the total number of small-pox cases, 15,171 in all, treated in the hospitals of the Board in the recent epidemic, 11,412 were vaccinated, and 3,759 unvaccinated; the mortality upon the total admissions was 17.6, being at the rate of 8.8 per cent. of the vaccinated, and 44.4 per cent. of the unvaccinated. This result is in accord with all previous experience of the behaviour of small-pox among vaccinated and unvaccinated subjects. Thus, in the epidemic of 1871, among 1,000 cases which were admitted into the Fever Hospital at Homerton, under the care of Dr. Collie, the mortality among the vaccinated was 5.9 per cent., and, among the unvaccinated, 37 per cent. The history of all epidemics teaches the same lesson; but the managers of the Metropolitan Asylums Board have done good service in publishing statistics based on numbers sufficiently large to eliminate all possible source of error. It is difficult, indeed, to imagine the reply that can be made to such overwhelming evidence by those who are opposed to the practice of vaccination. Doubtless a cry will be raised that the larger number of cases occurred among the vaccinated portion of the community, and that the vaccination of these persons had absolutely predisposed them to the influence of small-pox. To this, the answer is simple enough. In each 100 of the population, but 6 are unvaccinated; while the 94 are all more or less protected by some degree of vaccination. With this proportion of vaccinated and unvaccinated persons in the metropolis, for every attack among the unvaccinated we should expect 15.6 attacks among the vaccinated; or for the 3,759 attacks which occurred among unvaccinated persons, 58,640 among the vaccinated; while the results we obtain from the statistics of the last epidemic show but 11,412 vaccinated persons admitted into the hospitals of the Metropolitan Asylums Board. We have, therefore, not only evidence of a considerable reduction of mortality among the vaccinated when attacked, but evidence showing that, but for the protection afforded by vaccination, the epidemic would in all probability have been five times as extensive as was really the case. The statement that no revaccinated attendant on the sick contracted small-pox, although nearly one thousand were employed, and that no attack of small-pox in a person who had been efficiently vaccinated and revaccinated became known to any of the medical superintendents, is a point of the utmost importance. It is a well ascertained fact that efficient vaccination in infancy will largely protect the individual against small-pox until the age of puberty is reached, but that then revaccination becomes necessary to ensure his complete immunity from small-pox for the rest of his life. It is to be hoped that the facts which the managers of the Metropolitan Asylums Board have wisely brought to the knowledge of the public will be turned to good account, both by private individuals and by our legislators.

MIDLAND MEDICAL SOCIETY.

The annual inaugural meeting of this Society was held on the 4th instant, at the Grand Hotel, Birmingham; Mr. William Thomas, F.R.C.S., President, occupied the chair. The attendance of members and visitors was larger than upon any similar occasion, about two hundred and fifty of our brethren being assembled to do honour to the orator of the evening, Sir William Jenner, Bart. Sir William chose for the subject of his address the treatment of typhoid fever, which he handled with his characteristic ability and vigour in a speech which occupied an hour in delivery. At the close of his discourse, a vote of thanks to the distinguished physician was carried enthusiastically upon the motion of Dr. Russell, seconded by Dr. Sawyer, who happily expressed their high sense of the value of Sir William's communication, and of the honour he had conferred upon the Society by accepting the invitation of the Council to inaugurate the present session. Sir William Jenner was afterwards entertained at supper by the Society, and his health was eloquently proposed by Mr. Sampson Gamgee.

ACTION FOR LIBEL.

A certain James Colmer was fined last week at the Central Criminal Court £50 for libels on the Committee of the Indigent Blind Visiting Society, Red Lion Square. According to the *Christian World*, the distinctive feature of the case is that Colmer was shown to have been for years endeavouring to destroy public confidence, by means of circulars, letters, and other agencies, in the society named, and to have also endeavoured, with considerable success, to make use of its reputation and influence to float and sustain a society of his own which he calls the Blind Poor Relief Society. He appears to have made an audacious and unsparing use of fictitious names and false assertions, and has created much doubt and confusion. The annoyance, vexation, and loss which have thus been entailed upon Dr. Armitage and his friends have been very great, and the infliction of a fine of £50 seems but an inadequate penalty for such an event. At any rate, Colmer seems to have felt that he had got off cheaply, for an eyewitness states that he paid the fine with a jaunty air, and left the Court laughing. The lesson which

we would suggest is that subscribers to charitable or pseudo-charitable objects should cultivate the habit of looking with more care and attention than are often expended on the task at the reports, balance-sheets, and lists of names which appear in connection with institutions which they are asked to support. It is astonishing how many thousands of pounds are annually sent to different people, simply because they ask for it under some plausible pretext of doing good. It is surely a duty not only to give, but to take care to give to people who deserve our confidence. "Societies" which publish no reports ought not to receive a farthing from any sensible person; and even five minutes spent in examining reports which are published, would generally show an intelligent person whether the statements and accounts were "cooked" or not.

TESTIMONIAL TO MR. WATKIN WILLIAMS.

On the 7th inst., a meeting of some of the members of the Birmingham and Midland Counties Branch, at which were present many of the local professional leaders, was held at the Queen's Hotel, Birmingham, under the chairmanship of Mr. Alfred Baker, for the purpose of presenting a testimonial to Mr. Watkin Williams. After holding the office of Honorary Treasurer of his Branch for twenty-five years, Mr. Williams had expressed his intention of declining nomination for another year. His services have been so devoted and so successful, that many of his brethren felt that his official duties should not be allowed to cease without some permanent record of their appreciation. To give expression to this feeling, a committee was formed, with Mr. Baker as Chairman, Mr. Sampson Gamgee as Treasurer, and Mr. Bartleet and Dr. Sawyer, two old Secretaries of the Branch, as Secretaries. Seventy-four subscribers contributed a substantial sum, with which were purchased for Mr. Williams's acceptance a beautiful claret-jug and a handsome silver tea and coffee service. The inscription on the plate is as follows: "Presented to T. Watkin Williams, Esq., F.R.C.S., in recognition of his very devoted services to the Birmingham and Midland Counties Branch of the British Medical Association, as its Honorary Treasurer, for a period of twenty-five years. Birmingham, November 7th, 1879." The presentation was made by Mr. Baker, who spoke in felicitous terms of Mr. Williams's labours. He was followed by Dr. Russell, Mr. Sampson Gamgee, Mr. Bartleet, Dr. Foster, Dr. Sawyer, and Dr. Carter. Of the eighteen surviving ex-Presidents of the Branch, sixteen have taken part in the movement, many of them writing to the committee very warmly in support of Mr. Williams's claims to the consideration of his professional *confrères* throughout the midland counties.

THE DENTISTS' ACT, 1878.

Counsel's opinion has been taken on the interpretation of certain clauses relating to the registration of persons claiming on slender grounds the right of registration. Mr. Fitzgerald, the counsel consulted, gives the following opinion—1 *a*. A person who, being at the passing of the Act engaged in the practice of dentistry, and also in some business not mentioned in the Act, declared himself to have been engaged in the practice of dentistry separately, is liable to have his name erased from the *Register*. *b*. A person who declared himself to be engaged in the practice of dentistry in conjunction with pharmacy, but whose name was not in the *Chemists' and Druggists' Register*, is liable to have his name erased from the *Register*. 2 *a*. He thinks that an assistant in a chemist's shop, where teeth were occasionally extracted, even if registered in the *Chemists' and Druggists' Register*, cannot be considered as engaged in the *bonâ fide* practice of dentistry, so as to entitle him to remain on the *Dentists' Register*. *b*. He thinks that the occasional performance of one class of dental operations, such as the extraction of teeth, does not constitute *bonâ fide* practice of dentistry. *c*. The *bona fides* applies equally and separately to the practice of pharmacy, and an assistant in a chemist's shop, not registered in the *Chemists' and Druggists' Register*, cannot be regarded as in the *bonâ fide* practice of pharmacy within the meaning of the Act. *d*. Whether a dentist's assistant can be considered as in *bonâ fide* practice, so as to entitle him to be on the *Register*, depends on the amount and nature of the assistance furnished by him to the dentist. The assistance must be such as to require the possession of some dental skill and knowledge. 3. The name of a person can be removed from the *Register* at his own request, without any reason being given by him. Of course, the Registrar would require a written request, signed by the person making it. The restoration of a name once removed is a matter for the discretion of the General Council (Sect. 14), after the facts of the case have been ascertained by the Standing Committee appointed under Sect. 15. Mr. Fitzgerald does not think that a person desiring to have his name removed could be legally required to make a declaration relinquishing all claim to restoration on the ground of *bonâ fide* practice before the passing of the Act. 4. The witness to the declaration in the Schedule to the Dentists' Act is a witness merely to the signature of the declarer; but if he signed, knowing the declaration to be false or fraudulent, he would be liable to be proceeded against under Section 35.

TYPHOID FEVER AT HOMBURG.

We learn, since the date of our issue of the 1st instant, that not only the two sons of "Paterfamilias", but that gentleman himself also, have had severe attacks of typhoid. Further information which has reached us seems almost to prove beyond doubt that they must all have acquired the disease at Homburg. We have also reason to believe that these cases were not singular, and that several visitors of Homburg this season have suffered from typhoid on their return home. If the authorities desire to purge Homburg of the suspicion of harbouring typhoid, they should extend their inquiries, and appeal to the dozen or so of medical men who practise there in the season. They might be asked whether their experience accorded with that of Dr. Lewis; whether they are not cognisant of cases of typhoid fever this season, which was acquired in Homburg; and whether they are not dissatisfied with the sanitary arrangements of some of the hotels. As we have already remarked, neither the authorities nor Dr. Lewis have made any allusion to them.

STIMULANTS IN WORKHOUSES.

At a meeting of the Luton Board of Guardians, it was reported that the eighty or ninety patients in the workhouse infirmary had, during the quarter ending last Michaelmas, consumed ten and a half barrels (thirty-six gallons) of stout, eight barrels of ale, twenty-two gallons of brandy, nineteen gallons of gin, and two gallons of wine. This was estimated to give about seven gallons of liquor to each patient per quarter. The master's books showed that every ounce of alcohol and pint of beer had been given by order of the medical officer, who, in answer to questions put by the guardians, said he only ordered stimulants in cases where he thought they were absolutely necessary. The cost to the board is about £300 *per annum*. The medical officer's attention was directed to the fact that the use of stimulants had been discontinued in other unions; but he replied that he could not undertake the management of the infirmary without them.

ZYMOTIC DISEASE IN PRISONS.

Dr. Gover, the Medical Inspector of Prisons, in his "notes", printed in the appendix to the Prison Commissioners' Second Report, which has just been issued, observes that some very interesting facts are recorded in the medical statistics of prisons for the past year; and more than one of these, in the absence of satisfactory evidence, might well be regarded as incredible. It could scarcely, for example, have been supposed possible that only one case of small-pox would occur in one year in the local prisons in the whole of England and Wales, and that there should not be a single instance of scarlet fever, or any form of typhus or "gaol" fever. Such a term as gaol fever might now be expunged from the English vocabulary, on the ground that its retention is an injustice to those who have the management and control of the prisons. Of typhoid or enteric fever there were only fourteen cases, and of these five occurred in one prison in an infected district. This immunity from typhoid fever in all but a few prisons is, adds Dr. Gover, a striking testimony to the efficiency of the sanitary arrangements generally. In the majority of cases, the disease resulted from sanitary defects in existence before the prisons came under the control of the Commissioners—defects that could

not all be immediately rectified. Where it has been found that a remedy could at once be applied, no time has been lost in doing so. On this, the *Pall Mall Gazette* remarks:—"It is, indeed, now generally admitted that six months in prison are far more advantageous to health than six weeks in a seaside lodging-house."

BRITISH PHARMACY.

DR. L. P. YANDELL makes sore complaints of the noxious and inelegant modes of prescribing common in Great Britain, and of the difficulty of obtaining palatable and well made preparations of a more elegant character, such as are now common in France and America. He writes in the *Louisville News:*

"In nothing is London worse off or more behind the times than in her pharmaceutical preparations. The other day I wanted some citrate of iron and quinine pills, and I was told at one of London's chief retail establishments that pills could not be made of citrate of iron and quinia, or, rather, that no way could be devised of preventing their running together. Finding argument and instruction useless, I suggested capsules. Positively I do not believe the people of the shop had ever seen a capsule. At any rate, they were utterly ignorant of them, and declared they are never used over here. Having no fancy for a solution of citrate of iron and quinine, which I was assured was the only proper way to take the medicine, I asked for dialysed iron, and the article presented was simply shameful. In colour it was correct, but it had not one other physical property of dialysed iron. Instead of being bland and smooth to the taste, it was rough and astringent; and, instead of being neutral, it was excessively acid, and put the teeth on edge. I asked for Wyeth's dialysed iron, which is always perfect, but they had none. At several places—all in the West End, the fashionable and rich part of London—I have tried the dialysed iron, and, without an exception, it is vile and abominable. True dialysed iron has little more taste than blood; slightly diluted, it tastes quite like blood. I am sorry to say that, so far as my travels have extended in America and in Europe, I have found genuine dialysed iron the very rarest of medicines. Pure, it is one of the best ferruginous preparations yet discovered. As it is commonly found in the shops, it is nasty and without merit."

SCOTLAND.

THE LATE SURGEON-MAJOR SHEPHERD.

THE Executive Committee for promoting a suitable memorial to the late Surgeon-Major Peter Shepherd have decided to present an annual gold medal for competition in surgery to the University of Aberdeen. Dr. Shepherd was born in Aberdeenshire.

PAISLEY EPIDEMIC HOSPITAL.

The local authority of Paisley have at length determined that the erection of the Epidemic Hospital shall be outside the Parliamentary boundary, and have remitted to the Sanitary Committee to look out a suitable site. This is more satisfactory than the former decision of the Board to have the building within the burgh, and which caused much ho tile feeling.

ROYAL COLLEGE OF PHYSICIANS AND SURGEONS, EDINBURGH.

AT the October examinations for the double qualifications of the Colleges, twenty-five candidates passed the first professional examination, and forty-four the second professional examination, and received the diploma. At the October examination for the diploma of the Royal College of Surgeons, Edinburgh, one candidate passed the first examination, and three passed the final examination, and were admitted Licentiates. Two candidates also obtained their diploma of Licentiates in Dental Surgery after passing the examination.

FOUNTAINBRIDGE DISPENSARY, EDINBURGH.

THE annual meeting of the committee and subscribers to the Western Dispensary, Fountainbridge, Edinburgh, was held last week. Dr. Peddie, President of the College of Physicians, and consulting physician to the dispensary, occupied the chair. From the report submitted, it appeared that, during the year, 4,200 cases had been treated. The action of the medical officers in appointing physicians for special subjects was approved. It was resolved that, in consequence of the increased attendance of patients and students, larger and more suitable premises be acquired as soon as possible. The sick kitchen (by means of which the medical officers are enabled to order for their patients beef-tea, steaks, chops, etc.), which was very successfully and economically conducted last year, will be reopened this winter. Financially, the dispensary is better off than heretofore, as there is a balance of above £70 to carry forward. More than £20 was collected by penny contributions from patients, and this represented above 4,800 prescriptions dispensed, as each prescription costs the patients one penny. This is a slight approach to a system of provident dispensary, and answers very well so far as it goes.

HEALTH OF GLASGOW AND EDINBURGH.

THE mortality in Glasgow last week was 20 per 1,000, and for the fortnight ending November 1st, was 16 per 1,000, in the first week being 18, and in the last 14. Scarlet fever is spreading but measles decreasing; there has been no death from measles for a fortnight; this has not happened since 1873. In the municipal hospitals at present there are 118 cases of scarlet fever, 71 of enteric fever, 27 of typhus, 17 of whooping-cough, and 3 of measles, in all 236, an increase of 15 on the previous fortnight. In Edinburgh, the mortality was 15 per 1000; there were seven deaths from zymotic diseases, of which scarlatina was most fatal.

GLASGOW UNIVERSITY MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of this Society held in the University, the following gentlemen were elected office-bearers for the ensuing session:—*Honorary President*, Dr. M'Call Anderson; *President*, Angus M'Phee, M.B.; *Senior Vice-President*, Mr. J. Lindsay Steven; *Junior Vice-President*, Mr. J. M'Gregor Robertson, M.A.; *Secretaries*, Mr. William Fraser and Mr. J. Macpherson Laurie; *Treasurer*, Mr. Duncan Love.

AMBULANCE-DRILL IN GLASGOW.

THE course of lectures in connection with this subject has commenced, and is under the direction of Surgeon-Major Creyk of the Army Medical Department, who has been sent down to Glasgow. As there are several volunteer regiments in Glasgow, it has been arranged to give three courses of lectures, so as to include them all. Each course will consist of twelve lectures, during which the men will be taught how to assist the wounded from the field to the hospital, and also how to treat the wounded men so as to enable them to be carried with the greatest amount of safety to the hospital. Four non-commissioned officers or privates from each company in a regiment undergo the necessary training.

THE GLASGOW SCIENCE LECTURES.

THIS season's course of City Hall Science Lectures was commenced on the evening of the 6th instant, before a large and appreciative audience, with a lecture by Professor Roscoe on the Chemical Action of Light. The lecturer, who met with a cordial reception, referred to the views that had been held in former times in regard to the chemical action of light; and, with the aid of many interesting experiments, explained the change that had come over modern opinion on the subject, and how, through the whole of the investigations that had been made, there ran the great principle of the conservation of energy. In concluding, Professor Roscoe briefly alluded to the discovery of the photographic power of the eye made by Professor Kühne of Heidelberg.

ANEURISM OF EXTERNAL ILIAC ARTERY: LIGATURE.

ON Wednesday, November 5th, in the large operating theatre of the new Royal Infirmary, Edinburgh, before a very crowded audience, Professor Spence performed the operation of tying the external iliac artery, for an idiopathic aneurism of that vessel. The patient, who was a man about thirty years of age, had suffered for some months from a pulsating tumour in the left inguinal region; but he had not consulted any medical practitioner until a week before the operation, as, up to that date, he imagined that it was merely an increase of the glandular swell-

ings which had long been present in the same region. In other respects, he appeared to be a healthy man, and there was no evidence of disease on the coats of any other artery. When the patient was placed on the operating table and brought under the influence of chloroform, the tumour could be readily seen, from all parts of the theatre, to pulsate strongly. That portion which projected appeared to be about the size of a large orange; but this bulging did not at all correspond to the real size of the aneurism, for it protruded only at the weak part of the abdominal wall. The tumour itself extended from Poupart's ligament up to the level of the anterior superior spine of the ilium. On account of the peculiar position of the aneurism, the incision could not be made in the usual position for ligature of the external iliac artery, and it was necessary to operate at a higher level, so as to enable the ligature to be applied either to the common or to the external iliac vessel, according to the condition of the vascular walls. The difficulty of the operation was increased by various circumstances. The subcutaneous and muscular tissues were well developed, and rendered the incision unusually deep; and the adhesion of the peritoneum to the upper part of the sac rendered great care necessary in separating it from the iliac fossa, which indeed could only be done to a limited extent. When the external iliac artery was reached, it was found that the aneurism was confined to the lower part of the vessel, and merely overlapped the upper portion owing to its size. Above the tumour, the arterial walls were healthy, so far as could be judged by the finger. A ligature of carbolised silk was accordingly passed under the vessel on the proximal size of the aneurism, and, as soon as compression had been effected, the tumour became less tense and all pulsation in it ceased. The whole of the operation was conducted under a powerful carbolic steam-spray; and, after the wound had been stitched up, the usual antiseptic dressings were applied, and the patient removed to bed in a satisfactory condition. The result of the operation will be given in a future number. The operating theatre, which is, we believe, seated for two hundred and eighty, was filled to overflowing in every part. The light was excellent during the operation, and the acoustic properties of the room leave little to be desired. The arrangements for heating and for ventilation are also admirable. This is the second or third operation which has taken place in the new theatre—the first one being an amputation through the thigh, also performed by Professor Spence, on Monday, the 3rd instant.

DEATH FROM HYDROPHOBIA.

On November 1st, a woman died in the Camlachie district, Glasgow, from hydrophobia, the result of the bite of a rabid dog inflicted so far back as July. The wound was on the right hand, and was at once cauterised by a medical man, and had completely healed in six weeks. No uneasiness was caused by it till the Sunday previous to her death, when she complained of considerable pain in the bitten part, and this soon spread up the arm. On Tuesday, unmistakable symptoms of hydrophobia were present. She was attended by Drs. Miller, Leitch, and Muir, but without success, as, after much agony, and after refusing food and drink for four days, she died.

THE EFFECT OF INFILTRATION ON TRANSUDATION AND EXUDATION.

At a meeting of the Medico-Chirurgical Society, held in Edinburgh on the 5th instant, Dr. James read a paper on the influence which the simple physical process of filtration exerts on transudations (pleural, peritoneal, cutaneous, and cerebral), and on exudations (abscesses, inflamed bursæ, and inflamed joints). With regard to pleural transudations, he showed, by experiment with the lungs of a cat, under appropriate conditions, that, where no hindrance exists to the entrance of air into the air-cells of the lungs, the inspiratory act will favour the transudation of fluid into the pleural cavity; and secondly, that, when the air-passages are obstructed, the same inspiratory force is, for the most part at least, expended in causing the fluid to transude into the air-cells, provided that, in both instances, the capillary conditions are such as to give rise to transudations through the capillary walls. Clinically, therefore (he remarked), we should expect to find that, in cases of Bright's disease, or of obstruction to the circulation alone, as in bowel-affections, hydrothorax will result; whilst in cases where the entrance of air into the air-cells is impeded, as in bronchitis, pressure on the trachea by tumours, croup, etc., œdema of the lungs alone is more likely to occur. The fact that the pleural and peritoneal transudations contain a larger proportion of organic matter than the cutaneous (according to Schmidt, Hoppe-Seyler, Lehmann, etc.), he explained on two grounds: viz., that in these cavities there exist physical conditions which favour the transudation of fluid into them, and the absorption of the aqueous part of the fluid so transuded. In speaking of ascites from cirrhosis of the liver, Dr. James remarked that there are here conditions differing materially from those present when the fluid is due to renal or cardiac disease alone. In the latter class of cases, transudation will occur from both portal and systemic vessels; in the former, it will occur from the portal vessels alone, the blood-pressure in the systemic capillaries and absorbents remaining normal, or perhaps being even slightly diminished. This will certainly have the effect of greatly promoting the absorption of the watery part of the transudation. In cirrhosis, also, we must remember, the greater the blood-pressure, the more rapidly will anastomoses between the portal and systemic vessels form; and when this is established, not only will the fluid already transuded be still more rapidly absorbed, but, by the free passage of portal blood into the systemic veins, further transudation will be completely prevented. Hence the harm which may follow the ordinary text-book treatment of "keeping the bowels freely open" in such cases. Those who advise such a procedure forget, in view of the undoubted temporary benefit produced, what its influence on the ultimate progress of the case will be. In regard to transudation into the cerebral ventricles in Bright's disease, etc., the author, from a consideration of its saline constituents, agreed with Schmidt in considering it rather as an increase of secretion than as a true transudation. The tension of exudations was obtained by introducing into the abscess-cavity the largest sized trocar and cannula of a Matthieu's aspirator. To the branch tube of the cannula a piece of tubing was connected, of small calibre, and containing two or three inches of carbolic solution. On withdrawing the trocar and closing the tap, the fluid rose in the tube, and, care being taken to keep this perpendicular, the height to which the column of water mounted was measured off, and so the pressure was obtained. Although such a method is liable to give inaccurate results, yet it is sufficiently reliable for the purpose. By tabulating the results so obtained, along with the duration of the exudative process and the various conditions of the fluid, as to specific gravity, percentage of organic constituents, etc., it was possible to arrive at the conclusion that, in exudations, there is a relationship between the tension and the composition of the fluid—the higher the tension, the thicker the fluid; and, further, that this is due to two causes: (1) that in high tension a much larger proportionate amount of the watery part of the fluid is driven into the surrounding tissues; and (2) that the tension itself acts as an irritant. In view of the fact that tension is an irritant, Dr. James believes that the curative effect of allowing a few drops of pus to escape from an abscess may be explained in the following manner. If, as the result of a bruise for example, a small portion of tissue in the deeper subcutaneous layer lose its vitality, it will at once act as an irritant, and cause the collection around it of leucocytes or pus-corpuscles. By this, tension will be produced, the irritation of which will of itself greatly increase the formation of pus. While this is going on, however, the portion of sloughed tissue will be breaking down into *débris*, so that, as an irritant, it will gradually become less powerful; and, finally, it will cease altogether to act as such. The tension, however, will still continue to stimulate pus-formation; but it will be remembered that the larger the abscess becomes, the less (according to the hydrostatic law) is the pressure required to distend it. Gradually, therefore, the irritation of tension will diminish; and the secretion will, therefore, become less and less, until the absorption of the fluid part of the exudation is sufficient to abolish tension entirely. In this way, no further formation of pus will occur, and, absorption going on, the abscess will eventually dis-

appear. It will thus be readily understood how the escape of a few drops of pus, at the time when the tension is reaching the minimum, will greatly hasten the process.

IRELAND.

THE Sanitary Committee of the Belfast Corporation have recommended that swimming-baths, at an estimated cost of £1,500, should be erected in that town; and the town council, at their monthly meeting held last Saturday, have resolved to adopt the suggestion.

AT a quarterly meeting of the Committee of the Belfast Branch of the Royal Medical Benevolent Fund Society of Ireland last week, after some routine business had been transacted, it was determined to hold the annual meeting of the Branch on the first Wednesday in February, 1880.

THE Mallow Dispensary Committee have elected Dr. Creagh medical officer of Mallow district, in the vacancy caused by the resignation of Dr. Parsons Berry. Dr. Creagh was unopposed.

BELFAST HOSPITAL FOR SICK CHILDREN.

TWO handsome cots have been presented to this hospital by the Marchioness and Dowager Marchioness of Downshire as a memorial of a visit lately paid to the institution; and to show their interest and sympathy with the charity.

WATER-SUPPLY OF LIMERICK.

AT an arbitration inquiry recently held in reference to the water supplied to the inhabitants of Limerick, the evidence of several professional gentlemen proved that the water was impure in quality, insufficient in quantity, and the pressure altogether inadequate to the population. Dr. Barry, medical superintendent officer of health, mentioned that between Killaloe and Limerick the sewage of several towns and villages emptied itself into the Shannon; while the use of the water had been productive of diarrhœa and other diseases. Dr. Cameron of Dublin compared the water to soapsuds without the froth; and Dr. Gelston, visiting surgeon to the county gaol, stated that the water supplied to the citizens was unwholesome and unfit for use. He remarked that he would not let anyone in his house drink it, and that he had given an order in the gaol that no patient was to use it.

THE SANITARY IMPROVEMENT OF DUBLIN.

THE Corporation of Dublin have sanctioned a scheme, under the Artisans' Dwellings' Act, which will doubtless lead to the sanitary improvement of one of the worst areas in the city. This area is termed the Plunkett Street area, and is inhabited by persons of the lowest classes. The houses in it are in a fearful condition, and, even under the Public Health Act, twenty-one houses in the area have been already condemned as unfit for human habitation. It is proposed to clear away this site—which covers two acres and one rood, and has been certified as unhealthy by the consulting sanitary officer—at an estimated net cost of £9,130, and erect thereon well and substantially built dwelling-houses, with proper drainage and other sanitary arrangements; the whole to be erected and maintained in order to the satisfaction of the Corporation.

DUBLIN HOSPITAL SUNDAY FUND.

THE sixth annual collection on behalf of this fund was made on Sunday last. For the first time in the history of the fund, the day was a fine one. It is to be hoped that, as the congregations in the various places of worship were therefore probably larger than on similar occasions in former years, the amount now collected will, as on each past Hospital Sunday, exceed that of the previous year. It will be remembered that the amount of the collections has steadily increased, being in 1874, £3,306; in 1875, £3,619; in 1876, £3,873; in 1877, £4,107; and in 1878, £4,301; thus proving the increased prosperity of the fund and the continued public confidence in its management. From the returns already received, it is anticipated that there will be no falling off in the amount collected this year.

MAINTENANCE OF LUNATIC ASYLUMS.

THE Belfast Board of Guardians, at a meeting held last week, unanimously adopted a resolution to the effect that, as the Government had lately relieved the county cess from the support and maintenance of the prisons in Ireland, it was expedient that the entire management and support of the lunatic asylums should be taken over by the Government. It appears that for the past year the cost of maintaining the asylums in Antrim amounted to £6,699, and in the county Down to £8,507.

HEALTH OF IRELAND: QUARTERLY REPORT.

DURING the September quarter, the births registered in Ireland amounted to 30,918, being equal to an annual ratio of 1 in every 40.7, or 24.6 per 1000 of the population; and the deaths to 20,423, affording an annual ratio of 1 in every 65.6, or 15.2 per 1000. The birth-rate was 0.1 under the average of the corresponding quarter of the five years 1874-78; while the death-rate was 0.7 in excess of the average for the same period; which may be mainly attributed to the inclement weather, and partly in some degree to the increase of poverty, the number of persons receiving relief showing a considerable excess over the average. We learn that the public health has materially improved during the past quarter as compared with the previous two quarters; but the death-rate being still above the average, it cannot be regarded as satisfactory. Severe epidemics prevailed in some districts; viz., small-pox in Dublin, scarlatina in Cork, whooping-cough in Belfast, and measles in some portions of the South-Western Division of Ireland. The number of deaths from the principal zymotic diseases was 1,996, or 9.8 per cent. of the total deaths registered; being 740 under the deaths from the same causes in the September quarter of 1878, and 265 under the average mortality for the third quarter of the three years 1876 to 1878. Small-pox caused 84 deaths, showing a decrease of 69 as compared with the previous quarter, and of 250 on the first quarter of the present year, the large majority of the deaths having taken place in the county and city of Dublin. The mortality from measles was exceptionally low, 104 deaths only being recorded; while scarlet fever caused 309, being about the average; diphtheria 48, whooping-cough 375, fever 651, and simple cholera 8. There were only 417 deaths from diarrhœa registered during the quarter, being 291 lower than the number recorded for the corresponding quarter of the year 1878, the slight prevalence of the affection being mainly attributable to the low temperature and excessive rainfall which prevailed during the quarter.

SUNDERLAND.—Dr. Yeld's last annual report, which is adorned with the now common lithographed disease-map, is a valuable and interesting document. Dr. Yeld endeavours to the best of his abilty to help out the compulsory provisions of the Public Health Act in every fashion he can devise. Thus, he has drawn up a paper of instructions and hints to school proprietors, managers, and teachers, begging them, among other things, to acquaint him with the occurrence of each case of infectious disease amongst their scholars. The result of issuing this paper was that, in two weeks, no fewer than 136 cases of scarlet fever (at that time epidemic in the borough) were reported to the sanitary staff. The death-rate last year mounted as high as 25.5 per 1,000. This is an increase of 3 per 1,000 over that for the preceding year, entirely due to the excessive infantile mortality, which constituted 54 per cent. of the total mortality. Zymotic diseases were very fatal in the Sunderland sub-district, which is densely populated by people living in tenements; the death-rate from this class of disease reached 10.0 per 1,000 of the population. Typhus fever caused 23 deaths, typhoid 30, scarlet fever 186, whooping-cough 175, measles 93, diarrhœa 204, and diphtheria 14—making a totai of 726, representing a death-rate of 6.4 per 1,000, or more than a fourth of the total mortality. During the year, 1,657 cases of infectious disease were reported, and careful examinations and inspections of the dwellings in which the cases occurred were made. Only 49 of these cases were treated in the Corporation Fever Hospital. Surely Section 124 of the Public Health Act must be overlooked in the borough, when so few cases are treated in a hospital provided for a crowded and dirty town of 112,000 people.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary meeting of the Council of the College was held on the 13th inst. The minutes of last meeting were confirmed; and a committee, consisting of Messrs. Hancock, Birkett, Marshall, Savory, and Holmes, was appointed to consider the first two clauses of Mr. Hancock's motion, as carried at the meeting of the 16th October. The Committee on Examinations in Anatomy and Physiology was reappointed for the ensuing year. The motion by Mr. Holmes, of which he gave notice at last meeting, "That the question of altering the curriculum with regard to Physiology, in accordance with the alteration recently made in the Primary Examinations, be referred to the Committee on Examinations in Anatomy and Physiology", was agreed to.

DINNER TO SURGEON-MAJOR REYNOLDS, V.C.

Members of the Association are reminded that the dinner to Surgeon-Major Reynolds will take place at Willis's Rooms on Wednesday, the 26th inst. The tickets are 25s. each, and the 18th inst. will be the last day for receiving applications. It is earnestly requested that members in London and the district will be present, as many members in the provinces are unable to come so great a distance for the occasion. The following gentlemen have also sent in their names, in addition to those mentioned in the Journals of November 1st and 8th: Dr. J. P. Cassells (Glasgow), Mr. T. M. Dolan (Halifax), Mr. J. E. Erichsen, F.R.S. (London), Mr. C. Franklin (Putney), Professor J. Lister, F.R.S. (London), Dr. C. Parsons (Dover), Mr. G. A. Rogers (Shadwell), Dr. J. Thompson (Leamington), Dr. W. Wood (London). It will be noticed that members from all parts of the United Kingdom are expected to be present on the occasion.

The following gentlemen have kindly consented to act as stewards: Professor William Aitken, F.R.S., Mr. J. M. Burton, Dr. R. L. Bowles, Dr. Alfred Carpenter, Mr. T. M. Dolan, Surgeon West York Rifle Volunteers, Mr. R. F. Frazer, Surgeon 19th Middlesex Rifle Volunteers, Dr. John H. Galton, Mr. Ernest Hart, Dr. C. Holman, Mr. J. R. Humphreys, Sir William Jenner, K.C.B., Mr. H. Ker, Surgeon-General T. Longmore, Professor J. Lister, F.R.S., Mr. W. Mac Cormac, Dr. W. Withers Moore, Mr. W. Platt, Tower Hamlets Rifle Brigade, Dr. G. E. Paget, F.R.S., Mr. Charles Vasey, Mr. W. J. Vance, Mr. F. Wallace. It is hoped that many will add their names.

CERTIFICATION OF CAUSES OF DEATH.

The Registrar-General, in his last Quarterly Return, draws particular attention to the large proportion of deaths in England and Wales the causes of which are uncertified. We commend his remarks to the notice of medical officers of health and others whom they may concern, in the hope that they may take action thereon, and thereby diminish in the future these unsatisfactory returns in the national registration. The causes of 93,210, or 89.9 per cent. of the 103,733 deaths registered last quarter in England and Wales were certified by registered medical practitioners, and 5,913, or 5.7 per cent., by coroners in inquest cases. The causes of 4,610, or 4.4 per cent., of the deaths were uncertified, no certificate of a registered medical practitioner being furnished to the registrar, and no inquest being held. The proportion of uncertified deaths showed a further decline from the proportions in the two preceding quarters of the year, when they were 5.0 and 4.6 per cent. respectively. In the several registration divisions, the proportion of uncertified causes of death ranged from 1.2 in the Metropolitan, and 2.5 in the South-Eastern, to 7.0 and 11.3 in the Northern and Welsh. The highest percentages of uncertified deaths in the English counties were 6.9 in Westmorland, 8.8 in Hereford, 8.9 in Durham, and 9.8 in Cornwall. The proportion of deaths registered last quarter, without the production of a certificate of the cause, either from a registered medical practitioner or from a coroner, was exceedingly and unsatisfactorily large in Thrapston, Oundle, Ely, Thingoe, Truro, Helston, Redruth, Wolstanton, Chesterfield, Skipton, Keighley, Todmorden, Halifax, Auckland, Durham, Easington, Chester-le-Street, Holywell, Carnarvon, and Anglesey. The large proportion of uncertified causes of death in so many localities is partly due to deceased persons having been attended during their last illness by unqualified or unregistered medical practitioners; and partly to the fact that many persons, including a large proportion of children, die without the provision of any medical attendance. The registrar of Chester-le-Street reports that, in his subdistrict, where 31 per cent. of the causes of death last quarter were uncertified, there are five unregistered medical practitioners in practice. The proportion of uncertified deaths in the twenty large English towns averaged 2.6 per cent., and corresponded with the proportion in the preceding quarter; in London, this percentage was so low as 1.2, while it averaged 3.8 in the nineteen provincial towns. The smallest proportion of uncertified deaths last quarter in the nineteen provincial towns were 1.4 in Birmingham, 1.7 in Brighton, and 1.8 in Portsmouth; the proportions ranged upwards in the other towns to 5.3 in Sheffield, 5.6 in Salford, 5.9 in Wolverhampton, 6.5 in Hull, and 9.0 in Sunderland. The proportions of uncertified deaths showed a considerable decline in Oldham, although it was equal to 4.7 per cent. The decline in the proportions of uncertified deaths in Nottingham and Bristol, consequent upon the local attention given to the subject by the medical officers of health and the coroners, is still noteworthy. Similar local action in Sheffield, Salford, Wolverhampton, Hull, and Sunderland would probably be attended with similar success. The recent rapid increase of the proportion of uncertified causes of death in Sunderland especially calls for notice; during 1878, the proportion did not exceed 4.1 per cent., whereas it has been successively in the first three quarters of this year 7.4, 7.1, and 9.0 per cent. Whether this excessive proportion be due to unqualified medical practice, or to the neglect to provide medical attendance by parents and other relations of the deceased, its effect upon the national death-register is most deleterious, and, in the interests of society and of public health, should be investigated by the medical officer of health.

THE WAR IN ZULULAND.

A correspondent sends us the following notes of the diseases prevalent in the second division of the army in Zululand.

You are already aware of the capture of Ketchwayo in the Ngomé Forest, so that the Zulu war is now a thing of the past. The list of sickness and the roll of death have been both very great, considering the previously supposed healthy climate of Natal and Zululand. The principal diseases affecting the troops composing the second division were fevers (enteric and simple continued), dysentery, and diarrhœa, pneumonia and bronchitis, and occasionally hepatic complaints. The direct causes of these diseases occurring was mainly owing to the water, the climate, and exposure. The indirect sources were undoubtedly the youth of most of the men and their inexperience of camp life; in many instances, the nature of their food; and in numerous cases amongst the older soldiers, the deprivation of their accustomed beer and drink.

The water both of Natal and of Zululand was unquestionably of good quality naturally, but it was frequently polluted by the decomposing remains of dead oxen, which often escaped observation. The cattle in a dying condition were accustomed to make for the adjacent rivers, and having drunk most plentifully, they were unable to return or to ascend the banks, and died in hundreds, if not actually in the water, at all events on the sloping banks, leaving half of their bodies usually in the river. Of course, due precautions were taken to prevent this pollution, but there is no doubt that it had some share in producing disease. The climate was comparatively healthy for the colonists and for those who understood its peculiarities. The winter season was represented by intensely cold nights and heavy dews, cold mornings, and a sudden accession of hot sun striking fiercely down throughout the day. The cold nights produced pulmonary complaints and diarrhœa amongst the young soldiers, and the hot sun, simple fever, which was in many cases complicated with partial sunstroke.

I have already referred to the absence of these diseases amongst the colonists accompanying the force; and although I do not believe in the theory of acclimatisation, I think that a knowledge of the climate and conformity to its actualities would, in numerous cases, have averted disease.

The troops were necessarily much exposed to the weather in outlying picquets, on guards, and sentry duties, as police, and in the almost continuous fatigues incidental to a campaign. The frequent exposure, especially lying out in the open at night, had the effect of disabling the younger soldiers; in many cases, the chills obtained from sleeping on the damp ground caused pulmonary complaints and diarrhœa amongst the young and hepatic congestions in the older soldiers.

The class of fevers was divisible into enteric, remittent, and simple continued. By far the greatest number of admissions occurred, however, from the last mentioned kind, which was almost invariably characterised by great subsequent exhaustion, necessitating the most liberal use of stimulants to prevent the accession of typhoid symptoms or the supervention of some secondary form of a former disease. Convalescents took always a considerable period in which to recover, and it is a question whether complete restoration to health has ever occurred in any one case of simple continued fever. The true enteric fever was very frequently fatal, and when occurring in the older soldiers invariably so. It ran its course surely, if gradually, to the end. There was, however, an abortive enteric fever noticed, which commenced with all the symptoms of the true enteric: the alternate grades of temperature, the

characteristic pulse, cæcal pain and gurgling, absence of head-symptoms; after a few days, it mostly appeared to quickly subside, and convalescence speedily supervened. In these cases, the typical rose-spots were absent. There was no malarial fever with the Second Division, there being no source of malaria in that part of Zululand through which the column advanced. I am told, however, that in the district where the First or Crealock's Division has been stationed, a typhomalarial form of fever has been diagnosed, but I cannot vouch for the accuracy of this statement. Large doses of quinine are required for these cases of fever, and thirty-grain doses have been given with benefit.

The dysentery usually occurred as a sequence to neglected diarrhœa, or from cold, in the case of young soldiers; whilst with the older men —those who had been accustomed to beer and spirits—I believe that the effect of the deficiency of a stimulant, however unnatural, to the process of digestion produced dysentery in numbers of cases. The tough meat and half-baked bread required some artificial means to promote their digestion. It is not unlikely that the younger soldiers were also affected by the quality of the meat and bread frequently issued to them.

The pulmonary complaints were chiefly pneumonia and bronchitis brought on by the cold at night. A tendency was noticed in cases of pneumonia to a rapid breaking up of the lungs, especially amongst the older patients. The bronchitis was of no account so far as the duration of any one attack, but it would be interesting to follow up some of these cases and observe any subsequent effect on the lung which might occur hereafter to throw light on the cause of the rapid termination of inflammation of the lungs, as was certainly noticed in a few cases.

The hepatic ailments affected, in most cases, the old soldiers, those who served in India, and many of whom had previously been invalided from that country.

These diseases, with various accidents, comprised the total affections from which the troops of the second column have suffered. An indolent ulcer, called the Natal sore, was also prevalent.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH: NORTH LONDON DISTRICT.

A MEETING of the above Branch will be held at the Myddleton Hall, Islington, on Thursday, November 20th, at 8.30 P.M.: JOHN WOOD, Esq., F.R.S., President, in the Chair.

Papers will be read by—

1. Dr. Fothergill: On Gouty Heart and its Treatment.
2. Dr. Dowse: On Neuralgic Headache and its Treatment.
3. Mr. Henry Baker will exhibit and explain his new invention for the Treatment of Talipes.

THOMAS S. DOWSE, M.D., *Honorary Secretary.*

2, Old Burlington Street, November 5th, 1879.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE next meeting of this district will be held at the Bow and Bromley Institute, on Thursday, the 20th instant, at 5 P.M.; Dr. MARK LONG in the Chair.

The following communications have been promised.

1. On the Treatment of Phthisis. By H. G. Orlebar, M.D.
2. On the Treatment of Spine-Disease by Plaster-of-Paris, with a Demonstration of its Mode of Application. By R. W. Parker, Esq.
3. A Case of Perforation of Bowel and Wall of the Body by a Spike of Grass (patient to be exhibited). By R. H. S. Carpenter, L.R.C.P. Lond.

A. GRANT, M.D., *Honorary Secretary.*

370, Commercial Road, E., November 12th, 1879.

SOUTH-EASTERN BRANCH: EAST SUSSEX DISTRICT MEETINGS.

THE next meeting of the above district will be held at the Bear Hotel, Lewes, on Wednesday, November 19th, at 3 o'clock P.M.: R. TURNER, Esq., in the Chair.

Members intending to make any communications, or to read papers, are requested to send notice of the same to the Secretary on or before Tuesday, the 11th instant, in order that they may be inserted in the usual circular.

Dinner will be provided at the Hotel at 5 o'clock.

As this will be the tenth anniversary of the establishment of these district meetings, it is hoped a large number of members with their friends will be present.

THOMAS TROLLOPE, M.D., *Hon. District Secretary.*

9, Maze Hill, St. Leonard's-on-Sea, Nov. 4th, 1879.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this Branch will be held at the County Hospital, Canterbury, on Thursday, November 27th, at 3 o'clock: President—Dr. GOGARTY.

Members intending to read papers are requested to communicate at once with the Secretary.

WM. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, November 3rd, 1879.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of the above district will be held at the West Kent General Hospital, Maidstone, on Tuesday, November 25th: WM. HOAR, Esq., in the Chair.

Dr. Monckton will introduce a discussion on "Some of the Epiphenomena of Albuminuria".

A. H. B. HALLOWES, M.R.C.S., *Honorary Secretary.*

Maidstone, November 12th, 1879.

STAFFORDSHIRE BRANCH.

THE first ordinary meeting of the present session will be held at the London and North Western Railway Hotel, Stoke-upon-Trent, on Thursday, November 27th, at 4.30 P.M.

VINCENT JACKSON, Wolverhampton
J. G. U. WEST, Stoke-upon-Trent } *Honorary Secretaries.*

Wolverhampton, November 10th, 1879.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held at the Belfast Royal Hospital, on Friday, December 5th, 1879, at 12 o'clock noon.

Members desirous of making any communication to the Branch are requested to communicate with

JOHN MOORE, M.D., *Honorary Secretary.*

2, Carlisle Terrace, Belfast, November 10th, 1879.

DUBLIN BRANCH.

NOTICE is hereby given, that at a special general meeting of the Branch held on the 3rd instant, it was unanimously resolved that the annual subscription to the Branch for the year 1880, and subsequently, be five shillings *per annum*.

GEORGE F. DUFFEY, M.D., *Honorary Secretary.*

30, Fitzwilliam Place, Dublin, November 4th, 1879.

SOUTHERN BRANCH: DORSET DISTRICT.

THE ninth meeting was held at the Royal Hotel, Weymouth, on October 29th; the President, Dr. E. PHILPOTS of Poole, in the Chair. Sixteen members were present.

Election of Officers.—Mr. William Daniell of Blandford was elected President; Mr. R. P. Simpson (Weymouth) and Mr. Vicary Snow (Bournemouth), Vice-Presidents; Dr. Vawdrey Lush (Weymouth) and Mr. C. H. W. Parkinson (Wimborne), Joint Honorary Secretaries and Treasurers, for the ensuing year.

New Members.—Mr. W. Douglas Hemming and Dr. Wm. Stewart Falls, both of Bournemouth, were elected.

Next Meeting.—It was arranged that the next meeting should take place at Blandford, and the subject of discussion should be Typhoid Fever.

Papers.—The following were read.

1. On *Post Partum* Hæmorrhage. By Mr. Parkinson.
2. On Anæmic Dyspepsia. By the President.

A Preparation containing Sulphur in a finely divided state, suitable for local application in diphtheritic cases, was shown for Mr. T. B. Groves, pharmaceutical chemist, of Weymouth.

Dinner.—The members subsequently dined together.

CORRESPONDENCE.

THE ANTIVIVISECTIONISTS AND THE PROGRESS OF MODERN SURGERY.

SIR,—My attention has been directed to the report of the proceedings of an "anti-vivisection meeting" held at Peterborough, in which I see that a Mr. Gilbert uses my name as his authority for stating that "no improvement whatever has been made in surgery for the last forty years". I need scarcely say that no such statement has ever been made by me. No surgeon who, as I have done, has lived through the last forty years, and has watched the progress of surgery through that period, can doubt that at no former corresponding epoch in its history has so great an improvement taken place as during these very forty years. During that period, we have witnessed the introduction of Anæsthetics and of Antiseptics; the treatment of Aneurism by Compression; the development of Lithotrity, of Plastic and Orthopædic Surgery; the establishment of Ovariotomy and of allied procedures; and the general advance of Surgical Pathology and the simplification of surgical methods.

To say that surgery during the last forty years has not improved, would be as absurd as to deny the progress of all natural and medical science, of which it but constitutes a part, during that lengthened period.—I am, sir, yours obediently, JOHN ERIC ERICHSEN.

6, Cavendish Place, W., November 7th, 1879.

VIVISECTION AND OVARIOTOMY.

SIR,—My attention has been directed to a report of a public meeting called by supporters of a Society for the Total Suppression of Vivisection, and held last week at Peterborough. At this meeting, Mr. Cooke, an agent of the Society, endeavoured to carry a resolution in favour of a petition to Parliament "to repeal the Act which authorises vivisection, and to pass a law for its entire prohibition". As this resolution was signally defeated by my friend Dr. Walker, who proposed an amendment to the effect that vivisection had been of great value to medical science, and as the chairman signed a petition on behalf of the meeting, praying "that no further restrictions than those already in force under the Act of 1876 be imposed on the practice of vivisection", it might appear unnecessary to do more than congratulate all true friends of the human race on this victory of knowledge and common sense over the ignorance and folly which would protect a rabid dog and imperil the men, women, and children whom the dog might bite and destroy by hydrophobia. But, as the agent of the Society, and speakers who supported the resolution, made statements which have repeatedly been made before, so false and absurd that I have never thought them worthy either of contradiction or of notice, and as these statements will probably be repeated wherever the Society think they will be believed and where no one like Dr. Walker is ready to prove their falsehood, it is thought by some of my friends that it may be useful if I put the real facts of the case shortly before your readers, so that any member of our Association may be ready to refute the assertions so constantly made by the agents and friends of the Society.

One argument of Mr. Cooke, in moving the resolution, was that, "since the practice of *Mr. Spencer Wells's operation for ovariotomy*, the mortality from *that disease* had increased rather than decreased". The speaker apparently thinks that ovariotomy is a disease, which some operation of mine has made more fatal than before. This would be quite on a par with many statements made in the publications of the Society. But, taken in connection with other remarks of the speaker and his attack on the speech in the House of Lords by which the Bishop of Peterborough defeated the Society last session, I think I can make out that one or both of two distinct arguments are put forward:

1. That, since the practice of ovariotomy has become general, the mortality from ovarian disease has increased:

2. That mortality from ovariotomy has been increased by the modifications in the operation which I tried on some of the lower animals before practising them on women.

I have never seen any attempt to prove the truth of the first of these two propositions; and it might be interesting if some one who had time would examine the reports of the Registrar-General from their commencement till about the year 1860—or say 1858—and compare that with the mortality of the next twenty years, 1858-78, making the necessary correction for increase of population. But, as every case returned as a death from ovariotomy must necessarily be a death from ovarian disease, it is not easy to ascertain even in this way, supposing the reported mortality from ovarian disease to have increased, what share ovariotomy has had in the increase. More accurate diagnosis and more careful certificates would be a far more probable explanation of any increase. It is a common belief among medical men who have seen much of ovarian disease, that, from its detection to its termination in the death of the patient, about four years would be the probable average duration of life. After ovariotomy, a patient may die at once and lose these four years. If she recover, she gains the average duration of the life of women from her age at the time of operation. On this basis, Lord Selborne has calculated that, in my hands alone, this one operation of ovariotomy has added some twenty thousand years to human life. My own cases now amount to nine hundred and sixty-nine. Atlee, Kœberlé, and Keith have exceeded three hundred each. Several surgeons in Germany and some here have done more than one hundred; and probably no operation is now more generally practised, or with such great success. Can any rational being honestly contend that ovariotomy has not lessened mortality?

As the Bishop of Peterborough argued that some of my experiments on living animals had led to improvements in ovariotomy which rendered that operation less fatal, the anti-vivisectionists have replied by two arguments. 1. The improvements are no improvements at all. Results as good as mine were obtained before me by others, and have been since by those who do not follow my example. 2. Admitting them to be improvements which have led to better results than before their introduction, and since then in the practice of those who follow them over those who do not, they are not due to experiments on animals, but to experience acquired on the human subject; and any inference drawn from experiments on the lower animals must be erroneous, if analogous results are expected in the human race. I take two dogs, two rabbits, two guinea-pigs, as nearly as I can find them of the same age and size; I put the animals under chloroform, and open the abdomen precisely in the same manner. In one dog, one rabbit, and one guinea-pig, I close the wound by sutures which include the peritoneum. In the three other animals, the sutures close the skin and integument, but do not include the peritoneum. When the animals have recovered, I kill them, and I find union quite perfect where the two peritoneal surfaces have been brought together. In the other cases, I find imperfect union, or adhesion of neighbouring omentum or coils of intestine to the abdominal wall, or a ventral hernia. In some of these cases, the animals died of peritonitis. I repeat the experiments—not often enough, perhaps, to bring conviction to everyone, but often enough to satisfy me; and some of the preparations now in the College of Surgeons would satisfy most people. When I say that, if one method be shown to be better than the other on dogs, rabbits, and guinea-pigs, it probably will be so in women, the Society cry out that this is illogical, and that no such reasoning can be allowed. When I go on and show that exactly similar results actually have been observed in women, they reply by quotations from writers who entertain a contrary opinion, but whose experience is so limited, that it can have little weight with anyone who has really examined the matter practically.

Although I am fully convinced that, in all cases where the peritoneal cavity is opened, accidentally or in any surgical operation, the edges of the divided peritoneum should be accurately brought together; that mortality is thus diminished; that, when death does not follow, the inconvenience from adhering intestine or from hernia, otherwise common, is prevented; that I learned this myself, and convinced others of its truth by a few experiments on animals, and have thus saved human life and lessened human suffering, I am very far from believing that this alone is the explanation of the reduced and diminishing mortality after ovariotomy. Every step of the operation is done with more care now than it was twenty years ago; and, during the last two or three years, antiseptic precautions have become more and more generally adopted, with a more marked effect upon the mortality than had any one of the many modifications which I inaugurated. In the last two years of my hospital practice, before adopting what we now consider necessary antiseptic precautions, the mortality of ovariotomy in my practice was reduced below 10 per cent.; I had seven deaths out of seventy-one cases. Since commencing antiseptics, I have had eighty-one cases, with only six deaths—but little more than 7 per cent.; and of the last thirty-six cases, every one has recovered, not one has died. Before 1814, almost every woman who suffered from ovarian disease, died of it sooner or later. From 1814 to 1860, a few were saved by ovariotomy; but half, or a third, or a fourth part of those operated on died. Since 1860, year by year, the mortality has been steadily and rapidly diminishing, until now it is so small as to be almost incredible and inexplicable; a delight and a wonder to the surgeon, which will not be lessened by the wild assertions of men who, knowing nothing of the subject, and utterly reckless what they say, assert that the mortality of ovarian disease is increased by ovariotomy.—I am, sir, your humble servant, T. SPENCER WELLS.

3, Upper Grosvenor Street, November 10th, 1879.

THE DISCOVERY OF THE DIFFERENCE BETWEEN TYPHUS AND TYPHOID FEVERS.

SIR,—It was, some years ago, publicly announced that I had retired from practice; and the statement, having received no contradiction, was, to my grievous loss and damage, generally accepted as true. In the course of last week, in a leading article of a widely circulated daily journal, I was spoken of as having departed this life. Thanks to the prompt kindness of Dr. Heywood Smith, this misstatement has been corrected in the quarter where it originated.

But for the correction of another misrepresentation, which assigns to me the position I cannot for a moment accept, of being a mere follower and retailer of the opinions of John Goodsir on typhus and typhoid fevers, I must be indebted, not to the justice of those who made it, but to your courtesy. Here is the latest and professedly most authentic account of the discovery of the specific difference of the two diseases, first published nearly forty years after date, and simultaneously with the announcement of my death.

"It was not until the late Professor Goodsir, of Edinburgh University, at the time a young but promising disciple of the notorious Robert Knox, noticed that, in certain common kinds of low or 'continued' fevers, two different sets of appearances were visible in the bodies of those who died from them, that any distinction was made between what we now know as typhoid and typhus fever. Of this fact we are naturally reminded by the address which Sir William Jenner has just delivered on the subject, before the Midland Medical Society. Goodsir's discovery that, in the dead body of a typhoid patient, certain intestinal glands were always found diseased, whereas in typhus cases this phenomenon was not observable, gave a powerful stimulus to pathological research into both kinds of fevers. After Mr. Goodsir, there came the late Dr. A. P. Stewart, of Middlesex Hospital, who, in 1840, introduced the doctrines of the Northern School to the profession in London; but his efforts had little appreciable influence until 1848, or rather 1850, when Sir William, then Dr., Jenner became convinced of the soundness of Goodsir's suggestions, and worked out with masterly thoroughness the line of investigation indicated by the Edinburgh Professor."

I repeat that, so far as I know, John Goodsir is now for the first time credited with the leadership of what is termed "the Northern School" of opinion regarding continued fevers. Murchison evidently knew nothing of it, for, in his historical summary, Goodsir is not so much as mentioned; and in our frequent conversations on this subject, he never once referred to him, not even when, in our investigations into the cattle-plague, he showed me his notes of Goodsir's lectures on the intestinal glands of the ox, which, in the healthy state, exactly resemble the glands of the typhoid patient at the stage of full development. And as I am not aware that Goodsir published anything on this subject before 1842, whereas my paper, in which I contrasted, at considerable length, the state of the intestines in typhus and typhoid fevers, was published in 1840—first in Paris and then in Edinburgh—I suppose that "the Northern School" consisted, before 1842, of myself and my distinguished friend Dr. John Reid, who entirely coincided in my views. If Goodsir published anything before 1842, let it be pointed out. The "discovery", here ascribed to him, that certain intestinal glands were diseased in typhoid, and not in typhus, was familiarly known to us in the Glasgow Fever Hospital in 1836, and I published the fact in 1840. Let those who claim this discovery for Goodsir prove that he made and published it earlier. Till then, I yield my priority to none but Gerhard of Philadelphia, whose papers I did not see till long after my work was finished. How far that work was complete my professional brethren shall judge for themselves, when the reprint of the original paper appears, as I trust it shortly will.—Yours, etc., A. P. STEWART.

Grosvenor Street, W., November 11th, 1879.

SMALL-POX AND VACCINATION.

SIR,—The severe nature of the small-pox epidemic which visited London during the autumn of 1876, and prevailed with more or less intensity during the whole of 1877 and 1878 and part of 1879, induced the Managers of the Metropolitan Asylum District—upon whom, in their official capacity, devolved the treatment of a large proportion of the infected—to collect certain statistical facts which illustrate the advantages of efficient vaccination and revaccination, as evidenced by the experiences of the medical superintendents of the several small-pox hospitals under the control of the Board. The observations of these gentlemen confirm former opinions on the subject, and establish beyond doubt the mitigating influences, in small-pox cases, of successful primary vaccination, and the preventive powers of efficient revaccination.

The total number of small-pox patients treated in the various hospitals of the managers, from the outbreak of the epidemic in 1876 until the commencement of the present month, has been 15,171, of whom 11,412 were vaccinated and 3,759 unvaccinated; and it is believed that, for each case treated in the Board's hospitals, another was privately attended. Hence some idea may be formed of the magnitude of the epidemic. The total number of deaths which occurred in the hospitals during the period under consideration was 2,677. Of these, 1,008 were vaccinated and 1,669 were unvaccinated cases. The percentage mortality upon the whole of the admissions was, therefore, 17.6, being at the rate of 8.8 per cent. of the vaccinated and no less than 44.4 per cent. of the unvaccinated. It may be observed that among the 11,412 vaccinated patients admitted are included the majority of those who stated that they had been vaccinated, but upon whom no traces of vaccination were discernible. No case of small-pox has come within the cognisance of either of the medical superintendents of any person who had been efficiently vaccinated and successfully revaccinated.

The nurses and servants employed from time to time at the various hospitals during the epidemic have enjoyed almost absolute immunity from infection; and the few—some half-dozen amongst nearly one thousand—who contracted the disease whilst discharging their duties had, from some cause or other, escaped revaccination before entering the wards.

Experience has, therefore, irrefutably proved that, were vaccination efficiently performed in infancy, within the period prescribed by the Vaccination Act, and revaccination successfully accomplished at puberty, small-pox, instead of being, as it is at present, a common and extremely fatal disease, would be a comparatively rare one, and so little fatal that few, if any, deaths would result from it.—I am, sir, your obedient servant, W. F. JEBB, Clerk.

The Metropolitan Asylum District, 37, Norfolk Street, Strand, London, October 30th, 1879.

TYPHOID FEVER AND SEWAGE.

SIR,—Your article in the last number of the JOURNAL on the outbreak of typhoid fever in the Chester County Lunatic Asylum tempts me to place before your readers an account of a series of outbreaks of the same disease which occurred in this asylum during the years 1873-4-5, which, by showing with what impunity *pure* sewage may be drunk, may be of interest.

This asylum was opened in the year 1861. It was then a new building, placed high above the river Froom (a tributary to the Avon at Bristol); the foundation being on the highly fissured Pennant rock, and much of the stone having been quarried on the slope leading from the asylum to the river. A stone-and-mortar drain at first carried the effluent water of the deposit-tanks straight into the river. Soon it was found that the supply of water during the summer months was very uncertain as to quantity, and in 1864 a hole was sunk in the rock at the confluence of the river and the drain on the higher side of the latter. From this source, water was pumped by means of an engine when other easier sources failed in the summer. About the same time, the sewage was intercepted, so as to prevent its going directly into the river; and it was made to flow into an old quarry close by, which had been filled with the *débris* of further excavation.

When I came into office in 1871, I submitted samples of this water to Mr. Stoddart of Bristol for analysis, and he found it to be little better than sewage; and this could hardly be wondered at, seeing that, besides the condition of things just mentioned, the river itself (which never, except in flood-time, is more than a rivulet) received the whole of the sewage of a workhouse adjacent, but up stream, which generally contains a population varying from nine hundred to a thousand inmates. This filthy liquid was drunk during all the years which lapsed between 1864 and 1873 with apparent impunity, no case of typhoid fever having been recorded.

In 1873—on the 6th of September—it came to my knowledge that a guest in the house of the farmer who supplied the milk used in the asylum was then convalescent from typhoid fever. I also ascertained that the one servant washed the linen of the patient and the cans in which the milk was carried to the asylum. On the 27th of the same month, a case of typhoid was recognised in a male lunatic. The usual precautions were taken to keep the stools out of the drains; but I presume they they were not successful. Five cases seemed to be the immediate result of the introduction of the specific cause, the last being recognised on November 8th. No record had been kept of the source of water; but it was certain that, during the whole year, water had been drawn from the "Grove"—that is, the tank near the river.

In the year 1874, we have reliable data. The Grove water was used from March 23rd to March 30th. Two cases of fever were recognised on April 28th. Water was had from the same source almost continuously from May 28th to September 7th. From July 9th to October 13th, fifteen cases were recognised.

In the first half of the year 1875, the engineer's dates are not clearly stated; but it appears that, previously to July 15th, the Grove water had been used for forty-two days, the pumping having been almost continuous for four weeks previous to that date. The same source was resorted to, with short intermissions, from August 27th to October 21st. Since that date, no water has been taken from the Grove. In July, four cases, and in October two cases, were first recognised.

No case of typhoid fever has occurred since, the source of supply being direct from the Bristol Waterworks Company's main.

The chief interest about this account is not merely that *pure* sewage may be used with impunity, but that the introduction of the specific "germ" was followed by first cases as the immediate result, and poisoning of the sewage as a secondary result. This seems, in my mind, to settle conclusively that the importation of a "first case" is essential to the spread of the disease; and I cannot but think with you that, if Dr. Davidson will pursue his inquiries further, he will find that "irrigation" is not the first cause of the "outbreak" which must cause him much toil and anxiety, and which, added to the ordinary cares of his office, renders his position anything but a sinecure.—Yours faithfully,

GEORGE THOMPSON, Medical Superintendent.

Bristol Lunatic Asylum, Stapleton, November 10th, 1879.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE APPOINTMENT OF DEPUTY POOR-LAW MEDICAL OFFICERS.

AT a recent meeting of the guardians of the parish of Marylebone, Mr. Sedgwick moved "That on a district medical officer giving the name of some legally qualified medical practitioner to whom application for attendance may be made in the case of his absence from home or other hindrance to his personal attendance, it is desirable that the gentleman so named should be seen by the guardians prior to the sanction by them of such appointment". This resolution was, we regret to note, seconded by Dr. Croft, a medical member of the board. A long discussion ensued thereon, in the course of which it clearly came out that the intelligent members of the board were of opinion that, if such a resolution were adopted, no respectable member of the profession would present himself as a candidate for an appointment which was coupled with such degrading conditions. We will go further, and say that no medical gentleman would fill the position of a deputy which, be it understood, carries with it neither social, professional, nor any other advantage, and which is generally accepted by a neighbouring medical man out of pure good will. When boards of guardians grant some pecuniary consideration to a gentleman who may be called in during the accidental or unavoidable absence of the medical officer, they may claim to have a voice in the selection, and may have an inspection, if they wish it, of the gentleman nominated, but not till then. Ultimately, the good sense of the majority of the board prevailed, and the resolution was withdrawn.

SANITARY PROGRESS (?).

A GENTLEMAN, whose statements are worthy of credence, gives the following account of the way in which sanitary matters are neglected in the Redruth Rural District, his remarks being prompted by a fresh outbreak of scarlatina in the locality. It is now nearly three years since Dr. Blaxall was instructed to report to the Local Government Board on the sanitary condition of the Redruth Union, partly "in consequence of the Registrar-General's returns continuing to show a very high mortality from scarlatina in the Gwennap subdistrict". Of the eleven recommendations of Dr. Blaxall to the Rural Sanitary Authority, not a single one has been adopted, and every plan for the staying of infectious diseases customary in other places has been ignored. The medical officer of health has no opportunity of knowing of the existence of infectious diseases in his district, except through the Registrar's monthly return of deaths, so it is only of fatal cases that he hears. No hospital for isolation of cases, or disinfecting chambers for infected clothing, have been provided. No notices giving poor people information regarding these diseases have been posted, and no steps have been taken to put in force the sections of the Public Health Act relating to the exposure of infected things, or the letting of infected dwellings. It would seem as if the Rural Sanitary Authority considered the removal of the most obviously offensive nuisance as their sole duty; and the value placed on that sort of work in contrast with the intelligent and well-directed suppression of infectious diseases may be indicated by the salaries of the respective sanitary officers: Inspector of Nuisances, £30 *per annum*; Medical Officer of Health, £20 *per annum*.

REMOVAL OF INFECTIOUS PATIENTS TO HOSPITALS.

BEFORE the passing of the Poor Law Act, 1879, the sanitary authorities of the metropolis, with comparatively few exceptions, had no hospital to which they could remove persons suffering from "dangerous infectious disorders", except by special arrangements made with the authorities of the Small-Pox and Fever Hospitals, which, in times of epidemics, are often inconveniently full. A deputation, therefore, in the early part of this year, from the vestries and district boards of the metropolis, waited upon Mr. Sclater-Booth, requesting him to introduce a Bill into Parliament enabling the Metropolitan Asylums Board to receive such persons from the sanitary authorities, upon payment being made for each patient. The President of the Local Government Board promised to introduce clauses into the Poor-law Bill, which he has done, and some of the boards have already applied to the managers of the Asylum Board's hospitals requesting to be informed on what terms they are prepared to receive patients; and, the letters having been referred to a committee, it is probable that the fifteenth section of this important Act will soon be in operation. This section, and the thirty-seventh of the Sanitary Act for the Metropolis, and the one hundred and thirty-second section of the Public Health Act, 1875, for other places, enable local sanitary authorities to erect and maintain hospitals for the treatment of persons affected with infectious diseases, or to contract with the managers of hospitals for their reception. The sections also empower the sanitary authorities to charge the sick, or their representatives in the case of death, with the expenses incurred for their treatment in, but apparently not for their conveyance to, these hospitals. It is feared by some that, if a charge be generally made, it would go far to neutralise the good effect of the Act; but there seems to be no reasonable ground for such a supposition, as the 1875 Act has been put into force in many extra-metropolitan districts, and charges have been made, without restricting its usefulness. The payment of the charge is in most cases extended over such a period of time as will enable the person removed to the hospital to defray it without inconvenience, so that respectable artisans and others, who could not afford to pay the amount at once, will be enabled under such an arrangement to pay the cost of their treatment.

From the discussion which took place at the meeting of the Asylum Board, it is to be feared that the managers are inclined to restrict the number of beds to be placed at the disposal of each vestry or board. This would be an injudicious step, and would go far to frustrate the intentions of the Act, as, when an epidemic is raging in one district, the number of beds required would be in excess of those occupied by patients from another district, as infectious diseases are very rarely, if ever, epidemic at the same time all over London. The statistics of the comparative number of deaths in hospitals and in private houses, will readily furnish the managers of the Asylums Board with the necessary data, without limiting the number of beds at the disposal of any given district. It should be remembered that the percentage of deaths to attacks is pretty uniform, so that the accommodation required can be readily calculated, if any metropolitan sanitary authority, except those already having hospitals, should send in patients. During the late epidemic of small-pox, it is shown by statistics published by some of the parishes and districts, that about 60 per cent. of the total number of deaths from the disease occurred in the Asylum Board's Hospitals, so that it is probable that not more than 5 or 6 per cent. additional beds will be required to be provided for the purposes of this Act. As Mr. Sclater-Booth stated to the deputation that, in his opinion, all persons being sick with an infectious disorder, and not having a home of their own, should be removed by the guardians; and as these would include servants, work-women, shopmen, and others living in the homes of their employers; and as some boards of guardians instructed their officers not to remove such persons to the hospitals, it is possible that a larger number will in future be sent in by the relieving officers than heretofore. The experience of the local authorities which have had hospitals of their own for the treatment of these diseases, shows that comparatively few were admitted excepting those who were entitled to be removed as pauper cases; and this supports our view as to the comparatively slight increase in the accommodation that will be necessary to carry out the requirements of this Act.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations on October 28th, were admitted Licentiates in Dental Surgery.

Davis, Harry, Kew (Middlesex Hospital)
Hammond, Gurnell Edward, Leinster Square (Middlesex Hospital)
Isard, William Alexander, Buenos Ayres (Charing Cross Hospital)
Maggs, William Adolphus, Yeovil, Somerset (Middlesex Hospital)
Magor, John Bernard, Penzance (Middlesex Hospital)

The following gentlemen passed their primary examinations in anatomy and physiology at a meeting of the Board of Examiners on November 10th, and, when eligible, will be admitted to the pass-examination.

Messrs. Johannes Sauer, Walter C. Beevor, William H. O. Mills, James A. L. Calder, and Robert R. Rentoul, students of the Edinburgh School; Rastamji H. Cama and Kaikhusro R. Viccaji, of the Bombay School; Frank Trotman and Ernest Leonard, of the Bristol School; John J. Tighe and Wm. H. Line, of the Dublin School; George A. Patrick and Charles A. J. Robertson, of the Manchester School; William G. Davis, of the Philadelphia School; Charles H. Wilford, of the Aberdeen School; Edwin E. L. Bowling, of St. Bartholomow's Hospital; John Conway, of the Glasgow School; Matthew B. Shirley, of the Leeds School; and Cecil Birt, of the Birmingham School.

Five candidates were rejected.

The following gentlemen passed on November 11th.

Messrs. Geoffrey F. Travers, Albert W. Griffin, and Frederic T. Bennett, of St. Bartholomew's Hospital; Ernest A. Marras, Robert B. Roe, and Henry L. Albert, of St. George's Hospital; John D. Malcolm and Henry W. Phillips, of the Edinburgh School; Albert W. Beaumont, B.A.Cantab., and Stanley J. W. Hayman, of St. Mary's Hospital; Edward Gordon, of the Manchester School; James R. Norman, of the Glasgow School; John W. Megarry, of the Charing Cross Hospital; Frank Allwork, of the Westminster Hospital; Frank Hewkley, of the London Hospital; Allan H. Jackson, of Guy's Hospital; and Elias Keys, of University College.

Seven candidates were rejected.

The following gentlemen passed on November 12th.

Messrs. Hubert W. Burke, C. A. E. A. Field, Alfred Robinson, and Arthur L. Copner, of St. Bartholomew's Hospital; Wm. R. Pollock, H. T. D. Medley, J. C. R. Freeborn, and Thos. B. Grimsdale, of St. George's Hospital; Daniel Thurston, Frederick C. Mears, and Chas. Wray, of the London Hospital; Jas. A. Fraser and Hugh W. Moor, of Guy's Hospital; H. M. N. Milton, of St. Thomas's Hospital; Henry G. Sworn, of University College; and John Fletcher, of the Manchester School.

Seven candidates were rejected.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, October 30th, 1879.

Crew, William Thomas, Park Lane, Macclesfield
Breese, Thomas Thwaites, The Precincts, Norwich

The following gentlemen also on the same day passed their primary professional examination.

Bartlett, Benjamin Pope, Guy's Hospital
Clatworthy, Herbert, London Hospital
Daniell, Charles Henry St. Bartholomew's Hospital
Pritchard, Owen, St. Bartholomew's Hospital
Rant, Charles, Charing Cross Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 6th, 1879.

Haycroft, Charles Henry, Starcross, Devonshire
Wray, George Bury, Mansfield Road, Nottingham

The following gentlemen also on the same day passed their primary professional examination.

Martin, Joseph Henderson, Middlesex Hospital
Newcombe, Frank, Middlesex Hospital
Whelan, John Jossph, Grant Medical College, Bombay

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the monthly examinations for the Licences of the College, held on Monday, Tuesday, Wednesday, and Thursday, October 6th, 7th, 8th, and 9th, 1879, the following were the successful candidates.

For the Licence to Practise Medicine.—Deane Bennett, John Noble Bredin, Charles Davidson, John Farrell Easmon, Hugh Parry Jones, George Robert Lawless, Joseph McDonnell, Michael De Courcy O'Grady, and George Thomas Albert Staff.

For the Licence to Practise Midwifery.—Charles Davidson, John Farrell Easmon, J. H. Fialho, Hugh Parry Jones, Joseph McDonnell, Michael De Courcy O'Grady, and George Thomas Albert Staff.

QUEEN'S UNIVERSITY IN IRELAND.—At the annual meeting of the Senate of the University, held in St. Patrick's Hall, Dublin Castle, the following degrees in Medicine and Surgery were conferred, and diplomas in Midwifery were granted, by His Grace the Duke of Leinster, Chancellor of the University.

Degree of Doctor of Medicine, honoris causâ.—Randle Wilbraham Falconer, D.C.L., M.D.; Denis Charles O'Connor, A.B., M.B.

Degree of Master in Surgery, honoris causâ.—William Mac Cormac, M.A., M.D.

Degree of Doctor of Medicine.—First Honour Class: James Barron, B.A., Belfast; W. E. Ashley Cummins, Cork; Sinclair White, Galway. Second Honour Class: J. Wm. U. Macnamara, Galway; Robert Mowbray, Belfast; Upper Pass Division: John Acheson, Belfast; Thomas M. Corker, M.A., Cork; G. H. Desmond, Gimlette, Belfast; Myles Wm. O'Reilly, Galway and Cork; T. Taylor Reynolds, Galway; John Smyth, Galway; Samuel A. K. Strahan, Belfast; T. Kennedy Wheeler, Belfast. Lower Pass Division: Henry K. Allport, Cork; Myles H. C. Atkinson, Galway; William Atkinson, Galway; Augustus H. Bampton, Cork; J. W. Beatty, Galway; Samuel Dickey, Galway and Belfast; John E. Dowling, Cork; John Eadie, Belfast; Alexander C. Fraser, Galway; James Geraghty, Cork; Hugh Greany, Cork; Edward Hanly, Galway; Patrick C. Hickey, Cork; James Frank Holland, Cork; James Hosford, Cork; John E. Lane, Cork; Samuel G. Levis, Cork; Henry M'Cormick, Galway; John J. M'Cormick, Galway; Samuel M. Malcomson, Belfast; John Martin, Galway; Andrew S. Mitchell, Galway; Charles A. P. Mitchell, Galway; George R. O'Donovan, Cork; Thos. O'Kelly, Galway; Alexander C. Suffern, Belfast; John Vint, Belfast; John Watson, Belfast; David L. Williams, Cork; William James Cowden, Belfast; Joseph Crowley, Cork; Thomas Dorman, B.A., Cork; Thomas P. Madden, Galway; Charles Magill, Belfast; Robert Mitchell, Galway; Alexander Sharpe, Belfast; Jacob Thomas Shipsey, Cork; John Simpson, Belfast; William Smyth, Belfast; Horace R. Townsend, B.A., Cork; James Wilson, Belfast and Galway; William Mussen Young, Belfast.

Degree of Master in Surgery.—John Acheson, Belfast; Henry K. Allport, Cork, Augustus H. Bampton, Cork; James Barron, B.A., Belfast; William Henry Bracken, M.D., Belfast; Thomas M. Corker, M.A., Cork; W. E. Ashley Cummins, Cork; Samuel Dickey, Belfast; John E. Dowling, Cork; C. H. Desmond Gimlette, Belfast; Hugh Greany, Cork; Edward Hanly, Galway; Samuel Malcomson, Belfast; Charles A. P. Mitchell, Galway; Robert Mowbray, Belfast; T. Taylor Reynolds, Galway; John Smith, Galway; Samuel A. K. Strahan, Belfast; Alexander C. Suffern, Belfast; Horace R. Townsend, B.A., M.D., Cork; Sinclair White, Galway; David L. Williams, Cork; A. Osmond Geoghegan, Galway; Gilbert Kirker, M.D., Belfast; John M'Kinlay, M.D., Galway; John F. Tuohy, M.D., Cork; Joseph Crowley, Cork; Thomas Dorman, B.A., Cork; Thomas P. Madden, Galway; Charles Magill, Belfast; Robert Mitchell, Galway; Alexander Sharpe, Belfast; Jacob Thomas Shipsey, Cork; Thomas M. O'Brien, M.D., Galway.

Diploma in Midwifery.—John Acheson, Belfast; Henry K. Allport, Cork; James Barron, B.A., Belfast; Henry Bingham, M.D., Belfast; Thomas M. Corker, M.A., Cork; W. E. Ashley Cummings, Cork; Samuel Dickey, Belfast; Hugh Greany, Cork; John J. Hartnett, M.D., Cork; John Hosford, Cork; Henry, M'Cormick, Galway; John J. M'Cormick, Galway; Samuel M. Malcomson, Belfast; John Martin, Galway; Charles A. P. Mitchell, Galway; Robert Mowbray, Belfast; Myles W. O'Reilly, Galway and Cork; John Smyth, Galway; Samuel A. K. Strahan, Belfast; Alexander S. Suffern, Belfast; T. Kennedy Wheeler, Belfast; Sinclair White Galway; David L. Williams, Galway; Robert Beattie, M.D., Belfast; Gilbert Kirker, M.D., Belfast; Daniel Riordan, M.D., Galway; John Wilson, M.D., Belfast; Joseph Crowley, Cork; Thomas Dorman, B.A., Cork; John Simpson, Belfast; William Smyth, Belfast; Horace R. Townsend, B.A., Cork.

At the same meeting, the Peel Exhibitions awarded at the First University Examination in Medicine were granted to John G. Bell, Belfast, first, £20 a-year for two years; William E. Hadden, Cork, second, £15 a-year for two years.

The Peel prize in composition, limited to the competition of undergraduates in medicine, was awarded for the essay signed "Middlemark", to Robert Shore, M.A., Galway.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ABBEYLEIX UNION—Medical Officer for Ballyroan Dispensary District, at a salary of £100 per annum, with £20 per annum as Medical Officer of Health, and the usual Registration and Vaccination Fees. Election on the 18th instant.

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

BELMULLET UNION—Medical Officer for Bangor Dispensary District, at a salary of £100 per annum, together with £10 per annum as Medical Officer of Health, and the usual Registration and Vaccination Fees. Election on the 17th instant.

*BRISTOL ROYAL INFIRMARY—House-Surgeon. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before December 1st.

BURY DISPENSARY—House-Surgeon. Salary, £100 per annum, with apartments, etc. Applications to the Secretary on or before November 29th.

*CARLISLE DISPENSARY—Junior House-Surgeon. Salary, £90 per annum, with apartments, coal, gas, and attendance. Duties to commence on Dec. 1st.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

GORT UNION—Medical Officer for Gort Dispensary District, at a salary of £120 per annum, £10 as Medical Officer of Health, with Registration and Vaccination Fees. Whoever is appointed is expected to open a Medical Establishment in the town for the accommodation of the district. Election on the 22nd instant.

*GREAT NORTHERN HOSPITAL, Caledonian Road—Two Physicians. Applications on or before December 4th.

*HOSPITAL FOR SICK CHILDREN, Great Ormond Street—House-Surgeon. Salary, £50 per annum, with board and residence. Applications on or before November 27th.

*INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST—Visiting Physician.

*JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer. Salary, £120 per annum, with furnished rooms, attendance, coal, and gas. Duties to commence December 1st.

*LONDON LOCK HOSPITAL—House-Surgeon. Applications on or before December 10th.

*ROYAL FREE HOSPITAL, Gray's Inn Road—Assistant Surgeon. Applications, with testimonials, on or before November 26th.

*ROYAL LONDON OPHTHALMIC HOSPITAL—House-Surgeon. Applications on or before November 22nd.

*TORBAY HOSPITAL AND PROVIDENT DISPENSARY—House-Surgeon. Salary, £100 per annum. Also, Non-Resident Dispenser; salary, £55 per annum. Applications, with testimonials, to the Honorary Secretary not later than November 17th.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*CASLEY, R. K., M.D., appointed Honorary Physician to the East Suffolk and Ipswich Hospital, *vice* C. M. Durrant, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

THOMAS—RICHARDS.—On November 11th, at Dock Street Congregational Church, Newport, Monmouthshire, by the Rev. W. Shillito, A. Garrod Thomas, M.D., to Priscilla Eleanor, daughter of R. H. Richards, of Palmyra Place, Newport, Monmouthshire.

DEATH.

COLLINS.—On November 9th, at Wanstead Lodge, Wanstead, Essex, aged 53 years, *Frederick Collins, M.D.—R.I.P.—Friends will please accept this intimation.

A GOOD-SERVICE pension has been conferred on Surgeon-General George Smith, M.D. Edin., of the Madras Army.

VACCINATION.—The Local Government Board have, for the third time in succession, awarded to Mr. A. S. May, Public Vaccinator of the Forest Hill District of the Lewisham Union, a first-class grant of £16 2s. for efficient vaccination in his district.

QUEEN'S COLLEGE, BELFAST.—The following were awarded scholarships on the 4th inst. *Fourth Year* (Anatomy and Physiology).—R. T. McGeagh. *Third Year* (Medicine).—Thomas Sinclair, W. H. Lendrum. *Second Year* (Medicine).—J. J. Austin, T. G. Bell.

QUEEN'S COLLEGE, CORK.—The following scholarships have been obtained in the Faculty of Medicine. *Fourth Year* (in Medicine, Midwifery, and Medical Jurisprudence).—James Whitton; (in Anatomy and Physiology, Practical Anatomy and Surgery), Jeremiah Cotter. *Third Year.*—H. R. Havelock, John Blair.

NORWICH MEDICO-CHIRURGICAL SOCIETY.—The opening meeting of this society was held at the Norfolk and Norwich Hospital, on Tuesday, November 4th: the President (W. Cadge, Esq.) in the chair. The chief part of the time was occupied by an able and interesting retrospective address from Dr. Short (of Walsham-le-Willows, Suffolk); after which, Dr. W. M. Crowfoot (of Beccles) read some notes of Three Cases of Ovariotomy, which gave rise to an interesting discussion; and Dr. Wilcox (of North Walsham) exhibited a specimen of a rare Deformity of a Fœtus. The members afterwards dined together.

PUBLIC HEALTH.—During last week, which was the forty-fifth week of the year, 3,603 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 22 deaths annually in every 1,000 persons living. It was 16 in Edinburgh, 20 in Glasgow, and 30 in Dublin. The rates in the twenty English towns were as follow: Brighton 15, Oldham 15, Leicester 18, Sheffield 19, Portsmouth 19, Salford 21, Manchester 21, Birmingham 21, Bradford 22, London 22, Newcastle-upon-Tyne 22, Plymouth 22, Norwich 23, Bristol 23, Nottingham 24, Liverpool 24, Hull 25, Leeds 27, Wolverhampton 27, and the highest rate 30 in Sunderland. The annual death-rate from the seven principal zymotic diseases averaged 3.5 per 1,000 in the twenty towns, and ranged from 0.0 and 1.1 in Brighton and Hull, to 5.7 and 8.7 in Newcastle-upon-Tyne and Sunderland. Scarlet fever showed the largest proportional fatality in Leicester, Newcastle-upon-Tyne, and Sunderland; measles in Bradford and Leeds. Eight more fatal cases of diphtheria were returned in Birmingham. The deaths from fever were numerous in London and Portsmouth. Three deaths from small-pox were registered in London, but not one in any of the nineteen large provincial towns. In London, 1,524 deaths were registered, being 112 below the average, and giving an annual death-rate of 22.0. The 1,524 deaths included 3 from small-pox, 50 from measles, 101 from scarlet fever, 11 from diphtheria, 25 from whooping-cough, 41 from different forms of fever, and 26 from diarrhœa; thus to these diseases 257 deaths were referred, being 6 above the average, and equal to an annual rate of 3.7 per 1,000. The deaths referred to diseases of the respiratory organs, which had increased from 190 to 402 in the four preceding weeks, further rose to 405 last week, but were 7 below the corrected weekly average; 264 resulted from bronchitis and 104 from pneumonia. Different forms of violence caused 33 deaths. Three cases of suicide were registered. At Greenwich, the mean temperature of the air was 43.2°, and 2.3° below the average. The direction of the wind was variable, and the horizontal movement of the air averaged 9.8 miles per hour, which was 1.8 below the average. Rain fell on Monday to the amount of 0.01 of an inch. The duration of registered bright sunshine in the week was equal to 11 per cent. of its possible duration.

FOREIGN GRADUATES' ASSOCIATION.—The Committee of this Association consists of the following members: Keith Norman Macdonald, M.D. Erlangen, F.R.C.P., Gowan Park, Cupar-Fife (President); William Gayton, M.D. Brussels, M.R.C.P., M.R.C.S., Medical Superintendent, Small-pox Hospital, Homerton, London, E.; Julius Dreschfeld, M.D. Würzburg, M.R.C.P., Physician to the Royal Infirmary, and Lecturer on Pathology at Owens College, Manchester; Robert Hodgens Lloyd, M.D. Brussels, M.R.C.S., Medical Superintendent of the Lambeth Infirmary, London, S.E.; George Paddock Bate, M.D. Brussels, F.R.C.S., L.R.C.P., Medical Officer of Health, Bethnal Green, London, E.; Herbert Junius Hardwicke, M.D. Giessen, F.R.C.S., M.R.C.P., Sheffield (Honorary Secretary and Treasurer). The annual meeting of the Association will be held at the Charing Cross Hotel, on Wednesday, November 26th, at 8 P.M. The object of the Association is to obtain, in any future amendment of the Medical Acts, for British registered practitioners, the privilege of registering foreign degrees as additional qualifications, on showing that they were obtained after examination. The existing regulations of the British universities are, the programme states, such, that registered practitioners desirous of obtaining an university degree, and however able and willing to undergo an examination in professional subjects, are practically excluded, and are thus compelled to go to foreign universities.

WELCOME TO MR. STEPHEN S. ALFORD IN NEW YORK.—We have received the fuller and more formal account of this interesting occasion. A public reception was given at the King's County Inebriates' Home, at Fort Hamilton, New York, in honour of Mr. Stephen S. Alford, F.R.C.S., Honorary Secretary of the Society for the Promotion of Legislation for Drunkards. After a very pleasant breakfast, Dr. T. L. Mason, of the King's County Home, was called to the chair, and Dr. T. D. Crothers, of Hartford, Connecticut, was made Secretary. The President welcomed Mr. Alford in a very felicitous manner, which called out a warm response from that gentleman. This was followed by interesting remarks by Dr. Parrish of Burlington, New Jersey, Rev. J. Willett of Fort Hamilton, Hon. Mr. Clapp, President of Washingtonian Home, Boston, Dr. L. D. Mason of Brooklyn, Dr. G. L. Beard of New York, Dr. T. D. Crothers of Hartford, editor of the *Quarterly Journal of Inebriety*, and many others. At the conclusion, Dr. Parrish offered the following resolutions, which were passed unanimously; and a copy of them, signed by the President and Secretary, was ordered to be presented to Mr. Alford. "Whereas the presence among us of Mr. Stephen S. Alford, F.R.C.S., of London, is a source of much pleasure to the friends in this country of the cause he represents; and whereas it is due to him that there should be an expression of our unshaken conviction of the necessity for, and our abiding confidence in, the usefulness of institutions for the custody and recovery of inebriates; therefore, resolved: That, notwithstanding the embarrassments to which some of our institutions have been subjected for want of pecuniary means, the work they have done has been quite as much as was anticipated, and the results of said work have been satisfactorily determined to be at least thirty-five per cent. of recoveries from confirmed inebriety: That we recognise those who endeavour to reform inebriates by moral and religious means exclusively, and those who recognise a diseased condition in the same class of cases, and who combine both moral and physical methods, as being alike engaged in the same field with the same purpose; That we congratulate the British Society for promoting legislation on the success which has so far attended its labours, and desire thus to express our high respect for, and our readiness to co-operate with, it in all consistent ways to promote the objects which we in common have in view: That the visit of Mr. Alford has been the means of bringing into closer sympathy the friends of the cause in Great Britain and this country, and that, though we are separated by the ocean, we are nevertheless one in sentiment and in labour; and, with a common reliance upon Divine aid, we confidently anticipate a continued growth and development of the cause."

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Mr. Rose, "On the Treatment of Fractured Patellæ, by drilling fragments and wiring them together"; also, Clinical Cases by the President (Dr. Cockle) and Mr. Spencer Watson.

TUESDAY.—Pathological Society of London, 8.30 P.M. Dr. Moore: 1. Calvaria from Congenital Syphilis; 2. Cancer of the Gall-Bladder. Dr. Abercrombie: Multiple Sarcoma of Skull. Dr. Coupland: Primary Sarcoma of Liver. Dr. Goodhart: 1. Fatty Degeneration of Heart; 2. Myocarditis in Scarlatinal Nephritis. Mr. Walsham: Bifid Uterus and Double Vagina. Mr. Barker: Peculiar Rash on Tongue. Mr. H. Cripps: Enchondroma of the Arm. Dr. Peacock: Malformation of the Heart (two cases). Dr. H. Orlebar: Aneurism and Rupture of Aortic Valve. Dr. Crocker: Heart-Disease (two cases). And other Specimens.—Members are invited to attend at eight o'clock, by which time all specimens are on the tables for examination.

WEDNESDAY.—Association of Surgeons practising Dental Surgery, 8.30 P.M. Council Meeting, 8 P.M. Casual Communications.—Society of Public Analysts, 8 P.M. Mr. O. Hehner, "On the Mineral Constituents of Cinnamon and Cassia"; Mr. G. W. Wigner, "On the determination of Carbonic Acids in Carbonates"; Mr. A. H. Allen, "On the Examination of Coffee"; Dr. Tripe, "Note on the Discrimination of the Starches by means of Polarised Light".

THURSDAY.—Harveian Society of London, 8.30 P.M. Dr. W. Squire, "The Action of Salicine and Salicylic Acid in Rheumatism"; Mr. Osman Vincent, "Congenital Talipes in the Adult"; Mr. Walter Pye, "The Present Position of the Operation of Nerve-Stretching"

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

REMUNERATION BY CLUBS.

SIR,—Your correspondent "A Disgusted Club-Doctor" has his remedy in his own hands: he has only to make his mind up to pay for his comfort, and he may certainly have it, without resigning his clubs or letting a "shady" opponent in to his practice. He does not say so; but from the tenour of his letter we may, I think, assume that he holds his appointments on the usual contract system of from three to six shillings a member *per annum*; consequently he gets frequent unnecessary calls, when Hodge is footsore or Billy has the colic; and if he turn an ear in the least unsympathetic, he is taunted with the remark, "He has got the money and so don't care." The remedy to which I allude has been well tried by twelve clubs in our practice for the last twenty-five years, and hitherto neither my partner nor I have ever had the smallest reason to regret our attachment to benefit societies. It is briefly this, that the clubs hold their own medical fund, and pay the doctor out of it for each case of illness, as a second-class private patient—*i.e.*, about half-a-crown an item, and double for night-work, which is consequently nearly *nil*. Thus it is evidently to the interest of the members, individually and collectively, not to call unless there be real cause, and to that of the doctor to attend when called, knowing that, in common with labourers and miners, he will have "fair wages for fair work".

I cannot just now publish in detail the results of our experience, but all the clubs acknowledge an annual saving of from ten to fifty per cent. Of course, all the money saved by the clubs is so much lost to the profession; but, if a man do not care for *otium cum dignitate*, by all means let him keep to the old system, wear out his horse's flesh, and treat his more paying patients or his family to that irritability of temper which constant unnecessary or vexatious work must produce in the most angelic enthusiast.

I do not know how the system would work in a large town, where the mortality is higher; but it is my firm conviction that the subscriptions need be only very little increased—say six shillings a year—to meet all demands. Anyhow, in this part of the country all are well satisfied with it at only four shillings a year; and our invariable refusal to attend on any but our own terms has never yet led to the transfer of the comitial affections to a shady opponent.—I am, sir, yours, etc.,

November 1979. ONE OF A CONTENTED FIRM.

DR. PEARCE'S friends will see with regret that a paper which he has recently published in a medical journal on "The Treatment of Phthisis by Arsenic", is abstracted at considerable length, with eulogies, in the *Western Daily Mercury*. The newspaper has done him a bad turn unintentionally.

A CAUTION.

SIR,—Last night, a gentlemanly looking man, apparently about thirty-five years of age, called here and asked to see me. He said he would wait; but, after ten minutes, rang the bell and told the servant he could not wait longer. He returned in about a quarter of an hour, saying he would wait for me after all, as he had received a telegram calling him out of town early next morning. After he had been the second time about ten minutes in the house, I returned and found him here. He gave his name as A. Ross, and his address as Union Place, Oxford Street. He spoke with a marked Scotch accent. Shortly after he left, no other person having been in the room, I missed about a dozen books, one of great value. He had a dark moustache, his hair being dark and parted in the middle.—Your obedient servant, NORMAN KERR, M.D.

42, Grove Road, Regent's Park, N.W., November 8th, 1879.

THE CRANIAL BONES IN CONGENITAL SYPHILIS.

SIR,—Allow me to correct one sentence in your report of the few observations I made at the Pathological Society on November 4th. I did not say that "there was no trace of rickets", for, in fact, the ribs were beaded; but that the more one studied these lesions of the cranial bones in early infancy, the more clear it seemed to be that they are due not to rickets, but to congenital syphilis. I did not attempt to prove this from the single specimen shown, but exhibited it as an instance of the earliest stage of those bone thickenings which M. Parrot demonstrated to the Society last year, and which Dr. Barlow and I illustrated at the same meeting by living examples.—I am, sir, yours, etc. DAVID B. LEES, M.D.

PALATABLE EPSOM SALTS.

M. YVON states that the disagreeable taste of sulphate of magnesia may be completely concealed by the addition of a few drops of the essence of mint, provided that the quantity of the vehicle be small. He advises that ʒvi of the sulphate should be dissolved in about ʒi of water, two or three drops of the essence of mint being then added; or the flavouring agent may be added to the salt, and the patient directed to dissolve the whole in as small a quantity of water as possible.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN OCTOBER 1879.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health.

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.		Hardness. (Clark's Scale.)	
			As Nitrates,&c.	Saline.	Organic	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	21.40	0.103	1.135	0.000	0.008	13.70	4.60
West Middlesex..	21.40	0.111	0.129	0.000	0.010	13.70	4.20
Southwark and Vauxhall	21.60	0.088	0.117	0.000	0.008	13.20	4.20
Chelsea.....	21.00	0.085	0.138	0.000	0.008	13.70	4.60
Lambeth	21.10	0.092	0.148	0.000	0.009	14.80	4.30
Other Companies.							
Kent	29.46	0.022	0.480	0.000	0.005	19.40	6.50
New River	21.00	0.052	0.126	0.000	0.006	13.70	4.30
East London	20.00	0.086	0.144	0.000	0.008	14.3	4.20

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases.

AN ERRONEOUS ANNOUNCEMENT.

THE *Western Morning News* of November 8th contained a paragraph stating that diphtheria has broken out at Weybridge, in the Princess Mary's Homes at Addlestone, at Leatherhead, and at Sutton, and that in each case it was shown that the households affected had been supplied with milk from the same dairy. We are happy, however, to state that such is not the case, and that there has been no diphtheria at any of the places named since 1878. Can our contemporary have confused the past and present tenses, and drawn his inspiration from the article on milk and diphtheria published in last week's BRITISH MEDICAL JOURNAL, in which the epidemic of diphtheria in question was referred to in connection with Mr. E. L. Jacob's Reports on the district in which they occurred in 1878? We draw attention to this curious error, because the large circulation of our Western contemporary renders its utterances important for good or for evil.

A CONSTANT READER.—The case is incompletely described, and therefore of no scientific interest.

THE PRACTICAL APPLICATION OF ELECTRICITY.

SIR,—In an editorial note of this day's JOURNAL, upon the rule passed by our Committee to enable medical men to make use of the hospital electrical room for the treatment of their private patients, you remark that you "trust that the arrangement will be carefully guarded, and that it will not prove another means of accustoming well-to-do people to look to hospitals for medical assistance". The Committee have taken this step after much anxious thought, and in the hope that it will be approved by the profession; for complete electrical apparatus is not usually at the disposal of general medical practitioners, who also can seldom afford the time to carry out efficient treatment, and hence one reason why electrical quacks flourish. No person is permitted to take advantage of this rule without a written request from his medical attendant (and the circular to which you refer was sent only to medical men): he is told that he remains that attendant's patient, and that he must see him periodically, and his electrical treatment is not varied without his attendant's sanction. If you can suggest any additional "safeguard", I am sure that our Committee will gladly adopt it; and, may I add—as you remark that general practitioners have too much reason to complain of the injury which special hospitals in particular have done them—that we admit no patient to treatment (except under the above rule), whether or not in a position to contribute a small weekly sum, without the production of a certificate of recommendation from either a subscriber, minister of religion, magistrate, or medical practitioner, stating from personal knowledge the amount of the applicant's weekly income, and that we admit no patients who are in a position to pay for ordinary medical attendance.—I am, etc.,

THE MEDICAL SUPERINTENDENT.

The West End Hospital for Diseases of the Nervous System, Paralysis, and Epilepsy, 73, Welbeck Street, Nov. 1st.

*** We are glad the Committee have given this arrangement much anxious thought. If it be to command the confidence of the profession, they must continue to watch it closely. As for the security which a subscriber's recommendation affords (even with the proviso mentioned by the medical superintendent), we feel no confidence in it. It is the simple fact that "hospital letters" have proved a failure, and are gradually being abandoned.

ARSENIC IN PLAYING CARDS.

THE practice of using arsenic for the purpose of giving a more brilliant colour to various substances is, of course, to be deprecated; but it is possible to be too hysterical about its use. Thus the letter of the city analyst of Glasgow, to the effect that he has discovered 1.6 grains of arsenious acid and .91 grain of oxide of copper in the composition of a green-backed card, refers to a danger which may easily be overestimated. Mr. Wallace says that with the aid of a little alkali and water, the green colouring matter was easily removed: but who is going to use soda and water to a playing card? The danger from such a source is indeed infinitesimal. The real danger consists not in playing cards that have a hard varnish over their surfaces, but in substances from which the arsenic is easily detached, by chance rubbing or otherwise—as, for example, "flock" wall-paper, which, it may be observed in passing, need not necessarily be green to contain arsenic, but may be of divers other colours.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

THE TITLE OF DOCTOR.

SIR,—Without any intention of taking part in the controversy upon the title of "Doctor", now appearing in your columns, I must protest against the charters of the London College of Physicians, and the well known legal cases relating to London physicians, quoted by Dr. Parsons, being used as an argument in favour of the alleged right of Licentiates of the Edinburgh College of Physicians to use either the prefix "Dr." or the affix "Doctor of Physic". So far as legal right is concerned, the licentiates of these Colleges must stand upon the charters and Acts of Parliament appertaining to their own individual College; and it in no way follows that, because the Licentiates of the London College may lawfully take these titles, even in defiance of their College, the Licentiates of the Edinburgh College may also use them. I have great respect for Dr. Parsons' opinion, since he appears to be the only one amongst your correspondents who has taken any trouble to make himself acquainted with the subject of medical titles, and shall feel glad if he will convince me that I am in error in the views I have expressed.

I wish to point out courteously to Dr. Parsons that he appends to his name the letters L.R.C.P., which signify the London qualification, whereas, as he is a Licentiate of the Edinburgh College, he should have used the initials L.R.C.P.Edin. There is a great distinction between these qualifications—one being a licence to practise in all the branches of the profession, the other a licence to practise medicine only; and I hold that gentlemen ought not to use letters which may imply that their qualifications are those which in point of fact they are not. Foreign graduates adopt this system frequently, and by it the public are often led to believe that their degrees are obtained from the best of our English Universities instead of from abroad.—I am, sir, your obedient servant,

November 10th, 1879. R. H. S. CARPENTER.

SIR,—In reference to the title of "Doctor" now under discussion, I would ask you to allow me to say a word or two about the Licentiates of the King and Queen's College of Physicians in Ireland. In 1860, the Irish College thought they had made the discovery, after nearly two centuries, that their charter empowered them to confer on their Licentiates the right to use the title of Doctor of Medicine or M.D. Mr. Barber and other of their Licentiates soon demanded to have M.D. placed after their names in the *Medical Register*. Dr. Francis Hawkins, the late Registrar, applied for advice to Sir Hugh Cairns (the present Lord Chancellor of England), and his opinion was, "that the College had no power to confer the degree of Doctor of Medicine; and without the degree there can be no legal right to the title, to whatever extent it may have been conceded by courtesy". After this advice, Dr. Hawkins refused to comply with the demand, and the case was brought before the Court of Queen's Bench, Dublin, and a *mandamus* was applied for. In due course, judgment was delivered by Lord Chief Justice Lefroy. The Court were unanimously of opinion that the application requiring the Registrar to attach the title of Doctor of Medicine to the name of Mr. Barber could not be complied with. "A licence", continued the Chief Justice, "and a degree from an University are mentioned; and this gentleman, having only a diploma or licence to practise medicine generally, and not a degree from an University, was not entitled to be entered on the *Register* as a Doctor of Medicine". Notwithstanding this judgment, the College of Physicians of Ireland continued granting its M.D. licences until the Provost and Fellows of Trinity College, Dublin, took the matter in hand; and, as a consequence of this, the case came before the Master of the Rolls in 1864. The Master of the Rolls, in giving judgment, held that under the true construction of the Charter of the College of Physicians of 1692, its Licentiates had no authority to use the title of Medical Doctor unless the same was conferred upon them by one of the Universities. In conclusion, His Honour said "that it was surprising that a body consisting of such eminent men should allow itself to be so misled as it had been". This decision, outside the interested parties, gave general satisfaction; for it was considered intolerable to give a non-academical corporation the power of conferring an academical degree by the mere act of examining for their licence. I think, therefore, when gentlemen of the Irish College of Physicians take the title of Doctor, or place M.D. after ther names, they should remember that they are setting at defiance the judgments of the highest courts of law in the land.—I am, sir, your obedient servant,

A MEMBER.

SIR,—It seems to me that the grievance of the general body of the profession with regard to the title of "Doctor" is not altogether a sentimental one, for it must be in the experience of all that many good men are placed at a disadvantage in this respect. They have not had the opportunity of taking the degree of M.D.; and as arrangements stand now, there will always be a large body in this position; further, they are too honourable to assume a title to which they have no legal right. Others, however, are not so strict; and inasmuch as the public attach a higher value to the man who calls himself "Doctor" than to plain "Mr.", men often occupy a difficult and annoying position. Cannot the difficulty be met this way? Let the whole body of general practitioners call themselves "Dr.", and let consultants style themselves "Mr." I do not think this would simply be shifting the difficulty, because in the latter case there would be no assumption of any title at all, and it might safely be assumed that the general practitioner would make himself acquainted with the status of the man he wished to consult.—Yours faithfully, M.B., M.R.C.P.

SIR,—Your correspondent J. F. M. and Dr. Parsons have very clearly shown that it is in accordance with the *mos et usus* of centuries to give the prefix title of "Dr." to all legally qualified physicians; but will you allow me to add one or two facts pointing in the same direction, but of more recent date?

1. In the Regulations of the Royal College of Physicians of London, dated December 22nd, 1838, we read as follows: "The College is prepared to regard in the same light, and address by the same appellation, all who have obtained its diploma, whether they have graduated elsewhere or not. The College feels confident that it has overstepped neither the spirit nor the letter of the law . . . by thus endeavouring to maintain its character and reputation, and vindicate its claim to be the source of professional honour."

2. In the "Historical Sketch of the Laws of the Royal College of Physicians of Edinburgh", we are informed that the late Registrar of the General Medical Council gave "the title of 'Doctor' to the licentiates of the Edinburgh College on the receipt for their registration fee".

3. My personal experience has been that since I obtained a licence to practise as a physician, I have been addressed as "Dr." by all my medical friends, including

Fellows of the London College of Physicians and hospital physicians of the highest reputation, as well as by the legal authorities and public press of the neighbourhood. I place the prefix of "Dr." on my doorplate, and consider this a more modest title than that of "Physician".

4. A Bachelor of Medicine almost invariably takes the title of "Dr."; but why? Not because he is an M.D., for he certainly is not, nor yet because he is an University graduate, for whoever heard of a Bachelor of Laws taking the title of "Doctor"? He must wait until he receives his doctorate, but a Bachelor of Medicine takes the prefix because he is regarded as a physician; and from time immemorial a physician, of whatever rank, has always been styled "Doctor".—Your obedient servant, L.R.C.P.Ed.

SIR,—Through the medium of your valuable JOURNAL, I would make an humble appeal to the authorities of the Royal College of Physicians of London to abolish the harsh by-law prohibiting their members and licentiates from assuming the title of "Doctor". In the locality where I practise I am surrounded by men who, possessing the ordinary diplomas of College and Hall, but, having taken illegitimate degrees, or being Licentiates of the Irish or Scotch College of Physicians, have assumed the title of "Doctor", whilst I am compelled to designate myself "Surgeon" only. I have heard the observation as applied to myself, "He is only a surgeon". Formerly, the designation "surgeon" was understood by the public to be equivalent to general practitioner; but since the very numerous assumptions of the title of "Doctor", the public begin to consider that one who styles himself "Surgeon" only has but a partial and inferior knowledge of his profession, chiefly confined to the practice of surgery. Under these circumstances, Licentiates of the College of Physicians of London feel it a great hardship to be denied the right of stating their medical as well as surgical qualifications, and thus to be rendered liable to such remarks as "You practise chiefly as a surgeon, I believe, but as mine is a medical case I must consult Dr. ——-", who may perhaps hold only a single inferior qualification and the title of a spurious M.D. Even if every Licentiate of the London College were to style himself "Physician and Surgeon", which he has a perfect right to do, yet it seems to be a very unusual and somewhat pompous designation, likely to be suspected of having come across the "pond"; but the title of "Doctor" is at once natural and proper for those practising generally both as physicians and surgeons, reserving the initials M.D. for graduates of Universities. If the prohibitive by-law be legal, which is a query, and is allowed to remain in force and no greater facilities afforded than at present for obtaining a British degree, without residence, the exodus to foreign universities which grant the candidates only so-called scientific titles and not titles to practise, either in the country of the University or in this country, must continue and increase, thereby continuing to obfuscate the public and to fill the coffers of those foreign Universities.—I remain, sir, yours obediently, L.R.C.P.Lond., M.R.C.S.E., & L.S.A.

HONORARIA TO OFFICERS OF MEDICAL CHARITIES.

SIR,—Could any of the members of the British Medical Association favour me with a list of the medical charities where an honorarium is given to the honorary medical officers, and upon what conditions it is offered? also what the amount of the honorarium is in each case? and oblige, yours very truly, A MEMBER.

Liverpool, November 11th, 1879.

P. J. C. F., who desires information as to a small work on practical dispensing, will do better to inquire of the editor of the *Pharmaceutical Journal*, who would more readily appreciate his wants, and be enabled to give him the information he requires.

MODERN PHYSICIANS.

SIR,—Correspondents on this head seem to forget—1. That former licentiates were and are members of the body corporate of the Royal College of Physicians of London; 2. That when general practitioners were admitted to the new "licence", the old licentiates were made "members"; 3. That the new licentiates are nothing more than persons licensed to practise medicine: they are neither "physicians" nor "doctors of medicine", being outside the body corporate of the College. To claim or use the title "Doctor" unless you are M.D. is exceedingly bad taste. No one can doubt that the term "doctor", as popularly used, simply implies "medical man", just as "parson" implies "clergyman"; but to the more educated, if a man affix "Doctor" to his name, it is assumed he has an University degree, M.D. or M.B. at least. If the present L.R.C P.London be a "physician", how greatly has the College lowered the status of that time-honoured title by its new L.R.C.P., for there are scores of these "physicians" working for from one shilling to about three farthings per visit.—Yours truly, M.D.

*** There is no doubt whatever, either legal or moral, that a licentiate of the College of Physicians is a physician; in fact, he is expressly that and nothing else: that term including, however, a knowledge of surgery as part of "physic".

ASSOCIATE (Nov. 1st.) is requested to communicate with Mr. Engledue Prideaux, Sutherland House, Wellington, Somerset.

DAVOS AND PHTHISICAL PATIENTS.

SIR,—I have no desire to urge anything against Davos as a health-resort, but I have heard one complaint in connection with it, the subject of which might be the cause of disappointing results in some cases—I allude to the diet. I was told by a patient who wintered at Davos last year, that he found the bread always execrable, and the meat for the most part tough and uninviting. It is true that the gentleman referred to was much benefited by his sojourn there; but he was one of those fortunate individuals, occasionally met with, in whom pulmonary mischief has for a long time little effect in impairing appetite and digestion. Had either of these been at fault, the result would probably have been different.

I am one of those who believe that the good effects of mountain air on phthisical patients is due to increased desire for food, and improved assimilation of the products of digestion which it induces, rather than to the absence of bacteria and their germs. An aseptic atmosphere could certainly be found on many mountain ranges, so that Davos is not peculiar in possessing this; but it is easy to understand that its great merit may consist, as Dr. Allbutt has pointed out, in what he expressively calls the absence of "draughts". That is to say, the invalid can there pass a greater number of hours in the open air with comfort and impunity, than it would be possible for him to do in other equally elevated resorts; and the organism, which may be still capable of responding to its invigorating surroundings, has a fuller opportunity afforded of doing so at Davos than in other places as yet known to us.

In order, however, that residents at Davos may have "good digestion wait on appetite, and health on both", there is need it seems, unless I am singular in my information, that they also should experience the benefits of a "Doctor in the Kitchen".—I am, sir, yours obediently, GEORGE F. ELLIOTT.

Hull, October 25th, 1879.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

FOREIGN DEGREES AND THE MEDICAL ALLIANCE ASSOCIATION.

SIR,—Mr. R. H. S. Carpenter will earn the thanks of all right-minded foreign graduates if, as he promises, he will bring before the Select Committee proofs of abuses in the granting of continental degrees. Reiteration of statements is, however, a very different matter from proof of facts; and your readers will, I think, not be able to congratulate the Secretary of the Medical Alliance Association on the manner in which he has attempted to sustain in your columns the aspersions he sought to cast on continental degrees in his first communication. The case with which he seeks triumphantly to wind up his correspondence is, it seems to me, far from conclusive to an ingenuous mind. He omits from the document which he has been at so much pains to translate, the date at which the University of Jena conferred the degree in question upon the graduate of the Metropolitan College of New York. Anyone turning to the *Medical Register* for 1878 will find that even our own Medical Council recognised, in 1859, as a qualification to practise in this country, the degree granted by the aforesaid College; and it is, therefore, by no means astonishing that a continental university should have recognised a degree which, if held by an American citizen, would be accounted a qualification to practise in his own country. British subjects who hold continental degrees have never asked that their degrees should be recognised except as supplementary to British qualifications in medicine and surgery; and for this privilege they hope to show ample reason when the matter comes under the consideration of the Select Committee. As to the innuendo with reference to the "mode of practice of some of the holders of continental degrees", a glance at the published list of British medical practitioners possessing foreign degrees—containing as it does the names of many well known physicians and surgeons holding public appointments, as well as of numerous Members and Fellows of the Colleges of Physicians, both of London and Edinburgh—will serve to show that it may not be altogether presumption on the part of the foreign graduates to imagine that, as regards professional and social "respectability", they will bear comparison as a body with other practitioners.—Yours faithfully,

A GRADUATE OF A BRITISH AND OF A CONTINENTAL UNIVERSITY.

SIR,—The various letters which have appeared lately in the BRITISH MEDICAL JOURNAL defamatory of foreign medical degrees, so surprised me by the boldness of the accusers in proclaiming to the public what I knew perfectly well to be totally incorrect, that I forwarded the various numbers of the JOURNAL which contained these letters to the Deans of the respective Faculties attacked. I have this day received a reply (in English) to my communication from the Dean of the Medical Faculty of Giessen University, of which the following is an exact copy.

"Giessen, October 29th, 1879.

"Dear Sir,—Many thanks for the documents and book you were so kind to send us. As no name of the candidate is given—of whom it is pretended that he holds an unworthy diploma—we are at the time quite unable to publish any successful declaration against the gentleman denouncing us. As soon as we shall be made acquainted with the full name of any medical man of whom it may be said he states he possesses a diploma of M.D.Giessen, not obtained in a regular way—*i.e.*, in consequence of a severe examination, thoroughly corresponding to the conditions you were so kind to publish in *The Guide to European Universities*, etc. (Sheffield, 1878, etc.), and which regulations we do not trespass in the least, I say we shall, you may rely upon it, prosecute such a slanderer with all the lawful means we are possessed of. To avoid any misapprehension, you will allow me to add that since the year 1846 no graduation took place without a strict examination *vivâ voce*. Although our regulations were sometimes altered in detail, that in former years the examination took place for your countrymen in English, as most of our members were acquainted with this language, and could serve as interpreters for their colleagues not speaking English fluently.—I remain, dear sir, truly yours, WILBRAND, M.D., Dean of the Medical Faculty of the University of Giessen.—To Herbert Junius Hardwicke, M.D., F.R.C.S.Edinburgh, M.R.C.P.Edinburgh, Parkfield House, Sheffield, England."

I am expecting replies from other Faculties, which I shall also place before the public, that they may judge for themselves how far the accusations made against foreign degrees can be supported by facts. I maintain that to publish a medical diploma of ancient date, suppressing the date itself, in order to defame the good name of a foreign University which, it is perfectly well known, grants to the present day an honourable and estimable medical degree, is not worthy of a Briton.

In the JOURNAL of November 1st, I notice a letter, headed "How Foreign Degrees may be Obtained"; I think that the heading of this letter should have been "How American Degrees may be Obtained". There is as great difference between American and European Continental degrees, yet both are foreign degrees. A few remarks concerning American degrees will, perhaps, not be out of place. In the United States there is free trade in medicine, and any graduate may practise; moreover, any body, or any community of men, may, if they feel so disposed, form an University and grant medical degrees. Thus there are Universities of good repute and of bad repute, each with equal licensing powers. Many of these Universities require only a single session of attendance at a medical school before granting admission to the examination, which are often absurdly easy. Others require no evidence of attendance at lectures at all, and hold examinations which are merely so in name. Others require such stringent conditions to be complied with that their degrees are justly placed on a par with those of any European University. Such are the Harvard University, the College of Physicians and Surgeons of New York, New York University, Buffalo University, Bellevue Hospital Medical College at New York, University of Pennsylvania, Jefferson Medical College, Chicago University, Ohio University, Cleveland Medical College, Missouri Medical College, University of Michigan, Vermont University, Louisville Medical College, North-Western University, Columbia College of New York, Louisiana University, Iowa State University, Wooster University at Ohio, Detroit Medical College, Starling Medical College, Dartmouth Medical College at Hanover, Kansas City College of Physicians and Surgeons, Miami Medical College at Cincinnati, Rush Medical College, Indiana Medical College, and Fort Wayne Medical College. These medical bodies, all of which grant the M.D. degree (which is the only medical qualification in the United States), held a meeting, in June 1877, at Chicago, for the purpose of forming an association which would have for its object the elevation of the standard of medical education. During the meeting, it was agreed that "no person, whether a graduate in medicine or not, shall be given a diploma of Doctor of Medicine who shall not have fulfilled the following requirements", etc. These comprise, 1. Evidence of good moral character, and of having attained the age of twenty-one years; 2. Proof of having studied for at least three years under a regular graduate or licentiate and practitioner of medicine; 3. Evidence that during the above mentioned

three years he has matriculated at some affiliated college, or colleges, for two regular sessions, and has attended two full courses of instruction in anatomy, physiology, chemistry, materia medica, therapeutics, obstetrics, surgery, pathology, and practice of medicine (the latter of the two full courses must have been attended at the College issuing the diploma); 4. The candidate must pass a personal examination before the Faculty of Medicine on all the branches of medicine mentioned above. The following article was also agreed upon: "No College shall admit to the privileges accorded in the article above mentioned the students or graduates of any College which, during any period of the student's or graduate's pupilage, shall have been excluded from the list of affiliated Colleges recognised by this Association." It would seem from this that all degrees granted by those Universities which have joined the Association are entitled to respect, whilst those granted by Universities which have not thought fit to join the Association must be looked upon with suspicion. The greatest defect in this Association scheme is the absence of any method of ascertaining that the person entering on the study of medicine has received a competent general education. As yet, a very small number of the American Colleges have issued regulations on this subject; but their requirements are very far behind those in force in our own country.

After reading the above, one must naturally arrive at the conclusion that "M.R.C.S.Eng. & D.D.S.America" applied at the office of one of the inferior licensing bodies which exist all over the States. Why did he not go to a respectable University like Harvard? He would have had no reason to complain of the mildness of the examination there. These "bogus" American Universities are entirely supported by the unscrupulous and unprincipled adventurer, the impostor and the quack, and the men who have failed to pass the foreign examination boards.—I am, etc.,

HERBERT JUNIUS HARDWICKE, M.D.

Sheffield, November 1879.

SIR,—Mr. Carpenter is wrong when he says he was assailed in the *Durham Chronicle* on the title of "Dr." He threw down the gauntlet by attacking his own profession, and holding up for the ridicule of the working classes the diploma of every examining body but those to which he belongs. As for myself using the title, I followed the example of Mr. Carpenter and others who had just the same right; neither was the correspondence continued long after myself and others ceased to reply: it was stopped by the editor. If any of your town readers are sufficiently interested to see this correspondence, it will be found in the papers for Sept., Oct., and Nov., 1867. These may be seen in the British Museum. They will be able to judge how Mr. Carpenter has served his profession. When he made the statements to which I lately referred, he forgot to state that the men who got the F.R.C.S. and L.R.C.P. Edinburgh, were men who had been years in practice, but left the public to imagine that any one, either tinker or tailor, could get them if they had the money. As for my degree, I beg to inform Mr. Carpenter that I obtained it after an examination above that of the London physicians for candidates in practice before 1861, and quite equal to that demanded from present students, and decidedly superior to the examination given in Edinburgh in 1867. I see from your paper of to-day, that Drs. Warlomont and Jansens will be in town next month. Mr. Carpenter should see them, and have their opinion about the University of Brussels. They are both scientific gentleman, who will give him any information he may require. The book to which Mr. Carpenter refers I have not received. The F.R:C.S.Edin. is purely an honorary distinction, which no man can get unless he be known to a resident Fellow, and is proposed and seconded, and his name posted up in the College for three months. I intend to proceed to this, and will ask my old teachers, Professors Lister and McLeod, to assist me in my application.

I am sorry to have taken up so much of your space. I will not trouble you again on this subject, but we will have the subject ventilated before the Committee when it resumes its sittings.—Yours, etc.,

W. EASBY, M.D.

March, Cambridgeshire, November 8th, 1879.

SIR,—Your correspondent, "M.R.C.S.Eng.", has obliged your readers by telling them how foreign degrees may be purchased abroad, and I can inform them how they can be bought in England. About three years since, several advertisements appeared in the *Daily Telegraph*, offering to assist gentlemen in obtaining medical and clerical degrees. As one of the Committee of the Medical Alliance Association, and in co-operation with its secretary, I negotiated with a certain learned foreign doctor for the purchase of a foreign degree. There was at first some difficulty in obtaining an interview with this gentleman, but this having been accomplished, and mutual confidence having at last been established between us, several foreign degrees were offered to me, at prices ranging from £3 to £13 each. Midwifery licences were also offered. Having ascertained practically how these degrees were to be obtained, and having become acquainted with the names of some persons who had purchased such degrees, and were practising with them, our negotiations were broken off. All the facts of this process of discovery are in the possession of Dr. Carpenter, as the Secretary of the Association, and I hope he will bring them well under the notice of the profession.—I am, sir, faithfully yours,

M.R.C.S. and L.S.A.

CASE OF ANGINA EXTERNA.

SIR,—This interesting case I am going briefly to describe, occurred some time ago in Norfolk. The patient was a little boy about four years of age, and the youngest in the family; the remainder had all had ordinary mumps a short time previously. A friend of mine, whose case it really was, pronounced it to be mumps, and thought the child was only taking its turn, but I, from the curious symptoms after the second time I saw him, diagnosed the case as one of angina externa. The symptoms, etc., were as follows. A hard tumour extended from the left angle of the jaw, a little below the parotid, and more superficially to the middle of the mylohyoid; the skin over it was of a dark red colour; there were pain, soreness, and great difficulty in opening the mouth. The child's appearance was stupid, and the pupils were dilated; pulse quick and small; skin cold and clammy; temperature 100°. I gave it aromatic spirits of ammonia and liquor ammoniæ acetatis with a saline draught. There was no change for the first four days, but after that the child became rapidly worse. On the sixth day, I was called to see the child in haste. When I arrived, I found the child unconscious, his forehead covered with sweat, pulse almost imperceptible, temperature 101°. I ordered ice to the head, bread-poultices every twenty minutes to the tumour, and, on learning the child's bowels were confined very much (from milk-diet), I prescribed twelve grains of compound jalap powder every hour until the bowels were thoroughly opened. The following day, the child was better, but the general symptoms remained. I ordered aromatic spirit of ammonia, spirit of nitrous ether, and spirit of chloroform, as the child was very weak. A week after this, low typhoid symptoms set in; the tumour softened, the superficial skin became of an intense reddish brown and then greenish; the pulse small and wiry; skin cold and covered with sweat; temperature 102°. The urine was thick and loaded with urates; the appetite was lost: pain, soreness, and difficulty in opening the mouth and swallowing were much increased; the pupils were still dilated, the pupil on the affected side more than the other, doubtless from pressure. In fact, he was almost dead. I opened the tumour freely, and ordered poultices to be applied constantly. I prescribed ammonia and chloroform, with tincture of calumba, port wine, and beef-tea. The child afterwards made a slow but complete recovery, with the aid of tonics.—Yours truly,

Holsworthy, Devon. THOMAS DUTTON, L.R.C.P.Ed.

SIR,—A short time since, we sent out some supplements of the *Medical Review* weighing one ounce and a half, which were stamped in compliance with the orders of the Post Office authorities, but which they afterwards marked "Subject to letter postage", and in many instances have collected from the medical men to whom they were sent an additional 2d. This is alike annoying to them and ourselves; and, although no fault of ours, we shall be happy to send 2½d. to any medical gentleman who may have paid the overcharge, and will send address on postcard.

We trust this explanation will be accepted by those who have been subjected to the impost, as clearing us from any intentional under payment of postage.—Yours obediently,

J. W. BURROUGHS & Co.

8, Snow Hill, London, November 12th, 1879.

INFANT MORTALITY IN RURAL DISTRICTS.

THE fortieth annual report of the Registrar-General, which is the last that has been issued, contains a valuable table which throws much light upon the varying rates of infant mortality in different parts of England and Wales. In this table is given the rate of infant mortality (the proportion of deaths under one year to one thousand births registered) in each of the English counties, and in each of the eleven years 1867-77. The mean proportion in the ten years 1867-76 averaged 154 per 1,000 in England and Wales. The lowest county rates in these ten years were 107 in Westmorland, 110 in Dorsetshire, 112 in Wiltshire, 118 in Herefordshire, and 119 in Hampshire, Sussex, and the metropolitan portion of Surrey. These may be taken as average rates of infant mortality in rural districts, although the rates rose far higher in many mainly agricultural counties. The ratio in the other counties ranged upwards to 170 in Durham, 171 in Nottinghamshire, 174 in Yorkshire, 181 in Lancashire, and 185 in Leicestershire. The high rates in most of these last-mentioned counties is due to the large proportion of urban population they contain. During the nine years 1870-8, the rate of infant mortality in twenty of the largest English towns averaged 174 per 1,000.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Berkeley Hill, London; Dr. J. W. Miller, Dundee; Dr. J. Cockle, London; Dr. Carpenter, Croydon; Dr. William Roberts, Manchester; Dr. E. Copeman, Norwich; Dr. Dougall, Glasgow; Dr. Channing Neill, Ryde; Mr. A. B. George, Dodington, Whitchurch; Mr. F. R. Manby, Swaffham; Dr. Macpherson, London; Dr. H. Macnaughton Jones, Cork; S.S.C.Cantab.; Mr. T. G. Lithgow, Farnborough Station; Mr. E. P. Hardey, Hull; Dr. A. Buchanan, Glasgow; Mr. W. H. Browne, Aldbrough, Hull; Dr. T. Oliver, Newcastle-upon-Tyne; Dr. H. Tomkins, Manchester; Dr. Dunkley, Foleshill; Mr. R. S. Fowler, Bath; Dr. W. Bernard, Londonderry; Dr. Sutherland, London; Mr. Gerald E. Barron, Caterham Valley; Mr. James Robertson, Edinburgh; Mr. H. T. Wood, London; Dr. Cassells, Glasgow; Dr. Mitchell, Barnard Castle; Dr. R. Battey, Rome, Georgia; Dr. R. Cory, London; Mr. W. F. Jebb, London; Dr. W. S. Playfair, London; Dr. Hoggan, London; Dr. A. T. H. Waters, Liverpool; Dr. Thomas S. Dowse, London; Dr. Norman Kerr, London; M.D.; Dr. Russell, Birmingham; L.R.C.P.Lond., M.R.C.S.E., and L.S.A.; Dr. H. J. Hardwicke, Sheffield; Dr. G. S. Davis, Detroit; M.B., M.R.C.P.; Mr. Lawson Tait, Birmingham; Dr. Easby, March; L.R.C.P.; An English M.D.; Dr. J. Haddon, Manchester; Dr. A. H. Buck, London; Mr. Stephen Alford, London; The Secretary of Apothecaries' Hall; Dr. F. Barnes, London; The Registrar-General of England; Mr. G. Eastes, London; The Registrar-General of Ireland; Mr. T. Spencer Wells, London; Mr. R. M. Mann, Manchester; Dr. J. Murray, Scarborough; Mr. V. Jackson, Wolverhampton; Mr. A. S. Duke, Rathgar; C. S.; Mr. Reginald Harrison, Liverpool; Dr. Cheadle, London; Mr. A. Kempe, Exeter; Mr. W. Whitehead, Manchester; Dr. W. R. Thomas, Sheffield; Mr. J. H. Craigie, London; Dr. Tripe, London; A Constant Reader; Mr. P. T. Collins, Wednesbury; Dr. Hime, Sheffield; One who wants to know you know; Dr. H. W. Boddy, Cheetham Hill; Mr. C. W. Price, Caerphilly; Dr. Tilt, London; Mr. Hallowes, Maidstone; Dr. Semple, London; Dr. Littlejohn, Edinburgh; Mr. G. Thompson, Stapleton; The Secretary of the Association of Surgeons practising Dental Surgery; Dr. Warner, London; Mr. H. R. Swanzy, Dublin; An Insignificant Member of the B. M. A.; Mr. W. Macewen, Chatham; Dr. D. Lees, London; Dr. McCook Weir, Nottingham; Mr. G. R. Jesse, Macclesfield; Mr. E. L. Jacob, London; Dr. Britton, Halifax; Mrs. Moore, Cliftonville, Margate; Dr. Steele, London; Mr. de Watteville, London; A British Medical Graduate; Mr. F. T. Good, St. Neots; A Member; Dr. M. Clement, Port Talbot; Mr. J. Hogg, London; Dr. Decaisne, Paris; Messrs. Probyn and Company, London; Dr. J. Moore, Belfast; An Old Undergraduate; Our Glasgow Correspondent; Dr. S. Murphy, London; Dr. T. J. Walker, Peterborough; Dr. A. S. Taylor, London; etc.

BOOKS, ETC., RECEIVED.

The Necessity of Mental Culture for Professional Students. By Christopher J. Nixon, A.B., M.B. Dublin: John Falconer. 1879.

CLINICAL LECTURES
ON
STRICTURE OF THE URETHRA.

Delivered in University College Hospital.

BY BERKELEY HILL, M.B., F.R.C.S.Eng.,
Professor of Clinical Surgery in University College.

LECTURE II.

DEFINITION OF STRICTURE: SYMPTOMS: TREATMENT.

LET us now define strictures. They may be classified as: 1, inflammatory; 2, spasmodic; 3, organic. The last variety is the only one recognised by some surgeons; but I think that, with certain limitations, it is allowable to call stricture some inflammatory or spasmodic narrowings that are undoubtedly met with in practice. First, what is meant by an *inflammatory* stricture? It is simply temporary local congestion and swelling of a part of the urethra; that part being most commonly, if not always, the site of slight previous organic induration; in other words, a stricture of wide calibre which is temporarily exaggerated by inflammatory swelling. *Spasmodic* stricture has been so widely used to explain away difficulties in passing instruments—difficulties which reside in the hand of the operator, rather than in the urethra of the patient—that it has become a byword among surgeons, and is not unfrequently a mere excuse for incompetence. But, in the following limited sense, I believe the term may be correctly employed. By "spasmodic stricture" I understand a narrowing of the calibre of the urethra through contraction of the muscular layers surrounding it; hence only a temporary narrowing, though liable to repetition at short intervals. I have never found this condition "pure and simple". I have found considerable impediment to the passage of the sound from reflex muscular spasm at the bulbo-membranous part, when there has been also (1) penile organic stricture of moderate or even of only slight amount near the meatus. That is, a fibrous narrowing situate about half or a quarter of an inch from the meatus, which would allow No. 20 bougie or sound to pass, may be accompanied by so much muscular contraction at the bulbo-membranous part, that not only No. 18, but No. 13 or No. 12, would be grasped. This condition is, I believe, frequently mistaken for an organic stricture, size No. 12 French (5½ English), and so treated by the surgeon; whereas, if the band near the meatus be cut sufficiently to allow a large bougie (No. 26 or 27, or more) to pass down the urethra beyond the point of incision, the large bougie will travel readily through the hitherto tight bulbo-membranous part to the bladder. Such a case was before us the other day. (2) Muscular contraction at the bulbous part also occurs when the mucous membrane adjacent is inflamed or swollen, especially if the submucous tissue be the seat of organic fibrous stricture of greater or less amount. When due to inflammation, such strictures are relaxed without instrumentation, by depletion and sedative applications; or, when a slight organic stricture is aggravated by muscular spasm, this aggravation rapidly disappears under the influence of anæsthetics. In no other sense do I recognise the term "spasmodic stricture".

In true *organic* strictures, the narrowing is due mainly to (1) new plastic production of slowly contracting quality, but also, as already mentioned, in part to (2) vital contraction by muscular spasm. They may be classified according to: 1, their position; 2, the form of the new product; 3, the behaviour of the stricture.

First, let us consider the *localities* of stricture. Commonly, as you know, it is maintained that strictures oftenest develop in the bulbous portion. There is no doubt that severe or widely developed strictures are most frequently found in that situation; not that tight strictures are developed only at the bulb, for both very narrow ones and those resulting from extensive induration may be produced at any part of the spongy portion. Witness the patient on whom I operated before you last week. He had a large gristly mass occupying the last two inches of the corpus spongiosum, and spreading into the glans penis. No. 3 French (No. ¾ English) could with difficulty be passed; yet, as soon as this indurated mass was divided, No. 24 catheter slipped readily into the bladder, showing that no impediment existed at the bulbous portion. But, if all kinds of contraction, slight and severe, be added together, the first inch of the urethra—perhaps even the first half-inch—is most frequently the seat of stricture. To corroborate this statement, I have extracted from the notes of thirty patients who have applied for cure of long-standing gleet the following. In only five of the thirty was no unyielding area in front of the bulb discovered; in the remaining twenty-five, stricture varying between No. 19 and No. 5 French (9½ and 1 English) was detected in the antescrotal portion. In ten of these cases, the apparently narrowest stricture was at the bulb; but in the fifteen others the bulb was not contracted at all. Further examination of these notes showed that the points most liable to induration and narrowing are these: 1, the meatus and the ends of the navicular fossa; 2, the spongy portion behind the last inch; 3, the junction of the bulbo-membranous portion.

The *form of the new product* varies much. One form, known as bridle-stricture, consists of a membranous fold, with slight thickening of the submucous tissue. The new fibres vary in direction, least commonly surrounding the whole urethra. They may be single or several. The bridle-stricture is found in the antescrotal portion.

Warts and scars left by ulcers occasionally form stricture.

Lastly, the most troublesome form of organic stricture—indurated areas of the tract of the urethra, in the shape of fibrous nodules or knots which stand forward on the surface of the urethra, causing irregular projections as well as unyielding contractions. Thus they twist the course of the canal and impede the passage of bougies. But, instead of being limited to patches, the indurating tissue may develop evenly along the canal, making it smooth and gristly for a large part of its length, with a narrow passage through the centre. This condition is a far less frequent one than the nodular form. From the foregoing, it is seen that the amount of fibrous thickening may be limited to one or two thread-like bands, or may develop sufficiently to occupy the whole corpus spongiosum except the glans, where induration is rarely ever complete. Furthermore, the fibrous tissue may spread through the perinæum, and convert that region into a dense gristly mass with unconquerable tendency to shrink.

The *behaviour* of strictures varies. Some (1) are rigid, and can be dilated only to a very small extent towards the natural calibre of the urethra. Others (2) easily yield and slowly contract; such are of comparatively recent origin and of scanty development. Lastly (3), some yield quickly to the dilating force, and almost as quickly shrink back again to their former dimensions; such are known as "India-rubber" strictures. In cases of advanced stricture, especially where instruments have been much used, the urethra is greatly altered. Between the meatus and the narrowest stricture, it is more or less contracted by additional indurations, sometimes excoriated or ulcerated at one or two points; while just in front of the main stricture there are often perforations of the urethra forming blind passages in the cellular tissue, even reaching into the urethra again, or into the rectum behind the stricture—"false passages". At the stricture itself, the surface is dull and roughened. Behind the farthest contraction, the canal is much widened and pouched, the pouches being lined by ragged ulcerated tissue. Here also break away fistulæ and urethral extravasations, from the strain to which the urethra is put by the impediment in front. The remainder of the urinary apparatus is also more or less affected. The bladder is the seat of chronic catarrh; its muscular walls are thickened. The ureters are dilated, and with them the pelves of the kidneys are chronically inflammed; the pyramids are flattened, partially destroyed by fibrous interstitial degeneration; the cortical substance is wasted; with other consequences of prolonged chronic irritation.

The *Symptoms* of stricture call for some remark, because those usually put forward as important indicate advanced stricture—when the disease may be always relieved, indeed, but can rarely be cured in the exact sense of that term. It is a common practice to direct the student, when he inquires for stricture, to ascertain the presence or absence of four leading symptoms. They are: 1, diminution of the size of the stream; 2, straining and frequent desire to void urine; 3, pain in passing it; and (though on this stress is seldom laid) 4, scanty oozing of muco-pus from the meatus in the intervals of micturition—the so-called gleet. Of these, none are pathognomonic; all but the gleet are usually absent until irreparable mischief has been done.

Diminution of the size of the stream, though actually present even when the amount of impediment is very small, is seldom detected by the patient until it has become a considerable feature in his case.

Straining and more frequent calls to micturate are undoubtedly most marked symptoms of stricture, but of stricture that is far advanced, not of the early and easily manageable strictures. So often are they absent, that a patient whose urethra has lost much of its expanding power will deny any change from his usual habit when questioned on this point.

Pain in passing urine is decidedly present only in advanced stricture, while painful micturition is due to so many other urinary affections that it has little value as a symptom of stricture, though it is not unfrequently just the one symptom which induces the patient to consult his doctor.

Though not highly estimated by the surgeon, twisting or forking of the stream is a sign to which patients attach great value as an indication of stricture. With narrow strictures, it is due to the flow of urine being too feeble to dilate the meatus; but it is often caused by irregularity of the outlet without any special contraction of the deeper parts of the urethra, and consequently *per se* does not suggest much to the surgeon.

By contending that the diagnostic value of the symptoms just mentioned has been exaggerated, I do not intend that you should omit to ask for them. I do not for one moment overlook their importance; but I wish you to understand that they may all be answered in the negative and yet stricture may be present.

The only symptom constantly or almost constantly acknowledged is a slight discharge. Indeed, you will find that patients continually apply to you for cure of a gleet, who are quite unconscious that any alteration in their mode of passing urine has taken place, even when examination reveals a diminution of the dilating power of the urethra, which may reach one-half of the diameter. The patient is conscious of nothing more than a slight gleety discharge. He feels no pain, no unusual call to void urine, and marks no alteration in the stream. Hence the importance of ascertaining the cause of any gleet, in order that, if the discharge be due to the contraction of the passage, further contraction may be prevented and a real cure effected. But at the same time do not let me be misunderstood. I do not mean that every gleet is the herald of a stricture, which requires instrumentation forthwith as a matter of course. On the contrary, withhold instruments whenever you have satisfactory evidence that the discharge is not of long standing. How long a discharge may exist without indicating stricture, is uncertain; for inflammatory induration is formed very slowly in some cases, but tolerably fast in others. As a general rule, it is not necessary to search for a stricture when the discharge has not lasted more than four or five months. Be sure, however, that the whole duration of the discharge is contained in the period named, and that there has not been previously a clap or a gleet, of which the discharge complained of is only a continuation.

Treatment.—In treating organic strictures of small calibre—by which I mean contractions at or below No. 18 or 16 French (9 or 8 English), the methods for selection are five: gradual interrupted dilatation; gradual continuous dilatation; forcible dilatation or divulsion; internal urethrotomy; and, lastly, external urethrotomy.

This guiding fact influences the selection of any method; viz., the permanent contractility of all strictures which have developed much beyond the inflammatory stage. However the stricture may be treated, this force always remains. The aim, therefore, should be to obtain dilatation without pain or suffering to the patient, in such wise that the calibre may be henceforth maintained at or near the normal width by the occasional passage of a bougie possessing that width. In saying that the recontraction of any stricture, however treated, is a guiding fact in its treatment, I am aware that I am maintaining an opinion which, though generally prevalent in Europe, has some stout opponents on the other side of the Atlantic, among whom Dr. Fessenden N. Otis of New York and the late Dr. Thomas R. Brown of Baltimore must be mentioned with the greatest respect. They tell us that a cut carried *completely* through a mass of stricture-tissue heals by a new splice composed of non-contracting material, which not merely restores the full calibre to the urethra, but further effects the gradual and complete absorption of the fibrous stricture-tissue from the part cut through. Dr. Otis has recently published his views and his experience in a work on stricture, in which he gives cases where most careful examination of urethras, made some years after his operation had been performed, could not detect any contraction of their calibre, or even the site of the strictures which had been divided (*On Stricture of the Urethra and its Radical Cure*, Putnam's Sons, New York, 1878). Such good fortune has so rarely followed in cases treated by myself, and is so seldom expected by surgeons on this side of the Atlantic, that I think we must not claim, as the termination usually to be expected in the treatment of narrow stricture, that which at best is only an exceptional result. It is true that contraction, so slow as to be imperceptible, does in rare examples succeed dilatation of a stricture; and I have noted such a result to follow treatment both by simple dilatation and by incision. It is just possible that this result is less rare than we suppose; for it is difficult to get further information of patients who leave our hands relieved of their symptoms until they suffer from a repetition, and thus we may include some few really cured among those classified as simply relieved of their ailment. The longest period of absence of shrinkage after incision I remember is that of a gentleman for whom I divided a stricture in 1871. The patient left for India soon after the operation, with an urethra through which a No. 23 passed easily. After seven years' service, he returned home, when I had an opportunity of passing a bougie. No. 23 went easily to the bladder, notwithstanding that no instrument had been passed since his absence from England. In a tabular statement of the cases of narrow stricture treated in my wards during two years (1876-7), which has been constructed for me by my former distinguished house-surgeon Mr. Francis J. Davies, of Newport, Monmouthshire, each patient's latest report of his condition after discharge from hospital has been entered. In very few, it is likely that no recontraction had taken place even in those cases where the bougie is recorded to have been regularly passed. In some of the cases, it is only too clear that, in spite of the operation and of the subsequent bougie-passage, recontraction has occurred. I shall have occasion to refer again to this table, in illustration of the results gained by the several methods for treating stricture.

To return to the selection of the method to be adopted in any given case: I have employed all the modes mentioned above, and I will allude to them in the order in which they have been enumerated.

1. *Gradual Dilatation by the passage of bougies of increasing sizes at short intervals.* This is the safest of all methods, as it excites the least irritation when being carried out; but, unfortunately, it often fails to obtain an expansion which does not speedily shrink again; and this is especially the case for strictures of the antescrotal portion. It is most efficacious for strictures of recent formation—cases that consist mainly of inflammatory thickening, and especially if these be situate at the bulbous or bulbo-membranous portion. Again, gradual dilatation by the interrupted passage of bougies is sometimes the only prudent course when the patient has evidence of renal disease. Such persons run some risk of acute suppurative nephritis, and even of septic affections, if submitted to cutting operations. But, with these general exceptions, gradual dilatation is an uncertain and most unsatisfactory mode of treatment. Nevertheless, from its simplicity, safety, and non-interference with the patient's pursuits, bougie-passing is very generally applied to all strictures. It commonly gives some relief, even when only imperfect and short-lived. In fine, gradual dilatation by the passage of bougies at short intervals is specially suited (1) for semi-inflammatory narrowings; (2) to widen strictures of long duration, when the kidneys are seriously degenerated, or the condition of the patient much debilitated. In such persons, the consequences of stricture may be relieved and their repetition warded off, by the passage of a bougie once a week or once a fortnight. In these cases, long intervals between the passage of an instrument are not to be expected; but the patient may be restored to comparative comfort and to tolerable health, and thus enjoy a longer lease of life than otherwise would be granted to him, But gradual dilatation is useless for strictures near the meatus, for bridle-strictures, or for dense fibrous perineal strictures.

For the *gradual dilatation* of stricture, three instruments are employed. They are rigid or flexible. The best material for rigid sounds is steel, which is susceptible of a higher polish than silver or plated metal, and is less liable to be scratched or dented. All metallic instruments, as soon as they are withdrawn, should be immersed in scalding hot water and wiped dry while hot. This ensures proper cleansing, and prevents rust. Steel sounds are best preserved for use in a wash-leather case.

The shape of rigid sounds is of great importance. Part of the sound is curved, in order that it may reach the neck of the bladder easily. Though at the penile part the urethra is a freely flexible tube, from the bulb to the bladder it has a tolerably fixed curve, which in most persons is a segment of a circle about three and one-quarter inches in diameter. Hence a sound of similar curve can be most easily passed through the deeper urethra, being less apt than an instrument of larger curve to hitch in the floor, and needing a less rapid sweep of the stem when traversing the deeper portion of the canal than does the short sharp bend of the calculus-sound or lithotrite. This curve, known in this country as Thompson's curve (Fig. 2, No. 11), occupies one-fourth of a circle of three and a quarter inches diameter, and is two and a half inches long. Here is another sound with shorter curve (Fig. 2, No. 1), being one inch and seven-eighths long. It is a trifle shorter than the curve recommended by Civiale, and is that which I prefer for urethral sounds. It occupies one-fourth of a circle two inches and one-third inches (sixty *millimètres*) in diameter. Being a shorter curve, it is more suitable for urethral sounds which are not required to reach the bladder, while the larger curve is best adapted for catheters which must pass the neck of the bladder. Whether the instrument follow the larger or the smaller curve, it must maintain the curve to its very tip, and not terminate in a straight run half an inch or even an inch long

before the tip is reached, as too many catheters and sounds do. Such straight ends strike the neck of the bladder before entering, and hitch there or give pain. The stem should be straight, seven and a

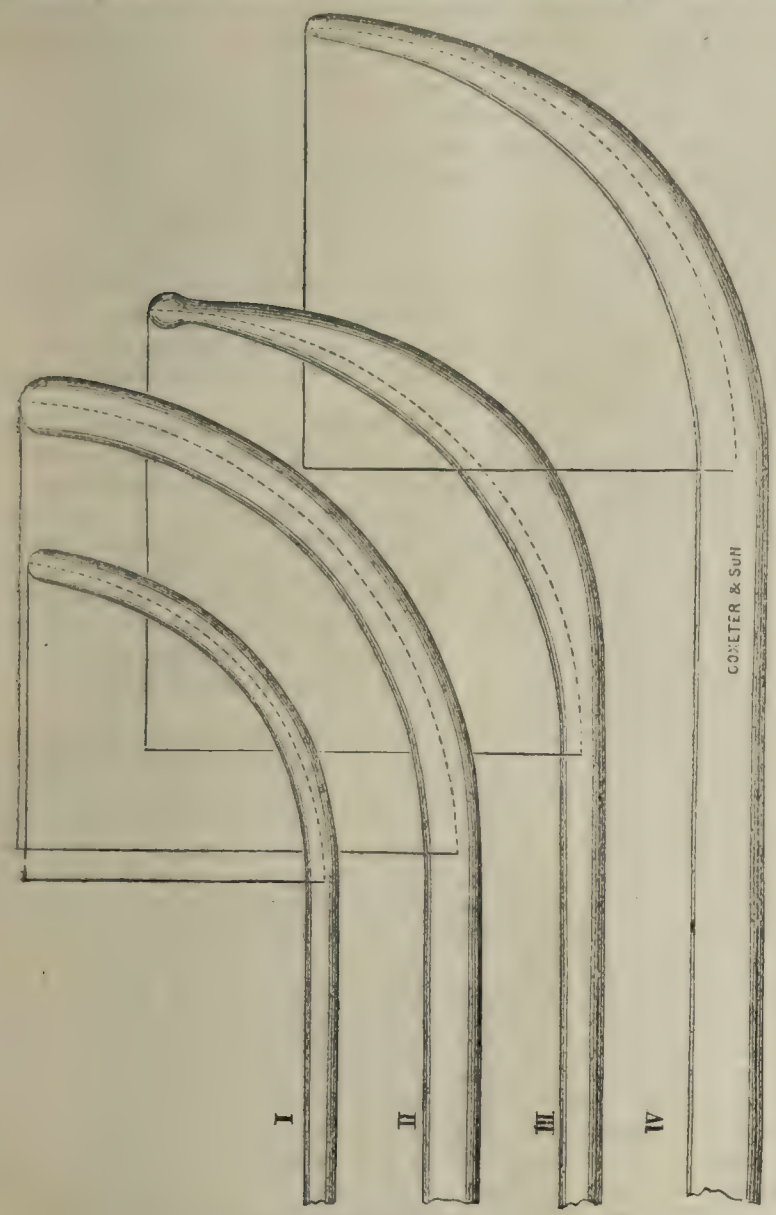


Fig. 2.—Urethral Sounds.

half or eight inches long, making the length of the sound without the handle about ten inches. Urethral sounds have a broad handle flattened from side to side, to give secure hold to the thumb and second and third fingers. The upper surface of the handle, being parallel with the shaft, is at right angles to the direction of the tip or beak. This disposition enables the operator to be constantly aware of the direction of the beak when using the instrument. Such sounds have the same calibre from handle to beak, being simply rounded at the point.

Conical sounds have the same curve and length, but increase in thickness four or six sizes from the point through the curve to the straight part. This one (Fig. 2, No. IV), for example, measures No. 5 at the beak, and at the junction of the curve with the straight part No. 12. The next size enlarges from No. 10 to No. 18, and so on. Five such sounds constitute a set. It is maintained by those who advocate their use, that they wedge their way through a stricture more readily and dilate it more rapidly than do a succession of sounds of the same calibre throughout.

Bellied sounds (Fig. 2, No. III) come into fashion time after time, but they have never got into general use. In these sounds, the stem is slender, not more than thirteen or fifteen *millimètres;* while at the middle of the curve the sound swells rapidly to twenty or more, and again diminishes towards the beak to thirteen or fifteen, and ends in a slightly bulbous beak. The curve is Thompson's curve, for these as well as for the conical sounds. They are supposed to pass through a stricture more readily than a sound of equal thickness throughout. I use them occasionally for maintaining the patency of a stricture after dilatation.

Flexible bougies are much more generally available than rigid instruments. There are two varieties, English and French, so called to distinguish their shape and quality, rather than the country where they are made, for the French variety is made in England of better material and quality than those imported from France. The English or "gum-elastic" bougie, tawny brown in colour, consists of a seamless silken tube woven like a stocking, of two or more thicknesses, stiffened and varnished over and over again until a thick smooth coating of copal is obtained. They have an even thickness throughout, are slightly flexible when cold, but, if warmed, become much more supple, and thus can be made to retain any desired curve that may be given to them when warmed, if cooled quickly in that curve; or, if kept for some weeks in the required shape, they take a "set" which they are slow to lose. When made of bad material, they are apt to snap in cold weather or if suddenly twisted. Hence to buy low-priced bougies is bad economy, and disastrous accidents are not unfrequent from pieces of bougie being left in the urethra or lost in the bladder. A well-made bougie, on the other hand, will by long use become rough and unserviceable, but is still tough enough to stand a sharp tug or twist without breaking.

The French or black bougie is, or ought to be, made of a silken tube similar to the English bougie, and varnished with black varnish. It is less durable than the English bougie; but the shape is better adapted to insinuate itself through the urethra. It can, therefore, be passed with less pain or discomfort, and thus is becoming the instrument most generally employed; while the English flexible bougie, like the rigid sound, is reserved for special circumstances. Thus are they shaped. The stem for two-thirds of its length from the handle has an equal calibre. In the last third, it tapers slowly till the last inch is reached, when it rapidly dwindles to a narrow very supple end. The tip itself is slightly enlarged or bulbous, to hinder it from catching in pouches or inequalities of surface. This enlargement is called by the French the "olive"; hence the name *bougie olivaire*, not to be confounded with the bullet-bougie, or *bougie à boule*. Now, on the minute observance of these details depends the production of a good or a bad instrument. Here are two—one good, one bad. (See Fig. 3.) I



Fig. 3.—Olivary Bougies.

must acknowledge that the English workman, in imitating the French production, often fails to reproduce its essential peculiarities. He makes the tapering point taper too slowly, so that, instead of a very

supple end that will bend at once before the obstacle, he makes an instrument that bends slowly along a good part of its length, and so fails to accomplish the intention of the supple end, which is to change the direction of the point quickly, that it may slip by an obstruction and pass on. The "olive" or swell at the tip also is often made much too large; it should never approach the thickness of the stem, but be just sufficient to remove all sharpness from the point. The French tapering bougie can be made to preserve any desired curve against a moderate strain by running down the interior of the bougie a leaden wire, or by filling it with shot. In this way, they are almost as useful as English bougies in the cases where a fixed curve is desired.

When compared with each other, the following are the chief characteristics of rigid and flexible instruments. Rigid instruments are far more difficult to pass, more capable of injuring the patient, and, unless passed with proper skill, more painful to him. On the other hand, they are more durable, can be easily kept in good condition in hot climates, can be made more smooth and, being rigid, their points can be guided by the hand past pouches and other obstructions. Of flexible instruments, the great advantage is their suppleness. This enables them to accommodate themselves to the urethra without strain; but, as their points cannot be easily directed away from an obstruction or false passage, they often slip where a rigid sound readily gains the bladder.

RESEARCHES

ON THE

TEMPERATURE IN PHTHISIS AND SOME OTHER DISEASES:

WITH REMARKS ON THE GENERAL VALUE OF THERMOMETRIC OBSERVATIONS IN DISEASED CONDITIONS.

An Address delivered at the Opening of the Session of the Liverpool Medical Institution, October 1878.

By A. T. H. WATERS, M.D., F.R.C.P.,

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Of the many symptoms of disease, there is no one more interesting or more worthy of attention than the temperature of the body. The wonderful power which the human economy possesses of maintaining in health an uniform, or almost uniform temperature under varying conditions of external heat, is a phenomenon interesting alike to the student of natural history, the chemist, the physiologist, and the physician; and it is nowise remarkable that the variations of temperature produced by abnormal conditions should have attracted the notice of early observers. As far back as 1638, Sanctorius applied the thermometer to the determination of temperature; and a century later Van Swieten, by improved instruments, made observations which proved that in fever the temperature was higher than in health. De Haen, a colleague of Van Swieten, made further observations, and became aware of the morning remissions and evening exacerbations which characterise fevers; of the rise of temperature in febrile rigors; and of the discrepancies between the pulse and the temperature. He used his knowledge of these changes as a guide to his therapeutics and regarded the return to a normal temperature as a proof of convalescence. No observations of any great value to practical medicine seem to have been made after De Haen's time, until Currie made his important researches; but, although Currie's work on this subject went through three editions, it influenced his contemporaries very slightly. From the time of Currie to the year 1840, but little may be said to have been done in medical thermometry.

At that time, there was commenced a series of painstaking investigations which have never been interrupted. It was not, however, till 1851 that Wunderlich began his researches, which resulted in the treatise so well known to the profession; and thus it appears that, with a few exceptions, to some of which I have referred, it was reserved for the practitioners of the latter half of the nineteenth century to bring to bear instruments of precision in the investigation of this particular phenomenon of disease, and to study it scientifically.

Those who, like myself, began the practice of the profession a quarter of a century ago, well know that at that period no regular temperature observations were made in our hospital wards, and the clinical thermometer was not the constant accompaniment of the practitioner in his rounds. It is, indeed, only within the last twelve or fifteen years that, in this country at least, the instrument has become of daily use, and hat, from an accurate record of temperature observations in disease, attempts have been made to generalise on this symptom.

That in the early days of the introduction into practice of a novelty, its value should be either overestimated on the one hand, or somewhat doubted on the other, is only what might be expected. Possibly the use of the thermometer by the inexperienced may have been to some extent productive of error. The recognition of the fact that the temperature had risen a few degrees above the normal may have led to an exaggeration of the patient's danger, and the fear that some serious pyrexial condition was present; whilst, on the other hand, a fall of temperature below the normal may have given rise to the notion that collapse was threatened. The prolonged use of the thermometer has, however, enabled us to avoid errors of this kind—errors which, as they were on the side of caution, were of a very venial kind.

The facts to which I wish to call your attention are the outcome of a long series of careful observations, made either by myself, or under my supervision. They may, I believe, be implicitly relied on. I have thought, therefore, they might be worthy of being made the subject of a discourse which it is my duty, as your president, to address to you on this occasion.

The science of thermometry in disease, although at present but little developed, obviously rests on no uncertain basis. The practical value of thermometrical observations is capable of easy demonstration. The more we can introduce into our practice instruments of precision; the more we can bring into play, in the investigation of morbid phenomena, those senses on which we can most certainly rely;—the more easily will the mind be able to analyse the difficult problems which disease presents; the more shall we tend to raise medicine from the region of pure empiricism; the more easy shall we render the teaching of our art; and the more, therefore, shall we diffuse the knowledge of diagnosis, and of the practical application of therapeutics.

Although the normal temperature of the human body is placed at 98.4 to 98.6 deg. Fahr., this is liable to certain variations, which should be borne in mind in thermometric observations in disease. As regards adults, it is stated by Davy, Gierse, Fröhlich, and Lichtenfels, as the result of observations on themselves, that there is a daily range of about one degree. Sydney Ringer, as the average of a series of observations, makes the range about the same. My own observations on myself give 98.6 deg. as the highest reading, and 97 deg. as the lowest, thus giving a daily range of 1.6 deg.

In children, the daily range is greater; and it is a noticeable fact, that the range diminishes with increasing years; so that in the aged the range is very slight. There appears to be in all persons, of whatever age, a tendency to a fall of temperature in the evening; and in children this amounts to one, two, or three degrees, and begins usually from 5 to 7 P.M., and is rapid up to 9 or 10. The minimum is reached during the early hours of the morning, from 2 to 4 A.M.; and then a rise begins, which may reach its maximum at 9 or 10, but sometimes later. It is very important to bear in mind these alterations of temperature in the diagnosis and treatment of diseases of children; for, as there is a normal rise at certain periods of the day, a single examination at such times might possibly lead to error; and, again, inasmuch as there is a normal fall late in the evening, the recognition of a persistent high temperature at that time might aid us very much in the diagnosis of certain cases of tubercular and enteric fevers, often very difficult diseases to make out in children.

Another question with reference to normal temperature is, whether there is any difference in the temperature in different climates. Dr. John Davy, from observations made on himself, stated that in tropical climates the normal temperature of man was one degree higher than in temperate zones. This statement remained for a long time unchallenged; but of late it has been apparently confuted by the observations of two army surgeons, Drs. Johnston and Boileau. Without referring in detail to their observations, it may suffice to say they have found that the temperature of the human body does not rise under the influence of tropical heat. Dr. Johnston states that the mean of 320 readings was 97.74 deg. Fahr.; and it would thus appear that the normal temperature is rather lower in intertropical, than in temperate climates. At all events, we may, I think, safely conclude that it is not higher, and therefore we must be prepared to recognise a temperature of 99 to 100 deg. as abnormal in both climates.

The first disease to which I wish to call your attention in connection with this subject is phthisis. The development and progress of this affection are marked, as a rule, by elevations of temperature, sometimes of a very striking character. How far these are due to *tuberculosis* or *tuberculisation*, to the phthisical diathesis, or to inflammatory or other changes incident thereto, or consequent thereon, I cannot at the present moment stop to consider. There are, I believe, no diseases, except ague, and septicæmia, including pyæmia, in which there are alterations of temperature so extreme, characterising the pyrexial and apyrexial

states, or the periods of exacerbation and remission, as in those which come under the designation of acute phthisis; and, as far as my own experience goes, it is in the pneumonic form of the disease that the most marked oscillations of temperature are observed.

Table No. I shows the temperature of a lady whom I attended. The case was one in which there was a rapid consolidation of the apices of both lungs, with all the characters of a scrofulous pneumonia, a rapid formation of cavities, and death. The temperature was taken morning and evening; the highest temperature recorded was taken at 9 P.M. of the 17th June, when it was found to be 106.6 deg. On the following morning, at 10 o'clock, it was 97 deg., giving a fall of 9.6 deg. The lowest temperature observed was 96 deg. on several mornings. This extreme oscillation—a very high evening temperature, and a low or subnormal morning temperature—is a marked characteristic of acute phthisis, especially of the pneumonic form. It is very rare, however, to find the oscillations as great as in the case now under consideration.

TABLE I.—*M. S., aged* 30. *Acute Pneumonic Phthisis.*

Date.	Morning.	Evening.
June 1	98.8	105.0
,, 2	97.4	104.2
,, 3	98.6	104.4
,, 4	99.0	101.5
,, 5	99.0	103.5
,, 6	96.0	102.0
,, 7	97.0	100.0
,, 8	97.0	103.0
,, 9	96.0	101.8
,, 10	97.4	102.0
,, 11	96.0	103.8
,, 12	97.0	102.2
,, 13	96.5	102.2
,, 14	97.0	104.0
,, 15	97.0	104.2
,, 16	98.4	103.8
,, 17	98.4	106.6
,, 18	97.0	103.5
,, 19	99.1	103.0
,, 20	99.7	102.8
,, 21	96.0	103.0

On looking at a table of this kind, it is easy to understand how grave must be the nature of this disease; how the existence of so high a temperature, even for a few hours daily, must tend to a destructive waste of tissue. It is only in consequence of the fact that the temperature is not continuous, that there are remissions—amounting, indeed, to intermissions (for the temperature frequently falls below the normal)—that we can account for the maintenance of life.

Now let me call your attention to another case very similar to the last, but not marked by symptoms so acute. The patient whose temperature is represented in Table No. II was a woman twenty-eight years of age, who was admitted into the Infirmary under my care on December 28th, 1877. At that time, there was crepitation over the upper part of the left lung, and a temperature, three days after admission, of 103.6 deg. In this patient, there was rapid consolidation, and development of cavities, in the upper part of both lungs. The woman died on February 4th. You will observe that the case was characterised by oscillations of temperature, which, although not as great as those of the preceding case, were nevertheless well marked. From the evening of the 16th of January, at 5 P.M. to 9 the following morning, there was a fall of five degrees and a half, from 105 to 99.5 deg., and again from 5 P.M. of the 24th to 9 A.M. of the 25th there was a fall of four degrees, from 105 to 101 deg.

TABLE II.—*S. C., aged* 28. *Acute Pneumonic Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
January 16	103.0	105.0	104.6
,, 17	99.5	100.8	102.0
,, 18	102.6	103.6	103.6
,, 19	102.4	105.0	104.7
,, 20	103.4	104.7	103.8
,, 21	102.3	104.7	104.0
,, 22	102.4	105.0	104.6
,, 23	104.0	104.8	104.0
,, 24	103.0	105.0	102.5
,, 25	101.0	103.5	104.7
,, 26	103.0	104.6	104.0
,, 27	102.0	103.4	103.0
,, 28	100.5	102.6	102.0
,, 29	100.0	103.0	104.0

As a contrast to these two cases, let me call your attention to the Tables Nos. III and IV. These represent the temperature oscillations of two cases of acute miliary tuberculosis of the lungs, *acute tubercular phthisis.*

The first case (No. III) is that of a man who was admitted into the Infirmary, under my care, on the 6th of February 1878, and died on the 14th. He was at work as a fireman on board a steamer twelve days before admission. On the following day, he was seized with dyspnœa and faintness, and gave up work. On examination, I found the physical signs of cavities, which I diagnosed as old, under the right clavicle, with subcrepitant *râles* all over both lungs. There was a somewhat congested state of the face, and a general condition not unlike that met with in typhoid fever. The case was diagnosed as one of acute tuberculosis with old-standing lung-disease. This diagnosis was verified by the *post mortem* examination. Some old cavities were found in the right apex; and both lungs were studded throughout their entire extent with semitransparent tubercles, with the usual engorgement of the pulmonary tissue around them.

As you will see, the temperature in this instance was not *very* high. It reached 105.6 deg. at 5 o'clock one evening; but a temperature considerably above the normal was persistently maintained. On no occasion—and it was taken three times a day—did it approach the normal; the lowest temperature marked being 101.4 deg. The oscillations were far less marked than in the previous cases.

TABLE III.—*J. K., aged* 28. *Acute Tubercular Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
February 6	—	—	104.0
,, 7	103.6	103.8	103.0
,, 8	102.4	104.4	105.5
,, 9	103.2	104.1	104.0
,, 10	102.0	101.2	101.9
,, 11	103.0	103.2	103.5
,, 12	102.4	102.8	103.0
,, 13	103.0	105.0	103.0
,, 14	104.0	104.8	—

The second case (No. IV) was that of a man who was admitted into the Infirmary, under my care, on April 5th, 1873, and died on May 16th. At the necropsy, the lungs were found studded throughout with miliary tubercles, and some small cavities existed in the lower lobe of the right lung. The case was diagnosed as one of acute tubercular phthisis. Here, again, the temperature did not rise to an extreme height, nor were the daily oscillations very decided; the greatest fall from exacerbation to remission being 3.6 deg.

TABLE IV.—*W. H., aged* 24. *Acute Tubercular Phthisis.*

Date.	Morning.	Evening.
April 20	102.2	104.2
,, 21	103.4	102.2
,, 22	102.8	103.3
,, 23	102.8	103.5
,, 24	102.8	103.0
,, 25	101.5	101.0
,, 26	102.2	103.5
,, 27	103.6	104.5
,, 28	103.2	103.8
,, 29	103.7	103.3
,, 30	102.0	102.5
May 1	101.5	103.2
,, 2	102.8	103.0
,, 3	101.5	102.5
,, 4	100.0	103.0
,, 5	102.4	103.2
,, 6	100.0	103.0
,, 7	99.4	103.0
,, 8	100.5	103.0
,, 9	102.2	103.6
,, 10	101.6	103.8
,, 11	102.5	103.8
,, 12	101.8	103.3

In the first two of these four cases of acute phthisis, there was a rapid destruction of tissue going on, extensive softening and excavation of deposits thrown out into the lungs, and extreme exacerbations, and remissions of temperature occurred. In the two latter, the destruction of tissue was little or none, but there was extensive deposit of tubercle—*tuberculisation;* and this, although it raised the temperature considerably, and maintained it at a high level, was not attended by very great defervescence.

It is interesting to note these phenomena, but not easy to account for them. The cases of acute pneumonic phthisis, in their daily alternations of temperature, come to resemble very closely cases of septicæmia and pyæmia; but here, again, there is a difference. In pyæmia, the exacerbations and remissions may occur three or four times a day; whereas in acute phthisis there is, as a rule, a steady rise of temperature from the morning to the evening—the maximum being reached at five,

six, seven, or nine o'clock—and then there is a steady fall. Table No. v shows the oscillations of temperature in a well-marked case of pyæmia, in which, after death, numerous abscesses (pyæmic) were found in the liver. The rises of temperature in pyæmia are attended with rigors; and in this respect the disease resembles an intermittent fever. But in pyæmia, as is not the case in ague, there may be several rises and falls of temperature—exacerbations and remissions—in the course of the day. The Table represents the variations of temperature during four days. The patient, a woman, had suffered from abscess behind the ear, which had been opened. Hæmorrhage had occurred, for which the occipital artery was tied. She came under my care on the 22nd of March 1878. At 11.30 A.M. on that day, the temperature was 106 deg.; at 9 P.M., 101.4 deg. The following day, at 9 A.M., it was 101.8 deg.; and at 9 P.M., 98.2 deg. The next day the temperature was taken frequently, and you will observe that there were two distinct exacerbations followed by remissions, amounting, indeed, to a cessation of fever—intermission.

TABLE V.—*M. C. Pyæmia.*

March 22	.. .. ..	11.30 A.M.	106.0
,, ,,	.. .. ..	9 P.M.	101.4
,, 23	.. .. ..	9 A.M.	101.8
,, ,,	.. .. ..	9 P.M.	98.2
,, 24	.. .. ..	9 A.M.	102.5
,, ,,	.. .. ..	11.30 A.M.	104.2
,, ,,	.. .. ..	4.30 P.M.	100.5
,, ,,	.. .. ..	6 ,, ...	98.5
,, ,,	.. .. ..	12 ,, ...	104.0
,, 25	.. .. ..	9 A.M.	99.5
,, ,,	.. .. ..	5 P.M.	101.5
,, ,,	.. .. ..	9 ,, ...	101.5
,, 26	.. .. ..	9 A.M.	100.0
,, ,,	.. .. ..	12 noon	101.0
,, ,,	.. .. ..	3 P.M.	102.5
,, ,,	.. .. ..	6 ,, ...	103.0
,, ,,	.. .. ..	9 ,, ...	101.5
,, 27	.. .. ..	9 A.M.	101.0

Table No. VI shows the temperature of a case of septicæmia after excision of the breast. The patient was under the care of Mr. Bickersteth, and was operated on by him on November 13th. I am indebted to the resident medical officer of the Infirmary, Mr. Damer Harrisson, my present house-physician, but at that time Mr. Bickersteth's house-surgeon, for this chart. On November 19th, six days after the operation, the temperature rose to 105 deg. During the following day, nineteen observations were made. There were two rigors and two distinct exacerbations of temperature, followed by remissions. You will observe that there is rise of temperature reported of 4.4 deg. in ten minutes—viz., from 102.6 deg. to 107 deg. I am told that this great rise was carefully noted at the time, and that such rises are occasionally met with in septicæmia. The patient died on November 22nd. No deposits of pus were found.

TABLE VI.—*M. W., aged* 48. *Septicæmia after Excision of the Breast.*

November 13	.. ..	Evening	99.8
,, 14	.. ..	Morning	99.5
,, ,,	.. ..	Evening	100.0
,, 15	.. ..	Morning	99.4
,, ,,	.. ..	Evening	99.7
,, 16	.. ..	Morning	99.8
,, ,,	.. ..	Evening	100.9
,, 17	.. ..	Morning	101.6
,, ,,	.. ..	Evening	101.0
,, 18	.. ..	Morning	100.5
,, ,,	.. ..	Evening	101.5
,, 19	.. ..	Morning	102.8
,, ,,	.. ..	Evening	105.0
,, 20	.. ..	8 A.M.	103.6
,, ,,	.. ..	11 ,,	104.0
,, ,,	.. ..	12.15 P.M. (12.30 P.M., rigor)	105.0
,, ,,	.. ..	1 ,,	106.2
,, ,,	.. ..	1.30 ,,	105.7
,, ,,	.. ..	1.45 ,,	104.5
,, ,,	.. ..	2 ,,	104.0
,, ,,	.. ..	2.45 ,,	103.0
,, ,,	.. ..	3 ,,	102.8
,, ,,	.. ..	4 ,,	102.6
,, ,,	.. ..	4.30 ,, (rigor)	102.6
,, ,,	.. ..	4.40 ,,	107.0
,, ,,	.. ..	5.15 ,,	105.2
,, ,,	.. ..	5.30 ,,	104.5
,, ,,	.. ..	6 ,,	104.0
,, ,,	.. ..	6.30 ,,	103.5
,, ,,	.. ..	7 ,,	103.4
,, ,,	.. ..	7.30 ,,	102.5
,, ,,	.. ..	8.50 ,,	100.5
,, 21	.. ..	Morning	100.4
,, ,,	.. ..	Evening	105.0
,, 22	.. ..	Morning	103.0

Table No. VII shows the temperature-oscillations in a case of septicæmia connected with phlebitis. The patient was a woman who was admitted under my care into the Infirmary, and was discharged, well, after several weeks' residence in the institution. Her symptoms, except as regards the rises of temperature, were not acute. Her pulse, except at first, was not very quick, and the elevations of temperature were not attended with marked rigors.

TABLE VII.—*M. J. Phlebitis: Septicæmia.*

November 21	.. ..	5 P.M.	103.0
,, ,,	.. ..	9 ,,	101.0
,, 22	.. ..	9 A.M.	97.2
,, ,,	.. ..	1 P.M.	98.7
,, ,,	.. ..	1.40 P.M.	101.2
,, ,,	.. ..	3 ,,	102.2
,, ,,	.. ..	5 ,,	101.0
,, ,,	.. ..	9 ,,	102.0
,, 23	.. ..	9 A.M.	99.2
,, ,,	.. ..	9 P.M.	103.0
,, 24	.. ..	9 A.M.	100.0
,, ,,	.. ..	5 P.M.	101.2
,, ,,	.. ..	9 ,,	102.2
,, 25	.. ..	9 A.M.	102.8
,, ,,	.. ..	5 P.M.	102.0
,, ,,	.. ..	9 ,,	104.8
,, 26	.. ..	9 A.M.	102.8
,, ,,	.. ..	5 P.M.	101.0
,, ,,	.. ..	9 ,,	103.0
,, 27	.. ..	9 A.M.	101.8
,, ,,	.. ..	5 P.M.	100.9
,, ,,	.. ..	9 ,,	102.8
,, 28	.. ..	9 A.M.	101.8
,, ,,	.. ..	5 P.M.	101.0
,, ,,	.. ..	9 ,,	100.5
,, 29	.. ..	9 A.M.	100.8
,, ,,	.. ..	5 P.M.	100.5
,, ,,	.. ..	9 ,,	101.5
,, 30	.. ..	9 A.M.	102.8
,, ,,	.. ..	5 P.M.	101.9
,, ,,	.. ..	9 ,,	103.0
December 1	.. ..	9 A.M.	101.2
,, ,,	.. ..	5 P.M.	100.9
,, ,,	.. ..	9 ,,	103.0
,, 2	..	9 A.M.	100.4
,, ,,	.. ..	5 P.M.	100.9
,, ,,	.. ..	9 ,,	103.8
,, 3	.. ..	9 A.M.	101.5
,, ,,	.. ..	5 P.M.	101.0
,, ,,	.. ..	9 ,,	103.9
,, 4	.. ..	9 A.M.	100.8
,, ,,	.. ..	5 P.M.	104.2
,, ,,	.. ..	9 ,,	103.7
,, 5	.. ..	9 A.M.	100.6
,, ,,	.. ..	5 P.M.	104.0
,, ,,	.. ..	9 ,,	103.7
,, 6	.. ..	9 A.M.	99.9
,, ,,	.. ..	3 P.M	102.8
,, ,,	.. ..	5 ,,	104.6
,, ,,	.. ..	9 ,,	103.0
,, 7	.. ..	9 A.M.	99.5
,, ,,	.. ..	5 P.M.	101.2
,, ,,	.. ..	9 ,,	103.5
,, 8	.. ..	9 A.M.	98.6
,, ,,	.. ..	5 P.M.	98.6
,, ,,	.. ..	9 ,,	99.5
,, 9	.. ..	9 A.M.	98.5
,, ,,	.. ..	5 P.M.	99.0
,, ,,	.. ..	9 ,,	98.0
,, 10	.. ..	9 A.M.	101.3
,, ,,	.. ..	5 P.M.	98.6
,, ,,	.. ..	9 ,,	99.0
,, 11	.. ..	7.30 A.M.	97.0
,, ,,	.. ..	8 ,,	104.6
,, ,,	.. ..	9 ,,	101.1
,, ,,	.. ..	5 P.M.	98.6
,, ,,	.. ..	9 ,,	98.0

It is not my intention to enter into any speculative considerations. I wish rather to confine myself to facts. But, in comparing the extreme exacerbations and remissions met with in septicæmia, and some cases of acute phthisis, it is impossible not to ask oneself the question how far these pyrexial phenomena in the latter disease may be due to some condition analogous to that which obtains in the former—how far, indeed, they may be the result of some poison introduced into the blood from the diseased, and often suppurating pulmonary organs.

[*To be continued.*]

MR. HENRY LAWRENCE, the recently elected Public Vaccinator for Bristol, has been appointed by the Local Government Board to the office of Teacher of Examiners in Vaccination for that city, vacated by the retirement of Dr. H. A. P. Robertson, under circumstances of distressing bodily illness.

ON SCLEROTOMY IN DIFFERENT FORMS OF GLAUCOMA.*

By L. DE WECKER, M.D., Paris.

In the latest publications on the cure of glaucoma by sclerotomy (Mauthner, Jany), I have been reproached for not having upheld with more vigour an operation of which I am the originator. Great surprise has been created, especially by a passage in my *Thérapeutique Oculaire*, in which, addressing young surgeons who had not yet entered upon practice, I advised them to confine themselves to iridectomy, until some daring operator should succeed in demonstrating that we ought to give the preference to sclerotomy, and above all until it had been established upon practical grounds in what forms of glaucoma sclerotomy should be preferred.

Mauthner has already in part commenced to supply this demonstration. But while he proposes the almost absolute substitution of sclerotomy for iridectomy in the treatment of glaucoma, I have thought it right to advance towards this change of practice by selecting cases in which sclerotomy could be performed with facility, and then those in which it presented evidently fewer dangers than iridectomy, and finally cases in which the new operation offered serious advantages as regards the optical result, whilst at the same time it displayed not only an efficacy analogous to that of iridectomy, but even an incontestable superiority under certain circumstances.

The great object was to allow the new operation to become ripe, in order that it might be able to take the place of the old one from which it originated, and which has been a true blessing to humanity, although its results have not always been satisfactory, and in some exceptional cases have even been most unfortunate.

I commenced accordingly by substituting sclerotomy for iridectomy in cases of absolute glaucoma with atrophy of the iris, where the latter operation would have been illusory. In the second place, I thought sclerotomy might be preferred in the hæmorrhagic forms of glaucoma, precisely where the discoverer of the operative treatment of glaucoma himself had feared to recommend his operation, so disastrous did the results show themselves.

Since the recommendation in my *Thérapeutique Oculaire* (page 386) above referred to, I have experimented with sclerotomy upon a large scale, and I have gradually extended its indications, so as sensibly to have approached the wise opinions of Mauthner. But still I have always selected cases in which the substitution of sclerotomy was justified by the obstacles to iridectomy, which obstacles were obviated by the new operation.

In my *Chirurgie Oculaire* (page 221), I recommend sclerotomy in the following conditions. 1. In the incipient stage of glaucoma when, between the attacks, vision is normal. There is no doubt but that the formation of an artificial pupil in such eyes, even when completely successful, gives rise to an imperfect optical apparatus, causes dimness, and frequently astigmatism; and the patient, comparing the vision left him after the operation and that which he previously enjoyed, is always more or less discontented, although he may possess a central acuity of vision which is perfect. 2. In cases of simple glaucoma, in which both central and peripheral vision are nearly normal. The same considerations as to the deteriorating action of iridectomy are equally applicable here. 3. I recommend recourse to sclerotomy when, in simple glaucoma, the margin of the visual field, even at one side only, touches slightly or comes very near to the point of fixation. Every clinicist is aware that in such cases the iridectomy is very frequently followed by a further diminution in the field of vision, which may deprive the patient of central vision, a danger not to be feared with sclerotomy.

I shall not here speak of congenital hydrophthalmia—the glaucoma of children—which constitutes the fourth indication mentioned in the *Chirurgie Oculaire*, as I wish to confine myself to the treatment of the ordinary forms of glaucoma.

Having up to the present time treated a very large number of cases by sclerotomy, I think it is possible to give to the indications for the operation all the desired precision. I am of opinion, in short, that in every form of chronic simple glaucoma, in which the results of iridectomy have been much less brilliant than in the irritative forms, iridectomy should be definitely given up and sclerotomy exclusively employed. This important substitution appears to me justifiable, not only because sclerotomy possesses, according to my experience, a greater efficacy in such cases, but also because the proceeding is free from some inconveniences which, in a certain number of cases, have been observed to attend iridectomy.

By degrees I have succeeded in extending also the use of sclerotomy to cases of irritative glaucoma, in which the use of myotics transforms the disease into the simple form, and where well-marked myosis is produced by eserine. According to this statement, iridectomy would for the present be reserved solely for attacks of acute glaucoma, and for irritative forms in which the tension is such that the myotics do not produce any effect, or but an imperfect one. It will be noticed that these are precisely the cases in which an exact performance of sclerotomy would present great difficulties, and where, on the other hand, as in attacks of acute glaucoma, the most imperfectly performed iridectomy may prove efficacious.

As Schweigger has observed, we have in the use of eserin—several instillations of which should precede each glaucoma operation—the means of deciding upon the method which is to be preferred in each case. On any glaucomatous eye in which eserin acts well, sclerotomy should be performed; but on any eye in which the effect is not complete, and on which even the prolonged use of the myotic does not modify the form of the glaucoma, it is desirable to have recourse to iridectomy.

In order to form an opinion as to the curative effect of sclerotomy, it is necessary that it be most accurately performed. With regard to this point, I shall not deny that if the anterior chamber be shallow (which need not prevent the perfect action of the eserin), this operation might present some difficulty, whilst iridectomy would be more readily performed. But I am so convinced that it is sclerotomy which in such cases will in future be demanded, that I do not fear but that routine and a greater operative facility will here also give sclerotomy the position it deserves.

In all the sclerotomies which I have lately performed, I have used a narrow Gräfe's knife, which I found more suitable in cases of shallow anterior chamber than the sclerotome which I formerly recommended. Moreover, as also Mauthner has recommended, I do not confine myself strictly to the formation of a flap two *millimètres* high, of which the middle third is left undivided. But, especially if the depth of the anterior chamber permit it, I form a flap of from three to four *millimètres* high. The knife should penetrate the sclerotic very precisely at a distance of one *millimètre* from the clear cornea, and then, the blade being held perfectly parallel to the plane of the iris, it should be passed very slowly in front of the latter, so that the counterpuncture may fall also exactly at a distance of one *millimètre* from the internal border of the cornea. If the blade be not held quite parallel with the plane of the iris, there is danger that it may pass through the cornea, and that the sclerotomy may be but half performed; or, if it be directed too deeply, it may come out through the sclerotic at an exaggerated distance from the cornea, may wound the ciliary body, and may provoke troublesome hæmorrhage and irritative symptoms of an alarming kind. A complete curative effect should not be expected from sclerotomy unless it is performed strictly *lege artis;* and, in order that this may be, it is necessary that the operator should have the proceeding at his fingers' ends. I would like every practitioner to be convinced that it is only after a certain apprenticeship that good and precise sclerotomies can be performed. The section should be made by slow sawing movements, leaving exactly one-third of the flap undivided.

Before giving the results obtained by this operation, I wish to draw attention to the difference which exists between sclerotomy and simple paracentesis or puncture of the sclerotic, as Mackenzie performed it or recommended it. In an eye upon which sclerotomy has been precisely performed, the anterior chamber is not reformed until the fifth or sixth day, and often still later, although a bandage be kept applied to the eye; while, as we know, the aqueous humour is collected very rapidly after simple paracentesis.

Without any cystoid cicatrix having been formed, the subconjunctival tissue remains often œdematous for a long time, and the neighbourhood of the wounds especially remain swollen. Moreover, I have observed that in some eyes on which very large sclerotomies had been performed, with flaps of from three to four *millimètres* in height, and also in cases where the uncut bridge had been very narrow, the cornea presents depressions close to its margin and in front of the incisions. This sinking in of the corneal tissue gives very much the appearance of ulcerative facets, but differs from the latter in the dryness which the epithelium presents. The nature of these appearances is evidently not such as to make me abandon my opinion as to the curative action of sclerotomy; on the contrary, they confirm me more and more in the idea that it is the increased facility which is given to the process of filtration that is to be regarded as the chief factor.

In describing the results which I have obtained from sclerotomy, I am especially anxious to point out in what way they differ from those of iridectomy. In the first place the new operation admits of much

* Read in the Subsection of Ophthalmology at the Annual Meeting of the British Medical Association in Cork, August 1879.

greater freedom in the after-treatment. The patients being provided with a bandage, may return home, and can, for the most part, resume their occupations upon the second or third day afterwards.

Having examined the acuteness of vision of the greater number of my patients upon the day following the operation, and the field of vision two or three days afterwards, I am in a position to state that an improvement was evident in most cases, and that in no instance was there a deterioration of vision. In one case,* where I had to deal with a chronic irritative glaucoma, which, when the other eye was found affected with retinal apoplexies, was recognised as of a hæmorrhagic nature, the vision after the sclerotomy was found considerably diminished in consequence of a hæmorrhage situated at the macula lutea; but yet this disturbance of vision was of short duration only.

When, after sclerotomy, the anterior chamber is only slowly re-established, an alteration in the refraction of the eye may be observed, owing to displacement of the crystalline lens; but we have not found astigmatism to become developed, as often happens after iridectomy, putting the patient in a very uncomfortable position. In short, sclerotomy, except for a slight transitory change in the refraction, leaves the operated eye absolutely intact, with but a short period of irritation.

I mention, in my *Thérapeutique Oculaire* (page 383), the case of a medical man upon whom I performed sclerotomy for simple chronic glaucoma, which had damaged his vision so much that he was unable to count fingers at more than a *mètre* and a half (nearly five feet). The defect in the field of vision at the inner side approached close to the point of fixation. This operation was performed in November 1877, and I had an opportunity of observing its effect in May 1879, when the patient came to request that I would perform the same operation upon his other eye, although it possessed perfect acuteness of central vision and an unblemished field of vision. Believing that he had felt some premonitory signs of glaucoma in the second eye, he wished to have the sclerotomy performed in order that he might leave Paris without fear. I could not refuse him this operation, for, in the eye which had already been operated on, there was an enlargement of the field of vision and an improvement in the central vision, fingers being now counted at two *mètres* and a half (eight feet and a quarter). This patient's case allowed me to satisfy myself again how very little visual trouble is caused by sclerotomy, for the sight was absolutely good from the second day after the operation.

Since the commencement of the year 1879, I have performed forty-eight sclerotomies, most of which have been noted with great care by Dr. Manversen of Bucharest for an essay on the subject. These numerous operations confirm me in the opinion already expressed—namely, that in the various forms of chronic simple glaucoma, sclerotomy is not only as efficacious as iridectomy, but that it is far superior to the latter, being free from the disagreeable effects of the excision of a portion of iris.

* I might mention the case of a medical man affected with insufficiency of the aortic orifice, who was operated on for attacks of glaucoma, and on the day after the operation saw his patients, but on the fifth day a copious hæmorrhage took place into the anterior chamber.

TOBACCO AND ALCOHOL AMBLYOPIA.†

By T. HIRSCHBERG, M.D., Berlin.

When I was in London, two years ago, I saw and heard what I had learnt before by reading, that a greater amount of amblyopia and amaurosis was attributed to the abuse of tobacco in England than on the Continent, and particularly more than with us in Germany.

In my account of my London tour, published in 1877 (*Deutsche Medicin. Wochenschrift*), I suggested that it would be very useful to submit this important difference between English and Continental views to discussion at an international ophthalmological congress. It therefore affords me much gratification to have the opportunity, by the kind request of your secretaries, of opening a discussion on this interesting subject at the Annual Meeting of the British Medical Association.

Tobacco amblyopia was discovered by Mackenzie of Glasgow, and much attention has been paid to the subject in England; the original term, tobacco amaurosis, being still retained by some authorities. It is true that English authors differ widely in the share which they attribute to tobacco by causing failure of sight. For instance, in the admirable treatise of Mr. Soelberg Wells (1869), we find the following passage. "I fully admit the fact, that the excessive use of tobacco (but most frequently together with other causes) may produce considerable impairment of vision, and finally.....even atrophy of the optic nerves. But I cannot, from my own experience, accede to the doctrine, that there is anything peculiar in the form of atrophy of the optic nerve.....I believe that, in the commencement of the amblyopia of smokers and drunkards, the disturbance of sight is at first only functional.....But if the cause persist, the disease passes over into an organic lesion." Mr. Brudenell Carter, who formerly passed some considerable time amongst a people—the Turks—who smoke almost without cessation, has expressed to me his grave doubts as to the existence of tobacco amaurosis. Mr. Jonathan Hutchinson, who for many years has bestowed great pains on the investigation of this subject, and to whom I am personally indebted for many remarks in connection with it, stated in his first paper (in 1864) that a peculiar form of amaurosis or atrophy of the optic nerves was caused by tobacco; but in his most recent paper (1876), based on a re-examination of a large series of patients affected with tobacco amblyopia, he states, that a large majority had quite recovered, and that scarcely anyone had become worse. Lastly, Mr. Nettleship published, two years ago, a series of fourteen cases of the amblyopia of smokers, in all of whom mere abstinence from tobacco was followed either by recovery or arrest of the disease. Notes on the diagnosis of tobacco amblyopia by Mr. Nettleship appear in the volume of *St. Thomas's Hospital Reports* for this year, and contain full details of twenty-three cases.

The influence of tobacco upon sight has also for many years been to some extent admitted in Germany, and more freely in France by Sichel and Galezowski (*Des Amblyop. toxiques*, Paris, 1879). A. von Graefe, in 1865, drew out very clearly the differences between progressive amblyopia with restriction of the field of vision, and curable amblyopia with normal periphery of the field but with a central defect (central scotoma). He considered that excessive indulgence in alcohol, much smoking of strong cigars, debauchery, abdominal obstruction, irregular sleep, and overwork of the eyes, might act singly, but far more often acted together, in producing amblyopia; and that it was difficult to estimate the etiological value of the different factors. He goes on to say that the much greater frequency of amblyopia in men than in women has suggested the opinion that smoking is a principal cause. But since many other influences, injurious to the nervous system, act far more on men than on women, he concludes that excessive smoking is to be regarded as constituting only one element in the production of amblyopia. For some years, these statements of von Graefe were fully admitted in Germany, and the papers of Professor Horner of Zürich and of his pupils Erisman and Schön, and of Professor Leber, now of Göttingen, were all based upon von Graefe's ideas. Considering that an immense number of men smoked regularly without damage, and that cases of benign centric amblyopia in workmen addicted to the abuse of alcohol were very common, there was a proneness in Germany to attribute the symptoms principally to the alcohol, and to admit pure tobacco amblyopia only in those cases where there were also clearly marked symptoms of chronic nicotin poisoning. Both forms of amblyopia, that from tobacco and that from alcohol, seemed to us very similar in their clinical symptoms as well as in their prognosis. Both were generally known under the same name of amblyopia from intoxication, or toxic amblyopia, even in my own earlier statistics published by my late assistant, Mr. Pufahl, now in Paris. A real progress was made in Germany by Förster, who published a short abstract in 1868, and a full monograph on this subject in 1876. He points out that the existence of tobacco amblyopia is fully proved *ex juvantibus*, if passionate smokers who become amblyopic are found to improve in sight after having relinquished their excessive use of tobacco. He also shows that the amblyopia of both eyes, which interferes with the reading of small print, depends upon a central scotoma, or dull, or even dark, region in the middle of the field of vision, which reaches from the fixation point to Mariotte's blind spot; that within this region the perception of red is especially defective; and that the periphery of the field remains normal. Förster states that this form of amblyopia is characteristic, but not pathognomonic; it occurs in almost all cases of tobacco amblyopia, but also in some others. The ophthalmoscope shows a normal fundus, but the papilla is palish. The patients, all males, are from thirty-five to sixty-five years old. A sedentary life, want of sleep, and bad appetite or bad nutrition, are the co-operating causes. Progress of the disease to complete atrophy of the optic nerves is very rare. A central defect in the field of vision may be permanent, but generally the patients recover if they can give up smoking. He considers that the morbid process is localised in the optic nerves, not in the brain.

In supplementing this brief historical abstract by a short statement of my own views, I would say that I have, in common with most other observers, found the fundus normal in the early period of tobacco amblyopia, whilst after some time the outer quarter or half of the disc grows gradually rather pale. In the diagnosis of this disease and of similar cases, we should not overestimate the value of ophthalmoscopic examination, but rely rather on an exact examination of the whole retinal function. The field of vision of a normal eye in steady fixa-

† Read in the Subsection of Ophthalmology at the Annual Meeting of the British Medical Association in Cork, August 1879.

tion furnishes to our mind a picture in which only a very small centric point of one degree's aperture is carefully executed. The remainder is more and more roughly stretched in proportion as we pass towards the periphery. Only a limited pericentric region of about twenty degrees aperture shows saturated and bright colours; further towards the periphery one colour after another fades away in a regular order, and the extreme periphery is colourless as painted grey in grey.

This diagram shows the normal field of vision with the boundaries for white and the three principal colours. It also shows the principal isopteric curves, as I have termed the lines of equal excentric vision. The following seventeen cards give the field and history of all cases of chronic amblyopia without decisive change in the fundus, which, after my return from London, have been observed by myself during nine months and among a number of two thousand five hundred patients. Thirteen of these were cases of toxic amblyopia. In my earlier statistics of twenty-two thousand patients, I found one hundred and twelve such cases; these numbers give a little above five *per mille*.

The first question for discussion is as to the actual existence of such a disease as tobacco amblyopia. Notwithstanding some negative, and even adverse, opinions, I shall be very much surprised to hear any but an affirmative reply to this question from the majority of the members of this meeting. The proof lies, in my opinion, in the recovery by mere abstinence, as observed by Mackenzie, Sichel, Hutchinson, Förster, Nettleship, and myself. If a chronic amblyopia in a heavy smoker have existed for some months, and have increased slowly but steadily, some days of abstinence may be sufficient, as I have observed more than once, to produce a moderate but decided improvement of sight; but perfect recovery requires a longer time: some weeks or months. The impairment of vision from tobacco is always binocular and characteristic. The complaints of the patients are due to a centric scotoma or limited dimness in the central region of the visual field of each eye. The scotoma is of more or less oval shape, includes the fixing point, and reaches to the blind spot. If the eye be fixing the middle of the field, a white piece of paper, placed anywhere in the defective area, seems to the patient to be grey; further, as Förster has shown, a red piece is either not seen at all, or appears very dark; and, as I have myself observed, a green piece becomes greyish, and a blue one frequently a paler blue or indistinct. The scotoma is never absolute; the white paper, if well illuminated, will never disappear entirely within the scotoma. Corresponding to this impairment of the central part of the field, the acuteness of central vision is reduced to one-third, one-tenth, or even in rare cases to one-thirtieth of the normal. Both eyes are equally affected, or one sometimes a very little more than the other. The power of reading common print is abolished; but even in the worst cases the number of fingers can be counted up to a distance of 5′ or 6′. The fundus at first is normal, but after a time the disc becomes palish. To this definition of tobacco amblyopia it must be added, that we never meet with the disease in women.

A second and very important question for consideration is, whether this disease ever ends in complete loss of sight—amaurosis. For my own part, I believe that this never occurs. Amaurosis begins and progresses differently. In the earliest commencement of progressive atrophy, although the patient may still read the smallest print, and the disc may be almost normal or only a little pale, the extent of the visual field is reduced, and especially the boundaries of the fields for various colours are constricted. The green field first, then that for red, and finally that for blue, shrinks more and more to zero. Even when only a small residue of blue perception is remaining, central vision may still be as much as one-fourth, which is more than commonly met with in cases of tobacco amblyopia, even when they first come under care. You will never find a sharply limited central scotoma, nor the condition remaining stationary for months, nor even a partial recovery, in cases of common amaurosis from progressive atrophy of the disc. It has been affirmed, but in my opinion not yet proved, that abuse of tobacco often leads to progressive atrophy of the optic nerves. I have never seen a case of tobacco amblyopia progressing to complete amaurosis; whilst, on the other hand, it is beyond doubt that not only non-smoking men, but also, though rarely, women, are affected by progressive atrophy of the optic nerves. I may instance the case of a poor man of fifty-two years, accustomed to smoke the strongest shag tobacco day and night, who was suffering during six years from amblyopia, and showing the clearest symptoms of chronic nicotinism. Both discs were palish, central vision $\frac{1}{50}$, but the boundaries of the visual field were perfectly normal. I have never yet met with a case of progressive amaurosis in which such a state of function remained after the disease had existed for six years.

I will not occupy the time of the meeting by discussing the hypotheses as to the nature of tobacco amblyopia. It may, however, be of interest to say a few words as to the quantity of tobacco in use and in disuse. In Germany, hitherto, the yearly consumption is about two-and-a-half pounds for each person; in England, perhaps, one pound and a fifth; in France and Austria one pound and two-thirds. The average for the smoking German is ten pounds a year. Some of my patients consumed a hundred pounds, principally of bad tobacco, but others only twenty or thirty pounds a year. Most of them were either underfed or suffering from loss of appetite. Here is a *circulus vitiosus;* abuse of tobacco diminishes assimilation and lowers the strength; hence increased susceptibility to the noxious substance and chronic poisoning.

The second and shorter part of my subject relates to amblyopia caused by alcohol. It is very similar to the amblyopia caused by tobacco. I do not speak of acute or subacute amblyopia following recent and excessive increase of the daily quantity of alcohol, but only of chronic alcoholism. I know very well that some of my English friends will not accept this peculiar form; but I have met with cases which do not seem to admit any other explanation. Patients who do not smoke at all, or only a trifling quantity (say one pipe or cigar daily), nor make any other use of tobacco, but have been for a long time heavy drunkards, are slowly affected with amblyopia. Central vision in both eyes is lowered down from $\frac{1}{3}$ to $\frac{1}{30}$; the boundary of the visual field is normal, but a central scotoma is found, which reaches from the fixation point in all directions 5°, 10°, or even 20°. If the central scotoma be very large, there is perfect blindness for green and red, because the fields of normal perception of these colours are covered by the scotoma. I may suggest that this form of colour-blindness is not so unfrequent, and is perhaps more dangerous for railroad and marine officials than the common form of congenital colour-blindness. Temperance may be followed by a return of good central vision before normal colour-perception is restored. The optic disc is normal or a little pale in the outer half.

Since abuse of tobacco and of alcohol often exist together, it is difficult, if chronic amblyopia follow, to discriminate exactly between the two causes. My English colleagues have observed that such patients may recover from the amblyopia if they give up the use of tobacco, although continuing to drink brandy. I have not been able to make exact experiments with patients under confinement. In my diagrams the quantity of both noxious substances is stated for every patient, and you may judge for yourselves. All the cases, whether of tobacco, or alcohol, or of combined tobacco and alcohol amblyopia, occur, as already stated, in men, and not in very young men.

Finally, in some cases of central scotoma with normal boundary of the field and almost normal fundus, no chronic poisoning by alcohol, tobacco, or any other substance, can be made out. Some of such cases are perhaps explained by an idiopathic retrobulbar neuritis.

PERIPHERAL DIVISION OF THE CAPSULE OF THE LENS.*

By C. E. FITZGERALD, M.D., Ch.M. (Dub.),
Surgeon Oculist in Ordinary to the Queen in Ireland; Surgeon to the National Eye and Ear Infirmary; Ophthalmic Surgeon to the Richmond Hospital; Lecturer on Ophthalmic Surgery Carmichael College of Medicine and Surgery.

My object in bringing this subject before the meeting is, that it appears to me not to have received the attention it deserves in this country, if indeed it can be said to have attracted as yet any attention at all. If it really possess the significance which I believe it does, it must prove one of the most important modifications which has been of late years introduced into the operation for cataract; but, though present data regarding its results must still be deemed insufficient for *perfect* certainty, it is of the utmost moment that it should be given a fair and impartial trial by those who may have the means at their disposal of testing its efficacy. These remarks contain my excuse for bringing what is, after all, merely a preliminary communication before the meeting.

In a short paper, bearing date May 20th, 1878, and published in the *Archives of Ophthalmology and Otology* (vol. vi, Nos. 3 and 4, 1878), Dr. Knapp first proposed this method; and he subsequently brought the matter before the meeting of the Ophthalmological Society, at Heidelberg, in the following August.

Dr. Knapp says, that the manifold reactive processes, which for years he had observed to follow extensive laceration and partial removal of the anterior capsule of the lens, induced him to try some way "to reduce to a minimum the injury to the capsule, and, consequently, the reaction from it also, during the healing process of the extraction wound". At first, after making the corneal section and removing a portion of the iris, he divided the capsule of the lens along the corneal section; he then introduced the cystotome into the anterior chamber and divided the capsule from the centre of the pupil to the edge of the lens. He

* Read in the Subsection of Ophthalmology at the Annual Meeting of the British Medical Association in Cork, August 1879.

soon, however, abandoned the latter, or vertical, division of the capsule; and he now simply incises the capsule in a position exactly corresponding to the corneal section. He lays great stress on the importance of the division being a *cut*, and not a *tear;* and, in order to effect this, he makes use of very sharp cystotomes, whose straight cutting edges form an angle of 120° to 150° with the stem. During the division of the capsule, slight pressure must be made with the traction-forceps, so as to cause the corneal wound to gape somewhat. By this means, the division is effected without the necessity of entering the cystotome into the anterior chamber.

Knapp alludes to the fact that von Gräfe had, from the beginning, laid stress on the importance of horizontal division of the capsule, to insure an easy expulsion of the lens; and Arlt draws attention to the same point, in his Section on Operations on the Eye, in von Gräfe and Sämisch's *Handbook*. In the discussion which took place at the Heidelberg meeting, Professor Dor spoke of having seen Guguet of Lyons perform this operation, and also stated that he himself had done it. This does not, however, appear to me to invalidate Knapp's claim to priority in the matter, as he is clearly the first who "has confined himself to the horizontal section as a general method", studied it from a scientific stand-point, demonstrated its advantages, and described the proper manner of performing it.

From Knapp's observations it would seem that, after the lens has been removed by this method, the wound in the capsule closes in a few hours, and any remnants of the cataract lie shut up in the bag—in fact, out of harm's way; and thus, one of the greatest dangers attending the operation is eliminated. One of the most remarkable features about the cases, however, is the almost total absence of any irritation after the operation. This was strikingly demonstrated in all the cases I saw in Dr. Knapp's Hospital last year, on the occasion of my visit to New York; and I have observed the same in nearly all the cases I have since operated on myself. With the exception of a slight conjunctival injection, one would find it hard to believe on the following day that any operation had been performed upon the eye.

As regards the results; at the time when Knapp made his communication at Heidelberg, he had performed forty-three operations by this method; and of these he had lost four, but they were all complicated cases. The medium result as regards visual acuteness was betwen $\frac{20}{50}$ and $\frac{20}{70}$.

The disadvantage of the operation, and the only one I believe which can be urged against it, is, that it is generally necessary to perform a secondary operation on the capsule a few weeks later; but this is attended with no trouble; and, as an argument against the proceeding, has little force when weighed against the increased safety of the operation itself.

The number of times I have performed the operation—twenty-seven in all—is, of course, too small to draw any definite conclusion from; but, taken in conjunction with Dr. Knapp's results, coupled with the fact that I have not lost one of them, and that the healing in all of them has gone on smoothly, they justify me in looking upon it as significant. I am not in a position to give the visual results in these cases, because some of them have not yet been accurately tested, nor have all of them, though needing it, undergone the secondary operation on the capsule; the average was about $\frac{20}{50}$.

On thinking over the subject lately, it occurred to me that if this method really eliminates the chief danger from the operation, it ought to be quite possible to remove a cataract, before it had reached maturity, with perfect safety. Accordingly, I extracted such a cataract on Friday last, at the Richmond Hospital. The operation went very well, and on Monday last, when I saw the patient, the eye looked quite quiet and he had no pain. I need scarcely say that, if this proceeding prove to be one which can be undertaken with safety, it will be an immense boon to those who are afflicted with incipient cataract. I ought to mention that I and my colleague (Mr. Swanzy) always perform von Gräfe's linear peripheral extraction, and that we instil eserine both before and after the operation, as recommended by De Wecker.

On Sunday last, I received a letter from Dr. Knapp, to whom I had written some short time ago. He says: "I am delighted with the good account you give of your last eighteen extractions. I, too, can say that, since last November, I have not had any reverses. Much depends on the delicacy of the operation; but I feel somewhat hopeful that, with good instruments and correct performance of every step, extraction can be made almost as safe an operation as iridectomy. I send you, simultaneously with this letter, a paper, which has perhaps already reached you, published in the second number of the eighth volume of the *Archives of Ophthalmology*. You will find in it a detailed account of my latest experience in cataract extractions. I have done the peripheral division of the capsule for almost two years, in all cases (about seventy-five); and am the more satisfied with it the longer I practise it. There has been no iritis, no capsulitis, no cyclitis—certainly a very pleasing and comforting result."

I regret to say the paper Dr. Knapp alludes to has not come to hand, nor have I yet received the second part of the eighth volume of the *Archives*.

The advantages of this method may, I think, be briefly summed up as follows: 1. Simplicity of the operative procedure; 2. Less liability of doing injury than by the ordinary method; 3. Exit of the lens rendered easier; 4. Whatever portions of the cortical substances remain behind are, from the rapid healing of the wound, kept within a closed cavity, so that the conditions of the eye are practically the same as those which follow simple iridectomy.

CASE OF LATERAL CURVATURE OF THE SPINE DEPENDING UPON UNILATERAL PLEURO-PNEUMONIA.

By DAVID DRUMMOND, M.A., M.D.,
Physician to the Infirmary and to the Children's Hospital, Newcastle-on-Tyne.

R. G., aged 10, a somewhat delicate, though moderately well nourished girl, was brought to the Children's Hospital in the beginning of August by her mother, who gave the following history of her child's illness. A month previously, she was laid up with cough and pain in the left side, extreme prostration, slight difficulty in breathing, and some fever. For this attack, she was kept in bed for ten days and attended to by a medical man. It then being deemed inexpedient to retain her longer in bed, she was allowed to go about, when it became apparent to her mother, on bathing her, that the right shoulder was higher than the left, and the spine was "bent to the right side". At this time, she still complained of some pain in the left side, and of cough.

Some days were allowed to elapse before it was decided to consult some one for the deformity, the original attendant having given up the case; eventually, the child was brought to a professional man, who recommended the case to the Children's Hospital, on account of the inability of the parents to pay for the necessary instruments to give support to the spine. When she was undressed, the deformity at once became apparent; the right shoulder was higher than the left, the posterior border of the scapula being tilted out from the ribs, presenting a "winged" appearance. The spinal column was markedly curved (convexity) to the right side in the upper dorsal region, with the usual compensatory curve to the left in the dorso-lumbar, the lower ribs on the left side being flattened and thrust somewhat forward, evidently due to the rotation of the bodies of the dorso-lumbar vertebræ to the right. Physical examination of the chest revealed a consolidated left lung, as evinced by marked dulness on percussion, increased vocal resonance, and fine crepitus somewhat masked by the presence of tubular breathing. The child was ordered cod-liver oil and Parrish's syrup, and the spine to be rubbed and sponged with salt water.

When seen a fortnight afterwards, the spine was quite straight, the most careful examination by inking the spinous processes failing to elicit the slightest degree of curvature. No other treatment but that recommended (above) had been attempted. The lung was nearly normal, air passing in freely, and there was no dulness on percussion, with a total freedom from pain.

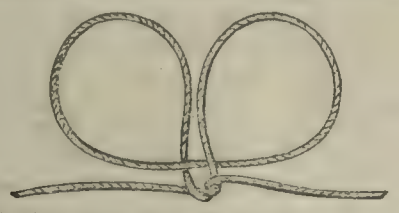
Remarks.—Without entering at length into the various theories which have been advanced as to the causation of lateral curvature, I would only remark that it seems now to be the fashion to ignore, at all events to a great extent, the muscular theory of Dr. Dods and M. Guérin, and in place to ascribe every case to the purely mechanical explanation. The case I have here briefly recorded is surely one in which pain played an important part in the production of the spinal curvature, for with a complete relief of the pleuritic pain the spine became straight in a very few days. The side being fixed to avoid as much as possible the friction of the inflamed pleura by what Mr. Hilton, in his *Rest and Pain*, terms "Nature's own process", an opportunity is consequently afforded the muscles attached to the vertebræ to rotate the same; for, as Mr. Adams shows in his classical work on the *Pathology and Treatment of Lateral and other Forms of Curvature of the Spine*, rotation precedes any lateral deviation of the spinal column.

Presuming, then, there is something in the "muscular theory", may we not have here a partial explanation of the vexed questions: 1. Why is the dorsal convexity nearly always to the right? 2. Why does lateral curvature occur so much more frequently in girls than in boys? May the inframammary pain of delicate girls, which is nearly always on the left side, and often severe, not have something to do in bringing about lateral curvature where there already exists predisposing causes, acting in a slower, but none the less sure, way than in the case recorded above?

SURGICAL MEMORANDA.

"TAIT'S KNOT."

THE knot which Dr. Meredith has kindly named as above should rather be called the "Staffordshire Knot", as it is the badge of the county of Stafford; and the idea of its use occurred to me whilst travelling in a Staffordshire railway-carriage in which it was a conspicuous ornament. Mr. Mazzinghi, the learned custodian of the William Salt Library at Stafford, tells me that nothing is known definitely as to the origin of the badge, further than that it was granted by the College of Heralds to the county within living memory, and was copied from the arms of the old Stafford family at Maxstoke Castle. Such badges were used to distinguish the adherents of noble families, and their origin is generally altogether unknown. The legend in the present case is that rogues were at one time so numerous in Staffordshire that a knot had to be devised which would hang three at a time. If so, the original knot must have differed from its present representative, for the latter could only hang two. It is, however, its remarkable property in this direction which has led me to introduce its use in surgery.



The woodcut will show how the knot acts, and a very brief description will probably make clear enough how it is used. An ordinary-handled needle, armed with a long piece of the silk required, is passed through the pedicle and then withdrawn, so as to leave a loop on the distal side. This loop is then drawn over the ovary or tumour, and one of the free ends drawn through it, so that one end is above, while the other is under, the retracted loop. Both ends being seized in the hand, they are drawn through the pedicle, against which the thumb and forefinger of the left hand are pressed as a fulcrum, till complete constriction is made. A simple hitch is then made, as in the drawing, and tightened; and that is followed by another, as in ordinary ligature-tying. There is another and more complicated way of making the knot, by passing each end of the thread round the corresponding half of the pedicle, and crossing them within the loop in front, which is equally effective, and which may be used in cases of large solid tumours. But the former way is by far the more elegant and rapid method.

The advantages of this knot over all others are that, while it ties the pedicle in two halves, these halves are compressed really into one surface; the two halves are equally well compressed; and, from the mechanical arrangement of the knot, very great constricting force can be employed; and, in this respect, it greatly excels Dr. Peaslee's chain-ligature. Finally, its application is very rapid, and everything which saves time in ovariotomy is very important. I have used it now a considerable number of times, and am satisfied it is a substantial improvement on anything else I have seen or used.

LAWSON TAIT, Birmingham.

CLINICAL MEMORANDA.

THE DIFFUSION OF DIPHTHERIA.

CONSIDERING the obscurity which exists as to the origin of epidemics of diphtheria, any facts which may point to even a possible cause are of importance. In the end of December 1878, I began to meet with cases of sore-throat which were of a very suspicious character; and, about the middle of January 1879, one such case was followed by a train of paralytic symptoms which are regarded as sequelæ of diphtheria, and convinced me that the epidemic was of a diphtheritic character. In some houses, only one case occurred; in others, it went through the whole household. The cases were scattered about, and did not occur in one quarter only, and all occurred among the better classes of the community. I could not account for the sore-throats by bad drains; for the drainage of the district, such as it is, is universally bad. The water-supply was the same to all the district.

During the summer, I made some inquiries as to the milk-supply of those who had been ill; but I found it very difficult to rely much on the information I got, as it often happened that one milkman had supplies from different sources. However, I found that one milkman who supplied three of the families who were ill did not buy any milk; that his daughter milked, and put the milk ready to send out; and that just about the time that these families were ill, she was suffering from a sore-throat, which made swallowing very painful, but for which she had no advice or treatment, and went about her usual work all the time she was ill and convalescing. This milkman did not supply any of the other cases which I attended in Eccles, nor could I get any clue as to the cause of the other cases, except it were by infection through personal contact.

One of my cases came into Eccles from a village six miles distant, and complained of sore-throat on the day she arrived. It was evident she had brought the disease with her. On inquiry, I found she had been nursing a sister who had been laid up in the distant village with what she thought was a quinsy. During the summer, I went to see the sister whom my patient had nursed, and then visited the milk-house from which she was supplied. I found an old man and woman were the only people who had charge of the cows and milk, and both of them had suffered from sore-throat about the same time as the sister of my patient. Both of them had to have the surgeon, and the woman was in bed for some days. I could not ascertain the date of their illness, but the coincidence is rather striking.

I had only one patient with such a sore-throat in Patricroft, the father of the family, from whom his wife and child caught it. On visiting the milk-house from which his supply came, I found two old folks, man and wife, in sole charge. Both of them had been ill about the same time as my patient, and the wife had the surgeon attending her for sore-throat and general weakness. Here, again, I was struck by the coincidence.

During the first three months of the year, I would have about twelve families and about forty patients with diphtheritic sore-throats; and I found sore-throats at the dairies supplying five families representing fifteen cases.

I put these facts forward for what they are worth. They do not give any help in ascertaining the origin of diphtheria, for I could not find evidence of disease in the cows, or of contaminated water; but they make it probable that if there be diphtheria, which may be only a slight sore-throat, in a milkmaid, she may communicate the disease through the milk to families who drink it; and, as to prevent the spread of a disease is only second in importance to the prevention of its origin, what I have stated may tend to make us more careful that no one suffering from a communicable disease shall be allowed to work in a dairy.

JOHN HADDON, M.A., M.D., Eccles, Manchester.

OBSTINATE CONSTIPATION: INJECTION INTO THE COLON: APPARENT SUCCESS: NECROPSY.

D. T., A HALE old man, aged 83, was treated by me in August last for obstinate constipation, which was overcome after twelve days by several six-grain doses of calomel. Though he had since taken great care to keep his bowels regular, he again came under my notice on October 8th, when his bowels had not been moved for a week, though he had actively dosed himself with castor-oil and pills. There were none of the urgent signs of obstruction. The abdomen was rather distended, but no particular point of tenderness could be found. After some days' delay with milder things, I was confirmed, by the experience of the previous illness, in the hope that calomel in large quantity would be suitable. I therefore gave him a dose of twelve grains, and left another to be taken, if required, in six or eight hours. Both doses, as well as a third on the following day, were retained, without much apparent effect of any kind. Of course an enema had been tried many times.

Mr. Evans of Lampeter, whom I was very sorry not to be able to meet, through unavoidable absence, saw him on the twelfth day, and was made acquainted with the measures already taken. The pills, with small doses of croton-oil, which he ordered after some further trial of milder things, produced so much vomiting and distress, that, after a few times, they were discontinued. The belladonna in small doses which was substituted, much eased the patient.

A mass came now to be felt in the right iliac region, which pitted on hard pressure. I thought I traced the ascending colon bending deeper, but failed to find a colon similarly loaded on the left side, the question of colotomy occurring. That evening, twenty-one days since the commencement, he was much worse. Convinced that the obstruction was the hardened fæces felt distinctly, with or without some stricture of the bowel, and that his condition was hopeless as it was, I tried injection with the aspirator into the hardness itself, of two ounces of a mixture of senna which I had ready by me. So soon as the fluid began to pass, the patient complained much of pain, and, when I had

done, his collapse was rather alarming. He soon rallied with brandy. In an hour, the injected matter came away, with a trace of fæces; and, in another hour, a copious stool was passed. However, too much hardness yet remained, though the chief seat of pain was now in the left side. An enema brought nothing more away. He was kept more at ease during the remaining few days by small frequent doses of opium, belladonna, and calomel, and latterly of opium and calomel. The last day but one, I came to entertain a forlorn hope that he was near having a copious motion, on finding that the colon on the left side could be easily felt to be loaded and doughy. An enema now administered brought not much away, though the end of the tube was covered. The following day, there was no improvement, and that night he was plainly sinking. He died on the morning of the twenty-sixth day of illness.

POST MORTEM EXAMINATION.—The abdomen being freely laid open by longitudinal and transverse incisions, I naturally looked first to the point I had punctured, this being also in the seat of the supposed obstruction. Where I had thought the ascending colon sank deep into the abdomen, the intestine was constricted, and there became suddenly collapsed. That which I thought during life to be the part of the colon near the cæcum was part of the sigmoid flexure; so enormously distended, that to find room it had passed across to the right iliac region. The rest of the colon, so far as its size would allow, was normal in position; and its contents, as we approached the cæcum, became more and more fluid. The contracted portion formed by the shrinking and thickening of the one side admitted the end of the forefinger. From the contraction, the bowel was quite empty, and passed down to the rectum from the right iliac region.

I had wrongly assumed that the fluid injected had passed the whole length of the colon, whereas it only travelled from the sigmoid flexure, and had softened a small portion of the mass beyond the stricture. It is a satisfaction to me that the case was carefully examined by another of much greater experience. I was blinded by the result of the former illness, and by the curious arrangement of the colon. A similar case will most likely come to some one else before it comes to me again. I hope this simple account of what I thought I saw, and actually saw, will be instructive. I meant to inject castor-oil; but I saw in time that it was much too viscid. Antiseptic precautions were taken; and I am not aware that harm was done. I yet believe that, had the mass been long and less hard, the result might have been perfectly satisfactory.

D. R. JONES, Llandyssul.

SLOW PULSE.

I WAS called on the 24th ultimo to see an old gentleman who was suffering from slight bronchial catarrh. The case I think interesting; first, on account of the age of my patient; and, second, on account of the character of his pulse. He has been a coal-merchant, and, in February last, completed his ninety-sixth year. He has had seventeen children (the eldest of whom is living, and is seventy-five), and has a great-grandchild twelve years old. His pulse on the 24th and on the 29th, when I saw him again, was of good tone and perfectly regular, but only thirty-six in the minute. His intellect is clear, and his sight and hearing good. Syncope threatens if he assume for long the upright position. I would be glad to hear if such a low pulse is rare. I have never met with a similar case.

J. BLACK NOBLE, M.R.C.S.Eng., Trinity Square, Borough.

THERAPEUTIC MEMORANDA.

TREATMENT OF CHRONIC ECZEMA OF THE PALM.

THE publication of the case of chronic eczema rimosum of the palm, which Dr. T. A. Palm of Niigata, Japan, successfully treated with Messrs. Ferris and Co's anodyne amyl colloid, induces me to mention a lotion which I have found very beneficial in allaying the intense irritation which so often accompanies this common skin-disease. It consists of bicarbonate of soda, 2 drachms; bicarbonate of potash, 1 drachm; glycerine, 1½ drachms; tincture of opium, 2 drachms; water 8 ounces. I was at first induced to use it in a case of eczematous irritation, in which every application I had used proved of no avail, on account of the marked relief from pain which the local use of the bicarbonate of soda frequently gives in severe burns. Only a few days ago in the case of a lady suffering from chronic eczema of the legs, accompanied with intense itching, I used it with the most beneficial and immediate results, the patient showing me some half-dozen prescriptions which she had used with little or no success. I consider the bicarbonate of soda lotion almost, if not quite, a specific for the relief of the intense burning irritation which often attends chronic eczema, more especially if the patient have a rheumatic tendency; and although I do not for a moment imagine this to be a new local remedy, still I consider it worthy of mention.

W. J. H. LUSH, M.D., Fyfield, near Andover.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

ASYLUM FOR IDIOTS, DARENTH.

CASES UNDER THE CARE OF DR. FLETCHER BEACH.

Two Cases of Microcephalic Imbecility.—These cases are brother and sister, aged 14 years and 10 years respectively. The father is an habitual drunkard, and has always suffered from an impediment in speech: an affection common to all his family. A maternal uncle is insane. There have been twelve children in the family, of whom seven are dead, one having been "small-headed", and died in convulsions; the remaining three are physically and mentally sound. The mother attributes the boy's condition to her ill-usage by her husband during pregnancy. The boy is the survivor of twins, the other child having died; but his head was of normal size. The boy is rather thin and of a bird-like aspect; in height, 53½ inches. The head is obviously small, but not ill-shapen; in circumference, 17⅜ inches; transverse diameter, 10⅞"; antero-posterior, 11"; width of forehead, 3⅞ inches. The general shape of the head and physical character of the face do not differ from health. He has good use of his limbs, and plays with the other children. He is subject to frequent fits. In disposition he is somewhat stubborn. His mental capacity is limited, so that, on admission a year ago, he had no idea of colours, and did not know the letters. His power of attention was small. He used no words, but, in answer to questions, answered merely "Ah". The sister presents similar conditions.

Imbeciles with Chronic Muscular Movements.—A low-typed imbecile boy is able to walk, but with a tottering gait; unable to use either hand for any useful purpose, the left hand being specially affected. He is somewhat thin. On examining the upper extremities in detail, the forearm is found to be usually kept flexed at an acute angle. The position of the hand varies; and, although there is power to extend the wrist, it is usually strongly flexed, with the thumb drawn into the palm and the fingers folded over it. There is no strong spasm in these movements of the hands and fingers. The fingers constantly open and shut upon the hand, and at times both the wrist and all the digits are extended. There are constant movements of the humeral muscles and of the muscles of the forearm. He cannot be persuaded to protrude his tongue, but only moves it from side to side in the mouth. During examination, as he stands up, the body is altogether unsteady and the head is much moved, the chin principally pointing towards the left shoulder.—Another case is a low-type imbecile, not epileptic, who also walks with a tottering gait, is not able to use either hand for any useful purpose, but, in holding things with either hand, the left is the more useless. The usual position of the left upper extremity is with the forearm strongly flexed; the wrist being fixed at right angles with the forearm, the thumb drawn into the palm of the hand, with the forefinger bent over it. At times, however, the fingers spontaneously open, and the first phalanges, all but that of the middle fingers, are extended backwards upon the metacarpus. As in the preceding case, the body is unsteady, and he stands with his feet widely separated. In this case, there is more tendency to constant muscular contraction, but less general movements of the body, the head being only slightly swayed. The tongue is protruded in a jerking manner, and cannot be held out.

Maniacal Attacks after Epilepsy in a Case of Congenital Hemiplegia.—T. R., aged 12 years, was admitted as a congenital imbecile with right hemiplegia from birth. A paternal aunt died after a fit; one child in the family died of convulsions; and the father shows signs of chronic alcoholism—an antecedent commonly met with in the history of imbeciles. At birth, it was noted that his right forearm was flexed and useless; the leg was also feeble and deformed. During his first year, he had four fits; they then ceased till he was seven years old, from which time they became frequent. When seen, he was fairly nourished, and presented marked loss of power in the right arm and leg. The arm wa wasted and contracted, the elbow permanently flexed, and the hand bent down upon the forearm; all the muscles being contracted and

rigid. The right humerus measured 10½ inches, as against 11¼ on the left side; the right ulna measured 7⅜ inches, against 8½ on the left. The right lower extremity was weaker than the left, but without marked wasting or shortening. The heart's sounds were normal. His mental capacity is fair; he can read the letters and distinguish a few colours. His speech is such as can be understood. He is very passionate, but at intervals is good and affectionate. Epileptic fits occur almost daily, and alternate with attacks of general quarrelsomeness, in which he will fight all round without any purpose, take off his clothes, and throw things about. He also swears, uses vile language, and has bitten the nurse. Such a condition usually lasts a whole day. At other times, he is affectionate and well-behaved.

Athetosis of both Sides of the Body not associated with Epilepsy.—The patient is an imbecile girl of low type, eighteen years of age, well nourished, except about the legs, which have been but little used. The skull is of fair size and normal shape. The child usually sits in her chair with the left hand resting on her lap, the right hanging by her side. The left forearm is flexed at right angles with the arm; the wrist is flexed upon the forearm; the thumb projects upwards; the fore, middle, and ring fingers being extended, and the little finger semi-flexed. The digits are constantly moving slowly and rhythmically in alternate slight flexion and extension; the thumb moving in a similar manner, but to a less extent. The spasmodic action of the extensor muscles of the forearm, causing the drawing backwards of the fingers, can be plainly seen, while the arm and shoulder muscles are unaffected. At other times, the fingers are drawn firmly into the palm of the hand. On telling the girl to take hold of an object, she raises the left arm with a jerk; the elbow being flexed at right angles and the wrist flexed upon the forearm, the thumb and all the fingers being at the same time widely separated. In the endeavour to seize an object, the hand is carried round and past it; but, after one or two attempts, she succeeds in grasping it. She cannot pick up small objects; but she can retain an object, when grasped, with great tenacity. The right hand is less affected than the left, and is at times quite still, so that nothing abnormal might be suspected on this side till voluntary efforts are made. The left foot rests on the ground without movement; but, on the slightest change of position of the body, the foot is raised so that only the heel touches the ground. When the hand is used, the foot becomes greatly extended, and the effort to control the muscles of the hand greatly increases the spasm in the foot. The hand may be extended on one side while the fingers are flexed on the other. She cannot stand without support. The head and face present analogous movements; the tongue is seen continually moving, and saliva at times dribbles from the mouth. The movements cease during sleep, and are not increased by attention being directed to them. She understands what is said to her, but cannot utter a word. Careful measurements show that there is neither atrophy nor wasting of the limbs affected, except that the legs are small from want of use. The cause of the athetosis is obscure, there being no history of epilepsy or hemiplegia.

Imbecility associated with Sclerosis.—A fairly intelligent-looking girl, aged 13 years, of fair stature, is remarkable on account of continuous vibratory muscular movements. The head is held well up, and is very slightly moved from side to side; but these movements are less marked than those of other parts. Slight twitching movements are seen in the muscles around the mouth and nose, especially those moving the angles of the mouth. The tongue is unsteady, but is well kept out. She fixes her eyes steadily on objects, and is capable of facial expression. While at rest, vibratile movements are seen in the arms, forearms, and hands; the fingers move frequently, the oscillations being fine in character, and not twitching, as in chorea. On holding her hands out in front of her, the vibratile movements are increased, with spasmodic bending backwards of the fingers. On attempting to take a glass of water and drink from it, she does so with difficulty, the water being spilt by the excess of her movements. In the lower extremities, a similar condition exists. Patellar tendon-reflex is markedly exaggerated on both sides; a blow on the tendon causing, on the average, a movement of the foot through five inches, as compared with a movement of three inches in another child. She can walk without assistance, but does so in a tottering manner, with the feet widely separated. She cannot stand with her feet together; while erect, the tendons in front of the ankle-joint are seen constantly twitching. Her mental capacity is fair, and she can talk clearly. The movements prevent her from feeding or dressing herself. She is epileptic, the attacks being frequent and severe. A systolic *bruit* is heard widely over the cardiac area, being of maximum intensity toward the second right cartilage. The second sound is clear.

Imbecility with Premature Obesity.—A girl nine years of age presents marked obesity, which has developed under observation during last eighteen months. She was admitted three years ago as an epileptic imbecile. Under treatment by bromide of potassium, the fits became greatly lessened, but concurrently with the subsidence of epilepsy the obesity developed, so that at present her girth round the abdomen is 27½ inches, the enlargement being evidently due to subcutaneous deposit of fat. This case is an example of mental impairment due to long continued epilepsy. As is usual in cases of premature obesity, the mental condition is feeble and the disposition fretful.

Congenital Imbecile of Mongolian Type.—The patient is a girl eight years old, a congenital imbecile. The head is small, measuring 18¾ inches in circumference, 11½ inches transversely, and 13 inches longitudinally. The features are broad, and the superciliary margin of the orbit being more oblique than usual gives an upward slant to the outer droop of the eyebrows. The inner portion of the upper eyelid comes down towards the nose with a somewhat rapid slope. The bridge of the nose is flat, making the distance between the eyes appear greater. The tongue is rough, and presents marked transverse ridges, due to the greatly increased size of the fungiform papillæ in transverse lines. Her stature is dwarfed, her height being only 42 inches. The hands and feet are short and broad. The general surface of the skin is rough. The mental condition is small; but she is affectionate and lively in disposition.

MONSALL FEVER HOSPITAL, MANCHESTER.

FATAL CASE OF POISONED WOUND FROM PRESERVED MEAT.

(Under the care of Dr. HENRY TOMKINS.)

APROPOS of the sometimes poisonous properties of tinned meat, referred to in the JOURNAL of November 1st, the following case may be of some interest.

On July 1st, 1879, Peter Blackmore, a muscular well-built man of temperate habits, thirty-six years of age, a striker by trade, was admitted into this hospital, suffering from erysipelas of the hand, accompanied with a sloughy almost gangrenous condition of the tissues of the palm. He gave the following history. Sixteen days previously, being at the time in robust health, in opening a canister of preserved meat, he cut the forefinger of his right hand with the jagged edge of the tin forming the lid; it bled slightly; he wrapped it up, and took no further notice of it. In the course of a few days, the finger began to ache and swell; the pain and swelling rapidly extending upwards, with a scanty discharge of pus from the wound. For a few more days, he poulticed it, and then went to a surgeon, who made an opening both on the dorsum and in the palm of the hand, which was at once followed by such profuse hæmorrhage that it was deemed advisable to take him to the Royal Infirmary, where the bleeding was stopped, and of which place he was made an out-patient. On the following day, alarming hæmorrhage again set in; and, after going again to the Infirmary, he was, on account of the erysipelatous condition of the parts, transferred to this hospital.

On admission, the man presented a most blanched appearance. On the back and front of the hand, which was very swollen and œdematous, were several unhealthy and sloughing wounds, filled with masses of soft coagula. Upon clearing these out and cleansing the wounds, rapid and free arterial hæmorrhage commenced, the blood being thin, pale, and coagulating but imperfectly. Under these circumstances, it was considered advisable to ligature the radial and ulnar vessels, the patient being already in an exhausted condition from loss of blood. This, therefore, was done at a spot about one inch and a half above the wrist; the tissues of the hand were then freely laid open, and the wounds cleansed and dressed with carbolic lotion.

The next day, the local condition of things had much improved; the erysipelatous blush had almost gone, the wounds looked much healthier, and there had been no more hæmorrhage; but the patient himself continued in a very weak and prostrate condition. His pulse was 120, exceedingly weak; breathing hurried and shallow; at times he was sweating, at others complaining of cold, although his temperature at the time was 103°. He was ordered alcoholic stimulants, together with a mixture of iron and ammonia. The dressings at the seat of the ligatures were undisturbed.

On the 3rd, the hand was still going on fairly well; but the proximal and middle phalanges of the finger originally injured were necrosing. His general condition did not show much improvement; he was vomiting a little, and also slightly purged. The next day (the 4th), the wounds at the wrist where the vessels had been tied were almost healed and the wounds on the hand doing well; but, towards night, alarming symptoms of dyspnœa suddenly came on, the patient became quite livid, and death appeared imminent. Loud noisy *râles* were heard all over the chest, the cardiac sounds being with difficulty distinguished. These abated somewhat through the night, but reappeared on the following day, when the case terminated fatally.

At the *post mortem* examination, all the organs were found to be very anæmic. The spleen was large (eight ounces) and softened. The liver and kidneys were healthy. The lungs were engorged and œdematous, especially at the bases, and the bronchi filled with frothy mucus. There was no pleuritis or pericarditis, nor were any hæmorrhagic infarcts found; but the right side of the heart was almost filled with a large colourless mass of fibrin, the clot extending some distance into both the superior and inferior venæ cavæ.

It is worthy of remark that, although the meat taken from the tin was eaten by several persons, the patient included, no one appears to have suffered or shown any bad symptoms from its use; and it was not until two or three days had elapsed that the patient felt any inconvenience from what he had at first considered a very trivial wound.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 14TH, 1879.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

Congenital Sebaceous Disease of the Head and Neck.—Dr. R. CROCKER read notes of this case. The patient was a male infant, aged 6 weeks when brought to University College Hospital. He was born with patches on the skin of the occiput, left side of the head, both cheeks, and the front of the neck, this last joining by processes those on the cheeks. Small patches existed on the left alæ nasi and inner angle of the left orbit, and in the vicinity of the large patches. The patches varied much in size, the largest, on the occiput, measuring 9¾ by 2⅜ inches in its greatest dimensions, the smallest about one-fourth of an inch in diameter. They were irregular in shape, and narrow processes branched off them; they showed signs of being formed by the coalescence of several into one by small sulci, sometimes with a slightly raised edge at the borders of the sulci. The whole patch was slightly raised, the edge more than the rest, and these edges consisted of comedones, with their usual black tops. These were also seen—but not so close together—on the borders of some of the dividing sulci, and occasionally one or two sometimes suppurating on the surface. The general surface at first sight appeared smooth, but, on looking at it closely, it was seen to be finely granular, of a pale yellowish-red colour, but varying in tint, growing redder when the child cried, and paler when exposed to cold. The patches on the scalp were quite hairless; they had not increased in size since birth, and the mother thought they were less prominent, but not smaller. The child was well nourished; the skin was healthy, except for these patches, and had not had any other kind of eruption. There were no snuffles when it was first brought to the hospital, but it caught cold three days afterwards, and then snuffled slightly. There was no evidence of syphilis besides this, either in the infant or in his sister, three years old, the latter being in good health. The mother had not been ill, or even ailing, since her marriage, five years before; and the father had never had a day's illness for the seven years she had known him. The presence of comedones on the edge, and occasionally on the surface, suppurating like ordinary acne, pointed to the case being one of sebaceous origin; and, though the surface might be of a different nature, the individual granules had much the appearance of milium on a small scale, with a yellowish tint. The case appeared to be unique.—Dr. DUCKWORTH had never seen a case resembling the one described. He had examined the case with Mr. Hutchinson, and had at the time concluded that it might have a syphilitic origin. This opinion, however, could not now be maintained. He thought a committee should be appointed to make an accurate investigation into the case.—The PRESIDENT agreed with Dr. Duckworth that the case was unique, and was fully deserving of being made the subject of investigation. He proposed that the committee should consist of Dr. Duckworth, Mr. Hutchinson, Dr. Robert Liveing, and Dr. Crocker.

Ophthalmitis (Double) treated by Duboisin and Mercury.—Mr. SPENCER WATSON described this case. Both eyes of a woman aged 37 were seized, one a few days after the other, with acute ophthalmitis, with severe pain, tenderness, and inflammatory redness, but no purulent discharge from the conjunctival surfaces. The sight was so nearly destroyed that the patient had to be led into the waiting-room. Duboisin drops were used freely and frequently after the failure of atropin, and at the same time mercury was administered by inunction and by the mouth. The gums became tender in a few days, and simultaneously an improvement took place in the condition of the eyes, the sight gradually improving in both; so much so that, by the eye last and less severely affected, good-sized type was distinguishable, and she could do needlework at the end of a month's treatment. The duboisin drops produced full dilatation of the pupils; and, though used at intervals of only two hours for some days, no toxic effects were observed, such as had been noticed by other surgeons. The highly congested state of the conjunctival and ocular vessels might have been an impediment to the rapid absorption of the drug, and the usual constitutional symptoms might have thus been prevented.

Perforating Wound of the Lung, ending in Recovery.—Dr. THEODORE WILLIAMS brought forward this case, which had been reported by Surgeon-Major Alcock. On May 8th, 1878, Trooper G., of the Frontier Light Horse, aged 30, during the Transkei war in South Africa, was struck through the chest by a rifle-bullet in a close attack on a Kaffir position. He was carried to the Field Hospital, two miles and a half distant, and arrived in a very exhausted state. The bullet had entered through the fourth intercostal space on the right side internal to the nipple, and had escaped through the ninth rib, which it fractured about an inch and a half from the spinal column. Air, blood, and mucus escaped freely from both wounds, and the patient expectorated a considerable amount of blood. The wounds were treated by lint soaked in carbolic acid, covered with loose freshly picked oakum, held on by a bandage, so as to act both as a respirator and a disinfectant to the wounds. The dressings were changed night and morning, and the parts carefully washed with a solution of Condy's fluid. Chloral and morphia were given from time to time. During the first two days, the patient was distressed by the frequency of the cough, and the temperature was 100.2° Fahr. But afterwards he rapidly improved, the discharge being copious from both wounds, except on one occasion, when, owing to the bandage being tightened, the secretion was pent up, thereby causing distress and slight rise of temperature. No drawbacks occurred, and the patient was able to be out of doors one month after the injury, with both wounds healed, and free from cough. The lung was thickened along the track of the bullet, and there were some signs of consolidation in the lower lobe.—Mr. BRYANT remarked that the successful progress of the case prevented the possibility of many points arising for consideration about it. But it showed two things: first, the benefit of non-interference in chest-injuries, as opposed to the older modes of treatment; and, secondly, the advantages following the existence of a free outlet for purulent discharges. This latter was the main lesson to be learned from the case as presented.—Dr. A. J. POLLOCK thought the case proved that fatal consequences were by no means to be anticipated from punctured wound in the lung. The time, moreover, was rapidly approaching in which the advantages of free openings to secure an efficient drainage of wounds would be fully recognised; and, in empyema, the necessity of adopting such means towards healing were becoming daily apparent. This, and like cases, tended to prove that even serious injuries to the lung could be safely recovered from, and that artificial drainage-wounds might even be made with every prospect of a successful result.—Dr. WILLIAMS briefly replied on behalf of the author, drawing attention again to the conditions under which the case had progressed.

Syphilis: Removal of Cranial Bones and of Left Eye: Recovery.—Mr. A. T. NORTON read notes of a case of syphilis, in which the frontal portion of the frontal bone, the roofs of both orbits, the ethmoid bone, parts of both superior maxillary bones, the vomer and palate, the left wing of the sphenoid bone, and the left eye were removed. The operation was followed by complete restoration to health. The subject contracted syphilis in June 1866. He was of a strumous constitution, having suffered previously from strumous psoriasis, and since acquiring syphilis, from strumous arthritis of the left knee-joint, followed by ankylosis. The chancre healed in about five weeks, and was followed by an eruption of small vesicles and sores every two or three months for more than a year. The glands of the groin were swollen; but the patient never suffered from sore-throat, nor from any cutaneous eruption. His habits were intemperate; and, about a year after the chancre, syphilitic ulceration attacked the matrix of several toe-nails. About Christmas 1873, he had a severe attack of syphilitic laryngitis, and in 1875 a suppurative and foul discharge flowed from both nostrils, followed by necrosis of the bones of the nose, and of the left palate and superior maxilla. From time to time, pieces of bone were removed by various surgeons, and in June 1876 he came under Mr. Norton's care. At that time, the ethmoid bone was necrosing, and a suppurating node occupied nearly all the frontal portion of the frontal bone. All stimulants, of which he had previously been taking a large quantity, were prohibited, and the iodide of potassium treatment was stopped. Quinine and iron and opium, with milk and simple diet, were advised, and the patient was not allowed to undergo any change of temperature. In October 1876, sight was destroyed in the left eye, and the left half of the sphenoid bone was separating: this mass of bone was ultimately removed through the nose; a large part of the left superior maxilla having previously been taken

away, allowing space for the operation. It was now evident that the frontal and ethmoid bones would be destroyed, and the suppuration was exhausting. The patient was, therefore, never allowed to leave the house, but kept in an unchanging temperature of 62°. On July 4th, 1878, the bones were in a fit state for removal. An incision was made perpendicularly upwards from the nose to the sagittal suture, and from each end of this central incision lateral incisions were carried outwards; in the upper part along the coronal suture, and in the lower part along the orbital ridges. The flaps thus formed were turned outwards to expose the whole of the frontal bone. Gentle traction and manipulation brought away the frontal portion of the frontal as far outwards as the temporal ridges, the cribriform portion of the ethmoid bone, and the roofs of both orbits. The left eye being inflamed and suppurating, and its sight gone, it was also removed. Granulations rapidly sprang up, and the discharge was no longer fœtid; some bone was re-forming over a part of the forehead. Mr. Norton considered it astonishing that health could have been maintained under the prolonged and exhausting suppuration which occurred during the separation of the extraordinary quantity of necrosed bone, especially as much of the pus, which was horribly foul, found its way into the stomach through the nose. Further, it was remarkable that the brain should be in no way affected, notwithstanding that not less than its entire anterior third had been denuded, and was covered in by cicatricial tissue only. As far as treatment was concerned, the drugs usually administered in syphilis were avoided, the object being to maintain a desire for food, and—looking upon a patient suffering from syphilis as one predisposed in the extreme to inflammation—to avoid all changes of temperature, and so withdraw the patient from the influence of the most common exciting cause of inflammation.—Mr. BRYANT thought it would be well to postpone the discussion on this case until the portions of bone could be produced, the point of interest in connection with it centering on the formation of new osseous plates. By examination of the patient (who was present in the room), he could discover only one place where it was not re-formed; and the extreme rarity of any such restoration after removal of syphilitic caries rendered it important to have the complete details. The discussion of the case was consequently adjourned.

Unusual Development of Keloid in Small-Pox Scars.—Dr. GOODHART rendered the particulars of this case. The patient was sixteen and a half years of age. He had never been vaccinated, and in March last had small-pox so severely, that bed-sores formed on his shoulders, elbows, hips, and back. He was in bed four months, and during that time the present disease came on. Since then, it had been slowly decreasing. The face, neck, shoulders, upper extremities, and legs, were the parts where the disease was most abundant. On the thighs, it attacked the seat of old bed-sores, and over each great trochanter and over the sacrum were similar keloid scars. The appearances in the various parts varied somewhat. Thus, on the face, where perhaps the greatest exuberance of growth was shown, there were large flattened masses of solid growth, occupying chiefly the inferior maxillary region, though by no means confined to it. The skin of the face was more or less trabeculated all over by an irregular growth of thickened scar-bands, giving the features a rather elephantine expression. The cuticle in these parts was red, traversed by small capillary vessels, smooth and shiny. The sacral and trochanteric regions showed similar masses of keloid, but in these parts the entire scar was not so universally affected, and the skin was much deeper in colour, being a dark purplish brown, like a recently-healed wound. From the ill-defined outline of the disease in these parts, and the depth of the pigmentation, Dr. Goodhart believed that the disease was disappearing, and the patient himself and his father said that the masses were less in size. On the arms and forearms, except over each olecranon, where there had been a bed-sore, the keloid lumps were mostly circular and discrete, though numerous, and the same might be said of the legs. In both arms and legs, they were mostly about half an inch in diameter, of a deep livid brown colour, smooth on their surface, and indurated like an infiltrated scar. They were mostly present on the outer aspect of the arm and forearm, on the back of the hand, and on the shin. Some of the lumps in both legs and forearms were certainly disappearing, leaving a soft, slimy, slightly depressed, pigmented cicatrix. The unaffected skin, which was mostly on the lower part of the trunk, was thickly covered with the pits of small-pox vesicles, but these as yet showed no alteration like keloid, though they were distinctly raised. There was no history of any tumours in the family, so far as the patient himself and his father could say. Dr. Goodhart related the case for three reasons; first, because it seemed to be a very unusual extent of development of keloid; and in reference to its occurrence in the cicatrices of small-pox, it seemed possible that in the small-pox scar there might be some unusual facilities afforded to such a growth as this, because he had observed keloid not unfrequently take place in vaccination scars. Secondly, he wished to hear from any member who might have seen any similar case, whether he was justified in holding out, as he was doing, a hope to the patient that the keloid would ultimately all disappear; and further, he wished to show the case at this early stage, that if anything unusual happened, he might exhibit the patient again in some months' time.—Mr. B. SQUIRE thought that a marked distinction could be drawn between the keloid of syphilitic scars and that of non-syphilitic origin.—Mr. CHRISTOPHER HEATH considered this case to resemble in character the ordinary keloid, but to be unlike the variety known as Addison's. He had not known a keloid developed after a burn to disappear.—Mr. B. SQUIRE explained that he agreed to call the instance under discussion one of ordinary keloid; but it differed from the syphilitic variety. The spontaneous keloid followed non-syphilitic scars, and might disappear spontaneously.—Mr. GANT drew attention to the fact that one of the most interesting features of the case was the marked symmetry of the growth; patches on the jaw and shoulders being markedly so. He thought the development of the keloid might be intimately dependent on the condition of the blood; and he further showed how the influence thus exerted could be traced in numerous instances.—Mr. MORRANT BAKER said he had then in the outer room a patient exhibiting Addison's keloid, and it would be interesting to compare the two cases. He could not follow the distinction attempted to be set up by Mr. Squire.—Mr. B. SQUIRE had observed a marked difference in the plates depicting the varieties of keloid in Alibert's works, and it was on this that, together with the result of his own personal observation, he founded his belief. These enabled him to distinguish an essential difference between syphilitic and ordinary keloid.—Dr. DUCKWORTH pointed out that Mr. Hutchinson had declared keloid to follow on the formation of scars, almost invariably. Alibert's keloid, however, was frequently a sequel of irritant applications, and its common occurrence over the sternum could be attributed to the blistering of the præcordial region. In a case under his own care, this had taken place, Alibert's keloid developing gradually afterwards. In the case under discussion, the present soft vascular masses would, he thought, in time become firmer and more scar-like. He did not know any distinctive signs whereby syphilitic keloid might be separated from the ordinary form.—Dr. LIVEING observed that Hebra mentioned one or two kinds of keloid in acne scars. He imagined that spontaneous keloid might originate in small scars.—Mr. MALCOLM MORRIS mentioned a case in which keloid, that eventually almost entirely disappeared, followed after operation. He was struck by the remarkable symmetry exhibited in Dr. Goodhart's patient, and thought it notable that the symmetrical appearances should be found where keloid developed on the loci of bed-sores independently of scars.—Dr. CROCKER had recently treated a case in which keloid developed on acne scars. The spots had never disappeared in his experience. He thought there might be more than one phase of keloid, and suggested that Dr. Goodhart should remove one of the spots from his patient and submit it to examination.—The PRESIDENT proposed the appointment of a committee to inquire into and investigate this case, and draw up a report dealing with the differences that might exist between the varieties of keloid.—Mr. GOLDING-BIRD detailed a case in which keloid followed a boil. At the end of a year, it was raised as much as one-third of an inch above the skin, and was as large as a split hazel-nut. At the present time, three years later, the skin presented only a white scar. He could vouch for the absolute accuracy of his description, being, he said, himself the subject of it.—Dr. I. C. FOX had seen keloid tumours distributed over the whole body, as many as twenty or thirty in number. They were large and pedunculated, some of the size of a largish mushroom. They had been under observation fifteen years, and had been removed, but returned again.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOVEMBER 18TH, 1879.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Multiple Sarcoma of Bones of the Cranium.—This specimen was shown by Dr. ABERCROMBIE. It was from a child aged 4 years, under the care of Dr. Gee in the Hospital for Sick Children. When admitted, after three months' illness, it presented three tumours on the head, situated on the right parietal and left frontal bones. There was also a small lump in the left iliac fossa. Soon after admission, optic neuritis appeared. The child died three months later from cachexia. The tumours on the head were found to be connected with the bone; they were of a deep purple colour, and the periosteum was stretched tightly over them. There were found to be several small tumours in various parts of the cranium, two or three being situated at the base. The dura mater was abnormally adherent over the tumours. A growth of the

size of a marble was found in the left occipital lobe of the cerebrum. There was a tumour similar to those of the skull in the upper part of the sternum. All the ribs were invaded by new growth. The deep glands, from the brim of the pelvis to the second lumbar vertebra on the left side, were swollen, soft, and contained liquid. Microscopically, the growth was found to be composed of round cells; and it appeared to start from the deeper layers of the periosteum.—Mr. BUTLIN stated that he had collected several cases of sarcoma of the skull. He thought it was very rare in young children. It was always multiple, round-celled, affected the vault more than the base, and contained very few myeloid cells, growing rather between the layers of bone than beneath the periosteum. In many cases, the tumours were followed by secondary deposits in the thoracic organs.—Mr. WALSHAM had examined several cases of malignant disease of the skull, and had always found them to be medullary carcinoma.—The case was referred to the Morbid Growths Committee.

Primary Sarcoma of Liver.—Dr. COUPLAND exhibited a liver affected with sarcomatous growth, which was manifestly primary, no other organ in the body being diseased. The liver was uniformly enlarged, weighing three hundred ounces; and the new growth, which was widely diffused, presented patches of black and grey pigmentation. It was of tolerably firm, elastic, and fleshy consistency, contrasting markedly with what liver-tissue there remained, and exceeding this in amount. There was no similar growth in any part of the alimentary tract, nor in the pelvic organs; and, beyond basic engorgement and compression, the lungs were healthy. The case was that of a married woman aged 33, who died in the Middlesex Hospital, under the care of Dr. Greenhow, on October 3rd, 1879, after an illness of about seven weeks' duration, characterised at first solely by pain in the right hypochondriac and lumbar regions and the right shoulder. When admitted, she did not appear to be very ill; but, after a week's stay, her illness rapidly took a downward course, the margin of the greatly enlarged liver becoming more nodulated under observation. The nature of the hepatic change was peculiar and difficult to determine; for side by side with a type of structure obviously carcinomatous, and plainly evolved from the gland-cells, there were portions as plainly sarcomatous, composed of whorls of spindle-cells, many of which were pigmented, and, in addition to much free blood-pigment, gave rise to the black patches observed on the surface and in the substance of the organ. Not inclined to adopt so heterodox a view as that the spindle-cell tissue was the outcome of a primary epithelial change, Dr. Coupland preferred to believe that this was an instance of an "acute cancer" (in the general sense) of the liver, in which the morbid process affected both the stromal connection and the epithelial elements of the gland. The case thus had bearings on general pathology; and, whatever its true interpretation, it was singular (1) in the character of the new formation; (2) in its limitation to the liver, not infecting even the nearest lymphatics; (3) in its rapid evolution; and (4) in its widespread diffusion within the organ itself.—By Dr. Coupland's request, the growth was referred to the Morbid Growths Committee.

Living Specimen showing Dwarfing of the Tibia following Detachment of the Lower Epiphysis.—This case was exhibited by the PRESIDENT. It was a child thirteen years of age, the lower epiphysis of whose tibia had been detached three years ago. The fibula was now one inch longer in proportion than the tibia, the foot being, in consequence, pushed over to the inner side. This was the first instance he had met of this condition in the leg, though he had seen it in other bones.—Mr. RIVINGTON thought that the injury had been rather above, than at, the epiphysis.

Fatty Degeneration of the Heart, apparently traceable to Hæmorrhage.—Dr. GOODHART showed the heart of a child six years of age, who had died of typhoid fever, having, during the few days preceding death, had two attacks of hæmorrhage from the bowel and one of epistaxis. The heart was in a marked state of fatty degeneration. He had never seen degeneration so marked in other cases of typhoid fever. It was well known that fatty degeneration took place rapidly from anæmia, and he traced the condition to this cause rather than to the fever itself.—In reply to Mr. KESTEVEN, Dr. GOODHART said that the microscopical condition was one of molecular disintegration, generally known as fatty degeneration.

Suppurative Myocarditis after Scarlatinal Nephritis.—Dr. GOODHART showed this specimen, from a child three years old, who, in the course of scarlatinal nephritis, had galloping action of the heart without displacement or *bruit*. After death, the wall of the left ventricle was thickened by diffused purulent infiltration, extending from the auricular attachment nearly to the apex.—Dr. BARLOW thought this was a very important specimen. Sometimes in scarlet fever the ventricle appeared to undergo acute dilatation. He had seen a case where, three weeks after scarlet fever, the heart's apex was displaced and its action very quick and irregular without murmur. Under the influence of ether and digitalis, the apex came back to its normal position. A few days afterwards, there was a sudden onset of right hemiplegia. He believed that in this case there was much the same condition as that described by Dr. Barlow.—Dr. THOROWGOOD described a somewhat similar case which he had recently met with.—Dr. SAMUEL WEST thought the question of acute dilatation was one of great interest. He had seen many cases of it in connection with acute fever, but more especially in connection with rheumatic fever. In one such case, where sudden death had occurred, the appearances to the naked eye were much like those described by Dr. Goodhart.—Mr. EWART inquired whether the purulent myocarditis was due to embolism of the vessels of the heart, resulting from softened inflammatory material on the wall of the ventricle.—Dr. GOODHART, in reply, stated that he could not say where the myocarditis had started, but there were parts which were softer than others, pointing to the possibility of embolism. In scarlatina, it was common to have suppurative inflammation, but it was rare to have it in the muscles. In this case, the pericardium and endocardium were unaffected.

Peculiar Circular Wandering Rash on Tongue.—Mr. BARKER described two cases of rash on the tongue which, though probably not uncommon, had not hitherto been sufficiently described. The rash was exceedingly erratic; it tended to assume a circular form, and advanced with great rapidity, so that in a few hours it advanced from a small spot to one of the size of a shilling. It was always seated on the dorsal surface; the margin was slightly elevated and the surface somewhat eroded, as though deprived of its epithelium. The same part of the tongue could be invaded over and over again. It gave rise to much irritation of the tongue and salivation. In both cases, several careful microscopical examinations of tongue-scrapings had been made, but on only one occasion had any cryptogamic organism been found. It was uncertain, in this instance, what the fungus was. The disease was very amenable to treatment, and rapidly disappeared.—Dr. MORISON had seen two or three cases not unlike these cases. He had attributed the condition to dental irritation.—The PRESIDENT thought the subject was one of great interest. A case had occurred in Moorfields Hospital very similar to those described, and like them it had disappeared very rapidly. He had seen a child, in the Hospital of St. Louis, at Paris, under the care of Dr. Lallier, who was suffering from ringworm, and whose tongue presented just such a condition as that described. Dr. Lallier stated that in France it was called "lichenoid disease of the tongue", and it was not regarded as cryptogamic.—Mr. PARKER had seen a child with urticaria, whose tongue was affected in the way described by Mr. Barker. He looked upon the condition in his case as analogous to the urticaria of the skin.—Mr. GUNN remarked that, in the case at the Moorfields Hospital, there was a suspicion that the condition was due to congenital syphilis.—Dr. LEES asked whether there was any history of syphilis in these cases. He had seen several cases of the disease in congenital syphilis. In these cases, the eruption changed very rapidly.—Dr. POWELL thought it was very unlikely that, if the disease were due to a parasite, such rapid changes would take place. This feature pointed rather to an erythema, as had been suggested by Mr. Parker.—Dr. BARLOW thought Mr. Parker's suggestion was much to the point. The intense irritability and the evanescent character of the eruption pointed to an erythematous origin. He believed Mr. Barker's cases differed from those seen in congenital syphilis, in which there is an extreme heaping up of epithelium round the margins of the patch.—Mr. BARKER, in reply, stated that he did not think the word "lichenoid" was good as applied to the disease. One of the children he had treated was suffering from lichen elsewhere; but, whereas this had been cured by arsenic, the condition of the tongue was not at all affected by this drug. He did not attach much importance to the discovery of the cryptogam on the one occasion of its being found. The father of one of the children had had syphilis.

Calculus from the Bladder of a Female Child Removed by the Suprapubic Operation.—Mr. SWAIN (Devonport) narrated the case of a child ten years of age, who had suffered from incontinence for fifteen months. It was known that during this time she had been in the habit of passing hair-pins into the vagina, and that on one occasion a hair-pin had passed into the bladder. On examination, a large stone was found, which appeared to occupy the whole bladder. Some little time before she was seen, there had been an abscess in the groin, from which pus and urine had been discharged. At the operation, the urethra was first dilated and a lithotrite introduced, but the stone was found to be too large to allow the instrument to bite. The suprapubic operation was accordingly performed, and the child made a perfectly good recovery. The stone was found to be composed of phosphates collected round the hair-pin that had passed into the bladder. The points of the hair-pin protruded from the calculus, and were felt by the finger in the bladder after dilatation of the urethra.

Mr. SWAIN also showed a large calculus of phosphates round a nucleus of uric acid, which he had taken from the body of a man after death.

The following specimens were exhibited by card.

1. Mr. WALSHAM: Uterus Septus cum Vaginâ Duplici.

2. Dr. PEACOCK and Dr. BARLOW: Malformation of Heart: stenosis of the pulmonary artery, aorta communicating with both ventricles.

3. Dr. PEACOCK and Dr. CASH READ: Malformation of Heart: absence of pulmonary artery. Dr. Peacock remarked that in this case the blood was probably conveyed to the lungs by a patent ductus arteriosus.

4. Dr. CROCKER: Congenital Malformation of the Heart. In this case, the foramen ovale was patent, and the septum ventriculum imperfect. The aorta arose immediately above the right ventricle. The tricuspid and pulmonary orifices were constricted; and the ductus arteriosus, though closed in the middle, was patent for some part of its course.

5. Dr. CROCKER: Complete Occlusion of the Aortic Orifice by a fibrous and calcareous growth: perforation of the aortic valve.

6. Dr. GOWERS, for Dr. OSLER (Montreal): Brain preserved by the method of Giacomini.

7. Dr. ORLEBAR: Aneurism and Rupture of the Aortic Valve.

INTRODUCTORY ADDRESSES AT THE MEDICAL SCHOOLS IN DUBLIN.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY.

THE introductory address at this School was delivered by Mr. F. A. NIXON, Lecturer on Anatomy and Surgeon to Mercer's Hospital. He said that, within the past twelve months, there had passed away one to whose labours, prudence, tact, and foresight the School owed, in no small respect, its present position. Mr. Ledwich was a dearly loved and much lamented colleague, a wise and prudent councillor, and a tried and trusty friend. He had the happy gift of winning the heart while he trained the mind. His life was spent in one sustained and unceasing effort to promote the welfare of the students committed to his charge, of this School, called after his brother, who like himself sacrificed his life rather than neglect them. The recollection of his self-devotion to the cause of medical education, and to the interests of the students, had made the teachers in this School firmly resolve that, so far as possible, they would keep up the School which bore his name as a lasting memorial to his honoured memory, and hand it down to their successors with its usefulness undiminished. In this resolve, they appealed with confidence to the students to second them by earnestness and industry. From the foundation of this institution, more than half a century ago, its object had ever been to impart to its students (over eight thousand of whom had entered its portals) a sound practical education; and that it had done so successfully was shown by the confidence reposed in it. This year's entries were the largest in its history up to this date; and in every quarter of the globe its alumni were to be found. The system of teaching which had been successful in the past would be rigidly adhered to in the future. On the lamented death of Mr. Ledwich, many were the prophecies that this system would break down, and that the School would deteriorate. But within less than four months, twenty-two gentlemen, educated at this School, were enrolled as licentiates of the Royal College of Surgeons of Ireland without a failure. The lecturer said that he regarded medical students as one of the most maligned classes in the whole community. They were fair and reasonable if fairly and reasonably treated, while they stood staunchly and manfully by those whom they believed to be their friends. As a body, they were generous, warm-hearted, and brave to a fault. A patient was perishing from hæmorrhage; the surgeon proposed transfusion, and on the instant, without a moment's hesitation, a volunteer stepped forward from among his fellows, and freely offered his own blood to save the life of a dying pauper, whom perhaps he had never seen before. This had been done recently to the lecturer's own knowledge on two different occasions, by students of the School. He looked upon it as heroism as great even as that displayed by that gallant Irishman Surgeon-Major Reynolds, of whom Irishmen and surgeons were justly proud, who, during the engagement at Rorke's Drift, bore his wounded patients on his back from the little hospital when it was threatened by the enemy, and carried ammunition to his comrades under a galling cross fire.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 22ND, 1879.

THE RULINGS AND LESSONS IN THE NOWELL CASE.

THE case of Nowell *versus* Williams, however disappointing in its results to some of the parties to it, will nevertheless have done some public service by bringing into greater prominence the unsatisfactory state of the lunacy laws. The trial turned largely upon the sufficiency or otherwise of the existing certificate system, and the responsibilities attaching to medical men who sign such certificates (especially when even remotely or indirectly interested in the success of private asylums); it touched nearly, too, the custodians of lunatics generally.

A chief point in the case which will at once strike the medical observer, is the difficulty that has been found, during nearly a fortnight of legal investigation into the state of mind of a man whose insanity there was more evidence to establish than is producible in ninety-nine cases out of a hundred. It was clearly shown not only that he entertained a number of marked delusions—such as injury from his wife's infidelity, persecution through being followed by tribes of detectives, and apprehensions of being poisoned—but that he kept diaries of his delusions, and spoke about them freely to doctors and other people. Probably, in nine hundred and ninety-nine cases out of a thousand lunatics, such ready-made evidence of insanity is not forthcoming. Even the letters he wrote to people came to testify to his palpable delusions. And not only did he keep two diaries, but also a third, a sort of abstract diary. Lunatics do not usually keep diaries in which they minutely note all the wanderings of their intellect. He used Greek characters in writing his diaries, by way of keeping private his records of daily delusion. He spoke about these diaries at first quite freely; afterwards less freely, but still he talked about them; and every medical man who examined him at once pronounced him to be a dangerous lunatic, on his own showing. The fact that he had these delusions which the doctors record was amply confirmed by the letters, by the evidence of the servants and others, and still more by his extraordinary diaries. It would perhaps be impossible to go into Hanwell or Colney Hatch and find another case with such self-recorded testimony of insanity forthcoming; yet it took fifteen days for a wise judge and an attentive jury to find out that the man was a lunatic. If the process be so dilatory and so dubious in such a case as this, what might it be where the evidence is not self-recorded and is less conclusive? It is clear that some more simple, some less recondite method of ascertaining whether a person be a lunatic or not, ought to be adopted in the future.

Another important point is that upon the question whether Mr. Nowell was a dangerous lunatic, and not whether he was a lunatic; and, further, not whether he was simply thought to be a dangerous lunatic, but whether he was actually one. That emphasises a very important question, for it places the proprietors of private asylums and the custodians of lunatics in this position, that they must recognise that they are perhaps the only people whom the law requires not only to do what they think to be right, but what is right. And the person who signs the certificate is placed in a similar position. He must certify not that he thinks the man a dangerous lunatic, but that he is a dangerous lunatic. That is to say, a man must certify to his own absolute infallibility as well as to the dangerous lunacy of the patient. The case of "Fletcher *v.* Fletcher" was once more referred to as that which

governs lunacy cases in this respect. And in the present case the judge has strongly emphasised the difficulties which we pointed out as inherent in the decision of that case. Lord Coleridge, in an able and elaborate summing up, in which with great pains and perfect fairness, he analysed the medical evidence, concerned himself mainly with the certificates, and did not step out from the beaten track to lay down much that was new. But he did insist strongly upon the observance, to an extent not hitherto customary, of the spirit of the statute, that there should be a separate examination by each certifying doctor, neither knowing what was in the other's mind; and he insisted that the medical man who signed last should not even be able to see what the other had said in his certificate; that, therefore, the certificates ought to be on separate pieces of paper, and that there ought to be no approach to consultation whatever, either in person or otherwise. Lord Coleridge further strongly laid down that a man having such an interest in an asylum as a mortgage upon it should not sign a certificate, as he had both a direct and an indirect interest in it.

A fact worthy of mentioning here is that the forms of certificate now in use, in which the blank certificates are printed on one and the same page, are issued with the approval of the Commissioners in Lunacy; that is to say, they are to be procured at almost any law stationer's, and under the sanction of the Commissioners. Under this ruling, these forms are illegal, and should not be used.

Another point laid down by Lord Coleridge, of great importance, though it is perhaps open to question, is this. The Lunacy Act of 1862 requires that the certifying medical man shall state "the facts indicating insanity observed by himself, and also the facts, if any, indicating insanity which have been communicated to him by others". His lordship says this means not that the medical man must state what he considers a sufficient amount of evidence that the man is a lunatic, but *all* the facts which he has either observed or had communicated to him. To this it was objected that the forms which were issued under the sanction of the Commissioners did not contemplate such an exhaustive work, as they provided only an inch or two of space in which to record the facts; but that Lord Coleridge held reasonably enough to be an absurd objection, as, he said, a man might take three or four sheets of foolscap, write all the facts down, and then append the paper to the certificate. And, he added, not only ought all the facts to be so recorded, but they ought to be recorded for a certain purpose, which was evidently in the mind of the legislature when it required this record, viz., that the person whose liberty had been restrained might see upon what grounds it had been done.

Whether this is really desirable is, in our view, a very doubtful question. Without at all questioning the law or the ruling, we must, nevertheless, point out that it is thus laid down for the first time. We believe that no objection has ever been taken before to a certificate on the ground that all the facts known were not disclosed. It has generally been considered sufficient if the *facts disclosed* were, in the opinion of those competent to judge, adequate to prove the necessary point, that the person was a lunatic. That was the law, as was commonly understood, up to this case. And it must be confessed that certain inconveniences present themselves as likely to arise from this later interpretation of the law. For instance: medical men will be required to disclose most unpleasant and unnecessary facts on the certificates—which are quasi-public documents which pass into various hands. Only a copy of the certificate goes to the Commissioners, the actual document remaining in the hands of the person who has the custody of the lunatic; so that it may sometimes be in the hands of the person keeping an asylum, sometimes in the hands of a lodging-house keeper at the seaside, and sometimes in the hands of a keeper who is sent to travel with the lunatic; sometimes the police ask leave to see them, and they pass into the hands of servants and other people. Therefore, they are quasi-public documents; and to state upon such documents family secrets and individual weaknesses, and sometimes the crimes of persons who have become insane, would be in the highest degree inimical to the interests of the insane, adverse to the recognised ethics of the profession, and conducive to nobody's good. It would, for example, be necessary to chronicle with minuteness the dreadful blasphemies and obscenities which even the most pure-minded women utter in a state of mania from a childbearing, the mere statement of which would be horrible, and a source of inexpressible suffering to them afterwards, upon recovery, to see on record against them. Pure-minded women, in such a state of mania, will often charge themselves with the most flagrant and indecent offences; and so with men. Nowell made a ridiculous but horrible charge of indiscriminate adultery against his wife; and supposing the man had ultimately quite recovered, it could not fail to be a source of anguish to him to see it recorded; and it might well be a hindrance to a perfect re-establishment of domestic relations. There is a still greater objection. The facts indicating insanity are frequently real facts of crimes committed—committed as a result of insanity, but still actual facts. Are they to be put down in a quasi-public document for people to see without essential necessity? It is surely unfortunate enough for a man to become insane, without every detail of his insanity being thus inevitably brought into judgment against him. It is not necessary, as a measure of public security; it cannot possibly be of any service to the poor victim; aad it can in no way conduce to the well-being or the morality of the public.

The one certain conclusion which we draw from the case in question is, once more, that, do what we may, we shall never make the system of giving certificates satisfactory, and that it ought to be given up. The one reform necessary, notwithstanding that the Commissioners set their faces against it, is, in our opinion, to make a magisterial order necessary for lunatics of all classes, instead of confining it to lunatics of the pauper class. In Scotland, it is required for lunatics of all classes; and there is, we understand, no valid reason whatever why it should not be adopted also in England. Even an infant can sign the order here for well-to-do lunatics. It is impossible to amend the certificate system; it is radically bad. Let a magisterial order be necessary for detention, granted upon the testimony of medical men. If two doctors be necessary, let them have a consultation; and let the lunatic himself, if he choose, appoint one of them to represent him in the consultation; and let the case be dealt with as a case of any other malady. The attempt to convert the certificate into a full medical record must be a failure, and would carry with it more disastrous consequences than Lord Coleridge could have foreseen. Medical men, of course, should never sign certificates when they themselves are interested in the success of asylums; that is an elementary principle.

We cannot conclude without again expressing our appreciation of the painstaking and lucid summing up of Lord Coleridge, which, whatever exceptions may be taken to it, went throughout to the security of the lunatic. On the point that all the evidences of insanity should be stated, it may be useful to mention that, in *re* Shuttleworth (9, Q. B. 651), a statement in the certificate that the alleged lunatic "labours under delusions of various kinds, and is dirty and indecent in the extreme", was held to be sufficient. Lord Coleridge's judgment seemingly overrides this decision.

Finally, this case points once more to the propriety of legislative measures for abolishing private asylums. It is an intolerable grievance to the profession, and a great hindrance to justice, that the prejudice arising, however unjustly, out of the supposed interests of the proprietors comes always to complicate the trial of the question of insanity in such cases. The more the relations of the doctor to the insane are limited to the purely professional character, the sooner such prejudices will die away, and the sooner cases of disputed sanity will cease to be public scandals, in which the lawyers are free to indulge in imputations of interested motive.

M. VERNEUIL ON OPERATIVE MANIA OR PRURIGO SECANDI.

M. VERNEUIL, in the course of a recent discussion at the Académie de Médecine, on a couple of cases of successful ablation of the uterus, made some observations on what he describes as the "délire opératoire", which has naturally attracted a good deal of attention. The discussion

arose *à propos* of two cases of hysterectomy, one by M. Tillaux and one by M. Duplay, both of them under antiseptic precautions. In this country, a very large amount of success attends operations of this kind, Dr. Keith of Edinburgh having, we believe, now performed this operation successfully in five consecutive cases, and Mr. Spencer Wells recently in as many, besides having had forty consecutive cases of ovariotomy without a death. In France, they are still comparatively rare operations, although by no means unknown. M. Verneuil began by saying that he did not desire to diminish the favourable impression produced by the interesting communications of MM. Tillaux and Duplay, but would be the first to congratulate his skilful colleagues on the success which they had obtained.

"I adopt hysterectomy", he said, "and am happy to see produced at this tribune the protest against the too exclusive conclusions of the report which M. Marquet read to you himself on this spot, and which was extremely unfavourable for the operation in question. No one can doubt that supravaginal resection of the uterus is suitable for certain exceptional cases, and that to it is due the safety of some patients."

That declaration made, M. Verneuil desired to express the hope that the enthusiasm of operators in future would not go too far, and that they would be good enough to remember that, if operative surgery does in fact usefully and brilliantly intervene in the cure of internal tumours by hysterectomy, the bloodless method of treatment, on its part, is not so powerless as it formerly was, and that it also counts in its record palliative results and radical cures well worthy of attention. The two surgeons in this case had, he hastened to say, acted from prudential motives, and had not taken up hysterectomy until they had arrived at the conviction that nothing else remained to be done in the hands of French surgeons. M. Duplay had explicitly declared that an operation which still gave fifty-five per thousand of mortality, at a period when the prognosis of operations is improving along the whole line, should be reserved as an extreme resource in cases where metal treatment has failed, or where a tumour becomes a cause of imminent danger.

"I adhere", said M. Verneuil, "completely to these wise precepts, and if I have come forward to speak, it is to complain of their too frequent neglect. I have followed for some years with a lively interest the attempts at radical cure of uterine tumours, and too often I have convinced myself that certain operations have been performed without being preceded by serious attempts at medical treatment, without absolute necessity, and indeed without sufficient regard to the opportuneness of the proceeding. If, then, when hysterectomy passed with good reason as an act of rashness, people were already too hasty in performing it, what will it be now, when it enters on an open footing into practice, and when it is described as relatively benign? We shall have to expect, I think, to see it advised and performed as if a simple ovariotomy were concerned. My fears are not without a good reason. It is not necessary to be a professed surgeon; it is enough to read our journals to remark that, for several years, surgery has begun to march in a singularly audacious path. To indifference or to discouragement in the matter of chronic affections of this sort, has succeeded a violent access of *prurigo secandi*, a sort of operative delirium (*délire opératoire*), carried so far that one is sure to see, one day or other, the application to the living subject of every operation which is practicable on the dead subject. Thus they cut out now the larynx, the spleen, the kidney, not only when it is diseased, but when it is simply displaced. Thus women are castrated when from the ovaries, which are otherwise healthy, certain nervous disorders arise, whilst others resect a slice of the œsophagus or a piece of the stomach, or a fragment of intestine; and, others, again, make a great carnage of unfortunate women, from whom they cut away the uterus infiltrated with cancer. Fifty years ago, there existed a personage, whose name, I am not sorry to say, I have forgotten, who desired to overcome sterility. He proposed, in order to facilitate the access to the ovaries of the spermazoids, which were obstructed, to practise catheterism of the Fallopian tubes. Quite lately, another inventor proposed, on the contrary, to create sterility. Oh, the thing is very simple. You introduce, by the vulva, the vagina, and the uterine cavity, the stylet of the galvano-cautery; you carry it directly into the internal orifice of the Fallopian tube; you push a button; the platinum-wire reddens, and cauterises the intra-uterine passage. Obliteration must follow. And this is how he proposes to set his patient free from inconvenient fecundation. I expect every day to read in the journals of the country from which these lucubrations generally start, the solemn description of a methodical proceeding for the removal of the vulva or of the liver in cases of asthma or of jaundice. I do not know if it be in me an effect of age, and if I am already entering on a period of senile weakness, but I absolutely refuse to see, in this sanguinary debauch, the characters of veritable therapeutic progress. I am willing to believe that the intentions are of the purest, and that a boundless love for humanity is the sole motor of these pioneers of surgery. I see nothing more legitimate than the persevering struggle of science and art against disease, and no victory more glorious than that which is won over an affection regarded till then as incurable; but I think that the pursuit of good, and of that which is still better, has its limits, and that we ought not, in order to protect life, to adopt the proceedings of the bear in the fable, and that, under the pretext of an improbable cure, we ought not to expedite in the course of a week, if not sooner, our patients towards the borders of the dark river. *Primo non nocere* is an axiom which real surgical therapeutics ought never to forget. These attempts, I know, seem to be justified on the one hand. The successes of ovariotomy are invoked, which, after having been condemned by the great scientific tribunals, are to-day one of the most brilliant and one of the most useful operations of surgery. Further, surgeons now flatter themselves that they can undertake everything with the aid of the antiseptic method."

M. Verneuil then proceeded to say he would give briefly his opinion on these two points. So far as concerns the antiseptic method, of which, he asserted, no one will consider him the adversary, since he has supported its principles for more than ten years, he declared that in counting on it too much surgeons deceived themselves. If it be sovereign for external wounds, it affects little as yet deep operations performed upon the cavities. He cited lithotomy, tracheotomy, the removal of tumours of the rectum; it would not do, therefore, to shelter oneself behind it, and to demand of it more than it can give, especially in hysterotomy. As to confining this latter operation to ovariotomy, the thing appeared to him impossible for various reasons. The cysts of the ovary constitute, he observed, a grave affection, which tends almost always to increase, and which, as statistics have proved, indubitably abridges life. Medical therapeutics can do nothing for it any more than either of the other cystic degenerations. The operative treatment is certainly more useful; and if it is not devoid of danger, yet the radical treatment has become almost exempt from peril. Thus it may be adopted without scruple. For hysterectomy, things are different. It very commonly occurs that an uterine tumour passes on unperceived, as any one may assure himself in following the *post mortem* examinations at the hospital for the aged at the Salpetrière. It may remain for a long time stationary, or may grow very slowly; at the epoch of the menopause, it ordinarily ceases to grow. As a rule, it rarely compromises life; and he is of opinion that there is no practitioner moderately full of experience who does not know at least a dozen women living very well with their uterine myoma. During thirty years that he passed in the hospitals, he hardly ever remembered to have seen one or two women succumb to the effects of fibrous bodies in the uterus. Thus much as to his opinion of its benignity. Medical treatment, he observed, is not in this case devoid of efficacy. Often, he agrees, it is only palliative, putting a stop to losses of blood where they exist, impairing or arresting the growth of the tumour; but sometimes also it is absolutely curative. His allusion here was to the treatment by ergot of rye *intus et extra*, known also as Hildebrand's treatment (which, by the bye, is also a general treatment). He had for a long period convinced himself of its efficacy in a very satisfactory proportion of cases. He associates with the ergotine subcutaneous injections of morphine when there are signs of painful uterine congestion.

He combats this congestion by bromides and other accessory methods; in a word, by a combination of measures, which it is not necessary to describe at greater length in this place, he arrives at the mastery over the symptoms most frequently, and is at least enabled to gain time, which may be very precious if operation be inevitable. This treatment has appeared to him especially efficacious in the particularly grave cases, in which the neoplasm advances rapidly and acquires a considerable volume. He has seen a case of this kind in assisting one of his colleagues, who, believing that he had to do with the cyst of the ovary, undertook to operate on it. The tumour was of the size of an adult head; it was

extremely soft, and quasi-fluctuating. It was furrowed by large vessels, especially on the lateral borders of the uterus. Extirpation was followed by rapid death. Now, it was precisely in an analogous case, in a young woman of twenty-one, that he had obtained, by internal treatment alone, the most brilliant success. The disease was of little more than from ten to twelve months' duration. The tumour had reached the umbilicus, and nevertheless filled the smaller pelvis. He, in consultation, recommended the use of ergotine, partly by the mouth and partly in the cellular tissue. At the end of the year, there did not remain any trace of the tumour, and the young patient enjoys still brilliant health.

He knows of other successes obtained after treatment of the same kind, which he had advised, and can count very considerable improvements, and especially the prompt arrest of internal hæmorrhage. Moreover, at a yet later date, he had ascertained indubitably the efficacy of electrical currents. He had seen with a colleague a young woman of magnificent appearance, affected with abdominal pains for some months. A tumour was discovered after careful examination, which was ascertained to be an uterine fibroma of already considerable volume. Ergotine was not well tolerated. Then, remembering a memoir of Dr. Cheron, in which electricity was recommended, that physician was called, and the case made a rapid progress towards cure; the tumour diminished very rapidly; the sufferings were relieved to such a degree that the patient, who, before the treatment, could hardly take a drive for twenty minutes, had recently started for a journey to Russia; and, nevertheless, fibroma, at the moment of her departure, had not completely disappeared. The conclusions of M. Verneuil from all this are, that hysterectomy is certainly a good operation, which will remain in practice for certain exceptional cases; that this will become more and more rare in proportion as the agents of medical therapeutics are better applied, and applied in a more timely manner; and that among these must be counted in the first rank the preparations of ergot of rye, and probably electric currents.

A SHARP touch of cholera is reported to have broken out at Mardan.

AN Allahabad paper states that something like two hundred men of the second battalion of Her Majesty's 22nd Regiment, stationed there, are ill with fever.

A BOMBAY journal says that fever has been playing great havoc in the Punjab. During the week ending September 27th, there were 16,628 deaths registered, against 11,713 for the previous week.

THE *South of India Observer* says that, if the quality of the cinchona crop turns out to be good, and prices keep up, the amount realised this year will considerably exceed the £40,000 obtained last year.

THE two Honorary Secretaries of the Testimonial Fund to Mr. Holden are Mr. John Langton and Mr. Howard Marsh of St. Bartholomew's Hospital; to whom, or to Dr. Robert Martin, the Treasurer of the fund, subscriptions should be sent.

A NEW journal, devoted to the diseases of children, under the name of *Archiv für Kinderheilkunde*, is announced for appearance in Germany. It is to be under the management of Dr. A. Baginsky of Berlin, Dr. Herz of Vienna, and Dr. Monti of Vienna.

IN connection with the reconstitution of the India Museum, we understand that the director, Dr. J. Forbes Watson, will take his well-earned pension at the close of the current year. Dr. Cooke's services as botanist will be transferred to the Kew establishment.

THE *Times of India* tells us that the cost of maintaining prisoners in ten Bombay gaols was much reduced in 1878, but the vital statistics were very unsatisfactory. The Government Report attributes this to feeble state of health of prisoners, produced, prior to their incarceration, by want. If this be so, it might have been more satisfactory to read that the cost of maintenance had been increased instead of diminished.

We understand that scarlet fever is very prevalent at Leek. Meanwhile, the infectious hospital of the town, which was long ago condemned as being inadequate and unsuitable, is not proof against the inroads of either rain or wind. It is time that something should be done to put an end to this state of affairs by the prompt erection of a suitable efficient building.

IS a steam-whistle an injury to health? This interesting question is about to be settled by an inspector of the Local Government Board on a complaint of Mrs. Henry Dudley of Netherthorpe Hall, Staveley, against the Staveley Coal Company, for calling their men to work by means of certain ear-torturers of the type in question.

AT a meeting of the Medical Society of Lower Austria on June 28th, Dr. Pollak read a paper on the "Treatment of Whooping-cough", in which he recommended insufflation of quinine, prepared according to the following formula: Tannate of quinine and bicarbonate of soda, of each five parts; powdered gum arabic, one hundred parts.

ABOUT three years ago, Professor Schäfer was appointed by the Obstetrical Society to make experiments with a view to determine what fluids may be used with benefit for transfusion, and the best way of performing the operation. Mr. Schäfer has presented his report, and it will be read and discussed at the next meeting of the Society on December 3rd.

WE have already mentioned Mr. Butlin as a candidate for the vacant office of Assistant-Surgeon at St. Bartholomew's Hospital. In addition to Mr. Butlin, whose claims we have referred to, Mr. Walsham is also a candidate. Although it is possible that Mr. Butlin may be regarded as the senior candidate on this occasion, Mr. Walsham is so well known in the profession as an accomplished surgeon and pathologist, and an excellent anatomist, and has, by his continuous services at the hospital and school, and by his public works, achieved so excellent a reputation, that his claims to such an appointment must be regarded as of the highest order, and such as deserve the fullest recognition. Mr. Walsham's *Catalogue Raisonné* of the Museum at St. Bartholomew's is a model of usefulness, and one which we should be glad to see adopted or enlarged, so as to include all the pathological museums of London.

THE excellent museums of surgical, medical, and anatomical preparations attached to all our London hospitals and schools constitute one of the most valuable and peculiar features of our hospital establishments. They have no precise parallel abroad, and but few institutions on the continent can boast of such collections as those which are to be found in nearly all our hospitals. Unfortunately, being scattered, and not possessing for the most part available public catalogues, even separately, their contents are much less useful for scientific purposes and much less capable of reference and consultation than they otherwise would be. It has, we believe, been for some time proposed, that an effort should be made to do for all the hospitals what Mr. Walsham has done so well for the museum of St. Bartholomew's; and we have little doubt that a well arranged and scientifically edited conjoint guide to the museums of the metropolitan hospitals would be a work which would be largely welcomed by the working members of the profession, and treasured as an important book of reference for medical libraries. To be effective, it should be well classified, well illustrated, and carefully edited. Such a *magnum opus* ought to receive the willing support of all our great hospitals. It probably could only be produced with their favour and assistance, and on the condition of being to some extent subsidised by them, or at least largely subscribed to by the hospitals for the benefit of their pupils and members of their staff now and hereafter. Under these conditions, we do not see any inherent difficulties in the undertaking which might not be overcome. Executed on a large scale, it would be a credit to English medical literature, and both honourable and useful to our great educational establishments and hospital services.

An Army Circular, just published, details the ration which is given to the British soldier when in the field. The allowance seems liberal. It includes a pound of bread, a pound of fresh meat, half a pound of fresh vegetables, three-quarters of a pound of flour, and, at the discretion of the commanding officer and medical staff, a pint of porter or half a gill of spirits. As it is not always practicable to obtain bread, fresh meat, or fresh vegetables, three-quarters of a pound of biscuit, flour, or rice are to be considered equivalent to the ration of bread; a pound of salt meat, or three-quarters of a pound of preserved meat, may be substituted for the fresh meat ration; and two ounces of preserved vegetables, one ounce of compressed vegetables, or a quarter of a pound of onions or leeks may take the place of the fresh vegetables. Where flour is not obtainable, half a pint of split peas, three-quarters of a pint of dholl or calavances, or a quarter of a pint of oatmeal is to be regarded as representing three-quarters of a pound of flour. The total expense of provisioning the British army for the current year is £1,588,000, of which £40,000 is additional in consequence of the Zulu war.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

The quarterly meeting of the Association was held on November 13th, 1879, at 53, Berners Street, Oxford Street; Dr. Lush, M.P., President of the Association, in the Chair. Dr. Wilkie Burman read a paper on the separate care and treatment of acute and curable cases in asylums, with proposals and suggestions for a detached hospital for special purposes in connection with very large public lunatic asylums. An interesting discussion followed, and the further consideration of the subject was adjourned till the next meeting. Dr. Hack Tuke exhibited a brain preserved by Giacomini's method.

"E PUR SI MUOVE."

People will not allow Dr. Stewart to remain alive. It is now Dr. Wilson of Leamington, who on page 17 of the new edition of his *Handbook of Hygiene*, proceeds to slay him in the following manner.

"About the year 1848, when fever was plentiful enough in all our large towns, and did not spare country villages, the present Sir William Jenner, *the late Dr. Stewart*, and a few other earnest workers in hospital wards, began to observe the differences between typhus and typhoid."

Dr. Stewart must congratulate himself that his work is so good as to be already classic; and his friends are so many that to be already promoted to the gods of medical literature will not lessen his earthly pleasures.

MEDICAL ESTATES.

The will of Dr. Patrick Black, late Queen Anne Street, who died on October 12th, was proved on the 5th instant by Mrs. Jane Louisa Black, the widow; Miss Jane Emma Black, the daughter; and Mr. Arthur Black, the son, the executors, the personal estate being sworn under £60,000. The will of Mrs. Green, widow of the late Mr. Joseph Henry Green, F.R.S., was lately proved under £90,000 personalty; and that of Dr. Radclyffe Hall of Torquay at the same amount of personal estate, exclusive of a large realty.

A NEW LUNACY COMMISSIONER.

The mistake which Lord Coleridge made in his most able summing-up in the Nowell case, in speaking of Dr. Nairne as an *ex* Lunacy Commissioner, is making some aspirants to office stretch the wings of fancy or the ropes of patronage towards the Olympus of Whitehall Place. The appointment of Commissioner in Lunacy is vested in the Lord Chancellor; but this dignitary has always accepted the nomination of the Board for the medical appointments, and, until recently, for the legal appointments also; and the plan has its advantages. It saves the Chancellor the trouble of endeavouring to discover for himself the most eligible person for the office, as he is compelled to do with regard to his own visitors of lunatics; and it enables the Commissioners to provide themselves with colleagues and comrades to their own mind. But we may express the hope that, at the present juncture of lunacy imbroglio, it is extremely desirable that the Lord Chancellor will take the trouble to select for himself some person far removed from mediocrity—a physician having the confidence of the profession at large, and a gentleman of culture equal to the literary requirements of the position. The evolution of mediocrity is but too apt to be the result of self-election in Boards; and although mediocrity is a safe, and, in peaceful times, to a certain extent a laudable quality, at the present time it is desirable that the Lord Chancellor should pour a fresh stream of living water into this canal of officialism, even at the risk of producing some eddying currents, and disturbing the even flow of the slow and steady waters along which commissioners mostly best love to glide.

HEAVY DAMAGES FOR ACCIDENT TO A MEDICAL MAN.

In the Common Pleas Division of the Supreme Court of Judicature, on Tuesday last, before Lord Coleridge and a special jury, an action brought by Dr. C. D. Phillips against the London and South-Western Railway Company was tried. The action was for damages sustained in a collision on the defendants' line in December 1877. The case was originally tried before Mr. Justice Field in April, and £7,000 damages obtained by the plaintiff. A rule for a new trial was afterwards granted by the Court of Queen's Bench on the ground that the damages were inadequate. Mr. Pope, Q.C., and Mr. A. L. Smith were for the plaintiff; Serjeant Ballantine and Mr. Dugdale for the defendants. The plaintiff's case was that he had been in the enjoyment of a large practice, amounting in the three years preceding the accident to about £6,000 a-year, his professional expenses being about £1,200. The result of the accident was a severe injury to the spinal cord, causing partial paralysis, which produced great difficulty in breathing, accompanied with much pain. These symptoms had not improved since the accident, though the general health of the plaintiff was somewhat better, but still existed to an extent that made it improbable that the plaintiff would ever be able to resume his practice. The plaintiff had visited various places for the sake of his health, and claimed for travelling expenses £1,000. The plaintiff's deposition was read, and various eminent medical men gave their opinions on his case, some being of opinion that recovery was impossible, and others that in three or four years he might recover to some extent. Serjeant Ballantine addressed the jury for the defendants, contending that many of the plaintiff's symptoms might be due to his nervous condition, which would improve when the anxiety of the trial was past, especially as no organic injury existed. The learned Serjeant also maintained that certain large payments made by patients, amounting in the whole to about £5,000 for nine persons, could not fairly be taken into account in calculating the income of the plaintiff during the three years before the accident. Lord Coleridge, in summing up, told the jury that the many recent cases left the matter much where it was before—viz., that compensation was to be what the jury thought fair. After stating that in this accident he considered the defendants singularly free from all moral blame, his lordship went through the various items for which compensation was claimed, and the evidence relating to the state of the plaintiff. With regard to the contention of the defendants as to the omission of the payments abovementioned from the annual income, he saw no reason why the same persons, or others equally rich and grateful, might not have been among the plaintiff's future patients, supposing the accident had not happened. The jury, after an absence of about twenty minutes, gave a verdict for the plaintiff for £16,000.

MISPLACED ECONOMY.

Our attention has on many occasions been attracted by the havoc which infectious diseases make in the various sanitary districts within the area of the Hartlepool registration district, and it has often occurred to us that, if all the authorities within the area would join together, a very satisfactory combined district might be formed, to be served by a medical officer of health giving his undivided attention to public health affairs. Our surprise therefore, is great in reading that, at a recent meeting of the Improvement Commissioners of West Hartlepool—a dirty crowded town of 30,000 inhabitants—objections were urged to the increase of the salary of the medical officer of health from £20 to the still insufficient sum of £40 *per annum*. The increase was, it is true, eventually

granted; but what is to be hoped in the way of sanitary improvement from a local authority which is content to regard for a number of years the sum of £20 as adequate remuneration for safeguarding the public health of a teeming population of thirty thousand people? We learn about the same time that the Liskeard Rural Sanitary Authority has reduced the salaries of its already underpaid sanitary officials 25 per cent. Evidently this august body prefers economy to efficiency.

MURCHISON MEMORIAL.

AT a meeting of the General Committee, which was held on the 14th instant, Mr. Lister, F.R.S., presiding, it was resolved, on a motion by Dr. Quain, F.R.S., seconded by Dr. Spencer Cobbold, F.R.S., "that the competition in Edinburgh for the Murchison Memorial Clinical Scholarship be open to all students of the Edinburgh medical schools". It had previously been decided that none but University undergraduates should compete; but, a protest having been made against this exclusiveness by the lecturers in the extra-academical schools, it was thought best to throw the Scholarship open, as had already been done in the case of the London schools. It is proposed that the award shall be made alternately by the Medical Faculty of the University in Edinburgh, and the Royal College of Physicians in London, these being the two bodies with which the late Dr. Murchison was more especially connected.

TYPHOID FEVER AND CLEANSING OF WELLS.

DR. GEORGE WILSON, on page 159 of the just issued fourth edition of his admirable *Handbook of Hygiene*, says:

"Even when there is no drain or cesspool near, a well frequently becomes polluted because it is never cleared out; and, for my own part, I regard the periodic cleansing of wells so necessary, that I think every pump-well should be provided with a man-hole, and be cleaned out at stated times. In towns or large villages provided with a large water-supply, the closing of all wells, whether public or private, should be made compulsory; for, with drains ramifying in every direction, it may be taken for granted that they are either polluted, or are, at all events, constantly liable to pollution."

An outbreak of typhoid fever that would seem to bear out Dr. Wilson's view has recently occurred at Lafayette, Indiana, where Dr. W. W. Vinnedge was recently called to attend a whole family, consisting of the father and mother and seven children, suffering from the disease. All the surroundings of the house were perfectly wholesome; but, when the water was pumped out of the well, two feet and a half of soft stinking mud were found at the bottom, together with tin pans, horseshoes, bones, pieces of wood, etc. From this time, the health of the family commenced to improve, and since the well was cleaned out the family has not suffered any more from fevers or boils. There seems no doubt, therefore, that the well was poisoned by the filth thrown into it from time to time, and by the fact that it had not been cleaned out, so far as could be ascertained, at all.

INTRA-UTERINE VACCINATION.

THE question whether it is possible to render the fœtus *in utero* insusceptible of small-pox by vaccinating the pregnant female, has been examined by Dr. A. E. Burckhardt in the *Deutsches Archiv für Klinische Medicin*, Band 24. Attention was previously directed to the subject by Professor Bollinger of Munich, in his article on Human and Animal Vaccine, published in Volkmann's *Sammlung Klinischer Vorträge*. He suggested that, as the poison of small-pox was known to be capable of transmission from the mother to the fœtus, a similar condition might be found to exist with regard to vaccine; and that this was supported by the number of cases in which insusceptibility of infants to vaccination might be traced to the revaccination of the mothers during pregnancy. The results of some experiments on sheep also pointed in the same direction. Rickett inoculated about seven hundred pregnant ewes during the last four to six weeks of gestation with *variola ovina*. Their lambs were inoculated when from four to six weeks old with good sheep-pox lymph; no result followed in any case, while thirty-six other lambs treated in the same way had very fine pustules. A similar observation has been made by Roloff. The only observation on the human subject, according to Dr. Bollinger, is that of Underhill, who found, after successfully vaccinating a woman in the eighth month of pregnancy, that vaccination of her infant with recent lymph in the third and fourth months produced no result. Dr. Burckhardt's researches were carried on in Dr. Bischoff's obstetric wards in the hospital at Basel. In 1877 and 1878, he revaccinated twenty-eight pregnant women. From various circumstances, however, such as still-births, early removal of the children, etc., only eight of the children were available for observation. To test the accuracy of his results, he vaccinated four children whose mothers had not been vaccinated during pregnancy, and in all produced fine pustules. The results with the children of the vaccinated women were these. 1. The children of four women who were successfully revaccinated during pregnancy were all found to be insusceptible of the vaccine virus. One of them was still insusceptible at the end of half a year; while the lymph employed in the other three cases was used successfully in other children. 2. The children of two mothers who had been revaccinated with partial success were both found insusceptible of vaccination. One of the test children was vaccinated successfully, the other without effect—but perhaps the lymph used in this case was too old. 3. Of the children of two women who had been unsuccessfully revaccinated, one was vaccinated without result, while the operation in the other was successful. The mother of the latter had been revaccinated successfully five years previously. Dr. Burckhardt has made some observations on the subcutaneous injection of vaccine lymph, taking for the purpose a sufficient quantity to vaccinate six or eight persons in the ordinary way and mixing it with a drop of distilled water. The injection of this into the subcutaneous tissue of pregnant women was not followed by local reaction or general disturbance. He treated ten women in this way; but only two of the children were available for experiment. Both were found to be insusceptible; while two other children, vaccinated with the same lymph, had good pustules. Dr. Burckhardt considers it too soon to arrive at any positive conclusions on the subject; and remarks that the value of the process can only be decided by the publication of the results obtained by a number of independent observers.

EXCESS OF SUICIDES IN LOCAL PRISONS.

IT appears from the Second Report of the Commissioners of Prisons for the year ended March 31st, 1879, that there was a large excess of suicides in local prisons (formerly county and borough gaols) over the number reported in central convict establishments. In the five years and a half ended March 31st, it seems that the number of suicides in the convict prisons with an average population (in round numbers) of 10,000, was ten; and in the local prisons, with an average population of 20,000, the number was eighty-one; so that, in the local prisons, the number of suicides in proportion to the average population was about four times that of the convict prisons. The largest percentage of cases occurred at the Clerkenwell House of Detention, where, with a daily average population of about 300, there were seven suicides, or nearly six more than would have occurred if the proportional number of suicides had been no greater than the ratio of suicides to the average population of local prisons generally. "Perhaps", the report continues, "this may be explained by the fact that, during the greater part of the period, the Clerkenwell prison was used as a place only for the detention of persons waiting for trial, and that the number of its inmates tortured by suspense and anxiety, and constantly undergoing various forms of acute mental suffering, was much larger in proportion to its population than in ordinary prisons. It is interesting to observe that, in the neighbouring prison of Coldbath Fields, with its large average population of nearly 2,000, there were only five suicides during the same period, or two fewer than at the small prison from which it was chiefly fed. The largest actual number of cases, and, next to Clerkenwell, the largest number of cases in proportion to population, was at Salford (thirteen cases); then followed at some distance, Preston (five cases), Wakefield (five cases), and Leeds, Newcastle, and Stafford, each with two cases. In no other prison was there more than one case, and in twenty-seven of the existing prisons there were none. For

every prisoner who yields to the suicidal impulse, probably many are tempted and resist; their misery may be great, but not great enough to culminate in self-destruction. Just as every death from natural causes represents much sickness in the population at large, so, I [Dr. R. M. Gover, Inspector-General of Prisons] would submit, does every suicide in Prison represent much bodily and mental suffering, and the suffering of a kind which does not assist in reformation of character, but rather demoralises, by diminishing self-reliance and weakening the power of self-control." This high ratio of suicides to population in local prisons as compared with convict prisons, would seem to indicate either some excess of harshness in the discipline of local prisons over that enforced in convict establishments, or some other defects in administration which are not creditable to the local authorities.

THE ANTHROPOLOGICAL SCHOOL IN PARIS.

THERE exists in Paris, in connection with the École Pratique of the Faculty of Medicine, an institution—the École d'Anthropologie—to which we have nothing analogous in this country. Lectures on "the proper study of mankind" are there delivered by eminent professors: as, for instance, by M. Broca, on Anatomical Anthropology; by M. Topinard, on Biological Anthropology; on Prehistorical Anthropology, by M. de Mortillet; and on Medical Geography, by M. Bordier. A full course of lectures is arranged on the following important subjects: The Anatomical Parallel between Man and the Higher Animals, by M. Topinard; Types and Races—an Analytical Study of their Morphological and Biological Characteristics, by M. Topinard; Human Palæontology; Prehistoric Archæology, and Classification of Human Remains by Means of Archæology, by M. de Mortillet; The Medical Geography and Comparative Pathology of the Races of Man; Pathological Aptitudes and Immunities; Influence of Race and Situation on Population; Progress and Division of Diseases, by M. Bordier. Supplementary courses of lectures by M. Eugène Dally on Ethnology, by M. Abel Hovelacque on Linguistic Anthropology, and on Demography by M. Bertillon, will be given in the spring. The value of these lectures, as a supplement to the ordinary medical education and as a means of awakening interest in the widest views of the human race in various aspects—medical, psychological, and ethnological—can hardly be overestimated.

INDUSTRIAL BENZINE-POISONING.

WORKMEN employed in the manufacture of benzine are exposed to chances of poisoning which are described in a paper read to the Paris Société Médicale des Hôpitaux, and reported in a recent number of *L'Union Médicale*, by Dr. Guyot, one of the physicians at the Beaujon Hospital. The first symptoms of benzine-poisoning are shown by mental disturbance. The temper changes, the patients become eccentric, wander sometimes, and seem as if they were in a condition of temporary inebriety. At the same time, the bodily strength diminishes, and the patients are easily fatigued. The gait becomes uncertain; and, finally, a very notable and early diminution, almost amounting to loss, of the sexual powers is observed in every instance. When these early symptoms have lasted a certain time, fits of an epileptiform character supervene. These crises are sometimes preceded, during a period varying from some minutes to two, three, or four hours, by a condition of unconscious delirium. One of the patients under Dr. Guyot's care left the factory where he worked, and wandered about the neighbouring streets, not knowing what he was about, for three or four hours. He then suddenly fell down, and was seized with convulsions exactly like those of an epileptic fit. These convulsive attacks recur at more or less distant intervals; sometimes there are five or six fits in the course of a few hours; at other times, the epileptiform convulsions only recur at intervals of from ten to twelve hours. After the crisis, the patient is sometimes in a state of coma, sometimes so delirious as to require a strait jacket. One symptom has been observed constantly after these attacks, and that is an anæsthesia which lasts several days, and extends over the whole surface of the body. Dr. Guyot points out, as another characteristic symptom, so pronounced a state of trismus that it is impossible to separate the jaws, even when the handle of a spoon is used as a lever. This condition, however, is only temporary. Generally, there are no symptoms of muscular paralysis, though in some patients a small degree of facial hemiplegia is observable. These symptoms, notwithstanding their apparent gravity, have not had fatal results in any of the patients under Dr. Guyot's care.

THE PAUPERS' WELL.

WITH reference to this now famous well (from which two thousand paupers are still supplied), it appears that the Bethnal Green Board of Guardians went to considerable expense in deepening the well at the workhouse; and to ascertain the character of the water, a sample was submitted to each of three chemists, who, however, did not agree in their respective reports. Therefore a sample was forwarded to the Principal of the Laboratory at Somerset House for his opinion of the water. So far as we can learn, the water contains a large amount of nitrites and nitrates, and in some other important particulars differs from the London chalk-water. The unoxidised organic matter is not, it appears, excessive, but the water possesses some of the characteristics of a water that is slightly contaminated with sewage. A tube, it appears, is driven down into the chalk about fifteen feet; but the whole of the tube, it would seem, is perforated, and it is supposed that water from the overlying strata obtains direct access to the tube, and it is probable that this is the cause of the difference between the quality of the water and that usually procured from the London chalk. There should clearly be no question whatever as to the quality of a water supplied to a workhouse, and when there is any risk in the use of a water the guardians ought to follow a safe course, and try to render it unobjectionable. The water is also a very hard one, and this means waste of money in washing.

FROZEN SECTIONS.

PROFESSOR RÜDINGER of Munich exhibited at a meeting of the Medical Society of Munich, held on the 16th of last month, an interesting set of sections which he has recently made, illustrating the topographical anatomy of the human body. The preparations were made by freezing the body of a well developed adult male, and dividing it into eight longitudinal sections. The skin on the posterior surface of the body was left intact, and in that way the various sections were attached to one another, and could be turned over one after the other like the leaves of a book. When the external sections were thrown open, all the viscera and structures of the trunk could be seen in position. The sections have been mounted in the erect position, which makes them very suitable for clinical demonstrations.

COMPULSORY VACCINATION IN INDIA.

THE statement of objects and reasons of the Vaccination Bill refers to the vast number of deaths annually caused by small-pox in India as rendering it necessary to enact special measures. The Bill, which is founded on existing Bengal and Bombay Acts, is intended to extend to the municipalities and military cantonments of all those provinces which do not possess local legislatures; but the local governments may extend it to any municipality; and it may also be extended by the Governor-General in Council to any British cantonments. The proposed law is framed so as to find popularity, and not interfere with the customs and habits of the people. Provision is made to enable municipalities to establish vaccination quarters and stations, which would render the operation of the proposed law free from practical difficulties. It has been provided that children may be vaccinated at their own residences, whilst the co-operation of municipal commissioners (most of whom usually are native gentlemen of respectability and local influence) required by the Bill, is calculated to secure its popularity. For similar reasons, its provisions have been framed to restrict as far as possible the interference of the police; and, by entrusting municipal commissioners and the superintendent of vaccinators with the duty of keeping registers of the names of unprotected children and making investigations, it i expected that all unnecessary inconvenience will be avoided which

would arise from enforcing the attendance of children and their guardians before magistrates. Considering the physical constitution and the notions of the natives of India, the minimum age for vaccination has been fixed at one year and the maximum at fourteen years. In consideration of the prejudices (whether well founded or not) of the native gentry against the extraction of virus from the arms of their children, the Bill expressly prohibits such a practice; and provision is made for securing the virus under special circumstances, with the consent of the parents or guardians of children, by payment of compensation. The penalties have been mostly reduced to pecuniary fines.

SAVAS PACHA.

IT will interest many to know that the present Minister of Foreign Affairs in the new Turkish Ministry recently formed, Savas Pacha, was a few years ago a physician in practice in Constantinople, in the employ of the Government, and formerly attendant on Sir H. Lytton Bulwer when he was Ambassador there. He displayed good organising powers, and was made governor of a province, and from that position has risen to the responsible post which he now holds. Thus in Turkey it is certain that a man may rise from any place in the ranks to any post however high in the State; and this is an example—rather striking, perhaps, to our country doctors—of one of our profession becoming rapidly Minister of an important department at the present critical moment.

HOME-HOSPITAL IN FLORENCE.

THE first report of the Evangelical private hospital, Villa Betania, Florence, established in 1877, has lately been issued. The institution receives strangers without distinction of nationality or of creed, and supplies a great want, inasmuch as neither the hotel nor the general hospital accommodation meet the requirements of sick strangers. The Villa Betania lies in a healthy and beautiful situation, and has twelve wards. Since the opening of the hospital, 33 patients have been admitted—viz., 11 Italians, 9 Germans, 6 Swiss, 5 French, 4 English, and 1 Russian. There have been three deaths—two of patients admitted in the last stage of cancer and of softening of the brain, and one of a cachectic woman, the subject of pleurisy. The report states that the period of convalescence has been short and undisturbed. The daily payment required from patients is, for the first class, ten *lire* (8s. 4d.); for the second class, six *lire* (5s.).

VERDICTS OF NATURAL DEATH: THE POISONING OF INFANTS BY OPIATES.

WE are indebted to a correspondent for a report of the subjoined case. It furnishes another illustration of the perfunctory manner in which inquests are conducted, and of the incorrect verdicts which are returned by juries under the present system.

An infant, only five days old, was on the morning of the 30th ultimo found dead in bed by the side of its mother. As it did not appear very well on the previous evening, four drops of Godfrey's cordial were administered to it. It was awake about twelve o'clock and took the breast, but in the morning was found dead. An inquest was held at Crowland, before J. G. Calthrop, Esq.; and, by direction of the coroner, a *post mortem* examination was made by Dr. Sargeant, who stated that he found slight congestion of the brain and symptoms of diarrhœa, but not sufficient to account for death. He inferred, therefore, that death had resulted from the effects of the narcotic. The druggist who supplied the cordial was called, and explained the composition of the drug, four drops of which, in his opinion, was a very harmless dose: he had heard of a much larger quantity having been given without harm. The jury, after a short consultation in private, returned a verdict of "natural death".

It will be perceived from this report that the medical gentleman, who made the *post mortem* examination, could not discover any "natural" cause of so sudden a death, and, judging from the condition of the brain, he referred it to the action of the opiate which had been given to the child under the direction of a druggist. Godfrey's cordial has caused the deaths of a large number of infants. The proportion of opium contained in this preparation is variable, but it is sufficiently potent to destroy the life of an infant only *five days* old in a very small dose. The jury preferred the evidence of the druggist, who sold the poisonous compound, to that of the medical man, who was called before them as a skilled witness. The druggist expressed his opinion that the dose given was harmless! We hope the time is not far distant when the opinions of the vendors of drugs, on poisonous and non-poisonous doses, will not be received in the coroner's court, to the exclusion of the evidence of educated medical men. The tradesman who sells a drug, which there is reason to believe has caused death, is scarcely a proper person to act as a skilled witness, and give an opinion at an inquest on what constitutes a poisonous dose. It cannot be expected that he should express an opinion which would lead to the suppression of the sale of the poisonous article; and a jury, by acting upon his opinion (as in this case), and returning a verdict of "natural" death, adverse to medical evidence, simply encourages the practice of poisoning infants with opiates. A medical coroner of ordinary experience would have pronounced the giving of an opiate, in any form and in any dose, to an infant only five days old, as dangerous to life.

CONFLAGRATION FROM THE USE OF THE THERMO-CAUTERY DURING ANÆSTHESIA FROM ETHER.

WE read, in the *Journal de Médecine et de Chirurgie Pratiques* for October 1879, that M. Poncet of Lyons, having anæsthetised with ether a woman, in order to straighten her leg bent by arthritis of the right knee, intended to follow up the straightening by the actual cautery. One hundred and fifty *grammes* of ether had been used, as the patient did not easily come under its influence. The window had been opened, the room was large, and the ether-bag was to a certain extent separated from the thermo-cautery. Suddenly, the room was in flames, and the bed was enveloped in them. The ether-bag was thrown down on the floor, and the patient quickly removed. She was scarcely touched; but Dr. Gros, who was giving the ether, had his hands severely burned. Similar accidents have also been noted elsewhere. MM. Cazeneuve and Poncet, who write on this case in the *Lyon Médical*, have made some experiments, which seem to show that the accident cannot happen with the thermo-cautery heated to red-heat. Metal heated to this point is extinguished in ether and forms aldehyde. But when the thermo-cautery is heated to white-heat, such an occurrence may take place. They impress the necessity of great care, and the necessity of not allowing any rise in temperature of the thermo-cautery. It is, however, a question whether it be not wiser to abstain from anæsthesia by ether whenever artificial light, or red-hot platinum or iron, is essential to the operation. It is not platinum alone which ether vapours. It is on record that, when local anæsthesia by ether-spray was in vogue, M. Dolbeau, at the Hôtel-Dieu in Paris, conceived the idea of thus anæsthetising the hæmorrhoids of a man whom he was about to cauterise with the red-hot cautery. The ether-spray was suspended, the red-hot iron was applied, but the dense ether-vapour took fire. The hæmorrhoids were not affected; but the unfortunate patient was severely burned, as were also the hands of the assistants.

COLOUR-BLINDNESS AMONG SAILORS.

It is just about a hundred years ago that cases of colour-blindness were made public by Joseph Huddart. It was not, however, till 1794 that Dalton published an account of his own case, he being red-blind. Pierre Prevost of Geneva, in 1827, first called colour-blindness Daltonism, and those so afflicted Daltonians; but it has now been generally agreed to give up this use of the name of so distinguished a man. Professor A. Seebeck was the first to examine, in 1837, a number of colour-blind persons, and classify their troubles. He also showed that there were degrees of colour-blindness—a very important practical point. It is unnecessary to insist at length upon the dangers to the community at large arising from this visual imperfection. When it is remembered that sailors and railway servants have daily to peril human life and property on the indication which a coloured flag or lamp seems to give, it will at once be understood that the question of their freedom from colour-blindness is a national concern. On railways, the danger attending mistakes of signals is much greater than at sea, especially in England, where trains travel at a very high rate of speed, and succeed each

other at very short intervals. Fortunately, a ship is seldom under the guidance of a single person; and in Her Majesty's vessels the colour-signalmen are selected from a large number, and are ascertained to have a quick eye for colours. In merchant-ships, the choice must necessarily be made from a much smaller number. "The appalling yearly list of lost vessels which appears in our Wreck Returns awakens the suspicion that more than one of these fatal disasters may have resulted from the mistaken colours of a lighthouse, beacon, or harbour-lamp, which, on a strange coast, and with perhaps the accompaniments of a snow-storm or a thick fog, has been wrongly deciphered by a colour-blind pilot." Thus forcibly wrote Dr. George Wilson of Edinburgh in 1855; and it is not a little surprising that sixteen years were allowed to elapse before the Board of Trade introduced the colour-test into the examinations for masters' and mates' certificates. We learn from a return recently made by Mr. J. Jackson, the Registrar-General of Shipping and Seamen, that from May 1871 (when the test was first applied) to the end of May 1879, thirty-nine candidates have been reported as failing to pass the test. From this number, however, should be deducted twelve, who subsequently passed on re-examination, and one who on consideration was allowed to have passed, which leaves the actual number of failures from this cause at twenty-six. During the period referred to, the total number of persons examined was 5,967. The proportion, therefore, of candidates who were decidedly colour-blind to the total number of individuals examined was about .43, or rather less than ½ per cent. The importance of sailors who are colour-blind being rejected from employment is rendered more striking, when it is remembered that the large majority of those colour-blind are so for red and green, which are the very colours necessarily chosen by all nations to be by law carried on the two sides of all vessels from sunset to sunrise—the green light on the starboard side, and the red light on the port side. These are so arranged that they can only both be seen when the vessel is directly ahead, and far enough off to allow both sides to be seen. These lights show, therefore, the position and the direction of motion of a vessel; and mistaking the colours must of course be most disastrous. Colour-blindness may, therefore, be well considered as a fertile source of collision at sea; and at the very least no sailor who fails to pass the test should under any circumstances be placed on the look-out.

WATER-MONOPOLIES.

THROUGHOUT the trying period of the epidemic of typhoid fever at Caterham and Redhill, our sympathies were with the unfortunate water-company that had inadvertently caused the mischief; and we did not hesitate to protest against the wild and absurd denunciations hurled at them. It is therefore with the more regret that we learn that the company have taken no profit by the consideration with which they were generally treated both during and after the epidemic, and of its having been so ill advised as to reply in arrogant and almost offensive terms to a very reasonable application, from the Town Council of Reigate, for information as to whether they were yet in a position to supply their district with water drawn exclusively from the lower greensand, and asking for payment of the expenses incurred by the Corporation in consequence of the epidemic. Whilst the company are undoubtedly wise in guarding themselves against any admissions that might place them in an awkward position, it seems to us that they are entirely in the wrong in treating the matter with so high a hand; for, however small their legal responsibilities may be, their moral responsibility, as the indirect cause of so much suffering and misery, cannot be ignored. To pay the expenses incurred by the Corporation in attempting to check the spread of the epidemic is, we think, the very least that the company can do, and this might apparently be expected without any prejudice to the interests of the latter. We had lately to draw attention to the subject of water-monopolies generally, and this case again raises the question of the very imperfect protection of the public against the extreme dangers which a water-company (supplying perhaps half a million of people) may suddenly bring upon great masses of population. Mr. Simon has well said that its colossal power of life and death is something for which, till recently, there has been no precedent in the history of the world; and such a power, in whatever hands it is vested, ought most sedulously to be guarded against abuse. In theory, no doubt, it would appear that Lord Campbell's Act (9th and 10th Vict., cap. 93) must apply to cases of this description; that actions for damages are maintainable against water-companies by the families of persons whom any wrongful act, neglect, or default of such companies, has thus killed; and of course that the person himself, if injured but not killed, can have his own action for damages. But the difficulties in taking any such course at law would probably be extreme. The proof generally as to the epidemic might be complete: it might be shown to the satisfaction of a jury that the outbreak, in mass, had been caused by the distribution by a commercial company of water which had become polluted by sewage; but, with all this clearly shown as to the epidemic generally, it might still be scarcely possible for any individual sufferer to prove (if this had to be proved) that his particular attack came from the direct operation of that and no other cause. It is doubtless from a perception of this difficulty that no proceedings for damages have ever yet been taken against a water-company by persons whom the water has injured; and as the deterrent influence of such personal proceedings does not operate in aid of the general law, it is especially to be desired that any wilful or neglectful distribution of polluted water to the public should be made punishable under the statute law to a very much higher degree than at present. Apart from legal subtleties, it would seem that the distribution of polluted water by a lax or careless company is as proper a case for judge and jury, or action for damages by any of the victims of the company's malfeasance, as any case in which a railway collision brings some scores of passengers into harm.

SCARLET FEVER IN LONDON.

THE fatal cases of scarlet fever in London, which had been 69 and 101 in the two preceding weeks, further rose last week to 113, and exceeded the corrected weekly average by 21; they were proportionally most numerous in East London, and included 14 in Pancras, 5 in Clerkenwell, 6 in St. George-in-the-East, 5 in Mile End Old Town, 13 in Southwark, 5 in Newington, and 6 in Lambeth. Scarlet fever is more fatal in London than it has been since November 1875; the Metropolitan Asylum Hospitals contained 290 scarlet fever patients on Saturday last (against 257 and 259 at the end of the two previous weeks), and 59 new cases were admitted during the week.

CERTIFICATION OF CAUSES OF DEATH IN LONDON.

THE cause of 23, or 1.4 per cent., of the 1,609 deaths registered in the metropolis last week were not certified, either by a registered medical practitioner or by a coroner; the proportion of uncertified deaths was equal to 2.6 per cent. in the South Districts, whereas it did not exceed 0.9 per cent. in the rest of London. Eleven of these uncertified deaths were of infants under one year of age, and eight were of adults; all the adult cases were referred to the coroner previously to registration.

SEVEN DEATHS FROM DIPHTHERIA IN ONE FAMILY.

NOTHING, perhaps, is more strongly marked in the etiology of diphtheria than the ravages which it commits in particular families when it once gets a foothold. The liability of diphtheria to attack members of certain families is well proved; and Sir William Jenner has laid great stress upon family constitution as being "one of the most important elements favouring the development of the disease and determining its progress". The most shocking instance of a household epidemic of this kind that we have ever had to record has recently occurred at Trottescliffe, a village in the Malling rural sanitary district, where ten out of a family of fourteen have been stricken down by diphtheria within a fortnight, and no fewer than seven have died. This fearful incidence of diphtheria in a single household is, we believe, almost, if not quite, without a parallel. The only cases that are at all comparable with it are those of Dungiven, Ireland, where, in November 1876, all the eight children in one family died of diphtheria within seventeen days; Ellesmere, where a whole family of six children died within a month; and Roslis-

ton (Staffordshire), where six out of a family of nine succumbed to diphtheria within a period of only five weeks. Some remarkable instances of family susceptibility have lately been published, and it may be convenient at this moment to refer to them. In one case, a poor woman had three children of her own, and took care of two others in no way related to herself: her own children were attacked by the disease, and one of them died. The two other children, not her own, who were constantly in the same room with the little patients, never suffered from the disease. In another case, four families occupied a house near Woodford, in Essex. In all of them there were several children. Two of the families were related, the mothers being sisters. All the children who were related to each other had diphtheria severely, whilst the children of the other two families escaped entirely. During the progress of the disease, no attempt at isolation was made, the healthy children frequently entering the rooms of the patients. In an epidemic at Staple Cross, in Sussex, which invaded eight families, five children out of one family of six, and four out of a family of five, were attacked, besides the whole of two families having six and four children respectively. The cottage of the last named family was the middle one of a row of three. In one of the adjoining houses there was a family of four children, who were in frequent communication with their infected neighbours, but entirely escaped diphtheria. The same immunity was experienced by a family living next door to the cottage where the family of five lived, and in frequent communication with them. In an epidemic at Church Gresley (Staffordshire) and its neighbourhood, ten families were invaded. Of these, four had more than two cases each, one having three cases, another five cases, and two others six cases each (in one of which—that at Rosliston above referred to—all, and in the other two of those attacked, died). The Rosliston cases occurred in the middle house of a row of three; and though the children (seven in number) in the end houses were in frequent association with the infected children, they appear to have entirely escaped any attack. It is therefore apparent that family susceptibility is a most important factor in the propagation of diphtheria, and it would be a matter of the most intense medical as well as social interest to discover what classes of families are most affected by the disease. We observe with satisfaction that the Trottescliffe epidemic is being investigated by Dr. Edward Ballard of the Local Government Board, in conjunction with Dr. Baylis, the health-officer of the district; and we trust that their united efforts may help us to a little more knowledge than we possess as to the etiology of this terrible scourge.

A SEQUEL TO THE INTERNATIONAL CONGRESS.

At the annual meeting of the Dutch Society of Natural and Medical Science, held in Amsterdam on November 5th, the following were elected honorary members: Professor R. Virchow of Berlin; Professor O. Becker of Heidelberg; Professor Hueter of Griefswald; Professor Halla of Prague; Professors Verneuil, Marey, Gariel, and Méhu, of Paris; Professor Lister and Mr. Ernest Hart of London; Professor Holmgren of Upsala; Professor Reverdin of Geneva; Dr. Pigeolet, Dr. Warlomont, and Dr. Crocq, of Brussels; Dr. Sayre of New York; and Dr. Palasciano of Naples.

SCOTLAND.

EDINBURGH BOTANICAL SOCIETY.

At the meeting of the Botanical Society, held at 5, St. Andrew Square, Edinburgh, last week, the retiring President (Dr. T. A. G. Balfour) delivered the address; and in it took occasion to reply, pointedly and forcibly, to the strictures passed upon the subject of the study of botany by students of medicine by Dr. J. Batty Tuke, in his opening lecture at the College of Surgeons.

GLASGOW UNIVERSITY MEDICO-CHIRURGICAL SOCIETY.

The opening meeting of this Society was held, in the University, on the evening of the 17th instant—Dr. Angus Macphee, President, in the chair. A paper was read by Dr. McCall Anderson, the Honorary President of the Society. He chose, as the subject of it, a consideration of the treatment of pulmonary consumption by means of change of climate, with special reference to the beneficial effects of a residence in high altitudes; and several illustrations were given of the benefits that had been derived from such a line of treatment. A hearty vote of thanks was awarded to Dr. McCall Anderson for his paper.

HEALTH OF THE EIGHT LARGE SCOTCH TOWNS.

According to the report for October, issued by the authority of the Registrar-General, there were 1,808 deaths registered in the eight principal Scotch towns during that month. As to sex, they were pretty equally divided—907 being males and 901 females. It is stated that this is the smallest number of deaths registered for October any year since 1861, and is 667 below the average of the last ten years. The death-rate per thousand of the population were respectively: in Perth 10; in Greenock 15; in Aberdeen, Dundee, and Glasgow 17; Leith and Edinburgh 18; and Paisley 22. Thirty-eight per cent. of the deaths were of children under five years of age—the highest rate being in Paisley, 42 per cent.; and the lowest in Perth, 17 per cent. Zymotic diseases caused 17.8 per cent. of the total mortality; and of 42 deaths from fever, 34 were returned as enteric. Diarrhœa, scarlatina, and whooping-cough were the most fatal of the children's diseases, and there were 30 deaths from diphtheria. Heart-disease caused 141, apoplexy and paralysis 96, and premature birth debility 44 deaths. Phthisis pulmonalis occasioned 13 per cent. of the total mortality, and inflammatory affections of the respiratory organs 17.1 per cent. As to longevity, there were six deaths (of whom five were females) of persons over ninety years of age. The births were nearly twice as numerous as the deaths, amounting to 3,525, of whom 1,831 were males and 1,694 females. The barometric pressure, the rainfall, and the wind-pressure were rather greater, while the mean temperature was less, than during the same month in the preceding twenty-two years. In Edinburgh, the lowest mean temperature and the highest wind-pressure were experienced.

ODONTO-CHIRURGICAL SOCIETY OF SCOTLAND.

The first meeting of the Odonto-Chirurgical Society of Scotland was held, in the Dental Hospital, Edinburgh, on November 13th. Mr. Walter Campbell, L.D.S., President, occupied the chair; and, in his address, congratulated the members of the Society on their increased numbers and successful finance, but especially on the enhanced position of the profession since the passing of the Dental Act. He traced the progress of dentistry, and stated that now there were in Scotland two fully equipped Dental Schools, each with a complete staff of lecturers.

HEALTH OF GLASGOW AND EDINBURGH.

In Glasgow, the mortality last week was 19 per 1,000. In Edinburgh, the mortality was 19 per 1,000; there were 12 deaths from zymotic diseases, of which 10 occurred in the Old Town.

ROYAL MEDICAL SOCIETY OF EDINBURGH.

The Royal Medical Society was opened on Friday, November 7th, with an introductory address on Medical Education, by Professor Crum Brown. Dr. C. W. Cathcart presided, and there was a crowded attendance of students. Professor Brown, in the course of an able address, which was frequently applauded, pointed out the importance of the student of medicine learning his professional work, not as a mere series of practical rules, but by mastering its principles. He should not, for instance, learn a series of practical rules for testing urine, but know also the principles of the science of chemistry on which the rules were based. Many contended that the practical rules were enough for the student, who had so much to learn. This was a belief curiously contrasted with the opinion held so firmly by many, viz., that the British workman had fallen far behind his German *confrère*, who had this technical education: *e. g.*, a knowledge of the principles of the sciences on which his practical work was based. It was, therefore, proposed to take away from the student of medicine what was so urgently needed by the artisan. The professional examinations to be passed by the

student were necessary, but had also some damaging effect on him. One cause of this lay in the student himself, who generally got up much that was only useless detail, about which no good examiner would ever ask him. Another cause lay in the examiner himself, who sometimes wished to find out, not what the student knew, but what he did not know. Such examiners, however, were very rare, he was glad to say. On the motion of Dr. Cathcart, seconded by Dr. E. H. Greves, a hearty vote of thanks was accorded to Professor Brown.—By the abolition of fines for non-attendance, a large accession of new members has been obtained, and there is every prospect of a prosperous session.

IRELAND.

DR. EDWARD PEELE has been appointed a member of the medical staff of the Dublin Throat and Ear Hospital, *vice* Dr. W. J. Smyly, resigned.

THE forty-second annual session of the Dublin Obstetrical Society will be opened this (Saturday) evening, with an address by the President, Dr. Sinclair.

CORK has for months past been almost free from measles, but within the last few weeks the disease has exhibited a tendency to become epidemic.

AT a recent meeting of the Queenstown Dispensary Committee, a resolution was unanimously adopted requesting the Cork Board of Guardians to attach to the new intercepting hospital, now in course of construction, a disinfecting chamber, as recommended by the dispensary medical officers.

METROPOLITAN MEDICAL OFFICERS' ASSOCIATION.

THE medical officers of health of the city of Dublin and the neighbouring sanitary districts, have formed themselves into an Association under the above title, with the object of advancing the progress of sanitary reform in the respective districts. Dr. Cameron, the Superintendent Medical Officer of Health for the city, was one of the chief promoters of the Association, which, we have every reason to believe, will prove a most useful one to its members, as well as to the citizens at large.

SURGICAL SOCIETY OF IRELAND.

THE first meeting of the Society for the present session was held this week. The President of the Royal College of Surgeons, Dr. Mapother, *ex officio* President of the Society, delivered an address.

PATHOLOGICAL SOCIETY OF DUBLIN.

A GENERAL meeting of this Society will be held to-day (Saturday) at five o'clock, in the School of Medicine, Trinity College, for the election of officers and for other business. It will be remembered that the Society has of late years undergone many changes; the most vital ones being the exclusion of students from its meetings, and the permission of discussion. In consequence of the former change, many members seceded from the Society; alleging as a reason, that students were thereby deprived of an opportunity of acquiring a knowledge of pathology. The kind of knowledge of pathology that a student might attain from an occasional bird's-eye view of an "interesting specimen", is open to criticism. Nevertheless, as the admission of students is popular with the majority of the Society, they are to be permitted again to be present at its meetings this session. The mode of their admission appears to be exceedingly cumbrous and troublesome. Instead of adopting a simple and easily worked plan for the admission of all strangers, similar, for example, to that pursued in the Pathological Society of London and kindred societies, each member of the Dublin Society will be troubled with forty numbered tickets, two of which, corresponding to each consecutive meeting of the Society, he is at liberty to search out and give weekly to students. Other changes in the rules of the Society this session are, that the hour of meeting is fixed for 5 P.M., and that essays on subjects in general or special pathology, accompanied or not with specimens, may now be brought before the Society. We are glad to notice that Dr. E. H. Bennett, Professor of Surgery in the University of Dublin, has been nominated to succeed Professor W. Moore as President of the Society for the ensuing session. Since the death of Professor Robert Smith, Dr. Bennett has been the most efficient Secretary of the Society. No one has worked harder than he has to promote the welfare of the Society, or is more deserving, from his professional position, of the honourable office he will be elected to. Dr. J. W. Moore will act as Secretary of the Society during Dr. Bennett's tenure of the presidential chair.

DUBLIN ROYAL SANITARY COMMISSION.

A SUPPLEMENTARY sitting of this Commission was held on three days last week, for the purpose of hearing the evidence of the dispensary medical officers (medical officers of health) as to the chief causes of the mortality in their respective districts. Nothing new, in a sanitary point of view, was elicited from these witnesses; but their evidence was valuable in being concurrent testimony, from those most qualified to form an opinion, as to the preventable nature of the chief causes of the high death-rate of the city. Several valuable suggestions were made by some of these gentlemen, which doubtless will receive the attention of the Commissioners. The report of the Commission need not be expected for at least three months.

QUEEN'S UNIVERSITY GRADUATES' ASSOCIATION, BELFAST.

AT a meeting of the Committee of this Association, held on the 13th instant, the following resolution was unanimously adopted: "That, in the opinion of this Committee, it is essentially necessary that all graduates of the Queen's University should register immediately as life members of Convocation, as important questions in which they are concerned are certain to come up for consideration."

THE EPIDEMIC OF MEASLES AT CAPE CLEAR.

THE disease, which was stationary for a time, appears by later accounts to have increased; and Dr. Donovan reported, at a meeting of the Skibbereen Board of Guardians held on the 13th instant, that since the 5th instant two additional deaths had taken place, making a total up to last week of eighteen deaths. Fifty persons were at that period attacked; but, although a temporary hospital had been constructed for the sufferers, only eight had availed themselves of its benefits, the people on the island refusing to enter it. As long as this is the case, the isolation of those affected becomes impossible.

SCARLET FEVER IN CORK.

CORK for a considerable time was free from this zymotic disease, but towards the end of the June quarter it reappeared, and since that time has prevailed to a great extent. During the September quarter, the deaths registered from scarlet fever in Cork amounted to 52, of which number 45 took place in the Cork Union. The disease appears to have spread by the disinclination of the people to allow their children to be removed to hospital, and the overcrowding which exists among the poorer classes of the community. The master of the Cork workhouse reported last week that there were 13 cases in hospital from one industrial school, while 25 cases were admitted from another institution of a similar kind. The deaths for the week ending the 8th instant amounted to 9, making a total of 23 for the three weeks ending that date.

QUEEN'S COLLEGE, CORK.

THE equatorial telescope constructed for the Observatory of this Institution by Mr. Grubb of Dublin has been placed in position; and the Astronomer Royal, acting as referee for the College, reports most favourably of the instrument. The telescope attracted considerable attention at the Paris Exhibition, and the maker was awarded a gold medal. One of the novelties of the instrument is stated to be the system of optical arrangement, by which both the declination and right ascension circles can be read from the eyepiece of the telescope. We may add that Mr. W. H. Crawford has contributed very generously towards the erection of the Observatory and the requisite instruments.

PARLIAMENTARY BILLS COMMITTEE.

The Coroners' Bill.—Report of Chairman on Recent Private Acts for Registration of Disease: Proposed Model Clause.—Proposed Conference on Animal Vaccination (Dr. Cameron's Bill).—Political Assistance to Poor-law Medical Reform.

AT a meeting of the Parliamentary Bills Committee, held at the offices of the British Medical Association, 161A, Strand, on November 7th, 1879, Mr. Ernest Hart in the Chair—Present: Dr. Fancourt Barnes, Mr. Wickham Barnes, Dr. Henry, Dr. C. Holman, Dr. D. Nicolson, Dr. J. Rogers, Dr. Norman Kerr, and Mr. Sibley. Dr. Carpenter, President of the Council, was also present.

Read letters of apology for non-attendance from Surgeon A. Myers, Dr. Vinen, and Mr. Charles Williams.

The minutes of the last meeting were read and found correct.

Resolved: That the annual report of the Committee, passed at the general meeting at Cork in August last, be entered on the minutes.

The Chairman made a statement to the Committee on the Coroners' Bill.

Dr. Rogers complained that the bill would cut off general practitioners from the fees and privileges of giving evidence in Coroner's Courts, and would mulct of fees the rising generation, because of those who in the past were deficient in pathological research.

Resolved: That Dr. Alfred Swaine Taylor, F.R.S., Mr. Sibley, and Dr. Rogers be a Subcommittee to consider the Coroners' Bill, and report to a future meeting of this Committee.

Dr. Nicolson read a letter from Dr. Davidson of Aberdeen to himself upon the Scotch law of coroners' inquests.

The Chairman of the Committee then read a report which had been drawn up on the Registration of Infectious Disease. [See below.]

Letters were read from Dr. Bristowe, Chairman of the Association of Medical Officers of Health, and Dr. Ransome, Chairman of the Registration of Disease Committee of the British Medical Association, supporting and approving the report and the proposed model clause.

Moved by the Chairman, seconded by Dr. Holman, and

Resolved: 1. That the Chairman's report be received and adopted by this Committee, and that it be printed and circulated amongst sanitary authorities and others interested in the subject.

2. That the assistance of this Committee be, and is hereby, offered to all sanitary authorities who may desire to make statutory provision in their districts for the notification of cases of infectious disease in the manner suggested by the Registration of Disease Committee of the British Medical Association in 1876, the principles of which are embodied in the Model Clause now proposed.

Resolved: "That measles" be retained in the list of infectious diseases to be reported, but that "whooping-cough" be struck out.

The Chairman reported that Dr. Cameron, M.P., had consented to attend a meeting of this Committee, and give an explanation of his Bill on Animal Vaccination.

Resolved: That a public conference be held on December 11th next, at which Dr. Cameron, M.P., M. Warlomont, and M. de Pietra Santa, be invited to attend and explain their views and afford their experience upon animal vaccination, and that the Branches be requested to send representatives to the meeting.

Dr. Rogers brought forward the objectionable clauses of Poor-law Medical Service of England, Ireland, and Scotland, and placed before the meeting an abstract of the proceedings of the Poor-law Medical Officers' Association, of which the following is a copy.

At a meeting of the Council of the Poor-law Medical Officers' Association, held at their rooms, 3, Bolt Court, Fleet Street, on November the 4th,

It was resolved: That in view of the approaching general election, it is desirable to bring under the notice of candidates for a seat in Parliament certain disabilities affecting the "Poor-law Medical Service" in the three countries.

First, in reference to the abuse in the issue of white and notably red tickets under the "Medical Charities Act" in Ireland, with a view to the curtailment of which it is desirable to ask for a modification of the arrangements whereby every member of the Dispensary Committee is permitted to grant a ticket.

As regards Scotland: That there should be a complete rearrangement and reform of the system of medical relief, which should be modified on the principles embodied in the Bill brought in by Mr. Crawford, and which has been brought year by year before the House of Commons by successive Lord Advocates.

Lastly, as regards England: The Association advocates an extension of the dispensary system generally throughout the provinces; the rearrangement and curtailment of the medical districts in accordance with the Board's general orders; the concession of greater powers to district medical officers in ordering necessaries in the treatment of the sick; a compulsory, in lieu of a permissive, superannuation; the introduction of efficient medical inspectors, to be selected from experienced members of the Poor-law Medical Service; the consideration of the recent orders of the Local Government Board in imposing sanitary duties on Poor-law medical officers without additional remuneration.

Moved by Mr. Sibley, and seconded by Dr. Norman Kerr, and

Resolved: That this Committee will give its best assistance to the Poor-law Medical Officers' Association in carrying out the three objects of Poor-law medical reform in England, Ireland, and Scotland, included in the representations now made by the Chairman and Secretary of the Association on their behalf; and that the Chairman of this Committee be authorised to take steps accordingly.

Moved by the Chairman, seconded by Mr. Sibley, and

Resolved: That Mr. Wickham Barnes be appointed a member of this Committee.

SPECIAL REPORT BY THE CHAIRMAN OF THE PARLIAMENTARY BILLS COMMITTEE ON THE RECENT PROGRESS OF LEGISLATION WITH REGARD TO THE NOTIFICATION TO SANITARY AUTHORITIES OF THE OCCURRENCE OF CASES OF INFECTIOUS DISEASE (WITH A PROPOSED MODEL CLAUSE).

The number of sanitary authorities who submitted for the approval of Parliament, during the session of 1879, clauses in local Acts designed to secure to them knowledge of the existence of each case of infectious disease occurring in their districts, immediately on its recognition, shows an increase so gratifying that I am induced to call the special attention of the Committee to the matter, with a view to the settlement of right principles in this important branch of public health work before the commencement of another session.

The attention of this Committee has long been given to the question of the registration of infectious disease, but has been more particularly directed to the subject since the reference made to it by the Registration of Disease Committee in 1877, "to consider in what form the enforcement of the regulation of all cases of infectious disease on the method already approved by the Association can be best dealt with by the legislature".* On two occasions especially during the present year (March 19th and June 12th, 1879), the subject has been carefully discussed by this Committee.

I have now to call the attention of the Committee to the important fact that the whole of the eight local Bills containing clauses as to the notification of infectious cases that were seriously proceeded with last session have been passed into law with the clauses intact. The authorities of two other places—Exeter and South Shields—had inserted clauses with regard to this matter in their local Bills, but neither of the latter was proceeded with. It may therefore be fairly assumed that Parliament looks with favour upon the registration of infectious disease, which it has long been an object of persons interested in the public health to obtain, and will be found ready to approve clauses having this object in all future local Acts submitted to it. Parliament, indeed, may be almost said to regard with undue tolerance the clauses submitted to it, since it has in no case made any serious alteration in the proposals made to it, whether good, bad, or indifferent. It has therefore become to be of great importance that, as already stated, there should, without delay, be a settlement of right principles in the matter for the guidance alike of Parliament and of sanitary authorities.

In the subjoined appendix (A), I have endeavoured to give in such a way as to be readily comparable a synopsis of the various clauses in local Acts now in force with regard to the notification of infectious cases. It will be observed at once that, with regard to the question that has most immediate interest for the members of the medical profession, viz., the persons by whom the existence of the disease is to be reported to the sanitary authority, an undue preference has been shown for the Bolton, or dual, method of reporting. By the Bolton Act, and by the Jarrow, Llandudno, Warrington, Blackpool, Rotherham, Leicester, and Derby Acts, founded more or less upon it, the duty of making this notification is a duplicate duty alike on the occupier and on the medical attendant; so that the sanitary authority has two sources of information about the same thing, paying for one but not for the other. In these Acts, the *primâ facie* duty of complying with the statute is cast upon the occupier. To that extent certainly they are superior to the Burton-on-Trent Act, which requires the occupier to give notice only when a medical man is not called in, and which thus obviously offers a premium to delay in seeking for medical advice in cases of infectious disease; and to the Edinburgh Act, which by inposing no duty at all upon the occupier, has not only the defects of the Burton-on-Trent Act, but is likely to lead to the employment of quacks and unregistered practitioners to an even greater extent than at present—a thing eminently to be discouraged on every ground of public advantage.†

Many medical men feel that, though the duty of notification is thus cast distinctly upon the occupier in the first instance, yet the doctor may

* See Report of the Committee on the Registration of Disease, adopted by the British Medical Association at the annual meeting of 1877.

† I am afraid, too, that the payment clause in the Edinburgh Act will cause some little friction; and it seems a great pity that Parliament, which has now considerable experience with regard to this subject before it, should have passed without alteration so obviously unworkable a stipulation as that providing for the payment of the fee to medical practitioner only when his diagnosis has been found "on inquiry by the Medical Officer of Health" to be correct.

complain of being made to "violate professional confidence" in officially certifying it, even though the sanitary authority knows it, or should know it, already from his client. This may be considered an extreme sensitiveness; but there is a method of notification which is infinitely preferable, and which seems, in fact, the only one which in justice to the profession should in future be allowed. In the Report of the Committee on the Registration of Disease adopted by the British Medical Association in 1876, the relation of the medical profession to this notification is thus ably summed up.

"The authoritative declaration of the nature of the disease must necessarily come, in the first instance, from the medical attendant..... On the other hand, to be obliged to furnish information to a public official with regard to sickness occurring in a family might reasonably be resented by the medical profession. It would be regarded by many not merely as an unnecessary addition to their work, but as an inquisitorial test of the extent of their practice, and as leading to a breach of professional confidence that might cause much annoyance both to doctor and patient.....No such objections apply to the proposal to make the householder responsible for the declaration of the presence in his house of diseases likely to be injurious to the community. It would, indeed, be in accordance with the precedent set in the Public Health Act of 1875, which enacts (Clause 84) that the keeper of a common lodging-house shall give notice of the presence of fever or any infectious disease, not only to the medical officer of health of the local authority, but also to the Poor-law relieving officer of the union or parish in which the house is situated."

For these reasons, the Committee, whilst cordially supporting the movement to obtain a complete registration of these diseases, expressed their opinion that the proper person to make the return should, in the first instance, be the person in charge of the case, or the householder, and not the medical attendant upon the case. The objections to the latter method are, indeed, manifold, and have been the subject of further comment by the Committee in their report to the last annual meeting of the Association. They then pointed out that:

"1. Whatever may be said as to the abstract right of the State to require this service, it is most undesirable that the confidential relation of the medical attendant and patient should be disturbed, or that the former should be placed in the position of an 'informer' in reference to the affairs of the latter.

"2. It is not well that, in addition to the heavy responsibilities and risk to life attaching to attendance upon cases of infectious disease, medical men should be liable to vexatious actions at law, and to heavy penalties for alleged non-performance of a duty that lies outside of their ordinary practice, and that would be more justly and better performed by persons in charge of the cases.

"3. Such an enactment would also often tend to defeat its own ends, seeing that it would in many cases prevent resort to medical assistance, or lead to the employment of unqualified practitioners, and to more frequent application to druggists. Patients suffering from these complaints would thus not only run much greater danger to life, but the community would be more frequently exposed to danger of infection.

"4. Any injury to trade, or to the means of gaining a livelihood, in

APPENDIX A.—*Synopsis of Clauses in Local Acts of Parliament relating to the Notification of Infectious Disease.*

Place.	Number of Local Act.	Diseases to be Reported.	How to be Reported.	Fee to Medical Men for Certificate, with Conditions, if any.	Special Features in Clause.	Penalty for Non-compliance with Section.
1. Huddersfield....	39 & 40 Vict., ch. c, s. 67.	Small-pox, cholera, or any contagious or infectious fever of a dangerous character.	Medical attendant to give certificate to occupier or other person in charge of building or room: certificate to be delivered forthwith by latter to sanitary offices or police-station. If no medical man in attendance, inmate himself or occupier to give, or cause to be given, notice.	Half-a-crown.	Operation of clause restricted to cases without proper lodging or accommodation, enabling the case to be properly isolated.	£5.
2. Bolton.....	40 & 41 Vict., ch. clxxxviii, s. 87.	Small-pox, cholera, or any contagious or infectious fever.	By medical attendant to sanitary authority; notice also to be sent by occupier to sanitary authority; and if patient be not a member of the family of occupier, then notice to be given to occupier by head of patient's family, or by patient himself.	Half-a-crown.		£10.
	Amended by Provisional Order included in 42 & 43 Vict., ch. ciii.	*Small-pox, cholera, scarlatina, scarlet fever, typhoid fever, typhus fever, relapsing fever, puerperal fever, and diphtheria.*	—		*Authority empowered to order by resolution, subject to the approval of the Local Government Board, any other acute infectious disease to be within the provisions of the section: such order to be either permanent or temporary.*	
Greenock.....	40 & 41 Vict., ch. cxciii, s. 202.	"Epidemic, contagious, or infectious disease."	By householder to sanitary inspector within twenty-four hours of existence of disease being ascertained.	—	Notification only required on its being certified by the medical officer of health that "epidemic, contagious, or infectious disease" exists within the limits of the town. Requirement may be confined to any particular district. [*On passing of Act, medical officer of health certified the existence of "epidemic, contagious, or infectious disease", and clause has since remained in constant operation.*]	£1.
4. Burton-on-Trent.	41 Vict., ch. lxi, s. 80	Small-pox, cholera, typhus, typhoid, scarlet fever, diphtheria, or relapsing fever.	*a*. By medical attendant to sanitary authority. *b*. If no medical attendant, occupier or person in charge to give notice; and if patient be not a member of occupier's family, then notice to be given by head of patient's family, or by inmate himself, to occupier.	One Shilling.		£2.
5. Nottingham	41 Vict., ch. xci, s. 22.	Ditto.	Medical attendant to give certificate to occupier or person in charge; the latter to deliver the certificate to the sanitary authority. If no medical attendant, as at Burton-on-Trent (*b*).	Half-a-crown. Not more than one fee to be payable within 30 days to the same practitioner for certificates given in respect of the same disease in the same building.		£5.

[*Table of Synopsis of Clauses in Local Acts of Parliament continued.*

Place.	Number of Local Act.	Diseases to be Reported.	How to be Reported.	Fee to Medical Men for Certificate, with Conditions, if any.	Special Features in Clause.	Penalty for Non-compliance with Section.
6. Jarrow	41 and 42 Vict., ch. cxx, s. 35.	"Infectious Disease."	By occupier to Corporation; or if patient be not a member of occupier's family, by patient or person having charge of him to Corporation: medical attendant also to send certificate to Corporation.	One Shilling. Only one fee to be payable in the case of the same illness in the same house or family.		£5; and £2 a day in case of continuing offence.
7. Llandudno.....	42 Vict., ch. xviii, s. 14 & 15.	Small-pox, cholera, diphtheria, typhus fever, typhoid fever, or scarlatina.	By occupier or person in charge to sanitary authority; medical attendant also to send certificate to authority.	Half-a-crown.		£10.
8. Warrington	42 & 43 Vict., ch. xcii, s. 23.	Small-pox, cholera, scarlatina, diphtheria, typhus fever, enteric or typhoid fever, relapsing fever or puerperal fever.	As Bolton (2).	Half-a-crown.	Corporation may, with sanction of Local Government Board, declare the section to apply either temporarily or permanently in the case of any contagious or infectious disease specified in such order.	£5: for a second or any subsequent offence, £10.
9. Blackpool.....	42 & 43 Vict., ch. cxcix, s. 75.	Small-pox, infectious cholera, measles, typhus, typhoid, scarlet, relapsing, or puerperal fever, or diphtheria.	As Bolton (2), except that notification is to be made and certificates sent to the medical officer of health of the Corporation.	Half-a-crown. Only one certificate needed, and only one fee payable within 30 days to same practitioner in respect of the same disease in the same building.		
10. Norwich.....	42 & 43 Vict., ch. cxxv, s. 43.	Small-pox, cholera, typhus, typhoid, scarlet fever, diphtheria, or relapsing fever, or any other infectious disease which the Corporation may from time to time specify, with the sanction of the Local Government Board.	As Nottingham (5).	Half-a-crown. Not more than three fees to be payable within 30 days to same practitioner for certificates given in respect of the same disease occurring in the same building.		£5.
11. Edinburgh.....	42 & 43 Vict., ch. cxxxii, s. 208.	Cholera, typhus fever, typhoid fever, diphtheria, small-pox, scarlet fever, scarlatina, and measles.	By Medical Attendant to Medical Officer of Health, within 24 hours of case coming to his knowledge.	Half-a-crown, "if it be found on inquiry by the Medical Officer of Health that the diagnosis was correct".	[*No duty at all imposed on occupier. Cases unattended by a Medical Practitioner will thus not be notified at all.*]	£2.
12. Rotherham	42 & 43 Vict., ch. cxci, s. 94.	Small-pox, cholera, or any contagious or infectious fever.	As Bolton (2).	Half-a-crown.		
13. Leicester	42 & 43 Vict., ch. cc, s. 8.	Small-pox, infectious cholera, scarlet fever, typhus fever, typhoid fever, erysipelas, puerperal fever, or diphtheria.	As Bolton (2).	Half-a-crown. Stipulation as at Blackpool (9).		£10.
14. Derby	42 & 43 Vict., ch. ccxv, s. 93.	"Any infectious disease."	As Bolton (2), except that notification is to be made and certificates sent to the medical officer at his residence, or to the inspector of nuisances at his office	Half-a-crown.		£2.

consequence of this notification, would probably be ascribed to the action of the medical attendant, and, in case of a disputed diagnosis, might lead to further evils than mere loss of practice.

"5. It is not desirable that the extent of a medical man's practice in these cases should be made known to, and commented upon by, members of the various local sanitary authorities."

None of these objections apply to the plan proposed by the Committee, which I may with satisfaction point out has been adopted at Nottingham and Norwich, as well as, to a less extent, at Huddersfield. By the Nottingham plan, the medical attendant is required to fill up, sign, and deliver to the occupier or person having the management or control of the building, or, in case such person is suffering from infectious disease, to the person in charge of the patient, a certificate, which must be forthwith delivered *by the person to whom it is given by the medical practitioner*, at the Town Hall, to a clerk or servant of the Corporation. If no medical attendant be called in, the occupier or other person is, so soon as he becomes aware of the existence of the disease, to give notice to the Corporation forthwith. In the event of the sufferer not being a member of the occupier's family, the head of the family (resident in such building) to which the patient belongs, or, if there be no such head, the patient himself (unless prevented by such disease, or by youth), is to give notice of the existence of the disease to the occupier or other person as above.

This plan seems to me entirely to carry out the views of the majority of our Association, and I think it deserves to be followed in all future local enactments on the subject. For the assistance of authorities who may desire to include in their forthcoming improvement Bills sections bearing on the subject, I have drafted a model clause, based partly upon the Nottingham Act and partly upon general experience of the working of the system. The clause would be somewhat to the following effect.

"In order to secure that due notice be given to the sanitary authority of any inmate of any building used for human habitation in the district who is suffering from small-pox; cholera; typhus, typhoid, scarlet, puerperal, or relapsing fever; diphtheria, measles, or erysipelas, the following provision shall have effect; that is to say:

"1. If any such inmate be suffering from any such disease, and no medical practitioner be attending on, or have been called in to visit, such inmate, the occupier or other person having the management or control of such building, or, if such occupier or other person be prevented by disease or otherwise, the person in charge of such inmate shall, so soon as he shall become aware of the existence in any such inmate of any such disease, forthwith cause notice thereof to be given to the sanitary authority at their office.

"2. If the person suffering from the disease be not a member of the family of such occupier or person, the head of the family (resident in such building) to which such inmate belongs, or, if there be no such head, then such inmate (unless prevented by reason of such disease or of youth) shall, on becoming aware of the existence in such inmate or in his own person, as the case may be, of such disease, forthwith give notice thereof to such occupier or person.

"3. Every medical practitioner attending on or called in to visit such inmate shall, on becoming aware that such inmate is suffering from any such disease as aforesaid, forthwith fill up, sign, and deliver to the occupier or person having the management or control of the building, or,

in case such person is suffering from such disease, to the person in charge of such inmate, a certificate stating, according to the forms prescribed and supplied to him by the Corporation, the name of such inmate, the situation of such building, and the name of such occupier or person, and the nature of the disease from which such inmate is suffering.

"4. The person to whom such certificate shall be given by the medical practitioner shall forthwith deliver the same, or cause the same to be delivered, at the office of the sanitary authority, to a clerk or servant of the authority in attendance there.

"5. The sanitary authority shall supply gratuitously to every registered medical practitioner resident or practising in the district forms for the certificate by such medical practitioner of the particulars hereinbefore mentioned of cases of infectious disease attended by him; and the authority shall pay to every medical practitioner who shall, in pursuance of this section, duly give any such certificate, a fee of two shillings and sixpence in respect of the same; provided that more than one fee shall not become payable under this section within an interval of thirty days to the same medical practitioner, for certificates given by him in respect of the same disease occurring in the same building.

"6. The sanitary authority may from time to time, by resolution, order that, subject to the approval of the Local Government Board, any acute infectious disease, other than those above mentioned, shall be deemed to be within and subject to the provisions of this section.

"7. Any such order of the sanitary authority may be permanent or temporary only; and, if temporary, the period during which it is to continue in force shall be specified therein; and when the Local Government Board have approved of any such order, the sanitary authority shall give public notice of the order by causing a copy thereof to be affixed to the principal door of every church and chapel in the district to which notices are usually affixed, and by publishing the same by advertisement in some one or more of the local newspapers circulated in the district; and, after such public notice has been given, the provisions of this section shall, so long as the order continues in force, apply to the acute infectious disease specified therein, in like manner in all respects as if the disease were mentioned in this section."

I append also a model form of the certificate to be given by medical attendant to the occupier for transmission by the latter to the sanitary authority.

"——— Improvement Act, ——— Section ———.

"Pursuant to the above mentioned Act, I hereby certify and declare that, in my opinion, the undermentioned person is suffering from a disease within the terms of the said Act.

"Dated the day of , 18 .

"(Signed) Medical Practitioner Duly Registered.

"1. Name of person suffering from the disease.

"2. Situation of the building wherein such person is.

"3. Name of occupier or other person having the management or control of the building.

"4. Nature of the disease.

"To Mr. of .

"Take notice that this certificate must be forthwith delivered at the office of the sanitary authority to the clerk or servant of the authority in attendance there, under a penalty not exceeding pounds."

With regard to this proposed model clause, only one or two observations seem necessary. In the list of diseases to be reported,* I have included measles, because, although it may not be strictly amenable to sanitary measures, yet it is intensely infectious, and as such does incalculable mischief at schools, for the benefit of which the disease has been mainly inserted. The clause providing for the inclusion of other diseases within the terms of the section on occasion is intended for emergencies, as when exotic diseases like plague or yellow fever are threatening, or when a disease such as diarrhœa is more than usually prevalent. Thus at Leicester (where I may mention that the objectors to the recent local Act lost all their points before the Committee of the House of Commons, because they refused to accept the compromise suggested to them by this Committee), it seems to me that it would be very desirable for the local authority to have power to order that all cases of diarrhœa (which is annually so terribly fatal in the town) shall, for a fixed period in the summer months, be compulsorily reported to them. We might hope in this way to find a clue to the puzzling recrudescence of this disease in Leicester and other towns as soon as summer approaches.

I do not think it necessary to trouble the Committee with any observations as to the clauses in the Huddersfield and Greenock Acts, which are admittedly tentative and imperfect. I subjoin, however, in a second appendix,* such information as I have been able to gather relative to the working of these clauses and of Section 87 of the Bolton Act. The time which has elapsed since the other Acts were passed has been too short for any statistics as to their working to be as yet available; but the medical officers of health for all the towns concerned express themselves, so far as I have been able to glean from their published utterances, as expecting incalculable benefit from the operation of the clauses.

In the preceding remarks, I have studiously avoided, because I have felt it to be unnecessary, any reference to the desirability of information as to infectious disease being brought to the knowledge of the sanitary authorities the moment its existence has been ascertained; but I cannot avoid the expression of my own strong conviction, based not only upon personal experience, but upon an examination of many hundreds of local sanitary reports, that, until such information is made compulsory throughout the country, we cannot hope to keep in check the diseases that annually cause so grievous an amount of preventable suffering and mortality.

ERNEST HART, Chairman of the Committee.

Offices of the British Medical Association,
161A, Strand, London, W.C.
October 23rd, 1879.

* The differences in the diseases to be reported under the various local Acts now in force are worthy of a passing remark. Thus while at Greenock, Jarrow, and Derby, all infectious diseases are to be reported, Huddersfield and Rotherham require "small-pox, cholera, or any contagious or infectious fever", to which Huddersfield adds, "of a dangerous character". Of the rest, small-pox, cholera, typhus, typhoid, scarlatina, and diphtheria are required in all the districts; relapsing fever in all but Llandudno, Leicester, and Edinburgh; puerperal fever in all but Burton-on-Trent, Llandudno, Norwich and Edinburgh; whilst erysipelas is required only at Leicester, and measles only at Blackpool and Edinburgh, whooping-cough being required in no one instance.

BRANCH OF THE BRITISH MEDICAL ASSOCIATION IN MELBOURNE.

WE learn with great pleasure by letter from Dr. Louis Henry of Melbourne, that the necessary steps have been taken for the formation in Victoria of a Branch of the British Medical Association, Dr. Henry having received the necessary credentials from the Chairman of the Committee of Council, Dr. Carpenter. We read in the *Melbourne Argus* of September 26th that a meeting of members of the medical profession wishing to form a Branch of the British Medical Association, was held at the Oriental Hotel, Collins Street, Melbourne, on September 25th. Mr. W. GILBEE presided. There were about twenty gentlemen present. The CHAIRMAN explained the object for which the meeting had been called, and stated that the principal objects of the Association were—To promote the advancement of medical science, and to form a bond of union among the members of the profession, and a medium through which their opinions can be easily ascertained and expressed; to advance the general and social interests of the profession; to promote fair and honourable practice, and to decide upon questions of professional usage and courtesy; to correspond with bodies or individuals in other parts of the colony on any matter touching medical interests, and by its moral influence, and the exercise of a judicious supervision, to prevent abuses in the profession; to consider any subject connected with the appointments of medical men to public institutions, situations, and services; to consider any question of medical polity; to further the federation of the medical profession in the various colonies of Australia. The original Association had increased largely of late, and contained within its ranks the leading members of the profession in Great Britain. He hoped the Branch would prosper like the parent Association. The JOURNAL of the Association was published weekly, and would be found to contain the opinions of the leading medical men of England, Ireland, and Scotland; and would keep them posted up in all that took place in the profession. They had a number of young men joining the profession who had not had the privilege of studying in England, and knew nothing of the teaching and influence of the leaders of the profession except by tradition. Joining such a society as the one it was proposed to establish would be of great advantage to them. There was no reason that the proposed association should interfere with any existing society.

Dr. HENRY said the Association was formed in 1832, by Sir Charles Hastings, and at present numbered over eight thousand members, nearly half the working members of the profession in Great Britain. He read a list of medical practitioners in Victoria who had signified their wish to become members of the Association, and explained the working of the Association in Great Britain.

Dr. NEILD said the project to form the Branch Association had been

* This Appendix is not reproduced here, as its substance has already appeared in the JOURNAL. See as regards Huddersfield, Vol. ii, 1879, p. 661; and as regards Greenock and Bolton, Vol. i, 1879, pp. 906 and 980 respectively

taken up much more warmly than the promoters had anticipated. He moved that a Branch of the British Medical Association be formed, to be called the Victorian Branch of the British Medical Association.

Dr. HAIG seconded the motion, which was carried unanimously.

The rules of the Association, which were a reprint of those of the British Medical Association, were then read over, and adopted with such amendments as suited the circumstances of the colony.

On the motion of Dr. NEILD, it was resolved that the rules should be printed, and circulated among the members.

The following gentlemen were elected members of the Council of the Association: Drs. Browning, Cutts, Graham, Neild, Henry, Jamieson, Macmillan, Morrison, and Messrs. Rudall and Gilbee.

In accordance with the rules, the Council retired for a few minutes, and elected the following office-bearers: *President*, Mr. Gilbee; *Vice-President*, Dr. Cutts; *Honorary Secretary*, Dr. Henry; *Honorary Treasurer*, Dr. Graham.—The meeting then adjourned.

The proposed by-laws have been forwarded, together with the names of thirty gentlemen who have been duly nominated as desirous of joining the Association.

DINNER TO SURGEON-MAJOR REYNOLDS.

THE proposal to entertain Surgeon-Major Reynolds at a dinner has been responded to cordially. More than a hundred gentlemen and friends have sent in their names as being desirous of attending, and more than forty have intimated their intention of acting as stewards.

The following gentlemen have kindly consented to act as stewards: Dr. Alfred Carpenter (President of the Council), Mr. J. O. Adams, Mr. William Adams (5, Henrietta Street, Cavendish Square), Dr. William Aitken, F.R.S., Mr. William Allingham, Dr. R. L. Bowles, Mr. J. M. Burton, Mr. J. Wickham Barnes (Surgeon 2nd Middlesex Artillery Volunteers), Mr. James Crawford, Mr. Oscar Clayton, Mr. Alfred Cooper, Surgeon-Major W. Collis, A.M.D., Dr. W. H. Day. Dr. W. Dickson, R.N., Mr. T. M. Dolan (Surgeon 4th York R.V.), Mr. J. E. Erichsen, F.R.S., Sir J. Fayrer, K.S.I., Mr. R. F. Frazer (Senior Surgeon 19th Middlesex R.V.), Mr. J. H. Galton, Mr. John Gay, Mr. Ernest Hart, Dr. T. C. Hayes, Dr. C. Holman, Mr. W. Hoar, Mr. J. R. Humphreys, Sir William Jenner, Bart., K.C.B., Mr. A. Cooper Key, Mr. H. Ker, Dr. T. Ligertwood, Professor Lister, F.R.S., Surgeon-General T. Longmore, Mr. W. Mac Cormac, Mr. J. Mann, Mr. W. Meehan, Dr. W. Withers Moore, Surgeon-General J. Mouat, V.C., Mr. A. Napper, Dr. G. E. Paget, F.R.S., Mr. W. H. Platt (Surgeon Tower Hamlets Rifle Brigade), Mr. F. J. Reilly, Mr. G. A. Rogers, Dr. H. C. Rose, Dr. Sutro, Dr. Sieveking, Dr. Protheroe Smith, Dr. William Travers, Mr. W. J. Vance, Mr. Charles Vasey, Mr. Frederick Wallace, Mr. John Wood, F.R.S., Surgeon-Major C. White, A.M.D.

MEDICAL EDUCATION.

THE discussion on the Education of the General Practitioner of Medicine will be resumed at an adjourned meeting of the Metropolitan Counties Branch, which will be held at 8 P.M., on Saturday, December 6th, at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square. The Committee appointed last session by the Branch, to consider the subject under discussion, have drawn up a report based on the answers to the questions that were issued; and their report has been printed and circulated among the members of the Branch and the teachers in the metropolitan and provincial medical schools. The report will present a number of highly interesting and important topics for discussion; and it is hoped that there will be a full attendance of members.

ANIMAL VACCINATION.

PROPOSED OPEN CONFERENCE, THURSDAY, DECEMBER 4TH.

IN accordance with the resolutions of the Parliamentary Bills Committee of the British Medical Association, a meeting will be held at the rooms of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Thursday, December 4th, at 4 P.M., to consider the provisions of the Bill for promoting Animal Vaccination, introduced by Dr. Cameron, M.P. for Glasgow; and to hear and discuss statements by Dr. Cameron, by M. Warlomont, head of the office of Animal Vaccination in Brussels, and others. Sir Thomas Watson, Mr. John Simon, Mr. Ceely of Aylesbury, Mr. Greene of Birmingham, Dr. Cory, and others, have signified their intention to be present; and all members of the Association are invited to attend and take part in the discussion.

A detailed preliminary report on the present position of the subject of Animal Vaccination in its relations to Legislation has been prepared by the Chairman of the Parliamentary Bills Committee, and will be printed in the JOURNAL next week, in order to facilitate and to afford materials for a discussion which, it may be hoped, will have an important influence on the question.

ANTI-VIVISECTION MEETING AT PETERBOROUGH.

THE anti-vivisectionist agitators have again met with a notable disaster at Peterborough. Smarting under a sense of their defeat in May last, and irritated by the knowledge that the bold and logical eloquence of Bishop Magee had materially influenced the vote in the Lords in July last, when Lord Truro's Bill was rejected by a majority of 81 in a house of 113, the two societies amalgamated and sent down their paid lecturer, Mr. H. Cooke, with Mr. Gilbert, M.R.C.S., the Rev. Mr. Barrett, and the Rev. Dr. Lee as auxiliaries, to retrieve the laurels lost at the former meeting.

About five hundred persons, including the principal residents in the town, were present. After some prefatory remarks from the Chairman, Mr. COOKE delivered his address. He affirmed that, although vivisection had been practised for two thousand years on men, women, and animals, neither general nor medical science had derived the slightest assistance from such experiments. It was altogether a mistake to suppose that Harvey, Haller, Hunter, etc., had been assisted in their discoveries by their experiments on living animals. It was true they were vivisectors, and it was true that they had made grand discoveries for the benefit of the human race; but scientific men were mistaken in supposing that there was the connection between their discoveries and experiments which was indicated in their writings. The same mistake had, he said, been made by the Bishop of Peterborough in the House of Lords, and by Dr. Walker when he contended, at the last meeting, for the connection of vivisection with the operation of ovariotomy as perfected by Mr. Spencer Wells. He (Mr. Cooke) had gone very carefully into the question with Mr. Childs, and had satisfied himself that Mr. Spencer Wells's so-called improvements and new methods were valueless, and indeed that the practice of Mr. Spencer Wells's operation of ovariotomy as improved by vivisection had increased rather than diminished the mortality. He then moved a resolution condemning vivisection and adopting a petition to Parliament for repealing the Act of 1876 and the passing a law for the entire prohibition of vivisection.

Mr. GILBERT seconded the resolution, contending that the high mortality in large hospitals as compared with small was mainly due to vivisection. He further stated, professing to quote from Mr. Erichsen, that there had not been a single improvement in surgical practice during the last forty years, and that, as vivisection had not been prohibited during that time, it was clear that this was what retarded the progress of surgery.

The Rev. Dr. LEE supported the resolution in an eloquent speech, delivered with great oratorical effect, in which he expressed his firm belief that he was right, and that the Bishop of Peterborough and others who differed from him were wrong, and warned his audience "that vivisection would not stop with animals, but that the poor and the weak, the imbecile and the helpless, would come under the knife of the vivisector".

Dr. T. J. WALKER proposed an amendment. He pointed out that in their preliminary announcements of the meeting, and from the platform that evening, the agitators had challenged him to repeat his statements as to the practical benefits which had accrued to medical science from vivisection, and had specially defied him to show that vivisection had done anything to perfect the use of digitalis as a remedy for diseased heart, or to improve the operation of ovariotomy. He then described the uncertainty that formerly existed as to the true action of digitalis on the heart, an uncertainty which, rendering its employment dangerous, had brought the remedy into great discredit, until Fothergill's experiments proved the *modus operandi* of the drug, and paved the way for its present scientific use. As to ovariotomy, the ground taken up by the speakers that evening, and by the authors of certain pamphlets distributed in the room, was: first, that the operation was at least as successful thirty years ago as now, and that therefore neither Mr. Spencer Wells nor anyone else had improved it; and, secondly, they stated specifically that Mr. Spencer Wells's experiments as to the best mode of closing the abdominal wound were useless; and, further, they inferred that his were the only experiments on living animals to which the Bishop, Dr. Walker, and others could refer in speaking of this operation. To support their first statement, they quoted Mr. Safford Lee's table of 118 cases, being every *recorded* case operated on between 1809 and 1845. They stated that the average success in these 118 cases was greater than in the first recorded cases of Spencer Wells. Even this statement Dr. Walker denied, and showed that *in the collection of cases by Mr. Lee, 40 are recorded as dying, in 4 the result is not given, in 24 the operation was abandoned, and therefore 50 only were cured, of*

118. But, were the statement true, it was hardly necessary to point out, even to an audience unaccustomed to consider statistics, that to compare the results of the practice of Mr. Spencer Wells, who published every case, successful or unsuccessful, with a collection of isolated cases published during the thirty-five years when every man who had a successful case published it, while those who failed would in most instances say nothing about it, was manifestly absurd. Mr. Quail, F.G.S., saw this absurdity so clearly that, in a prefatory note added to an anti-vivisection pamphlet for the purpose of contradicting the Bishop's speech, he says deliberately, "The truth is, that the same operation was performed, and with more success, by another surgeon" (Mr. T. Safford Lee) "years before Mr. Wells vivisected his dogs, rabbits, and guinea-pigs". He knows that the practice of one surgeon might legitimately be compared with the practice of another; and he therefore speaks of Mr. Lee's compilations of the cases of ovariotomy, published up to his time from the records of thirty-seven previous years, as though the operations had been performed by Mr. Lee himself. It was a fact constantly asserted and never denied, that the majority of fatal cases and cases where the operation failed, never came to light during the period referred to; and the true estimate of the success of the operation prior to the improvements of Mr. Spencer Wells and others, was that given by Mr. Gilbert as the opinion of Guthrie and Liston, viz., that it was so fatal as to be unjustifiable. What the present position was, the audience might judge from the fact that Mr. Spencer Wells had published the result of 900 operations which he had himself performed on women suffering from ovarian disease; and that of these 900 women who must all have died but for the operation, 679 were cured; and further, of the last eight series of 100 cases operated on, 83 had recovered and only 17 died. Of 69 cases since, he had only lost 5. In the face of these facts, could the antivivisectionists deny that this operation had been of enormous benefit to humanity, undoubtedly due in part to knowledge acquired by vivisection? Notwithstanding the remark in Dr. Hime's paper, quoted in the BRITISH MEDICAL JOURNAL, and Mr. T. Holmes's opinion as to the unimportance of Mr. Wells's method of closing the abdominal wound, a method the safety and advantage of which he ascertained by his only vivisectional experiments, the fact remained that this mode was very generally adopted, and was regarded as an essential step in at least ninety out of every hundred operations now performed. As to Kœberlé, who had been quoted as an authority against this mode, he had not yet adopted it, following Mr. Wells's earlier method; but possibly, did he adopt it in its entirety, his success might equal that of Mr. Wells. Further, although Mr. Childs and Mr. Cooke, who professes to have gone into the subject thoroughly, and the other agitators who pretended to answer the Bishop, seemed unaware of their existence, there were a series of most important experiments on living animals by Dr. Spiegelberg, Waldeyer, and Maslowsky, carried out with a view to determine the results of various modes of treating the pedicle. Of these experiments, Mr. Wells said: "They tell us what really does take place when a ligature or an eschar is shut up in the peritoneal cavity; and they teach us that, when we meet with any extraordinary difficulty in endeavouring to secure a pedicle outside the peritoneal cavity, we may resort to the cautery or the ligature, not, as hitherto, in nearly complete ignorance as to what we may expect afterwards, but with a pretty accurate idea of the process of repair and of the dangers which may attend this process." While thus marking his appreciation of the value of the facts recorded by these observers, Mr. Wells differed from their conclusions. Those who affirmed the value of experiments on living animals, did not pretend that these experiments necessarily led to infallible conclusions. He (Dr. Walker) would remind the audience that, at the last meeting, he told them that there was a patient then under his care on whom he dared not have performed ovariotomy, but for the knowledge which he had acquired from a study of the experiments described by Mr. Spencer Wells. That patient was dying, and he must conclude that she owed her life to those experiments which had given the knowledge on the strength of which the operation was performed. This case was no exceptional one; and seeing that Mr. Spencer Wells should be credited not only with the successful operations performed by his own hand, but with those of surgeons who, like the speaker, followed his method in operating; seeing that he had arrived at that partly by knowledge which could be derived only from the vivisectional experiments of himself and others, might he not be described as having, with the aid of experiments on living animals, perfected a method of operating, by means of which "hundreds, or might we not say thousands, of human lives would be preserved"? Dr. Walker then pointed out that, although Dr. Hime's paper had been quoted as proving that successful ovariotomy in nowise depended on vivisection, the true object of that paper was to show that the antiseptic principle was the one essential element for the success of this operation. And here again he had the authority of Mr. Lister, the father of that system, for stating that, but for vivisection, it would never have been elaborated. Dr. Walker then moved his amendment, proposing the adoption of a petition to Parliament, to be signed by the Chairman on behalf of the meeting, praying that no further restrictions be placed on the practice of vivisection.

The amendment was seconded by Dr. FOTHERGILL, who described his own experiments on frogs and other animals to determine the action of digitalis and aconite on the heart; gave practical illustrations of the value of experiments to determine the antagonism of certain drugs; and concluded by pointing out the provisions of the Act of 1876 for regulating vivisection.

The Rev. Mr. BARRETT then addressed the audience on the part of the agitators, stating, on his own authority, that knowledge acquired by vivisection was a knowledge forbidden by the Almighty, and furnished from another source.

Mr. F. ATLEE and Mr. Councillor TAYLOR having addressed the meeting in favour of the amendment, Mr. COOKE replied.

The amendment was put, and carried by an overwhelming majority, and the Chairman, on behalf of the meeting, signed Dr. Walker's petition.

MEDICAL TRIALS.

RECOVERY OF FEES BY A FIRM IN WHICH ONE PARTNER WAS NOT REGISTERED.

AN action has just been tried before Mr. Serjeant Wheeler and a jury, at the Brompton County Court, to recover £9 9s. for medical attendances and medicine supplied by the plaintiffs, Messrs. Hewitt and Monti, to the late wife of the defendant, a tailor named Collings, carrying on business in Young Street, Kensington. The case raised the question whether a firm of practitioners could recover for attendances, services, etc., rendered by one of the partners, who at the time was not qualified under the Medical Act. It appeared that, in 1877, Mr. Monti, a druggist, entered into partnership with Mr. Hewitt, a duly registered medical practitioner, and all business transactions were carried on in their joint names in the City. Mr. Monti resided in Kensington, and attended the defendant's wife in her accouchement, and, from weakness arising therefrom, until her death in August 1877. No objection was made to the account when rendered in January of the following year; but, since the payment had been pressed, defendant refused to pay, on the ground that the charges were excessive; and counsel now raised a further defence that, inasmuch as Mr. Monti was at the time of his services not a registered practitioner, he was not in law entitled to any charges.—His Honour, after referring to the Medical Act, said it was expressly provided that no person was entitled to recover fees unless he proved at the trial that he was registered under the Act.—Mr. Smith said that surely, if Mr. Monti had been Mr. Hewitt's assistant, payment would have to be made.—His Honour said he was not so sure about that. He was not, however, called on to decide this point, as both the plaintiffs sued as principals. He was afraid that the most that he could allow were the attendances of Mr. Hewitt, but he hoped that the learned counsel for the defendant would take a fair and equitable view of the matter, and persuade his client to do what an honest man should do.—After considerable discussion between the counsel as to how the matter should be settled, his Honour suggested that the defendant pay five guineas, and no fees but the Court fees. This proposition was accepted.

VALUE OF SERVICES OF GENERAL PRACTITIONERS.

An action has also been brought at Birmingham by Mr. Roger Prosser, surgeon of Bromsgrove, to recover £26 14s. from Mr. Amos Roe, timber-merchant, for professional services and medicine. The particulars of plaintiff's claim were: For twenty-three journeys and attendance at a guinea each; medicine, £1 10s.; and consultation with Dr. Heslop, one guinea. Defendant had paid £8 into Court, being £1 10s. as charged for the medicine, twenty-two day-journeys at 5s. each, one night-journey at 10s., and consultation-fee 10s. The main dispute was that the charges were unreasonable; but there was also a question whether Mr. Hornsby, who attended on one or two occasions, was duly qualified, which Mr. Prosser settled at once by showing that he was, and that, at the time he attended, Mr. Hornsby was virtually his partner, though the deed of partnership had not been drawn up.—Mr. Prosser stated that, on December 9th, 1878, at eleven o'clock at night, he was called to attend defendant's children. The weather was most severe, and witness had to drive a distance of nearly six miles. He found that one child, a boy about nine, had croup; and another, a girl between twelve and thirteen, had scarlet fever of a very malignant nature. He was there nearly an hour, and reached home about two

o'clock in the morning, the roads being bad. He made up some medicine, and sent it back by the messenger who had waited. Both the children were in danger. He wrote to defendant by first post the next day, and went up at mid-day, expecting to see defendant there. The child with the croup was better, and nearly out of danger; but the other was in a most dangerous condition, with sore throat and tendency to sink. He went again the next morning before breakfast, and found the girl still very bad; the boy was then out of danger. He went again in the afternoon, about five o'clock, and took Mr. Hornsby. He advised Mr. Roe of the dangerous condition of his daughter, and recommended him to send the other children away, and to call in his own medical man from Birmingham. Mr. Roe replied that he had every confidence in witness, and was pleased that he had been fetched. Witness advised him to have Dr. Heslop or Dr. Russell, or any leading physician to see the child. Defendant did not agree to that, and witness left; but, the next morning, at twelve o'clock, he received a message to meet Dr. Heslop at eleven. He went up; Dr. Heslop had gone, but had left a letter for him, and they had a consultation by letter as to the treatment of the case. The child was no better than on the previous day. Defendant consulted witness about himself, and witness prescribed for him; no separate charge was made for that. He attended night and morning on the 13th, 14th, and 15th, when he found the child better. Mr. Roe begged him to come oftener than he did, and asked him to pay every attention, and not think anything of expense. He went twenty-three times altogether; the last was on the 13th of January. Mr. Hornsby went once with witness, and once or more alone. Mr. J. F. West, Senior Surgeon to the Queen's Hospital, Birmingham, testified to the reasonableness of the charges. Mr. S. Stretton of Kidderminster; Dr. Fitch of Chaddesley Corbett; Mr. Mann and Mr. Yates, both of Birmingham, were also in attendance to give similar evidence; but the Judge said it would be unnecessary to call them, for he was as much satisfied upon that point with the evidence of Mr. West, as he should be if half a dozen other gentlemen corroborated him.—The Judge said that, if the plaintiff had been a physician, he could not, under the present rules of his College, have sued for his fees; but he was in good general practice, and he thought a gentleman in that position was not entitled to more than a guinea for an ordinary visit, though for some of his visits he might be entitled to still more. One of his visits was paid at night, during very bad weather, to attend what were no doubt very anxious cases; and for that visit he (the Judge) would be perfectly justified in allowing two guineas. Another visit was paid late in the afternoon, and for that he thought Mr. Prosser was entitled to a guinea. The other visits were made in the daytime, and there was no doubt that on those occasions Mr. Prosser also visited other patients, and therefore he was not entitled to a special fee for these visits, but would be allowed ten shillings for each. As to the consultation, he saw nothing unreasonable in the charge of a guinea for it, though it was by letter. The charge for medicine was not disputed, and the judgment would therefore be for £16 4s., together with the costs, including those of the witnesses which were not called, amounting to £10 17s. 6d.

PROSECUTION FOR SIGNING A DEATH-CERTIFICATE OF A PATIENT ATTENDED BY AN UNQUALIFIED ASSISTANT.

At Hammersmith Police Court, Mr. David Johnson, a surgeon residing in South Kensington, appeared to answer two summonses—one for making a false statement concerning the death of Margaret Philipina Howells, aged five years, the daughter of Letitia Howells, the wife of a tailor, with intent to have the same entered on the register of deaths; and the other for making a false certificate of the same. Mr. Claydon appeared for the defendant, who pleaded "Not Guilty". Mr. Pridham said the proceedings were taken under the Births and Deaths Registration Act of 1874, and instituted by the Medical Defence Association with the sanction and authority of the Registrar-General. The defendant was a registered medical practitioner residing in Penywern Road; but he had a brass plate bearing the words, "Dr. Johnson's Surgery", at 8, The Terrace, in High Street, Kensington, which house was occupied by Mr. Carnley Smith, who had been fined £10 at that court for falsely pretending to be a qualified practitioner in a certificate of vaccination. Mr. Smith attended the child, well knowing his position; and the defendant did not see her until after death, though he signed a certificate stating that he had attended her. The association were not actuated by any vindictive motives, but it was necessary to stop the practice, otherwise the Act would become a nullity. The mother of the child said Mr. Smith had attended a person in the house and witness's family. She liked him, and sent for him when her child was attacked with fever in April. He attended her until she died. The defendant saw her after death, and said, if the witness sent to the terrace, he would give a certificate. In cross-examination, the witness said she did not wish to prosecute. She was not aware of the prosecution until it was commenced.—Mr. Claydon said the Medical Association had acted rather precipitately in taking proceedings against the defendant, who was a highly respectable practitioner, and the last person to contravene an Act of Parliament. Mr. Smith had been the defendant's pupil and assistant, and proposed to go up in January for his diploma. It was the common practice for surgeons to employ unqualified practitioners to assist them in visiting and dispensing, and, if the defendant had erred, it was through ignorance of the law.—Mr. Sheil (the magistrate) was of opinion that there had been an infringement of the Act. As there had not been any previous complaint against the defendant, he should not impose the full penalty. He fined him £5, with five guineas costs in the first case, and one shilling in the second. The money was paid.

ASSOCIATION INTELLIGENCE.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

THE next meeting of this district will be held at the West Kent General Hospital, Maidstone, on Friday, November 28th, at 3 P.M., and not on Tuesday, November 25th, as previously announced: WM. HOAR, Esq., will take the Chair.

Dr. Monckton will introduce a discussion on "Some of the Epiphenomena of Albuminuria".

A. H. B. HALLOWES, M.R.C.S., *Honorary Secretary.*

Maidstone, November 19th, 1879.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE next meeting of this district will be held in the Library of the County Hospital, Canterbury, on Thursday, November 27th, at 3 o'clock: President—Dr. GOGARTY.

Dinner will be provided at the Fleur-de-Lis Hotel, at 5 o'clock. Charge, 6s. 6d., exclusive of wine. Members intending to be present are requested to communicate their intention to the Secretary on or before Tuesday, the 25th instant.

The following papers have been promised.

1. Case of Colotomy: Mr. F. Vacher.
2. Case of Hæmophilia: Mr. T. Whitehead Reid.
3. Case of Amputation of Thigh, with Anterior Flap only: Mr. Wm. Knight Treves.
4. On the Dose of Iodide of Potassium: Mr. Wm. Knight Treves.

WM. KNIGHT TREVES, F.R.C.S., *Honorary Secretary.*

Margate, November 17th, 1879.

STAFFORDSHIRE BRANCH.

THE first ordinary meeting of the present session will be held at the London and North Western Railway Hotel, Stoke-upon-Trent, on Thursday, November 27th, at 4.30 P.M.

VINCENT JACKSON, Wolverhampton
J. G. U. WEST, Stoke-upon-Trent } *Honorary Secretaries.*

Wolverhampton, November 10th, 1879.

METROPOLITAN COUNTIES BRANCH.

AN adjourned general meeting of this Branch will be held at the house of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Saturday, December 6th, to receive and discuss the Report of the Committee appointed to consider the subject of the Education of the General Practitioner of Medicine.

The Chair will be taken by the President, JOHN WOOD, Esq., F.R.S., at 8 o'clock precisely.

ALEXANDER HENRY, M.D.
W. CHAPMAN GRIGG, M.D. } *Hon. Secs.*

57, Doughty Street, W.C., November 19th, 1879.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held at the Belfast Royal Hospital, on Friday, December 5th, 1879, at 12 o'clock noon.

Members desirous of making any communication to the Branch are requested to communicate with

JOHN MOORE, M.D., *Honorary Secretary*

2, Carlisle Terrace, Belfast, November 10th, 1879.

GLASGOW AND WEST OF SCOTLAND BRANCH.

A MEETING will be held in the Faculty Hall, on Friday, December 19th, at 3 P.M.

There will be some references made as to the question of Fees in Medico-legal Cases; and a discussion on the Relation of Croup and Diphtheria; introduced by Dr. J. B. Russell, from the statistical point of view.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

THE seventy-second meeting of this district was held at the Albion Hotel, Ramsgate, on Thursday, September 25th, at 3 o'clock: S. WOODMAN, F.R.C.S., in the Chair. Twenty-five members and visitors were present.

Next Meeting.—Dr. Gogarty was appointed President of the November meeting at Canterbury.

The Ethical Committee were requested to consider and report on the propositions brought forward by Mr. Reid in May last.

Papers.—The following communications were brought before the meeting.

1. Case of Recovery from Traumatic Tetanus. By Mr. R. Hicks.
2. Remarks on Strangulated Hernia. By Mr. Edmund Owen.
3. Disguised Scarlatina. By Mr. T. F. Raven.
4. Specimens of Tubal Gestation and Mitral Stenosis. By Mr. T. F. Raven.
5. Case of Lithotrity and Casts of Dislocated Wrist. By Mr. S. Woodman.

Dinner.—The members, to the number of twenty-four, afterwards dined together.

WEST SOMERSET BRANCH: AUTUMNAL MEETING.

THE autumnal meeting of this Branch was held at the Railway Hotel, Taunton, on Thursday, October 23rd, at five o'clock; THOMAS CLARK, Esq., President, in the Chair.

Dinner.—After some routine business, fifteen members partook of dinner.

Discussion.—The question, as previously settled by the Council—viz., What is the use of Alcohol in the treatment of disease?—was put from the Chair. Thoughtful and varied replies were elicited. In some, theories were broached; and several gentlemen insisted upon the importance of administering alcohol in its purest form. But the general answer to the question may be summed up as expressing approval of the use of alcohol, administered very cautiously, in certain stages of *acute* disease, in cases of collapse and such-like. Its employment, however, in *chronic* affections should be had recourse to, as a rule, only exceptionally; its *use* in such cases being likely to end in *abuse*. Its good effects were referred to by different speakers as having, in their experience, been most marked in cases of typhoid and other fevers, in low forms of pneumonia, and in collapse after loss of blood or after severe injuries.

Papers.—The following papers were read.

1. Typhoid Fever: in its first Onset a Local Disease. By the PRESIDENT. Mr. Clark founded his argument on cases observed by himself and others, which he described, wherein, during epidemics of typhoid fever, persons exposed to infection died without having manifested the usual symptoms of the disease, but in whom, on *post mortem* examination, there was found to be diseased action going on in the Peyer's and solitary glands of the small intestine; and here, the author believed, was the nidus which constituted the local *habitat* of the disease.

2. A Case of Persistent Menorrhagia: Oöphorectomy: Recovery. By JOHN MEREDITH, M.D. This paper is published at page 730.

3. Clinical Notes on a Penetrating Wound of the Abdomen with Protrusion of Intestine. By G. CORDWENT, M.D. The patient, a healthy boy, soon after eating a good dinner, was gored by a bullock. Many feet of intestine protruded. Two hours afterwards, Dr. Cordwent saw him, when he returned the intestine and closed the wound. Recovery followed without a bad symptom. No medicine was given. The peculiar interest of the case was the evidence it afforded of "reciprocal action in organic life to maintain life". During four days after receiving the injury, the boy experienced neither thirst nor hunger. Thirteen hours after eating the hearty meal which he ate immediately before being gored, that meal was vomited up just as it had been swallowed; and, until after a spontaneous action of the bowels at the expiration of four days, the boy felt not the least desire for either liquid or solid food —thus showing that, where digestive action would have been likely to interfere with reparative action, it was completely suspended.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL AND CLINICAL SECTION.

A MEETING of this section was held on October 31st, at Queen's College, Birmingham: Dr. BODINGTON (Kingswinford) in the chair.

Mr. LAWSON TAIT read a paper on a case of Menstrual Epilepsy, dependent on Exanthematic Cirrhosis of the Ovaries, and cured by removal of both Ovaries. He drew attention to a form of chronic interstitial inflammation of the ovaries, which, according to his observations, was apt to follow certain of the exanthemata, notably small-pox and scarlet fever, to which he gave the name of Exanthematic Cirrhosis.

Mr. T. F. CHAVASSE showed a specimen of Scirrhus of the Male Breast.

Mr. W. THOMAS read a paper on the Treatment of Morbus Coxæ by Thomas's splints. It was illustrated by two living cases, which were shown to those present.

YORKSHIRE AND EAST YORK AND NORTH LINCOLN BRANCHES: CONJOINT MEETING.

A CONJOINT meeting of the Yorkshire and East York and North Lincoln Branches was held, in the Museum of the Yorkshire Philosophical Society, York, on October 22nd, at 3 P.M.

Illness of Dr. Procter.—A sincere vote of sympathy with Dr. Procter (Secretary of the Yorkshire Branch), in his serious illness, was proposed by Mr. Arthur Jackson, President of the Yorkshire Branch, and seconded by Dr. J. H. Gibson, President of the East York and North Lincoln Branch, and carried unanimously.

New Members.—Five gentlemen were elected members of the Yorkshire Branch.

Communications.—The following communications were made.

1. Mr. R. H. B. Nicholson exhibited two patients who had suffered from Lupus non exedens, and on whom he had operated by erosion. The result was most satisfactory.—Mr. Teale, Dr. Myrtle, and other gentlemen spoke of the gratifying results of this method of treatment.

2. Mr. Dix related the particulars of a case of Popliteal Aneurism. Pressure was tried, and failed. The arteries were then secured by the method known as the wire-compress; but, pulsation having returned in a few days, a ligature was placed on the vessel, just below the wire. Pulsation again returned, and in ten days a bleeding took place. The common femoral artery was now wired, and then pulsation ceased entirely. However, another bleeding took place. An attempt to secure the vessel failed, owing to the near proximity of the aneurism, and no resource was left but amputation. The patient was in a very reduced condition, and sank in a day or two. Mr. Dix blamed the ligature for the unfortunate result in this case.—Mr. McGill thought the treatment by the wire had a good deal to do with the failure of the ligature.—Mr. Jessop and Mr. Husband also spoke.

3. Dr. King showed a boy on whom he had performed Osteotomy for double Genu Valgum, after Dr. Macewen's plan. The limbs were as nearly as possible straight.—Mr. R. H. B. Nicholson showed the photograph of a case on which he had operated on the previous day.—Mr. Atkinson also showed photographs of a successful case on which he had operated.

5. Dr. Churton read a paper on Diagnosis and Perignosis. The argument of the paper was that, in dealing with patients, it was much more important to ascertain their medical history and their surroundings than merely to name their diseases.

6. Mr. Snell read a paper, and showed photographs of a severe case of Ectropion, treated by a naso-buccal flap. Photographs of other cases so treated were shown.

Papers on the Classification of Disease, by Dr. Rabagliati; on Extensive Cancerous Infiltration of the Skin, by Mr. Meade; and on Fracture of the Skull with Loss of Brain-Substance, by Mr. Ball, had to be postponed.

Dinner.—After the meeting, the members dined together at the Station Hotel.

BATH AND BRISTOL BRANCH: ORDINARY MEETING.

THE first ordinary meeting of the session was held at the Grand Pump Room Hotel, Bath, on Thursday evening, October 30th: Dr. BEDDOE, President, in the Chair. There were also present forty-two members and two visitors.

Communications.—The following communications were made.

1. Mr. F. K. Green exhibited a patient with well marked Alibert's Keloid on the Sternum, and gave the history of the case; which led to remarks being made by Drs. Swayne and Spender, and Messrs. Dobson, Thomas, Board, and Waugh.

2. Dr. A. W. Fox showed two patients: one suffering from Multiple Sclerosis, and the other from Amyotropic Lateral Sclerosis; and read an able paper on the cases, which led to a discussion, in which Dr. E. L. Fox, Dr. Shingleton Smith, and others, took part.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE VICAR OF CARMARTHEN AND THE USE OF STIMULANTS FOR THE SICK.

AT a recent meeting of the Carmarthen Board of Guardians, the vicar attended and complained that a pauper he had visited the day before his death was not attended to, and given no restoratives, although he needed them. The master said "the doctor told him that stimulants would kill the old man just referred to". He further said that, the day before the vicar's visit, Mr. Bircham (Poor-law Inspector) was at the house, and asked the old man if he had any complaints, when the latter said he had not. The reverend gentleman may be, and doubtless is, a very humane person; but it is clearly not within the measure of his duty to sit in judgment upon, and complain of, the exercise of it on the part of the medical officer of the workhouse.

THE ST. GERMANS BOARD OF GUARDIANS AND THEIR MEDICAL OFFICER.

WE learn from a local paper which has been forwarded to us, that a very lively passage of arms has taken place between the St. Germans Board of Guardians and one of their medical officers, Mr. Kempthorne of Callington, Cornwall, in reference to a charge of neglect of duty preferred against him by a Mr. Rickeard, a member of the Board, in which it was alleged that the doctor had not given proper attention to a case of pneumonia occurring in his district, and for which he had received the usual medical order. From a review of the correspondence, we do not hesitate to express our opinion that the guardians were rather hasty in jumping to the conclusion that Mr. Kempthorne, or rather his assistant Mr. Jacob, had neglected the case on the representation of a guardian who appears to have exhibited more zeal than judgment, and in calling on Mr. Kempthorne to resign his office before affording him any opportunity for explanation, seeing that it is within the competence of a medical officer to decide how often he should visit a particular case of sickness; and notably as, in this instance, no injury was inflicted on the youth who was the subject of complaint.

Whilst, however, thus expressing ourselves, we cannot but think it would have been better if Mr. Kempthorne had adopted a more judicious style of reply. It would have been more dignified and, what is more to the point, much more effective, if he had contented himself with quietly repudiating the charge preferred against him. We know full well that it is often a difficult matter for a Poor-law medical officer to put a restraint on his feelings when made the object of malicious misrepresentation, either by an individual or by several members of a Board of Guardians; but it is hardly judicious to fall foul of the whole Board, as they are clothed with authority, and have it in their power to exercise it in such way as to make the officer's position not only uncomfortable, but precarious. Poor-law medical officers should never forget that they are members of a learned profession, and that boards of guardians are often a narrow-minded and ignorant body of men. It is not always wise, however, to openly tell them so.

THE RECENT INQUEST AT THE WESTMINSTER UNION WORKHOUSE.

WE had hoped that under the provisions of the Metropolitan Poor-law Act, which was framed for the purpose of securing proper consideration for the necessities of the sick poor, such a story as that told in the columns of our daily contemporaries could not have occurred. It would appear that on the evening of Friday, the 31st ultimo, Constable 138 C found a poor fellow huddled up in a doorway of a house in Cranbourn Street, St. Martin's-in-the-Fields. He was feeble and exhausted. A bystander told the constable that as he was destitute and ill, he had been removed from a lodging-house close by, in accordance with the very prudent but questionable custom of the proprietor. The constable called a cab and took the man to the Cleveland Street Sick Asylum Hospital, to which the parish of St. Martin's is affiliated through its forming an integral part of the Strand Union. One would have thought that this sick person, when brought, would have been immediately admitted and attended to, but this was not to be. On the constable stating the case to the porter, that official promptly informed him that he could not be admitted without an order; and on the constable asking where he could get that, he was informed that he might obtain one at Edmonton, about seven miles off, where it would appear this sapient body of local Poor-law administrators have built their workhouse. As the porter remained inexorable, the dying man was taken to the Middlesex Hospital. There he was seen and examined by the house-surgeon, who gave him some beef-tea and a certificate, that as he was destitute as well as sick, his case was one for a workhouse infirmary.

Armed with the certificate, the constable next proceeded to the Westminster Workhouse, Poland Street. On his admission there, the patient was at once seen by the medical officer, Dr. Joseph Rogers, who happened to be in the House at the time, and who found him to be in a complete state of collapse. After the administration of stimulants he rallied, but eventually sank and died, but not before stating to the attendant at the infirmary that he had been without food of any kind for three days. This the *post mortem* examination bore out; and the subsequent history showed that he had been in a state of destitution and deprivation of the necessaries of life for some time past, but, with unusual pride, had not made known his wants to any of those friends who might have assisted him, until too late to be of service.

The inquiry at which the above facts were elicited was held on the 6th, and was adjourned to the 13th instant, for the purpose of enabling the various officials to explain their conduct, on which occasion the resident medical officer at the Middlesex Hospital deposed that he had examined the man, and found that he was suffering from chronic starvation; that he gave him some beef-tea, and directed his removal to a workhouse infirmary, as it was a case of destitution only. The night-porter at Cleveland Street Sick Asylum admitted the correctness of the statements made as to his action in the matter, and alleged as his reason for not admitting Chapman, that the previous porter had informed him that he would subject himself to dismissal if he admitted any one without an order. It was also elicited from him that he had never been instructed in the nature of his duties, beyond booking people in and out—not an unusual occurrence in Poor-law administration. Dr. Lediard, Medical Superintendent, stated that he should have admitted the man if he had been made aware that he was ill, and had been brought by a constable. He also cited three instances, extending over a period of four years, where he had admitted persons on his own responsibility without orders. The money-taker at the lodging-house said that, finding Chapman was feeble, emaciated, and penniless, he had gone to St. Giles's Workhouse for an order for a doctor; that he was referred to the Strand Union Office, Bow Street; that on his arriving there the relieving officer declined to give an order, although he informed him that the man was very ill, until he went back and got his name; that on his return to the lodging-house, he found the poor fellow so much worse that he took him up into the street to hand him over to the police.

At the conclusion of the inquiry, which occupied some hours, the jury found "That John Dudley Chapman died from starvation, accelerated by the neglect of the authorities of the Strand Union, and by the gross mismanagement on the part of the officials at the Cleveland Street Infirmary and Asylum". This verdict, though severe, was borne out by the facts elicited; but we would ask how came it to pass, when the Local Government Board sanctioned the action of the Strand Guardians in building their workhouse at Edmonton, that they did not compel them to provide a reception-house in town to which unfortunates like John Dudley Chapman might have been removed?

MEDICAL OFFICERS AND THEIR HOLIDAYS.

J. C.—It is nowhere laid down in the instructional letters nor in the general orders of the Local Government Board, that a district medical officer is required to ask the leave of his Board of Guardians before he takes his annual or accidental holiday. All that is required by the orders, which have the force of law, is to name to the guardians some duly qualified person who, in the absence of the district medical officer, shall act as his substitute. At the same time, we would urge on every Poor-law medical officer, whether for a workhouse or district, the expediency of forwarding a note to the clerk of the union, intimating that he is about to leave home, and that during such absence Dr. —— or Mr. —— will take charge. By adopting this course, he is exonerated from all blame if there should be neglect of the sick, or any other misadventure should arise during such absence. Under the circumstances mentioned in our correspondent's note, the censure of the Board of Guardians may be treated with the contempt it deserves.

TREATMENT OF TWO DISEASES IN AN INFECTIOUS HOSPITAL.

SIR,—May I hope that you will give space in your columns to the following brief statement of facts, my object being an elucidation of professional opinion upon a very important subject connected with public health? Within a certain district, cases of small-pox have lately occurred sufficiently numerous to create apprehension of possible epidemic. The district is urban, having a hospital provided for the reception of cases of infectious fevers—viz., scarlet fever, measles, typhoid, etc. This hospital was a dwelling house, now converted into its present use, having no means of practical isolation as regards diseases by separate blocks or wards. The questions arise:

1. Is it wise, judicious, or according with present professional opinion and professional practice, to admit small-pox into such a building conjointly with cases of scarlet fever, typhoid fever, etc.?
2. Is there danger of small-pox infection spreading to cases of these other kinds, and so endangering their lives?
3. Does the admission of small-pox into a hospital where are or may be admitted other forms of disease, and where neither disease nor attendance can be isolated, tend to prevention or possible spread of infection?

I have no doubt that, in your editorial capacity, you know the professional opinion as generally accepted on this subject, and I would greatly desire to have a record of that opinion expressed, if possible, in your next issue.—I am, sir, yours faithfully,

MEDICAL OFFICER OF HEALTH.

*** If, as we understand, the hospital do not admit of two different infectious diseases being properly treated at the same time—*i.e.*, treated in separate wards, with proper atmospheric separation from each other—it would clearly be improper to admit small-pox into such a building conjointly with other diseases, as there is nothing to prevent cases of the latter from being attacked by small-pox, or *vice versâ*. We do not understand the third question; but if our correspondent want to know if there be any danger in receiving small-pox into a hospital in which patients suffering from other diseases may subsequently, but not contemporaneously, be treated, the answer must be that, with proper precautions, no such danger need be apprehended.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Second M.B. Examination, 1879. Pass List.

First Division.

Andrews, William Stratford, University College
Barling, Gilbert Harry, St. Bartholomew's Hospital
Bond, James William, University College
Boyd, James Stanley Newton, University College
Buckell, Arthur Edward, University College
Colquhoun, Daniel, Charing Cross Hospital
Cross, Francis Richardson, King's College
Dunbar, James John Macwhirter, St. George's Hospital
Fuller, Thomas Warberton, Guy's Hospital
Gabb, James Percy Alwyne, University College
Hayward, Thomas Ernest, St. Bartholomew's Hospital
Herman, George Ernest, London Hospital
Hine, John Edward, University College
Hughes, Richard, St. Bartholomew's and Middlesex Hospitals, and Manchester Royal Infirmary
Mackern, George, Guy's Hospital
Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital
Russell, George Hannah, Guy's Hospital
Sainsbury, Harrington, University College
Sheppard, Charles Edward, St. Thomas's Hospital
Smith, Robert Percy, St. Thomas's Hospital
White, William Hale, Guy's Hospital
Williams, Dawson, University College

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners on November 17th.

Bowe, Francis, L.S.A., Shipley, Yorks
Cama, Rastamji H., L.M.Bombay, Bombay
Fellowes, H.F.A.B., L.S.A., Chobham
Gabe, John, L.S.A., Merthyr Tydfil
Harrison, James, L.S.A., Windermere
Mead, George O., L.R.C.P.Ed., Newmarket
Murray, Henry W., M.B.Dub., Limerick
Parsons, Herbert T., L.S.A., Frome
Pearce, John P., L.S.A., St. Austell
Purkiss, Arthur, M.B. and C.M.Aberd , Clapham
Sanders, John W., L.S.A., Trowbridge
Veale, William E., L.S.A., Plymouth
Walker, John S., L.S.A., Adelphi Terrace
Whiteley, George W., L.R.C.P.Ed., Wakefield

One gentleman passed in Surgery, and, when qualified in Medicine, will be admitted a member of the College; and ten candidates were rejected.

The following gentlemen were admitted members on November 18th.

Ansted, Hugh Leslie Petrel, Milton Suffolk (King's College)
Benthall, Alfred Elliott, Sherborne (University College)
Betts, Edward George, L.S.A., Holloway (Middlesex Hospital)
Cleaver, John Charles Carleton, M.D.Kingston, Kingston, Canada (Kingston School)
Davies, John Morgan Lloyd, L.R.C.P.Ed. and L.S.A., Cardigan (Middlesex Hospital)
Farrer, Robert Thompson, Brighouse, Yorkshire (Leeds School)
Fialho, Joao Henrique, L.R.C.P.Ed., Goa (University College)
Gwynn, Reuben Herbert, L.R.C.P.Ed., Caterham (St. Thomas's Hospital)
Handfield-Jones, Charles Montagu, Green Street, Grosvenor Square (St. Mary's Hospital)
Haycroft, Charles Henry, L.S.A., Starcross (Guy's Hospital)
Hill, Hugh Gardiner, Kensington (St. Mary's Hospital)
Howell, Thomas Arthur Ives, L.R.C.P.Lond., Wandsworth (Guy's Hospital)
Hudson, Theodore Joseph, Cottingham, near Hull (Leeds School)
Jefferson, Arthur John, L.S.A., New Hampton (St. Thomas's Hospital)
Lawford, John Bowring, M.D., McGill, Montreal (McGill University)
Liebstein, Herman John, L.S.A., Highbury Hill (Guy's Hospital)
Luckman, Edward Llewellyn, Manchester (Manchester School)
Maberly, Henry Edward, Birmingham (Birmingham School)
Maddick, Edmund Distin, L.R.C.P.Ed., Brixton (St. Thomas's Hospital)
Mitchell, James Thomas, M.B.Aberd., Adelaide (University College)
Morgan, James, L.R.C.P.Ed., Holloway Road (Dublin School)
Parker, William Rushton, Liverpool (University College)
Penruddocke, Charles, Bristol (Bristol School)
Pilkington, George, Yarm-on-Tees (Guy's Hospital)
Preston, Henry Tolver, M.B.Aberd., Bournemouth (St. Bartholomew's Hospital)
Priest, James Damer, L.S.A., Waltham Abbey (St. Bartholomew's Hospital)
Smith, Sydney, L.R.C.P.Lond., Weston-super-Mare (Guy's Hospital)
Steele, Richard, L.R.C.P.Ed., Blackheath (Guy's Hospital)
Sutcliffe, John, Stalybridge (Manchester School)
Swindells, John Adam, Holmes Chapel, Cheshire (Manchester School)
Tarleton, Paul, L.R.C.P.Ed., Leamington (St. Bartholomew's Hospital)
Taylor, David, M.D.Queen's Univ., Belfast (Belfast School)
Thomson, George James Crawford, L.S.A., Amberley, Gloucestershire (St. Thomas's Hospital)
Vinrace, Felix Coulson, Birmingham (Birmingham School)
Willoughby, James Frederick Digby, South Audley Street (St. George's Hospital)
Wright, Christopher St. John, L.S.A., Priors Maston (Guy's Hospital)

Seven candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

*BRISTOL ROYAL INFIRMARY—House-Surgeon. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before December 1st.

BURY DISPENSARY—House-Surgeon. Salary, £100 per annum, with apartments, etc. Applications to the Secretary on or before November 29th.

*CARLISLE DISPENSARY—Junior House-Surgeon. Salary, £90 per annum, with apartments, coal, gas, and attendance. Duties to commence on Dec. 1st.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

GORT UNION—Medical Officer for Gort Dispensary District, at a salary of £120 per annum, £10 as Medical Officer of Health, with Registration and Vaccination Fees. Whoever is appointed is expected to open a Medical Establishment in the town for the accommodation of the district. Election on the 22nd instant.

*GREAT NORTHERN HOSPITAL, Caledonian Road—Two Physicians. Applications on or before December 4th.

*HOSPITAL FOR SICK CHILDREN, Great Ormond Street—House-Surgeon. Salary, £50 per annum, with board and residence. Applications on or before November 27th.

*INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST—Visiting Physician.

*JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer. Salary, £120 per annum, with furnished rooms, attendance, coal, and gas. Duties to commence December 1st.

*LONDON LOCK HOSPITAL—House-Surgeon. Applications on or before December 10th.

*ROYAL FREE HOSPITAL, Gray's Inn Road—Assistant Surgeon. Applications, with testimonials, on or before November 26th.

*ROYAL LONDON OPHTHALMIC HOSPITAL—House-Surgeon. Applications on or before November 22nd.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

DEATH.

FULTON.—At Saintfield, co. Down, on November 11th, Matilda, wife of Thomas Fulton, M.D., etc., in her 36th year.

PUBLIC HEALTH.—During last week, being the forty-sixth week of the year, 3,700 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 23 deaths annually in every 1,000 persons living. The annual death-rate was 19 in Edinburgh, 19 in Glasgow, and 30 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Sunderland 17, Bradford 18, Plymouth 18, Brighton 19, Birmingham 19, Bristol 20, Manchester 20, Wolverhampton 21, Norwich 21, Oldham 22, Sheffield 22, Salford 23, Portsmouth 23, London 23, Newcastle-upon-Tyne 24, Nottingham 24, Leeds 25, Liverpool 26, Leicester 26, and the highest rate 27 in Hull. The annual death-rate from the seven principal zymotic diseases averaged 3.8 per 1,000 in the twenty towns, and ranged from 0.0 and 1.2 in Plymouth and Portsmouth, to 4.9 and 6.0 in Brighton and Newcastle-upon-Tyne. Scarlet fever showed the largest proportional fatality in Newcastle-upon-Tyne and Sunderland; measles in Leeds, Liverpool, and Birmingham. Three deaths were referred to diphtheria in Manchester. No fatal case of small-pox was recorded in any of the twenty towns. In London, 1,609 deaths were registered, being 138 below the average, and giving an annual death-rate from all causes of 23.2. The 1,609 deaths included 63 from measles, 113 from scarlet fever, 14 from diphtheria, 44 from whooping-cough, 20 from different forms of fever, 23 from diarrhœa, and not one from small-pox—being altogether 277 deaths, which were 5 above the average, and equal to an annual rate of 4.0 per 1000. The deaths referred to diseases of the respiratory organs, which had increased from 190 to 405 in the five preceding weeks, were 401 last week, and 48 below the corrected weekly average; 256 resulted from bronchitis and 107 from pneumonia. Different forms of violence caused 74 deaths; 64 were the result of negligence or accident, including 27 from fractures and contusions, 11 from burns and scalds, 5 from drowning, and 14 of infants under one year of age from suffocation. Seven cases of suicide were registered. At Greenwich, the mean temperature of the air was 40.3°, and 2.4° below the average. The direction of the wind was variable, and the horizontal movement of the air averaged 11.2 miles per hour, which was 0.7 below the average. Rain fell on two days of the week, to the aggregate amount of 0.02 of an inch. The duration of registered bright sunshine in the week was equal to 21 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S.. 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Lownds, "Unusual Respiration in a Case of Dilated Aorta"; Dr. Andrew Clark, "On Renal Inadequacy".

TUESDAY.—Royal Medical and Chirurgical Society, 8.30 P.M. Mr. James F. West (Birmingham), "On Trephining for Traumatic Epilepsy"; Mr. Henry Morris, "Two Cases of Carcinoma of the Breast preceded by so-called Eczema of the Nipple and Areola".

WEDNESDAY.—Hunterian Society, 8 P.M. Mr. Rivington, "On some Cases of Aneurism"; Dr. Stephen Mackenzie, "On Tumours of the Cerebellum".

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. W. J. Tyson (Folkestone), "A Case of Traumatic Aneurism of the Scalp"; Mr. Croft, "A Case of Excision of both Hip-joints for Symmetrical Femoral Necrosis—operations, antiseptic—result, successful"; Dr. Goodhart, "A Case of Rheumatism treated by Salicylate of Soda, and terminating fatally".—Quekett Microscopical Club, 8 P.M. Dr. T. Spencer Cobbold, F.R.S., "On the Fertilisation of certain Flowering Plants".

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

AN APOSTOLIC APERIENT.

THE "Missionary Hair-wash", mainly composed of salts of lead, but warranted to prove nourishing and innocuous, to which we lately referred, has now found its parallel in an Apostolical Aperient, which is being exploited in France, and has attracted the attention of Professor Diday. The printed recommendation of this method of opening up heathen countries to missionary work, states that "after the favourable report of our best chemists, we have desired to consult still further the most serious and most competent persons in medicine and pharmacy. By their encouragement and with their counsel we have decided to accept the proposition of M. H., and to confide this preparation to our brethren of the —— missions. The attention and conscientious care which they will bring to the preparation of this medicament will assure to it the efficacy which science has recognised it to possess. The success which it will obtain will be turned to the advantage and the development of the evangelisation of Dahomey, the Ashantees, and other people buried in ignorance and barbarism. Accept, M. ——, the assurance of my perfect consideration. H., Father Superior." M. Diday observes that from Godfrey de Bouillon to M. Purgon is a long journey for the crusader to make; but if the baptism of the infidel can be paid with the ransom of sinners, this may be considered an ingenious proceeding. A triple object is thus offered to charitable zeal to realise industrial progress, to evangelise the heathen, and secure a theological sanction for a new and safe aperient.

RETREATS FOR HABITUAL DRUNKARDS.

SIR,—In a few weeks' time, the Habitual Drunkards' Act will come into operation, and we are asked by friends of victims if it be possible that their unfortunate relatives may be induced to enter the retreats formed by the Act. But where are the retreats? There are several very well organised establishments for dipsomaniacs; but are they to be placed under the Act? Any information on this subject at the present time will be of great importance to the whole profession, who are much interested in this subject.—Yours, etc., M.D.

FACTORY ACT.

SIR,—The present amended Factory Act has now been in force over ten months. The Act requires that copies of registers of births for all under sixteen years of age shall be presented to the certifying surgeon when he examines for fitness to work; and that surgical certificates must be given within fourteen days of first employment if the surgeon reside more than three miles from the factory, and within seven days if less than three miles.

Will any member of the Association who holds an appointment under the Act kindly state if these rules have been carried out in his district? if not, whether any enforcement of them has been made by the inspectors? Also, whether it is according to the provisions of the Act that the inspector may ignore these clauses?—Yours truly, A CERTIFYING SURGEON.

MR. DAVID HATTON.—The method suggested is far from being an improvement on that already carried out.

DUNELM.—The evidence of Dr. Sharpey, Dr. McKendrick, Sir William Gull, and others, in the Report of the Royal Commission on Experiments on Living Animals. A monograph on the subject has been published by Herrmann, and still later by Haidenhain, in German, which may be ordered through Nutt and Co., Strand, or any other foreign bookseller.

PRURITUS ANI.

SIR,—Can any of your readers offer any suggestions as to the treatment of pruritus ani? I have been tormented with this troublesome disease for the last two years, and have treated myself very carefully both medicinally, dietically, and locally, with but poor success. The disease is a little more bearable, but far from cured, and I do not find much direction or encouragement amongst authors.—I am, faithfully yours, M.D.

JARED.—The subject is one of so delicate a nature that we must decline to discuss it. It may be of importance, but it must be discussed first in some other channel, where the theological difficulties which are sure to arise will be less embarrassing.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following were the questions submitted to the candidates at the primary examinations on Anatomy and Physiology for the diploma of Membership of the Royal College of Surgeons on the 7th instant, when they were required to answer at least four, including one of the first two, out of the six questions. 1. Describe the structure of the mammary gland. Give the physical characters and chemical composition of milk. 2 Describe the motions and sounds of the heart. What events are synchronous with each sound? 3. Describe the hip-joint, including the constituent bones, ligaments, and synovial membrane. What are its movements? and by what muscles are they effected? 4. State how you would remove the brain from the skull in a *post mortem* examination. Mention the structures which it would be necessary to divide in the process. 5. Describe the male urethra; giving the position, attachments, and actions of the muscles connected with it. 6. What dissection is necessary to expose the cœliac axis after the abdomen has been opened? Describe the course and anastomoses of its branches.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

THE COPLAND FUND.

THE following is the list of subscriptions at present received on behalf of the above fund.

	£	s.	d.
Dr. Stocker	10	0	0
Dr. A. Norton	10	10	0
A. Norton, Esq., F.R.C.S.	5	5	0
"As ye would, so do ye unto them"	5	5	0
Thomas Smith, Esq., F.R.C.S.	5	5	0
A Friend	5	5	0
H. Sewill, Esq.	3	3	0
Dr. Semple	2	2	0
Dr. Burgess	2	2	0
Dr. Thorowgood	2	2	0
Dr. Ward	2	2	0
Dr. Fowler	2	2	0
Dr. Taylor	2	2	0
G. Bury, Esq., F.R.C.S.	2	2	0
H. Bullock, Esq., F.R.C.S.	2	2	0
T. R. Wheeler, Esq., F.R.C.S.	2	2	0
Dr. Begley	2	0	0
J. Roche Lynch, Esq.	2	2	0
W. Ling, Esq., Brightlingsea	2	2	0
Dr. Randall	1	1	0
Dr. Lavies	1	1	0
Dr. G. Savage	1	1	0
Dr. Harvey Owen	1	1	0
Henry Stear, Esq., Saffron Hill	1	1	0
J. T. Clover, Esq., F.R.C.S.	1	1	0
Dr. G. C. Dale, Tooting	1	1	0
G. Field, Esq.	1	1	0

Subscriptions may be forwarded to the Treasurer, Dr. Semple, 8, Torrington Square, W.C.; or to the Secretary, Arthur Norton, Esq., 6, Wimpole Street, Cavendish Square, W.

THE TITLE OF DOCTOR.

SIR,—Considering the difference of opinion that has existed amongst medical men in regard to the title of "Doctor", I think that it would be satisfactory if it were more clearly known as to the qualifications that conferred the right to use this prefix Some time after I had been admitted a Licentiate of the King and Queen's College of Physicians of Ireland, I wrote to the gentleman who had been President of the College when I obtained its licence (the late Dr. Churchill), to inquire as to my right to use the title of "Dr.", and he replied that by courtesy I had a right to use it. I have since then done so always, which certainly would not have been the case had I thought I was making use of a title that did not appertain to my position as a Licentiate of the College of Physicians. I may mention that Licentiates of the King and Queen's College of Physicians of Ireland are, as a rule (if not almost always), I believe, addressed by the title of "Dr."—*i.e.*, by Irish people on Irish soil.—I am, etc.,

SURGEON R.N.

SIR,—The following remarks are from a letter written to you upon this subject, which I hesitate to send on account of its length. Their insertion in the JOURNAL will greatly oblige.

1. The *résumé* in the JOURNAL of November 8th, of the legal authority for the use of and right to the title of Doctor of Physic, affirmatively and finally settles the question, so far at least as the members of the Corporation of the London College of Physicians are concerned.

2. Prior to the passing of the Medical Act, the right to the use of the title of Doctor by members of the College was never disputed, and would not since have been but for the course the Edinburgh College adopted, and the adverse action of the Fellows, admitted without examination, during the year of grace.

3. No better committee could exist than was appointed to deliberate on and advise the College with reference to this subject, and their opinion virtually settled the question, so far as the members and Fellows were concerned, and, as you at the time intimated, gave a death-blow to the exclusive use of the title of Doctor by M.D.s only. That committee consisted of Sir George Burrows, Drs. George Johnson, A. B. Garrod, S. Wilks, C. B. Radcliffe, H. A. Pitman, and Francis Hawkins being the president; censors, the past and present registrars of the College, who of course had access to the charter and papers bearing upon the question, and were aided by the opinion of counsel. These gentlemen being, let it be remembered, all graduates of English Universities who had been admitted into the College by examination, presented the following.

"The Committee appointed by the College to consider the question of the title of Doctor by non-graduates, and the by-law and regulations relating thereto, recommends that the existing by-law on this subject be abrogated, and that henceforth in all official documents issued from the College, Fellows and Members be addressed by the title of Doctor."

4. Lastly, the by-law was then abrogated; but a resolution was subsequently adopted, from which, until the words Fellow and Member are withdrawn, the best thing the graduate members can do by way of sympathy with their non-graduate brethren is to sink their M.D.s, and rest on the title which their connection with the College as members of the Corporation under the charter secures to them.—I remain, yours faithfully,

A BRITISH MEDICAL GRADUATE AND M.R.C.P.Lond.

AN EXTRAORDINARY EMPIRIC.

SIR,—In the interests of the women who really have obtained the degree of M.D. of Paris, perhaps you will allow me to state that the name of Madame Enault is not on the list of such graduates, though your Liverpool correspondent says that she professes to possess that diploma. From this fact, the rest of her pretensions may probably be duly estimated.—I am, sir, yours obediently,

4, Manor Place, Edinburgh, Nov. 19th, 1879. ANNA DAHMS, M.D.Paris.

*** Of course the individual in question does not possess the highly honourable diploma of the University of Paris any more than "Malachite" possesses miraculous properties; but this pretension was enunciated, among others, as part of the singular portrait of this quaint empiric.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

LONDON AND VICTORIA UNIVERSITIES.

SIR,—I am a partisan for the University of London, and have no doubt that a gold medallist is a man of superior abilities, which implies great physical strength and mental capacity; but I do very much doubt that the possessors of degrees without the gold medal are such very superior men. I have reason to know that this is not the case. The advantages of the London M.B. or M.D. degrees are, that candidates who have filled the schedules are enabled to present themselves at their convenience for further professional advancement. The disadvantages are, that for the M.B. (second examination) a multiplicity of subjects are required, one of which (surgery) is foreign to a medical graduate. This the Senate partly recognise, for they have instituted separate examinations for B.S. and M.S. degrees. A man in country practice cannot possibly, with advantage to himself, work up all those subjects at one time, however willing and hardworking he may be. He comes up and finds he fails in surgery. He has, therefore, lost all his work and a fortnight of precious time for twelvemonths. A second disadvantage is the length of time over which the examination extends: twelve whole days of suspense and mental toil. None but the strongest can endure this suspense. I venture to think it is quite unnecessary. Consider what is required: a complete knowledge of Midwifery and Gynæcology, of Surgery, of Forensic Medicine and Chemical Analysis, of Medicine, of Pathology, Therapeutics, and Hygiene. All these imply a knowledge of minute anatomy and physiology. The candidate is also expected to diagnose and write a minute account of cases; then comes a minute *viva voce* interrogation. If the Senate desire that a candidate for the M.B. degree should show a knowledge of surgery, it is competent for them to make the candidate pass an examination in it at another time, as they allow in physiology. The degree then would be attainable by any ordinarily hardworking man without subjecting him to undue strain or unnecessary waste of time.

After all, the possession of a degree is only an intimation to the profession and the outside public that the possessor has worked thoroughly well at the various subjects which a medical man is supposed to be conversant with. If such be the case, why should the London University only claim to have on its roll graduates of the stoutest build, bodily and mental? Let it rather encourage men to pursue their studies gradually, so as to keep up, over a succession of years, their knowledge. This should be the end of a true mother, for such I regard an University. I do not see the object of making the examinations harder and less obtainable for the ordinary pass; but for the aspiring gold medallists, certainly as hard as you please: no favour and no quarter.

In conclusion, the examination for the second M.B. should be strictly medical, and its procrastination reduced, then no one would grumble.—I remain, sir, yours truly,

ANOTHER UNDERGRADUATE.

REMUNERATION OF CLUB-DOCTORS.

SIR,—The letter in Saturday's issue by "One of a Contented Firm" is a very suggestive production, and one which all who have to do with club-practice would do well to ponder. The endless trouble which club-patients give when managed on the ordinary system is too well known to all who have had them to attend. While assistant, I had to attend club-patients where the annual contribution for heads of families amounted to 13s. Whenever a man scratched his hand, or had a headache after a night's carouse, the doctor was sent for. "What was the use of paying for him and not using him?" The total contributions were worth to my chief over £200 *per annum*; and the work, although annoying, was easily done, for the patients were not spread over a wide district, but were concentrated into a group of streets. One point which I think has not been touched on by writers on this subject I would like to draw attention to. When a club-doctor is called continually into houses to see trivial cases, he is apt to get into a careless and loose way of diagnosing disease, and when a really serious case presents itself he is particularly apt to be dubious of any real disease, having been deceived so often.

"One of a Contented Firm" has hit the right nail on the head: fair remuneration for work done is the best method. In conclusion, I hope that his method may make way among the classes who find clubs suitable to their cases. For my part, I am exceedingly glad that I have no club-patients to attend; but the abovementioned writer at once brings light on the subject. I am, yours,

PRACTITIONER.

November 16th, 1879.

GODFREY'S CORDIAL.

SIR,—The enclosed is from the *Lincoln, Rutland, and Stamford Mercury* of November 7th, 1879, and is, I think, worthy of serious attention. If reported correctly, there can be little doubt that it adds another to the already long list of deaths from the administration of opium to infants under the form of Godfrey's cordial. In the face, however, of the medical evidence, the "enlightened" jury brought in a verdict of "Natural death", utterly ignoring Dr. Sergeant's most justifiable inference that death resulted from the effects of the narcotic, and accepting the testimony of the druggist as to its being, "in his opinion", a harmless dose. It certainly appears a strange thing to me that the opinion of a druggist as to the therapeutic value of a drug should be taken in preference to that of a medical man. The strength of Godfrey's cordial is supposed to be half a grain of opium to one ounce; but, as Dr. Taylor remarks in his work on *Medical Jurisprudence*, it is very probable that it is subject to great variation. A ninetieth part of a grain of opium has been known to prove fatal to an infant four weeks old: in this case the infant was only five days old.

I think most of the profession will agree with me that nostrums containing opium should never be allowed to be administered to children unless under the supervision of a medical man; and coroners should, by their direction to juries, strengthen our hands in this matter, and aid us in trying to lessen the alarming number of deaths which take place annually from the careless administration of such preparations to children.—I remain, sir, your obedient servant,

F. T. GOOD, M.R.C.S.

St. Neots, November 11th, 1879.

PANCREATISED MILK-GRUEL.

SIR,—I am treating a patient with the pancreatised milk-gruel recommended by Dr. William Roberts of Manchester in his paper published in your JOURNAL on November 1st and November 8th. I find that it is much more palatable if, after the completion of the artificial digestion process, and when the gruel has been boiled, just sufficient hydrochloric acid be added to convert the bicarbonate of soda into common salt. If the patient's saliva be normally alkaline, I think no theoretical objection can be raised.—I am, sir, yours respectfully,

DUNCAN J. MACKENZIE, M.D.

64, High Street West, Glossop, Derbyshire, November 12th, 1879.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

CROUP AND DIPHTHERIA.

SIR,—Had not Dr. Sealy of Weybridge so emphatically expressed his difference of opinion on the above subject with me, and "those who think with me"—meaning, of course, Sir Thomas Watson, Sir William Jenner, Dr. George Johnson, and several others—I do not know that I should have troubled your readers with any remarks. The fact is, that Dr. Sealy admits most of the views which I and others advocate; and, putting aside the personal allusion to myself, I regard his letter as a very good and practical one. I quite admit the possibility of the existence of a membranous idiopathic croup distinct from diphtheria; and, indeed, I long held that opinion, but then I never saw such a case; I never knew any one who had accurately described such a case, and I have not yet read in any medical book (British or foreign) the full description of such a case. The Croup and Diphtheria Committee of the Royal Medical and Chirurgical Society, of which I was a member, also admitted the possibility of the existence of idiopathic membranous croup, and this was the reason why their conclusions were so cautiously drawn up; but, although they made the most extensive inquiries of medical practitioners throughout the habitable globe, they failed to receive the particulars of a single well authenticated instance of the kind.

If Dr. Sealy have the records of such a case, it is to be regretted that he did not communicate them to the Committee while they were sitting; but it is not yet too late to supply the omission, and I for one will gladly modify my own views on the production of the necessary testimony. Until then, however, I must be pardoned for maintaining the opinion that membranous croup and laryngo-tracheal diphtheria are one and the same disease.—I remain, sir, yours truly,

8, Torrington Square, Nov. 1879. R. H. SEMPLE, M.D., F.R.C.P.L.

UNIVERSITY DEGREES IN MEDICINE.

SIR,—Allow me, as an Edinburgh graduate, to make a few remarks upon its University as a place for study, etc. A correspondent has lately asserted that only about one-third of those who pass the preliminary examination in medicine ever graduate there, and that the rest are either rejected or deterred by the rigor of the curriculum. I cannot agree with him here: many of them mean to pass elsewhere; others quit medicine for some other walk in life; some die; and many who could pass perfectly well are retarded by their fellow-students, who kindly represent the examinations as far more difficult than they really are; and lastly, about three or four per cent. of the candidates are "plucked"—most, I think, from carelessness, and some from not reading judiciously. There is a decided difference between the imposing papers of questions proposed and the humble answering that I believe is oft-times accepted. I am quite certain that the number who fail from want of ability form an exceedingly small fraction of the whole. Again, that "the roll of Edinburgh graduates is not to be surpassed by any other University", is, I believe, the truth; but what does this prove? Edinburgh has for many years attracted clever men to it, from offering, as the University of the Scottish metropolis, greater facilities for obtaining a degree than the Universities of England or Ireland: it has also, for the above reason, sent out far more medical graduates than any other. As regards the examination, to speak from experience, I have only to say that the professional examinations are such that no one need fail. I am very sure that M.R.C.S. and L.R.C.P.London require far more knowledge and application to obtain than M.B. & C.M.Edin. It is, indeed, high time that somewhat were taken off the undue pretensions of some of the graduates of the Scotch Universities.—I remain, sir, yours obediently, M.D.EDIN.

TRICHINOSIS.

SIR,—I should be extremely obliged if any of your correspondents would give me answers to the following questions relating to trichinosis. Prior to these, however, I wish to call their attention to the late prosecution for causing death by trichinosis, in your number for November 1st, page 706. In this account, it states that four persons ate more or less of the raw meat.

1. Is it a custom of the inhabitants of Merseburg to eat raw pork? if so, is it in conjunction with other animal food, cooked or partly cooked?
2. What is the cause of trichinæ, and its remedy?
3. Have we cases in England or America? and are the American bacon and hams liable to be affected with trichinæ?
4. Why should the German swine be liable to this plague, while, on the other hand, the English pigs are nearly, if not totally, exempt from the disease?
5. Can this be traced to their food, or want of sanitary measures in keeping?

I am at present investigating the subject of trichinæ, and should feel obliged by any of our German correspondents giving me their assistance. We have a large mass of food in the market of foreign production liable to the disease, and feel certain that several cases of sudden illness can be traced to this source—not to decomposition (a condition that would put the purchaser on his guard), but a more potent and silent enemy, if not of the order trichinæ, at least a remarkable good counterfeit. This investigation will include preserved or tinned food; and I have no doubt that some permanent good may result from the discussion, for at present the system of preservation appears anything but perfect.—I am, yours faithfully,

The Laurels, Aldbro', Hull, Nov. 5th, 1879. WM. HENRY BROWNE.

*** The custom of eating raw pork is not confined to the inhabitants of Merseburg: it is very prevalent in Germany, and to it is in great measure attributable the frequent occurrence of trichinosis in that country. A good account of the causes and symptoms will be found in modern text-books of medicine: *e.g.* Aitken's *Science and Practice of Medicine*. The best remedy is prevention—thoroughly cook the pork.

LIMITATION OF POPULATION AND ITS RESULTS.

SIR,—It has been said that, if the system of limiting population were in force in England, there would be an increase as regards the number of marriages and a diminution of prostitution and poverty; but the resolution which has lately been passed by the Conseil Général of the Rhône Department (where limitation exists, and has existed for years past) would go to show that this is not altogether correct. Painfully alarmed, it is said, by the falling off in the matrimonial returns, the Council proposes to promote connubiality through the agency of the taxgatherer, and is about to issue a decree imposing a fiscal penalty on all who remain single. The following is an abridgment of the decree in question. "Considering that celibacy is *contra naturam*, and that Providence has prescribed to all existing human beings the ordinance that they shall be born, shall procreate their species and shall die . . considering that it is the bachelors—soldiers, sailors, lawyers, and, indeed, men of all careers and occupations—who offend all the states of Europe with corrupt views and immoral tendencies; that ecclesiastics, Trappists, and the so-called upper classes, are addicted to sensual indulgence and improprieties which are worse than death itself; it is hereby decreed that the support of forsaken children shall be defrayed by the deduction of one-fourth from the salary or pension of every official or pensioner who is unmarried and resident in the Department of the Rhône, from the humblest to the most exalted *employé*, who belongs, or has belonged, to the army, the magistrature, or any other branch of the public administration." In the face of this, and similar experience of the results of population-checks, it does seem strange that men should be found to recommend the introduction of some such system into this country. However, there is one safeguard—it is thoroughly foreign to English ideas; and I think the good sense of the people will prevent its adoption to any great extent.—I am, sir, your obedient servant, F. P. ATKINSON.

Kingston-on-Thames, October 1879.

CHLOROFORM IN MIDWIFERY.

SIR,—I coincide entirely with the observations on the administration of chloroform in obstetric practice made by Dr. Donaldson; I used it also directly after hearing of Dr. Simpson's success. In probably one thousand cases or more, I never but once had any unpleasant symptoms; and then, my attentive manipulation being required during delivery, I trusted the anæsthetic to the nurse, who, in her enthusiasm, pressed the lint firmly over the mouth and nostrils. My patient was temporarily asphyxiated, but by prompt remedial measures was fortunately soon restored to consciousness, and all went well afterwards. The comparative safety in chloroform administration during labour is doubtless to be attributed to two things: firstly, the recumbent posture; and secondly, that it is but rarely necessary to produce complete anæsthesia. I have usually administered it on lint, having tried simple apparatus occasionally, but found them not so convenient as lint solely. In long tedious cases, I have sometimes continued the inhalation for from six to even twelve hours in succession, with great relief to the otherwise much suffering patient.

With regard to *post partum hæmorrhage*, I have certainly not found it more frequent than without chloroform; but I certainly did observe that the period of parturition appeared in some cases to be delayed, perhaps a few hours at most: that, however, is of little or no consequence to the patient, though her medical attendant might sometimes find it inconvenient to himself. With patients where money is not an object for consideration, I should always advise a chloroformist besides the usual medical attendant, on account of greater convenience; but in by far the majority of my cases I have administered chloroform and delivered alone. There is one objection I would mention *en passant* to my junior medical *confrères*, and it is, that should a mammary abscess, or peritonitis, or other disease occur after delivery, the patient is apt at times to attribute such to the administration of the drug. Such is unfortunate, but cannot always be avoided.—I am, sir, yours faithfully,

November 1879. ROBERT MANNERS MANN, M.R.C.S.Eng., etc.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. George Johnson, London; Dr. W. F. Wade, Birmingham; Dr. A. P. Stewart, London; Mr. T. Spencer Wells, London; Dr. Kelburne King, Hull; Dr. W. R. Thomas, Sheffield; Mr. Fisher, London; Dr. G. Wyld, London; Dr. Garson, London; Surgeon R.N.; M.D.Edin.; Another Undergraduate; Mr. J. H. Love, Wolverhampton; Mr. W. Mackesy, Dunmore East, co. Waterford; Dr. C. R. Francis, London; Dr. Mackenzie, Glossop; Miss C. Sandford, Shrewsbury; Dr. A. Grant, London; Mr. R. T. Cæsar, Southampton; Dr. G. Sealy, Weybridge; Dr. A. B. Brabazon, Bath; Dr. Lush, Fyfield, near Andover; Dr. L. H. Ormsby, Dublin; The Secretary of the Medical Society of London; Dr. A. T. H. Waters, Liverpool; The Secretary of Apothecaries' Hall; Mr. David Hadden, Weston, Wexford; Mr. G. A. Gunton, Herne Bay; Dr. A. S. Taylor, London; Mr. A. Coldstream, Leith; Mr. A. Cooper, London; The Registrar-General of Ireland; Dr. R. Clement Lucas, London; The Registrar-General of England; Mr. A. H. B. Hallowes, Maidstone; Dr. Fulton, Saintfield; Mr. J. E. Ingpen, Putney; An Associate; Mr. G. Eastes, London; Mr. C. Hood, London; Dr. Wm. Roberts, Manchester; Dr. W. Easby, March; Mr. T. Partridge, Strood; Mr. Henry Carr, Clapham Common; Dr. Thomas Chambers, London; Mr. Treves, Margate; Dr. Burman, Richmond; Dr. Hardwicke, Sheffield; Mr. C. Clark Burman, Bamburgh, Belford; M.D.; Jared; Mr. G. Meadows, Hastings; Mr. J. T. Clover, London; Ph., F.R.C.S.Edin.; Mr. John H. Wolstenholme, Rhyl; Dr. Norman Kerr, London; Mr. A. Erskine Stuart, Dunse; Dr. A. Davidson, Liverpool; Mr. J. Seaman, Southampton; Mr. R. G. Allen, Belper; Dr. Aitken, Rome; Mr. A. P. Fiddian, Cardiff; Dr. Schüller, Greifswald; Mr. Vincent Jackson, Wolverhampton; Our Paris Correspondent; The Secretary of the Royal Medical and Chirurgical Society; Dr. Allen Sturge, London; Dr. Perry, Glasgow; Dr. T. Barlow, London; Dr. Cheadle, London; Dr. J. W. Burman, Richmond; Dr. Semple, London; L.R.C.P., M.R.C.S.Lond.; Mr. Langton, London; Dr. Drummond, Newcastle-on-Tyne; Sceretary of the Medico-Psychological Association; Dr. John Duncan, Edinburgh; Dr. Thorburn, Manchester; Dr. Allchin, London; Mr. J. E. Adams, London; Dr. Clifford Allbutt, Leeds; Dr. Gowers, London; Mr. W. M. Baker, London; Dr. Bastian, London; Dr. E. B. Baxter, London; Dr. Hughes Bennett, London; Dr. Berkart, London; Dr. Crichton Browne, London; Dr. Lauder Brunton, London; Mr. Bowman, London, etc.

BOOKS, ETC., RECEIVED.

On the Functional Derangements of the Liver. Being the Croonian Lectures delivered before the Royal College of Physicians in 1874. By the late C. Murchison, M.D., LL.D., F.R.S. Second Edition, revised by the Author. London: Smith, Elder, and Co, 1879.

PRELIMINARY REPORT

ON

ANIMAL VACCINATION IN ITS RELATION TO PROPOSED LEGISLATION.

By ERNEST HART, Esq.,
Chairman of the Parliamentary Bills Committee of the British Medical Association.

Recent History of the Question in England.—Objects of the forthcoming Conference.—Preliminary Remarks.—Historical Note on the Origin and Progress of Animal Vaccination in Europe and America.—Present State of the Question in Foreign Countries.—Statement of and Examination into Alleged Objections to Animal Vaccination.—Suggestions for Future Action.

By the introduction last session into the House of Commons of Dr. Cameron's Bill providing for the supply of animal lymph as an alternative to humanised lymph for the vaccination of children whose parents have conscientious objections to the latter, the attention of the Parliamentary Bills Committee was particularly directed to a subject which has engaged professional and public attention for a considerable period. With a view to procuring for the Committee all needful information for its guidance in taking a course of action on this important subject, it seemed to me desirable that the arrangements which have been in force for several years in Belgium should be carefully studied, in order that their adaptability to our English system might be considered; and for that purpose I have on two occasions visited the animal vaccination *bureaux* at Brussels. It seemed, moreover, desirable that, pending the reintroduction of Dr. Cameron's Bill into Parliament next session, a Conference of those interested and of those specially experienced in the subject should be held, with the view of eliciting an expression of opinion from those best qualified to judge as to the most desirable course to be pursued with regard to Dr. Cameron's Bill, and the general subject of the official recognition in this country of animal lymph. With the sanction of the Committee, this Conference has now been arranged to be held on the 4th December proximo, and there is reason for hoping that the results of its deliberations will have an important bearing upon the future of vaccination in this country. In addition to Dr. Cameron, M.P., who will attend to explain the motives and provisions of his Bill, Dr. Warlomont of Brussels has, with characteristic kindness, promised to come over expressly from Belgium to give us the benefit of his valuable experience, ranging over a long series of years, and many thousands of vaccinations, and to read a paper on the general subject. We are also promised the attendance of men so distinguished and specially informed as Sir Thomas Watson, Mr. John Simon, Mr. Ceely of Aylesbury, Dr. Robert Cory, Mr. John Greene of Birmingham, Dr. Braidwood of Birkenhead, and others, who have all devoted considerable attention to the subject before us. I am happy to add that the President of the Local Government Board, recognising the importance of the Conference, has most kindly offered to send one of the Board's Medical Inspectors (from whom we shall doubtless learn more particularly what are the official views upon this question) to represent the Department on this occasion.

In order to present to the Committee, and through them to the Conference, as complete an account as possible of the progress which animal vaccination is making throughout the world, I have collected together such statistics and information on the subject as I have been able to discover. I feel, however, that this information is still imperfect; and I would suggest for the consideration of the Committee whether it would not be desirable to move the President of the Local Government Board to procure, from our representatives abroad, official and more complete information on the subject of the practice of animal vaccination in the countries to which they are accredited. The particulars which I have been able to collect will, however, be sufficient, I feel little doubt, to convince the Committee of the importance of some steps being taken to secure the official recognition of animal vaccination in this country.

This subject of animal vaccination has not been seriously discussed before the British Medical Association since its meeting at Leeds in 1869. I do not on the present occasion intend to deal at any length with the in many respects, interesting discussion that then took place; but I may refer in the briefest fashion to its results.* The subject was started by Dr. Blanc with some enthusiasm, but with statistics which were much questioned, and which were certainly deficient in exactness; and he was followed by Drs. Braidwood, Ballard, and Druitt, all of whom expressed themselves in favour of the use of calf-lymph. Dr. M. K. Robinson, then Medical Officer of Health for Leeds, expressed a judicious *caveat* as to the decrying of arm-to-arm vaccination, for which the late Mr. A. B. Steele of Liverpool argued strongly. Mr. Steele's position can easily be understood. As one of the very best vaccinators of the staff of the National Vaccine Establishment, and as Teacher of Vaccination for Liverpool, he, of course, found arm-to-arm vaccination in his careful and judicious hands to be sufficiently successful.

At the time of this discussion in Leeds, animal vaccination was but little esteemed, either in this country or abroad; and the results at that period of the use of calf-lymph were certainly not so satisfactory as to warrant the disturbance of the arrangements for arm-to-arm vaccination in England, which had been perfected at great trouble and expense only a short time before. It was therefore not surprising that Dr. Seaton, to whom we are indebted more than to any one else for our present excellent system of public vaccination in England, should have reported in 1869 adversely to the official recognition of animal vaccination by the Government.† But, since that time, changes of the most crucial and important kind have been effected in the conduct of animal vaccination abroad; so that now its supporters maintain that not only are its local effects equal to that of humanised vaccination, but greatly superior to them. The Government, however, as represented by the Local Government Board, have consistently refused to admit this, swayed, no doubt, by the very strong opinions which Dr. Seaton is known to hold on the subject. I desire to speak with the very greatest deference of Dr. Seaton's views in this matter; but I feel bound to say that the now available information leads to conclusions much opposed to those at which, as Dr. Mouat, one of the medical inspectors of the Local Government Board, stated at the recent congress at Amsterdam, Dr. Seaton has arrived after a recent review of the subject. It is a matter of extreme regret that Dr. Seaton will be unable to attend the Conference, as his great experience and the careful inquiries into the subject which he has on two occasions instituted would have made his presence most valuable and important; but I hear from Mr. Sclater Booth that he is now incapacitated by illness from attending to business. The President of the Local Government Board, who has most courteously expressed his great desire to facilitate the discussion at the Conference, and his readiness, under different circumstances, to furnish the Association with the results of Dr. Seaton's examination into the Belgian system of vaccination, informs me that those results are now before him in only an incomplete form, as he has but a short memorandum on the subject from Dr. Seaton, and it is impossible now to refer it to him for completion. However, it would appear from Dr. Mouat's statement that Dr. Seaton is still not convinced that animal vaccination as practised on the continent is superior to, or presents greater success than, the procedure adopted in England. Holding these views, and committed as he is, Dr. Seaton's refusal to substitute animal vaccination for what he considers the perfect system practised under his care is readily explicable. But it is still, in my opinion, to be regretted that he should have advised the Local Government Board to refuse animal vaccination as an alternative which would induce many people to submit to vaccination and revaccination who now (absurdly, if you will) object to it. There can be little doubt that, when Dr. Seaton made his historic report on animal vaccination in the year 1869, there was not much to be said for animal vaccination as then practised. He showed clearly enough that it was then altogether inferior to the system practised in this country, because it was impossible to keep up the stock, which had repeatedly failed, especially in Holland; and because the percentage of unsuccessful vaccination was enormously greater than that obtained under our English system. The alleged superiority of calf over humanised lymph, that syphilis could not be invaccinated with it, was scouted, because it had apparently been proved to demonstration that syphilis could not be introduced into the system in this way. Against this adverse report of 1869, which is being officially depended on and quoted as though its facts were equally applicable at the present day, we have the following. During the ten years which have since elapsed, Dr. Warlomont, at the head of a large animal vaccine establishment in constant operation, has never had the smallest difficulty in keeping up his succession of vaccinifer calves. The same experience comes from other countries. No difficulty is now found by Dr. Martin in

* See British Medical Journal, vol. ii, 1869, pages 275-278.
† Twelfth Report of the Medical Officer of the Privy Council for 1869, pp. 171-191.

America, or by the heads of the vaccination bureaux in Holland, Berlin, or Milan. Dutch statistics show the number of failures in primary vaccinations to be under one per cent.; and, in revaccinations, animal lymph has been shown to "take" much better than humanised lymph. The evidence as to the possibility of the invaccination of syphilis has now satisfactorily established that, although happily infinitely rare—so much so, as to be beyond all calculation—nevertheless such invaccination is possible.

M. Warlomont has stated that, when he suggested to the official adviser of the Local Government Board that an experimental station should be established in London for animal vaccination, the latter refused on the ground that "everyone would flock there". Surely this admission is very damaging. If everyone would flock there, this is an unanswerable argument of those who contend that, *cæteris paribus*, that is, if animal vaccination be equally effective, a compulsory law should also allow some play to such rooted prejudice.

All the members of the Medical Department of the Local Government Board are not, however, opposed to the introduction of animal vaccination. I have the authority of Dr. Cameron for saying that Mr. Simon, the late eminent Medical Officer of the Privy Council and Local Government Board, declared that, if he had remained in office, he would have introduced animal vaccination; and I will only give, in addition, the remarks made in 1868 by Dr. Ballard—now one of the most distinguished of our Government medical inspectors—after an inspection of even the imperfect results at that time attained. After alluding to the number of cities in which the practice of animal vaccination had taken root, Dr. Ballard says: "It is difficult to account for its adoption in so many places, except on the ground that some real advantage attaches to it. I confess that I should be glad to see animal vaccination adopted in this country as a part of our national arrangements for the prevention of small-pox. I believe that good would result from it; if no other good, there would be this: that practitioners who are dissatisfied with the virus they are using might have recourse to the vaccinated heifer at any time for the improvement of their supply. It would not necessitate or even render desirable the abandonment of arm-to-arm vaccination; but its adoption would tend to meet the prejudices of some persons who decline now to avail themselves of vaccination on account of the dangers with which they believe it is surrounded."*

The late Mr. J. F. Marson, for many years the chief vaccinator to the Privy Council, and subsequently to the Local Government Board, whose knowledge of the subject of vaccination was of the highest order, and whose practical experience of the operation was greater than that of almost any other man in the profession, stated before the Select Committee of the House of Commons in 1871 that he thought animal vaccination would be a very good plan; and that he had himself, in June 1869, successfully vaccinated thirteen children from an inoculated heifer brought to the National Vaccine Establishment station in the Blackfriars Road.†

One great object of the Parliamentary Bills Committee in convening the forthcoming conference has been to attempt to get at the general opinion of medical men in England upon this important subject. I believe I am correct in stating that, outside the official medical world, there are very few of our profession who have any positive objections to urge against animal vaccination. On the other hand, those who have taken the trouble to inquire into the subject on their visits to the continent, have, I think, uniformly been struck, as I have been, with the simplicity and efficiency of the arrangements made at the various stations at which animal vaccination is in force, and their adaptability to our English system. I shall not now recount the opinions of those who have studied the subject, but shall content myself with a brief reference to what Sir Thomas Watson, the Nestor of our profession, has said in the able paper recently contributed by him to the *Nineteenth Century*, and since republished in a separate form.‡ Sir Thomas Watson, after alluding to the "ugly blot" which has fallen "upon this fair and priceless charter of safety to humanity", vaccination, describes the arrangements made at Brussels under the able superintendence of Dr. Warlomont, and proceeds, "Surely similar institutions might be formed in London, and in all the large towns of this rich kingdom, whereat the general public might obtain vaccination from the baby or from the calf at their pleasure, while compelled vaccinations should in all cases be from the calf alone. It seems to me that all this could be effected under the authority and control of the Local Government Board, without derogation from the status or the emoluments of our licensed vaccinators, and therefore without opposition on their part."

* *Prize Essay on Vaccination.* By Edward Ballard, M.D. Page 253.

† Report of the Select Committee on the Vaccination Act of 1867, Questions 4701-2.

‡ *The Abolition of Zymotic Diseases.* By Sir Thomas Watson, Bart., M.D., F.R.S. London; C. Kegan Paul, and Co. 1879. (See pages 145-153.)

This view will, I am sure, find an echo in the mind of every member of this Committee.

After these preliminary remarks, I propose, in the first place, to show the progress that animal vaccination is making in the estimation of other countries than our own; then to state what appear to me to be valid answers to objections which have been raised to the use of calf-lymph; and finally, to indicate what, in my opinion, are the steps necessary to be taken to place this country, the birthplace of vaccination, on a level with other countries as regards the perfection of its machinery for securing the general vaccination of the population.

I.—Origin and Progress of Animal Vaccination* in Europe, India, and America.

Shortly after the introduction of vaccination into Italy, Troja, of Naples, conceived the idea of taking the vaccine virus from the vaccinated cow for the purpose of human vaccination, and the practice was pursued by him and his successors during many years for the benefit of the upper classes of society. On the death of Troja, Galbiati, his successor, continued it; and although in 1810 these vaccinations were proscribed, yet in the same year, we are told, several distinguished statesmen availed themselves of this method for their own children. Galbiati, who is reported to have become insane through the bitter opposition and ridicule of his scheme which he experienced, and to have terminated his life by suicide, was followed by M. Negri, who had to bear the brunt of official opposition similar to that offered to his predecessors. It is to M. Negri that we owe the practice of animal vaccination as it is understood now. Troja and Galbiati had both propagated in the heifers a vaccine disease implanted upon them originally from a human source. In fact, what they practised was a retro-vaccination, the result of which was perpetuated through a series of animals. At first, M. Negri followed in their steps, but subsequently, on the occasion of an outbreak of cow-pox in Calabria, the use of this virus was abandoned, and M. Negri propagated henceforth that obtained from the natural cow-pox. It is said that, on three occasions, he thus availed himself of natural cow-pox, on each occasion maintaining the supply by an uninterrupted succession of inoculations from animal to animal. At the date of Dr. Ballard's first inquiry in 1867, so thoroughly had all the prejudices upon the subject been cleared away, that M. Negri vaccinated from the heifer, in the course of a year, from 3,000 to 4,000 persons, a number nearly equal to the annual births that take place at Naples; and for several years M. Bima, of the Italian army, had used the animal vaccine alone for his regimental vaccinations, and for the pupils of the military colleges.

In 1864, Dr. Palasciano of Naples addressed the Medical Congress at Lyons on the subject of the vaccinations practised by his townsman Negri. So impressed was one of his listeners, Dr. Lanoix, that he visited Naples, studied animal vaccination under Negri, and presented, in a memoir to the French Academy, the facts he had collected on the subject. On his return, he brought with him a vaccinated calf, and after introducing the practice of animal vaccination at Lyons, established it in Paris under the auspices of M. Depaul, the director of vaccine. From Paris, the practice of animal vaccination has extended in many directions, amongst the first to take up the question being Dr. Warlomont, of Brussels (February 1865), and Dr. Pissin, of Berlin (June 1865), both of these being private speculations. Subsequently, the ramifications became so extensive, that it is impossible to follow them, and the practice is now in force, not only in France and Italy, but in Belgium, Holland, Germany, Russia, Spain, Austria, Switzerland, the United States, and in our own Indian empire at Bombay and elsewhere. Below are given the salient points of the information communicated to me with regard to each of these countries.

France.—I have already referred to the introduction of animal vaccination in Paris by Dr. Lanoix, who, in conjunction with M. Chambon, set up in 1864 a private establishment for the propagation of the virus from calf to calf. In 1866, the French Government placed the sum of six thousand *francs* at the disposal of the Académie de Médecine for the purpose of experiments in the matter; and subsequently a Commission reported in favour of the practice of animal vaccination. At first, the virus used by the Commission was that of MM. Lanoix and Chambon; but, after four transmissions of this virus had been made, a new source from natural cow-pox was discovered at Beaugency (Loiret), in favour of which the Neapolitan virus was abandoned. MM. Lanoix

* The term "animal vaccination" has not unfrequently been misunderstood to mean something which it is not. It may therefore be desirable to explain that throughout this report the term is used to mean what Dr. Martin correctly describes as "the inoculation of a young selected animal of the bovine species, from an original spontaneous case of cowpox, from this others, and so on in continuous and endless series, as a source of virus to be used for the protection of the human race from variolous disease."

and Chambon also adopted the use of this virus; and having in the same year (1866) met with another case of natural cow-pox at St. Mandé, near Paris, they introduced this lymph also into their practice. The establishment of these gentlemen is a private one; but M. Lanoix has, since the summer of 1865, held an appointment from the Directeur de l'Assistance Publique for the weekly performance of vaccinations at the hospitals at Paris, from the calves which he inoculates week by week. By far the larger number of vaccinations and revaccinations performed in these establishments are done in this way. During the Franco-Prussian War and the siege of Paris, animal vaccination ceased in that city for very obvious reasons. The last virus carried from Paris was that taken by Dr. Martin's agent to America; and, during the siege, the "stock" was lost. The virus employed since the war has been from other stocks discovered since that of Beaugency. The mode of procedure at Paris is as follows. The animals used for the purpose are calves of the age of from four to eight months. Animals with white skins and females are preferred. Those used are such as are brought to the market for the purpose of slaughter; and no difficulty has been experienced in making an arrangement with a butcher for a constant supply of them at a price previously agreed upon, and for their repurchase. Such calves, coming to the Paris market, are generally weaned calves; and, even when they are not, no great difficulty in feeding them is generally experienced by persons accustomed to the management of such animals. They are carefully stabled, and fed as nearly as possible upon the diet to which they are accustomed; and, when done with, they are returned to the butcher for slaughter. A vaccinating table of convenient construction is provided. It is a strong wooden table, with a flap, which is cut out semicircularly in the middle, so as to correspond in shape roughly with that of the body and legs of the animal. The flap being let down, the calf is placed with its left side against it; and, being then securely fastened, the flap is raised horizontally, so that the animal lies with the right side uppermost. The operator then proceeds to shave, with a dry razor, the right side of the abdomen, commencing from the udder, and extending over a space of about ten inches long by six or eight broad. The calf which is the vaccinifer, from which the virus is to be taken, is also securely fastened down in a similar manner upon the floor, and the vaccine matter is obtained from the pock by forcible compression of its base with a pair of spring forceps. The result is the rupture of the pock, and an abundant flow of a thickish fluid, which is taken upon the lancet or into capillary tubes for the purpose of preservation. The animal upon the table is vaccinated upon the shaven surface by puncture in sixty or seventy places, a little turn being given to the lancet at each puncture, and means are adopted to prevent subsequent injury by biting or licking. Pocks, which finally attain the size of large human vaccine pocks, speedily begin to rise, and are used for the vaccination of children from the fourth to the sixth day. After this day, the vaccine they contain is found to be less active, but still sufficiently so for the vaccination of another calf, for which the pocks left unopened are, therefore, used on the seventh or eighth day. The method of obtaining the vaccine matter just described is different from that followed by M. Negri in Naples. His practice is, or was, to slice off the entire pustule with a lancet, and then, taking it in his fingers, to scrape the attached surface, so as to obtain a magma of lymph and dermal tissue. This method is still followed at Milan and other Italian stations; and the lymph so obtained is mixed with glycerine, and largely used *in loco*, as well as for export demands.

With the exception of the necessary interval during the Franco-Prussian War, I believe M. Lanoix has never once failed in his attempts to continue the cow-pox by inoculation. In some animals, the eruption might be finer, in others poorer; but the genuine disease was always produced; and, whatever the eruption on the animal, it made little or no difference as to the effects of the lymph on the human subject, nor as to its effects when transmitted to another animal. At first, only one calf was vaccinated per week; but, since the latter part of 1865, two calves have been kept weekly under inoculation, the one being vaccinated on Friday, and the other on Saturday.

In a recent communication to the French Academy of Medicine, Dr. Pietra Santa, the accomplished editor of the *Journal d'Hygiène*, who has devoted much attention to the subject of animal vaccination, stated the reasons which had induced the Société Française d'Hygiène to patronise the establishment at Paris of a vaccination station, provided with both sorts of lymph.* An attempt was made to vaccinate the children brought for vaccination with humanised lymph on one arm, and animal lymph on the other. This, however, had to be discontinued, in consequence of the very general preference of the mothers for animal vaccination. The ascertained results attained by the Society are not of sufficiently exact a nature to warrant any definite conclusions being drawn from them; but they bear out the general principle enunciated by Dr. Pietra Santa, that animal vaccination is a good, useful, and efficacious method of vaccination, as evinced by the results of the numberless vaccinations that have been performed with it.

BELGIUM.—For the sake of completeness, I append a brief history of the growth of animal vaccination in Belgium, leaving the statement of the measure of success attained in that country with calf-lymph to the able hands of Dr. Warlomont at the forthcoming Conference. When Dr. Warlomont introduced animal vaccination into Brussels in February 1865, his first supply of virus was from the Neapolitan source; but, after that, he obtained the Beaugency virus, and in July 1868 introduced the Esneaux (Liége) lymph. In September 1866, at the request of the Minister of the Interior, the Royal Academy of Belgium referred the whole question to a commission, who reported favourably of it. In July 1868, an Institut Vaccinal de l'État was established by royal decree at Brussels, under the direction of Dr. Warlomont, for maintaining the practice of animal vaccination, and distributing gratuitously the lymph obtained from the animals. The Institute is attached to the Zoological Garden at Brussels, and consists of two waiting-rooms; one for applicants who pay for their vaccination; and the other, larger, for those who are vaccinated gratuitously. There are also two other rooms appropriately fitted up, one of which communicates directly with a stable capable of containing six calves. The calves are brought regularly, as wanted, by a butcher, who lets them to the institute for a term of seven days, after which they are returned to him. As a rule, two calves per week suffice. I purposely do not go into details with regard to the method of vaccinating the calves, or of taking the lymph, as this will come better from Dr. Warlomont; nor do I go at length into the statistics of success, to which Dr. Warlomont will draw attention at the Conference. But I cannot refrain from quoting what to my mind is one of the strongest evidences in favour of animal vaccination that we have—namely, that among more than ten thousand children vaccinated at Brussels from 1865 to 1870, and living afterwards amidst the terrible epidemic of small-pox of 1870 and 1871, there was not known a single instance of an attack of small-pox; and the same absolute immunity from that disease was enjoyed by the far greater number of revaccinated persons living under similar conditions.* Animal lymph is also used for the vaccinations performed under the direction of the Brussels Board of Health. This lymph comes from Milan in quills, and is highly spoken of by Dr. Janssens, the Chief of the Health Department in Brussels.

HOLLAND.—In Holland, the practice of animal vaccination is very largely developed. At the present time, there are four permanent institutes, at Rotterdam (founded in 1868), at Amsterdam (1869), The Hague (1871), Utrecht (1872); besides three temporary stations, working only in summer, at Kampen, Haarlem, and Groningen. In the Netherlands, it is customary to make ten punctures; and if, after five days, there be fewer than four pocks, a few punctures more are made with the lymph of the same child [auto-revaccination]. Dutch experience is the same as that of other countries, that animal lymph in tubes cannot be kept so long as human lymph; in fact, that it loses its efficacy from day to day.† It is found that lymph mixed with glycerine has the same effect. In Rotterdam, tubes are employed; but, in Amsterdam and Utrecht, glass plates, closed with sealing-wax or soldered, have been used. The use of these latter is, however, very properly, being more and more abandoned. At the Hague, pure lymph has been found more efficacious after a time than that mixed with glycerine. Calf-lymph is largely exported from Holland to its colonies, etc.; and some sent to the East Indies in 1876 came back without any impairment of its efficiency. The transport of the lymph is undertaken by the Government, and it is carriage free throughout the kingdom. The calculation has been made that an establishment where two calves are inoculated per week would cost four thousand *francs* a year, excluding the vaccinator's fees. All the Dutch stations are open once a week for gratis vaccination, and once a month for vaccinations which are paid for. The number of the latter is very inconsiderable, almost the whole population availing themselves of free vaccination. The deficit at all the stations is covered more or less by the State or the Province.

Dr. Carsten stated at Geneva in 1877, that, after nine years of experience in animal vaccination, they had arrived in Holland at such perfection that they could compete in every respect with the best institutes vaccinating with human lymph. As in other places, the results were at first disappointing; but this has now been completely changed. From a valuable table compiled by Dr. Carsten with regard to the statistics of the four permanent stations, I take the following facts.

* See *Journal d'Hygiène* for October 9th and 16th, 1879.

* *Compte Rendu du Congrès Périodique International des Sciences Médicales*, 4me Session, à Bruxelles. 1875.

† See Dr. Carsten at the Geneva International Congress, 1877.

The percentage of failures has gradually dwindled from 18.5 in 1869 to 8, 4.6, 1.6, 1.2, 1.3, 1.0, 0.8, and 0.09, in subsequent years, ending in 1877. During the ten years 1868-77, a total of 22,810 humanised vaccinations and revaccinations, and 39,864 animal vaccinations and revaccinations, were performed. Of the 29,465 animal vaccinations, 28,862 were successful, and 603 were unsuccessful. In 1877, the number of animal vaccinations was, at Rotterdam, 2,383; at Amsterdam, 2,905; and at the Hague, 2,454. The table shows very clearly the very large decline in vaccinations performed with humanised lymph year by year since the introduction of animal vaccination; the relative numbers being 2,024 (humanised) and 744 (animal) in 1869, against 1,467 (humanised) and 8,032 (animal) in 1877.

Rotterdam.—Early in 1868, the Society for the Promotion of Cow-pox Inoculation at Rotterdam, "Genootschap tot bevordering van de Koepokinenting te Rotterdam", by which the public vaccination of that city has been conducted since 1799, determined to open a station for the practice of animal vaccination, and such station has been in operation since April 1868. The Rotterdam Association was founded in 1799 for the propagation of cow-pox, and the first name inscribed on its list of honorary members is that of Edward Jenner. It has, since its foundation, performed the public vaccinations of Rotterdam at a station in the centre of the town, and distributed lymph through Holland and its colonies. It was with the view of obviating, by all possible means, any scruples or prejudices of parents, that the Society determined to add to its existing station a second for the performance of animal vaccination. The latter was at first practised with one calf weekly; but, since 1871, two calves each week have been regularly employed. These calves are inoculated—the one on the Tuesday, the other on the Wednesday. The calf of Tuesday is inoculated direct from the calf of the preceding Wednesday, and serves for the vaccination of children on the Sunday following. The calf of the Wednesday is inoculated with lymph collected on the Sunday from the calf of the Tuesday of the week before, and serves for the vaccination of children the Monday following. The vaccinations of the human subject with animal lymph are performed on Sundays and Mondays only, and in each case with lymph at the sixth day of eruption. The propagation of the cow-pox on the heifer is done always with lymph collected at the sixth or seventh day. To obtain the lymph, Dr. Minderap, the superintendent at the station, adopts the method of compressing the pock on the calf with pincers. The results of this method are stated to be satisfactory. From the report of the Rotterdam Society for 1877, it appears that ten punctures are made for the insertion of the virus into the human arm. The average number of resulting pocks was, in 1877, 8½; 1,367 cases had ten pocks or more, 256 nine pocks, 290 eight pocks, 150 seven pocks, 109 six pocks, and 206 having five pocks or less.

Amsterdam.—Animal vaccination was started here on March 31st, 1869, by a Vaccination Society similar to that at Rotterdam. The station is now a very successful one. At first, only one calf was inoculated weekly, on the Wednesday, and directly from the calf of the week preceding—the human vaccinations being done from it on the Monday and Tuesday of the week following, or the sixth and seventh days of eruption. One calf was, however, found inconvenient, as the lymph could not be kept up permanently, and renewals had frequently to be made from Rotterdam. After a time, the Society had better success, particularly since two calves have been employed. At present, the medical staff give their services gratuitously. The growth of the use of calf lymph is well shown by the fact that, whereas in 1869 there were 1,192 more vaccinations performed with humanised than with calf lymph, in 1877 the number of animal vaccinations surpassed the humanised vaccinations by 1,906.

The Hague.—On June 11th, 1871, a station was opened here, and its results now quite correspond with those of Amsterdam and Rotterdam. From the first, the transmission of lymph from calf to calf has been successful; this being mainly due to the employment of two vaccinised calves. Since 1872, the method of Dr. Bezeth has been followed, and it is reported to yield favourable results, especially in the transmission of lymph from calf to arm. During the summer of 1877, three calves were employed.

Utrecht.—The animal vaccination station at this city was opened on July 29th, 1873. Here calves are used which are a little older, and which are not fed with milk. The lymph from these calves is not so brilliant in its results as that taken from younger calves, being much drier and crustier.

Haarlem has a vaccination station in the summer, and it is hoped that it will soon be made a permanent one.

ITALY.—In this kingdom, there appear to be no fewer than fourteen animal vaccination stations, all instituted and kept up by the enterprise of private medical men. These are at Bologna, Milan, Bergamo, Ancona, Genoa, Venice (2), Arezzo, Verona, Vicenza, Rome, Modena, Ravenna, and Rimini.

Milan is a great lymph-providing station, sending supplies not only to Italy, but to Austria and Belgium, notably to Brussels, to the Board of Health there. During the first half of 1877, the latest period for which I have statistics, there were performed at Milan 2,733 vaccinations; the proportion of success being 99.70 per 100 vaccinations, and 3,169 revaccinations, with a percentage of success of 47.95 per 100.* From 1869 up to 1877, the number of vaccinations performed by the Milanese Committee had exceeded 100,000, and 668 heifers had been inoculated. The ideas of the Milanese Committee on the subject of animal vaccination are so sensible that I cannot but quote them. They observe that they never contemplated the weakening or annihilation of vaccination from arm to arm, which is and which will be a great benefit for the prophylaxis of small-pox. They only wish for a sanitary reform, which possesses great advantages in guarding infants from accidental but formidable affections, which it would be inhuman to insert into their veins at the same time as the protecting vaccine virus.†

At *Genoa*, the success of revaccinations is 51 per cent. Genoa possesses a strong garrison; and since 1870, a third of the recruits have, by Government orders, been revaccinated with animal lymph. The average of positive results has now been raised to 60.95 per 100.

At *Rome*, animal vaccination would appear to be practised, although the municipal vaccination service deals only with humanised lymph. It may be of interest to state that, during the twenty-five years 1848 to 1872, 22,701 vaccinations were performed by the municipality. Of these, 2,488 did not return on the eighth day; and of the remainder, 20,137 were successful, whilst 14 gave abnormal results and 62 were unsuccessful. Thus the proportion of successful results was, in the able hands of Dr. Toscani, as high as 99.62 per 100.

Ancona.—Here both humanised and animal lymph appear to be used. During the four years 1874-7, 5,795 vaccinations (5,506 successful) and 1,384 revaccinations (497 successful) were performed with humanised lymph, and 14,044 vaccinations (13,021 successful) and 5,316 revaccinations (2,261 successful) with animal lymph. From this station large quantities of calf lymph are sent to the Austrian provinces on the coast of the Adriatic, the provinces on the banks of the Danube, Greece, and Turkey.

Naples.—I have already referred to this city as the cradle of animal vaccination. So far as can be judged from an interesting paper,‡ recently read by Dr. Serafino before the Sixth Italian Medical Congress, held at Naples last September, animal vaccination would appear to be exclusively practised there. Dr. Serafino shows at some length the reasons why children escape vaccination, and argues strongly for an uniform register of vaccination throughout the kingdom. He also examines the question as to the relative value of the two systems of vaccination (*i. e.*, with humanised and animal lymph); and observes that, if this had to be settled with the statistics collected at Naples, during the epidemic of small-pox of 1871 and subsequently, the preference must be given to animal lymph. Indeed, statistics demonstrate that the Neapolitan population, vaccinated with animal lymph, offer a comparatively greater resistance to small-pox than those vaccinated with humanised lymph. From a table appended to his report, I extract the following figures: Births in Naples in 1878, 15,190; of which 12,828 have been vaccinated, all with animal lymph. Of these, 12,377 were certified as successful (or 96.4 per cent.); in 224, the result had not been certified; one was spurious; and 226 were unsuccessful.

The animal lymph from Italy would appear, from a report presented to the Constantinople International Board of Health, to have proved of immense service during the Russo-Turkish war. Flying before the invaders, half-a-million refugees from Roumelia arrived at Constantinople, where they remained several weeks before being transported for the most part into Asia Minor. Small-pox made frightful ravages amongst these hordes of people, crowded in the mosques in the villages of the Bosphorus. Measures were, however, early taken to secure their vaccination; and this was promply effected through the supplies of animal lymph sent from Ancona and Naples.

From a valuable memoir,§ by MM. Felice dell' Acqua and Gioachino Grancini, I take the following general statistics as to animal vaccinations in Italy. Excluding the cases that did not return for inspection on the eighth day, the figures as to animal vaccinations performed in the kingdom since 1869, 1870, and 1871, would appear to stand as follows.

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* *Gaz. Med. Ital. Lomb.*, No. 90, 1877.

† *Journal d'Hygiène*, October 9th, 1879, p. 491.

‡ *Il Censimento Vaccinico della Città di Napoli.* Del Dott. Cav. Raffaele Serafino. Napoli: 1879.

§ *Il Vaccino animale e il Vaccino umanizzato, Studi sperimentali statistici.* Del dottori F. dell' Acqua e G. Grancini. Milano: 1879.

	Number.	Successful.	Abnormal.	Unsuccessful.
Vaccinations	115,920	106,183	455	9,282
Revaccinations	89,490	38,691	9,720	41,076

giving proportions of success of 91.59 and 43.37 per cent. respectively.

In the year 1877, the positive results reached at Milan, 99.7 per cent.; at Venice in 1876, 99.2; at Bergamo in 1876, 98.9; and at Ancona, 94 per cent.

GERMANY.—In this empire, animal vaccination is in great favour, and a large number of institutes at which it is practised are now open.

The first animal vaccination service in Germany was organised at *Berlin* by Dr. Pissin, in June 1865, as a private speculation, and is still carried on as such. It happens most opportunely for my present purpose, that Dr. Pissin has recently published a long and most interesting report* on the fourteen years' working of his institute, and I am thus enabled to submit the very latest information with regard to animal vaccination at Berlin. Dr. Pissin's station is not nearly so large as those in Holland, at three of which considerably more than two thousand cases come for vaccination each year; but it is not less successful. Following the experience of others in the conduct of animal vaccination, Dr. Pissin at first had little success; but he attributes this to his use of M. Negri's system of obtaining the lymph. Subsequently, he went to Paris (in 1866); and, after inspecting M. Lanoix's system, adopted the latter in preference to the Neapolitan method. As to his success in vaccinating human subjects, the same initial difficulty has to be recorded. In 1869, only 46 per cent. of the vaccinations were certified as successful: a proportion, as Dr. Pissin admits, far too small. But doubtless a large number of those which were not recorded as successful did not come back for inspection, since we find Dr. Pissin referring to the favourable change in this respect after the passing of an improved vaccination law in 1875. Since that year, the percentage of success has been very much greater. In 1875, it was as nearly as possible 100 per cent.; in 1876, it was 98; in 1877, 95; and in 1878, 97. For the same years, the ascertained success in revaccinations, which before 1875 were beyond control as regards inspection, was: 1875, 68; 1876, 72; 1877, 75; and 1878, 80 per cent. From these figures, Dr. Pissin argues that animal vaccination is quite as successful as humanised vaccination; the more so, as all these vaccinations were not made direct from the calf, but with lymph in tubes, which had been kept for days and even weeks. As to the success of animal lymph in revaccination, which has been particularly observed elsewhere, Dr. Pissin insists strongly; for he says, adverting to the figures given above: "Ein günstigeres Resultät hat, soviel ich weiss, auch die humanisirte Vaccine nicht aufzuweisen." (P. 20.) Some important tables are given in the report as to the actual number of vaccinations, etc., accomplished; and from these I gather that, during the twelve years 1867-1878, 555 calves were inoculated, 6,773 vaccinations were performed with their lymph at Berlin, and 26,284 tubes were sent away. Dr. Pissin uses, as a rule, one tube for each vaccination; and each calf is made to yield about sixty tubes of lymph. But it is possible, as he says, to get a much larger number of tubes if desired. Most calves yield one hundred tubes, and a good many yield more. Dr. Pissin agrees that animal lymph in tubes is not so effective as humanised lymph; but he states that vaccination direct from the calf on the fourth or fifth day after inoculation is, without exception, effective. To use tube-lymph with success, he advises that simple punctures should not be trusted to, but that cross incisions with broad openings should be made on the arm. In the second quarter of 1866, the percentage of ascertained success in tubes sent away was 65 per cent.; but since then it has risen considerably, especially since the new law of 1875, and amongst those vaccinators who use the method of cross incisions. In fact, it is now quite the exception to use punctures or simple incisions. As to the degree of success in the particular case, Dr. Pissin gives the following figures. Of 404 successful vaccinations in a particular period, 56 had one pock, 56 two, 60 three, 69 four, 77 five, and 83 six; the number of incisions being six in each instance. Thus considerably more than half the cases had more than three pocks. On the whole, Dr. Pissin thinks very highly of animal vaccination; and he considers that it can be carried on in Germany as well as in other countries. As to the cost, he reckons that, paying fifteen shillings to the butcher for the loan of the calf, the cost of lymph for each vaccination would be under twopence; but, as the success is only unimportantly diminished by the admixture of glycerine—which, in fact, can be added so as to increase the amount of the lymph five times—each vaccination would only cost a halfpenny. The rent of the stables and of the vaccination-station, the food and attendance of the animals, and the remuneration of the vaccinator, must of course be added; but these are of a constant value and can easily be estimated. The great point for such an institute would be that a weekly cattle-market should be held in the town where it is established, so that the necessary animals could be procured. Dr. Pissin thinks that the Government ought to provide stations for animal lymph; and he recommends that, if the State take the question up, a central bureau should be established, with a head depôt at the largest town in each province. I may add that Dr. Bollinger states in his report that animal lymph is on sale at several dispensaries at Berlin, and at one in Reichenstein (Silesia).

Hamburg.—Animal vaccination was started at the Hamburg public vaccination station in 1875, by the indefatigable Dr. Voigt. The lymph obtained from Amsterdam at that time is still being used. The lymph is taken from the calves one hundred and twenty hours after inoculation; and the animals are, therefore, kept six days. The cost of feeding each calf for this period on milk (which is constantly tested) is estimated at ten shillings; and a further sum of twelve shillings has to be paid to the butcher from whom it is hired. Dr. Voigt is of opinion that calf-lymph should not be kept longer than a fortnight, and none that has been taken from the calf beyond one hundred and forty-four hours. At the Hamburg station, the proportion of unsuccess with calf-lymph during 1878 was only 0.29 per cent.*

Stuttgart.—Here animal vaccination was commenced in 1875. The inoculation of the calves is reported to be done on the scrotum, on the ground of the very thin and highly vascular nature of the skin on that part, enabling it to be easily grasped by pincers.

Weimar.—The Medical Association of Thuringia commenced animal vaccination here in 1870. The calves are mostly inoculated between the vulva and the udder. The proportion of successful vaccination amounted, up to August 1878, to 89 per cent.; while of revaccinations 80 per cent. were successful.

At *Leipsic*, animal vaccination has been practised since the end of 1877 by Dr. Livius Fürst; at *Munich*, a station was opened under government patronage by Dr. Kranz on the 21st of March of this year; and at *Würzburg* (Bavaria) there is also a station under the charge of Dr. Hofmann.†

AUSTRIA.—At *Vienna* there are two private institutes, both established in 1877, one under the direction of Dr. von Heinrich, the other under Dr. Moritz Hay. At *Pesth* there are several private institutes for animal vaccination.

At *Prague*, an institute for animal vaccination was started by Dr. Lilienfeld, on the 1st February last, and at a meeting of the Medical Association of Prague, on the 7th instant, Dr. Lilienfeld gave the result of his vaccinations.‡ Since the commencement of the institute, 273 primary vaccinations have been performed. Of these, 213 were successful and 60 unsuccessful. Doubtless, this large proportion of failure will soon be considerably diminished with further experience, as it seems to be invariably the case that a large number of failures attends the early days of the use of animal lymph.

RUSSIA.—Observations were, early in the history of animal vaccination, instituted in Russia by M. Prosoroff under the direction of the Government. Animal vaccination has now been practised in *St. Petersburg* for the last ten years under Government auspices by Dr. Bulmerinck.§ Dr. Risdon Bennett, the President of the Royal College of Physicians, who was in St. Petersburg in 1870, states that he saw, in the Foundling Hospital in that city, some rooms fitted up for vaccinating upon and from the heifer, and witnessed and admired there the decent and strict attention to order and cleanliness with which the whole process was conducted.

At *Moscow* there is also an important station at the Foundling Hospital. In 1869, 1870, and 1871, 662 calves were inoculated there, with sixty-four failures.

SWITZERLAND.—There is an animal vaccination station at *Bâle* under the control of Dr. Siegmund. From the report of the Sanitary Department for 1877, it would appear that, of 328 vaccinations with animal lymph, twelve were without result; while of 281 vaccinations from arm to arm, eight were without result. At *Schaffhausen* there is an animal vaccine station, and one is also projected at *Zürich*.

SPAIN.—Animal vaccination has not yet been officially recognised in this country, but it would appear to be practised at *Barcelona*.

* *Bericht über die vierzehnjährige Wirksamkeit des Impf.-Institutes für animale Vaccination.* Von Dr. Med. Pissin. Berlin; 1879.

* *Des Erfolg mit der Animalen Vaccine in der Hamburger Impfanstalt.* Von Dr. Leonard Voigt, Oberimpfarzt in Hamburg. Leipzig: 1879.

† See Hofmann, "Ueber Impfung mit animale Lymphe". (*Aertzl. Intelligenzblatt*, p. 22, 1879).

‡ *Prager Medicinische Wochenschrift*, No. 47, November 19th, 1879.

§ A series of interesting papers on Revaccination and Animal Vaccination in St. Petersburg, with a long historical *resumé* of previous experiences of other countries in the matter, is now being contributed by Dr. Bulmerinck to the columns of the Munich *Aertzliches Intelligenz-Blatt*.

INDIA.—Animal vaccination has made very considerable progress in our Indian empire. It has been practised for several years at *Bombay* and *Poona*, and it has at various times been in force at *Bhooj* (1873-4), *Barsi* (1874-5, given up in 1875-6), *Sakkhar* (for three consecutive years in the cold season), *Kolapore* (1875-6), and *Surat* (1877-8). Indeed, a Bill is now before the Council of the Governor-General of India, for making the use of animal lymph in ordinary cases compulsory.* Section 13 of the Vaccination Bill of 1879, introduced by the Honourable Sayyad Ahmad Khán, proposes to enact that "the vaccination of a child shall ordinarily be performed with animal lymph, but in case animal lymph is not procurable, with human lymph; provided the parent or guardian of such child has consented to have the child so vaccinated [with human lymph], or the Governor-General in Council has so directed by notification in the *Gazette of India*, and has fixed the period for which such mode of vaccination shall be adopted." Nothing was said by the mover of the Bill as to the reasons which prompted him to insist on the universal use of animal lymph; but there seems to be a great prejudice in the minds of the native gentry against allowing lymph to be taken from their children's arms, and the very next clause of the Bill (No. 14) forbids the taking of such lymph without the consent of the parent or guardian. I may here remark that the clause as to animal lymph, which the Honourable Sayyad Ahmad Khán would wish to apply to the whole of India, is already in force in the city of Bombay, under the provisions of Section 12 of the Bombay Vaccination Act of 1877. I am indebted to the kindness of Sir Louis Mallet for the preceding facts, as also for the information which follows as to animal vaccination at Bombay. Sir Louis has indeed most courteously forwarded to me copies of the last reports on the vaccination operations in the whole of the presidencies and districts comprised in the Empire; but in none of these but Bombay does animal lymph seem to be used.

At *Bombay*, animal vaccination was first started about 1869 by Dr. Ananta Chandroba, Superintendent of the Bombay Presidency Circle; the lymph being brought from Europe by Dr. Blanc, who vouched for its origin and purity. At first, there were a good many failures; but soon better results were achieved. In 1872, a special report was presented to the Government by the Superintendent-General of Vaccination, much interest having been excited in the subject, and all the superintendents having previously come either to Bombay or Poona to learn animal vaccination. Meagre as Dr. Pinkerton felt to be the information which he had been able to collect together, he nevertheless reported that it was "entirely in favour of the protective power, purity, and trueness of the animal virus in use". About this time, seventeen practitioners of Bombay, who were asked by Dr. Ananta if they had ever seen or heard of an undoubtedly authentic case of small-pox after vaccination with animal lymph, had to state that none of them could give the name of a single person. Dr. Ananta has devoted immense attention to the subject of animal vaccination, and every succeeding report records better results at his station. In 1872-3, 241 calves were inoculated: 233 with the animal lymph in general use, and 8 with lymph from Dr. Warlomont. Of inoculations with the former, 228, or 97.8 per cent., were successful; with the latter, 2, or 25 per cent. With 24 exceptions, all the revaccinations were performed with animal lymph. Of 14,940 primary vaccinations, 12,663 were performed with animal lymph, with success in 10,577 cases. Thus the proportion of success was 90.37 per cent. In 1873-4, 205 heifers were inoculated, and 8,285 primary vaccinations were performed, with 7,130 successes, or 89.8 per cent. During 1875-6, there was an epidemic of small-pox in Bombay; and at the beginning of the year it was found difficult to get calves to supply sufficient lymph to vaccinate the crowds of people who flocked to the station. The effect of this was to lower the percentage of successful vaccinations during part of the year. The number of cows inoculated was 372, and only 11 were unsuccessful. Of 19,259 primary operations, 16,853 were performed with calf-lymph, with a percentage of success of 92.65. All the revaccinations but 11 were done with calf-lymph, with what success is not stated. During 1876-7, animal vaccination was continued, to the entire satisfaction of Dr. Ananta. Of 293 heifers inoculated, 287 were successful. In 1877-8, 320 heifers were available, out of a total of 324. The cost during that year on account of heifers was about £260, as against £268 in the previous year. Since the passing of the Compulsory Vaccination Act for Bombay above referred to, all operations in that city are performed with animal lymph, and human lymph is no longer used.

Poonah.—About 1870-1, animal vaccination was practised here by Dr. Blanc. In the report for 1875-6, it is described as being of much benefit in the way of supplying good and pure lymph. During 1877-8, there was failure in 3 out of the 60 heifers operated on, the total cost under this heading being about £20.

* See *Gazette of India*, October 18th, 1879, page 935.

Surat.—Animal vaccination was introduced here during the rains of 1876, and continued up to February 13th, 1878, when it had to be discontinued, as no heifers could be procured for inoculation. During this period, 35 heifers were used, at a cost of £6. In 32 of these, the inoculation was successful. The number of primary vaccinations was 273, and of these 257 were successful, or 90.4 per cent. Revaccinations with calf-lymph were performed on the prisoners in the Surat Jail and eight European inhabitants of that city, and primary vaccinations were performed on the native residents.

UNITED STATES.—The credit of introducing animal vaccination into America belongs to Dr. Henry A. Martin of Boston, who sent specially to Paris for lymph from Professor Depaul, and who was supplied with autograph directions from that distinguished *savant*. Dr. Martin had secured the use of a farm on which was a herd of nearly fifty young bovine animals, and when, on September 23rd, 1870, he received the virus from the 258th, 259th, and 260th animals of Dr. Depaul's series, beginning with the heifer of Beaugency, he vaccinated three calves, on the next day two, and so on till he had nearly exhausted his supply of virus in the vaccination of nine or ten animals. In no instance did these vaccinations fail, and Dr. Martin was thus put in possession of ample supplies of animal lymph. The first physician who followed Dr. Martin's example was Dr. F. P. Foster, of the New York Dispensary, who has since established a flourishing service of heifer-vaccination. Dr. Martin and Dr. Foster had the field to themselves for about eighteen months, after which an epidemic of small-pox produced a demand for lymph so extraordinary, that a great many physicians, to say nothing of dealers, instrument makers, etc., set to work to propagate animal virus. The natural consequence of this haste was, that very large quantities of so-called animal virus were sold, the failure of which did great harm to the cause of animal vaccination. All this time, Dr. Martin was continuing his inoculations with the same care as before, with the result that, after 570 transmissions, he found no tendency to deterioration of the lymph, no shortening of the duration of the induced disease, no indication of change, however slight, from the standard of excellence observed in his first vaccinations six years before.* As over eleven years of constant bovine transmission had elapsed at the date of Dr. Martin's report since the case of cow-pox at Beaugency, without the slightest indication of deterioration, it would seem justifiable to assume that original cow-pox, transmitted through a series of selected young bovine animals, will not manifest the tendency to change which has been noted in virus of long humanisation.

It is a matter for regret that no statistics are forthcoming as to animal vaccination in America, with the exception of some "quasi"-reports, published as business circulars and advertisements, and which are evidently unreliable. It appears, however, from Dr. Martin's report, that, during the six years and nine months that he had practised animal vaccination, he had vaccinated 580 animals, besides some forty more in his early experiments. From these animals, 80,0000 charged points, and an uncounted but very large number of crusts and tubes of fluid lymph — many thousands — have been issued. Virus has been supplied to vaccinate many cities and other municipalities, to a very large number, with quantities of from 500 to 84,000 points. Dr. Martin supplied the Departments of War and the Interior with large quantities of virus, principally in the form of crusts, for the vaccination of troops, frontiersmen, and Indians; and on one occasion supplied 3,000 points for the arrest of an epidemic of small-pox, which threatened the annihilation of an Icelandic colony in British America. In his own practice, Dr. Martin at first experienced, and acknowledged, failure in 20 per cent. of his cases; but he now reports that, with further experience, failure in primary vaccination of infants is a very uncommon event. From the very first, the remarkable success of animal virus in revaccination was generally, indeed universally, admitted—the results of revaccinations, in all cases when the vaccinee has been vaccinated only once before, but at various ages, being exactly 73 per cent. at the first attempt.

Before leaving this part of my subject, it behoves me to refer to the results of an investigation made last year by the eminent professor, Dr. Bollinger, of the University of Munich.† Dr. Bollinger was commissioned by the Government of Bavaria to inquire into the present state of animal vaccination, and for this purpose he seems to have personally visited a large number of the continental stations. As the result of his investigation, he reports himself as very greatly in favour of animal vaccination, and he thinks it gives the very best results. He recom-

* *Report on Animal Vaccination to the American Medical Association.* 1877 Vol. xxviii of *Transactions*, pages 187-248.

† *Ueber animale Vaccination.* Bericht über eine im Auftrag des Kgl. Bayer. Staatsministeriums des Innern zum Besuche des Animalen der animalen Impf. Anstalten, etc. Von Dr. Med. O. Bollinger. Leipzig: F. C. W. Vogel. 1879.

mends that large towns should have institutions for the supply of animal lymph, and he regards its universal application as possible. I do not now quote further from Dr. Bollinger's valuable report, but the results of his independent inquiries into the subject seem to me to argue very strongly for the recognition of animal vaccination by the Government of this country, or at all events for a fresh and exhaustive investigations into the improvements effected in it since Dr. Seaton made his adverse report of 1869.

II.—Examination into Alleged Objections to Animal Vaccination.

The objections which have been urged against animal vaccination may be thus briefly summarised. It has been alleged that, 1. The vaccinia induced by the use of animal virus is objectionably and even dangerously violent; 2. That animal vaccination is liable to be the means of communicating other animal diseases than that which it is intended to communicate; 3. That the vaccination of an animal, even with the warm fluid or "living lymph", is an uncertain process, and with tube or dried lymph very likely indeed to fail; 4. That calf-lymph does not "take" easily on human arms, and that, when it does succeed, the measure of success obtained is not so great as that arising from the use of humanised lymph; 5. That it does not "keep" well; 6. That it is expensive and difficult to obtain. It will be necessary to deal with these several objections a little in detail.

1. *Violence.*—The fears that the vaccinia induced by the use of calf-lymph may be objectionably violent are founded not upon actual observations, but on the traditions of the vaccine disease as observed by the early writers. Dr. Seaton has admitted, and it is within my personal observation, that the vesicles produced by calf-lymph are good and well characterised pocks, running the same course, and manifesting the same varieties, as are produced by humanised lymph at the best public vaccination stations in England. Neither in the size of the vesicle, nor in the intensity of the local symptoms, nor in the length of period which the eruption takes to run its course, is there any notable difference. "The cicatrices which I have seen from the action of animal lymph", said Dr. Seaton in 1869, "are quite characteristic; in depth and foveation, they were as good as the cicatrices ordinarily produced by humanised lymph in the practice of good vaccinators. In short, the result of my personal observations with regard to the animal vaccine lymph in use in London [by Dr. Blanc], in Paris, and at Rotterdam, was that, tested by the character and course of the pocks it produced, it was perfectly good lymph." This frank admission effectually disposes of the first objection. It may be well, however, to add, to avoid possible misconception, that it is well known that peculiarities of local action do attend the use of some stocks of primary cow-lymph, not only in the direct transference of such lymph to the human subject, but also in its passage through many successive subjects. These local peculiarities are far, however, from pertaining to all original stocks of cow-lymph. In the Bridgwater level and the vale of Gloucester, where the natural disease is not unfrequently seen, Dr. Sanderson states that he has met with many practitioners who have inoculated from such cases, but "that all who have employed such lymph agree in stating that, after the first or second transmission, the results obtained do not differ from those of ordinary vaccination, either in respect to the progress or character of the vesicle."* To argue, therefore, that, because these local effects are manifested in some instances, they must follow in all cases of animal vaccination, is manifestly absurd. The experience of America is in accord with this, for Dr. Martin states that, "in the positive experience of many thousand American physicians, animal vaccination is no more intense than typically perfect vaccination should be, that it is infinitely less liable to be followed by troublesome and irregular sequelæ than that of long humanisation, and that it has, most unexpectedly, but most undoubtedly, proved to be exempt from that miserable complication, the pest of vaccinators, erysipelas."

2. *Inoculation of other Diseases.*—That animal vaccination may be the means of communicating other animal diseases than that which it is intended to communicate is an exploded bugbear founded on nothing—a revival, in fact, of the "prognostics and denunciations" referred to by Mr. Simon in such eloquent and amusing terms in his masterly "Papers relating to the History and Practice of Vaccination", and so severely satirised by Gilray in one of his best cartoons. It is not a little curious to note that these new objections to the use of animal lymph are the same as the old objections urged in the beginning of the century against humanised lymph. As Mr. Simon has ably said: "Divested of its more ludicrous imagination, all resolves itself into the one not uncommon error of confounding what is fact with what is opinion or inference. A child coughed; to the ears of the vaccinophobist, the sound was as of a cow; to his intellect, it was the effect of vaccination. A child was ugly or squinting, or it had those skin-eruptions which have always been frequent incidents of infancy; at once, to the alarmist, there was *vultus taurinus* or *tinea bovilla*. In a word, the oldest and most familiar diseases were thus renamed, in conformity with a belief that vaccination was causing them; while, in reality, there was no more reason in this belief than if vaccination had been charged with occasioning infants to cut their teeth, or with leading boys to prefer cricket to Cornelius Nepos."

We may apply with equal truth these forcible words to the objectors against the purity of animal lymph. A sufficient answer is that there is not an authentic record, hardly even an unauthentic one, of a single case giving colour to the objection in the history of vaccination. The only disease transmitted by animal lymph in Dr. Martin's experience has been a very trivial form of herpes circinnatus, and that can never occur when animals are selected and kept with any approach to ordinary care or propriety. This disease can be remedied at once by the simplest means, and now that it is known, need not recur. Dr. Martin states that at least five thousand calves have been vaccinated during the past seven years in America. "Many of these have been most carelessly selected and improperly kept, but the opponents of animal vaccination will look in vain for any facts to support their dire threatenings and forebodings of disaster.

It is proper that I should mention in this connection that, of course, reasonable care must be taken by the operator in not using lymph that has obviously become putrid. An instance of evil effects arising from the neglect of this most obvious of precautions was recently communicated by Dr. Pietra Santa to the French Academy of Medicine,* and it is right that I should refer to it here. On the 22nd April last, three vaccine pustules were sent to San Quirico d'Orceia by the Vaccination Committee at Rome, these pustules being taken from a heifer inoculated on the 17th April. Supplies were sent to numerous other places on the same day from the same calf, but no abnormal symptoms followed in the vaccinations performed with the lymph anywhere else than at San Quirico. Here the pustules were used for vaccinations on the 26th and 28th April. On the first day, eight persons were vaccinated from one of the pustules, which, as the officiating vaccinators admitted, exhaled a mouldy smell. Notwithstanding this, they used the lymph for twenty-nine persons.

Upon the first eight persons vaccinated, red blotches appeared two hours after vaccination, followed shortly by fever, erysipelas, phlegmons, and suppurating abscesses; the other children, with seven exceptions, also presenting unusual morbid phenomena.

Two inquiries were at once set on foot by the legal authorities and by the General Board of Health of the Kingdom, and it was incontestably proved—1. That the heifer was not ill; 1. That the virus sent had been of good quality; 3. That, in the three pustules sent to San Quirico, and especially the first, a process of change and of putrefaction had been commenced, so extensive as to have attracted the attention of the operators when only a few of the vaccinations had been performed. The carelessness of the vaccinators in continuing to use the lymph under these circumstances is, to our English ideas, quite inconceivable; and so gross an instance of *mala praxis* ought not to invalidate for a moment our conclusions as to the value of animal vaccination.

3. *Failures in Animals.*—There can be no doubt that, at the date of Dr. Seaton's inquiry in 1869, frequent failures took place in the transmission from animal to animal of lymph derived, in the first instance, from natural cow-pox. But since then very great improvements have taken place in the method of inoculation, so that now to fail in infecting an animal is a very rare occurrence. It must be remembered that in 1869 animal vaccination was in its infancy, and the rules to be observed in selecting animals and in the method of vaccinating them had not then been adequately appreciated. It needs, in fact, to be constantly borne in mind that some amount of care and patience are necessary for the successful cultivation of cow-pox on the calf, as, indeed, for the success of almost any other similar proceeding, however simple. Dr. Warlomont, whose success is now complete, and who can go on with perfect assurance, though inoculating one calf a week only, met at first nothing but disappointment: and his unsuccesses were so numerous that, had he been guided by the results of his first year's work, he could not but have abandoned the practice. It is not necessary that I should now state how entirely this has been reversed by experience, as Dr. Warlomont will doubtless himself state the results of his inoculations to the Conference. The experience of the Society at Rotterdam supports the same conclusion. They commenced their proceedings in April 1868 by taking a calf to Brussels for inoculation direct from one of Dr. Warlomont's calves. The inoculation was successful; but, after two or three

* Sixth Report of the Medical Officer of the Privy Council, p. 10.

* *Journal d'Hygiène* for October 16th, 1879, page 301.

months, the eruption on the successive calves became less pronounced, and the Society had, therefore, to send to Brussels for fresh lymph. This acted at first as their original supply had done; but, like it, after a number of weeks' use, apparently deteriorated. The same happened with the supply next obtained; and altogether, between April 1868 and June 1869, they had to renew their supply from Brussels at least six times. At length, Dr. Van Vollenhoven went to Paris to consult M. Lanoix (who, I believe, has never on any occasion failed in his attempts to continue the disease by inoculation); and, doubtless, profiting by M. Lanoix's experience as to the method of inoculation, brought back with him some mixed Beaugency and St. Mandé lymph of uninterrupted transmission. A degeneration (which I cannot think was only temporary) followed, however, the use of this lymph after a certain time, and recourse was again had to M. Lanoix. Since that time, no difficulty at all has been experienced in keeping up the supply unimpaired, and the lymph now in use at Rotterdam has undergone considerably more than five hundred transmissions without any necessity for renewing the stock. The same experience has been found at other places where animal vaccination was at first found difficult to maintain; and we are justified in asserting that the difficulty of transmitting successive vaccination from calf to calf does not, or need not, exist.

I cannot refrain, however, from quoting Dr. Martin's remarks in dealing with this objection. He says: "When I commenced the vaccination of animals, I was troubled by apprehensions of failure; and, in a few instances, did fail entirely. In many, I failed to induce the development of the number of vesicles I desired. I soon found that it was necessary to select animals whose skin was in a good state, well-nourished and vascular, and to exhaust a good deal more time and labour to insure perfect success than I had at first thought necessary. Properly done, vaccination of animals with bovine virus may be said to be invariably successful, so very rare are the exceptions. I think it may be said that a 'stock' of animal vaccine in the hands of a competent propagator is fully as secure from loss as one of humanised lymph. An important fact is, that while to obtain animal virus in the most efficient state for human vaccination, it should be collected at a certain and brief period of the vesicle, that taken at a much later stage of the eruption is found to be quite efficient for the vaccination of other animals. If, as is the best and much the most expensive method, animals are vaccinated directly from each other with warm fluid virus, the operation can be done with more facility than if dried lymph is employed, but still very considerable time and diligence are requisite. When points or quills are used, the labour is much greater, and more time is required to ensure perfect solution of the virus. It must be acknowledged that the vaccination of animals and collection of virus require for their best accomplishment a very decided degree of technical skill, patience, and experience. With these, nothing can be more certain in its results, and failure of animal vaccination conducted by physicians of proper experience need not be feared. The great reasons why Dr. Seaton was led to consider the vaccination of animals a precarious process were that in 1869, in Europe, tube-lymph was almost exclusively employed, and when points were used they were of a very small size, and on this account were difficult to handle, and held too small an amount of virus. Neither was it then understood how necessary it was to take a good deal of time and care to dissolve the dried lymph and to effect its perfect insertion. To ensure the best results in vaccinating animals, virus should be used very freely, and with patient diligence; with these, success is very certain."

4. *Failures in the Human Subject.*—One of the great objections of Dr. Seaton to the use of calf-lymph was its frequent failure to infect the human subject, even when the operation was performed by experienced operators and with lancet direct from calf to arm; and that, when it did take, the measure of success attained was not anything like that attained by vaccination performed from arm to arm at English vaccination stations. Indeed, this may be said to be his principal objection, since whatever may be the advantages or disadvantages of animal vaccination in other respects, the crucial question is how it protects the vaccinee from subsequent small-pox.

The difficulty, however, of successfully inoculating the human subject with animal lymph has now been surmounted by experience; and, as will appear from the statistics in another part of this report, animal lymph may now fairly vie with humanised lymph as regards the proportion of successes obtained. But Dr. Seaton has also objected (page 168 of his Report) that a vesicle does not rise to every puncture with the same regularity in animal vaccination as in arm-to-arm vaccination. I regret that no statistics are available to enable me to follow the Medical Officer of the Local Government Board through this argument; but I cannot but think that he has somewhat over-estimated the success systematically obtained throughout England and Wales with humanised lymph. The experience of the National Vaccine Establishment was reported by Dr. Seaton to be that, in vaccinations performed from arm-to-arm, vesicles rose in every point of insertion in considerably more than 90 per cent. of the children reported on; that the proportion of cases in which a single vesicle only resulted from the four, five, or more insertions made in each case was about 1 per cent.; and that failures did not occur on an average above once in 170 times. These results are, however, admittedly obtained only by the most careful and experienced vaccinators we have, and I have reason to believe that throughout England and Wales results of so exceptionally good a kind are not systematically achieved with humanised lymph. I should be the last to decry our present system of vaccination, and I am equally anxious not to say anything that should cast even the slightest slur upon it; but when objections to animal vaccination are based upon the alleged immense superiority of humanised lymph, it may be well to attempt to examine whether this is in fact the case. So far as I am aware no statistics have ever been published showing what is the particular quality of the scars resulting from vaccinations performed throughout the kingdom at large, and I have therefore had to fall back upon my own resources in attempting, so far as figures will serve me, to find out how much of the vaccination in this country comes up to the official standard of excellence, the grade, in fact, which the Local Government Board designate, for the purposes of grants to public vaccinators, as "first-class", *i.e.*, scars thoroughly well-marked in their foveation, and having collectively at least half a square inch of total area. The results of my calculations are to show that not more than a half of the vaccinations in England and Wales are up to this standard. Indeed, it is notorious, from the experience of all our small-pox hospitals, that a large proportion of vaccinations, although "successful" in the legal sense of the word, are so ineffectually performed as to afford by no means that perfect security against small-pox which thorough vaccination effects. Into this question, however, it is beyond my present purpose to go; but, as the statement made above may very possibly be combated, I deem it important to give the figures by which I have arrived at my conclusion, though I am afraid that, without a lengthy statement, I shall hardly render myself perfectly intelligible.

If it is objected that my figures relate to different periods, I answer that comparatively little variation takes place from year to year; and I have endeavoured to make every allowance for differences of this kind. On reference to the last published report of the Local Government Board, I find that, of the 887,694 children whose births were registered in 1876, 763,277 have been successfully vaccinated. Unfortunately, the returns as to the number of public vaccinations performed from year to year are, for some inscrutable reason, made up to the 30th September; but, having regard to the limit of time during which a child is allowed to remain unvaccinated before legal proceedings can be taken, we shall not be out of the way in regarding, as fairly comparable with the 1876 births, the return of public vaccinations performed in the year ended the 30th September, 1877. From this I find that, during that period, 498,577 public vaccinations were successfully performed on children under one year of age. Now, these public vaccinations would all come under Government review during the years 1877 and 1878—the inspection of public vaccination in each Union being made biennially; and, for such of them as presented sufficiently satisfactory characters to come up to the official standard of excellence, awards would be given. Adding together the sums gained in this way during 1877 and 1878 (£11,994 and £15,231), and dividing this amount by two, as to exclude the vaccinations of the children born in 1877, I find that, at the rate of a shilling a case, a total of 272,250 vaccinations were deemed to be so good as to come up to Government standard and deserve recognition. In other words, only 272,250 vaccinations, out of 498,577 public vaccinations performed, were of the first quality. There are several sources of error, however, in this calculation, the arithmetical value of which cannot be measured, and which act in different directions. Thus, some public vaccinators are reported as disqualified from getting awards by their irregularity of attendance, carelessness, etc., though their quality of vaccination may be good; and a few get a less sum for each vaccination than a shilling per case, under circumstances that cannot be detailed. On the other hand, those who do get awards undoubtedly get paid for some cases which are not up to the proper standard, since the Government Inspector can only inspect a certain proportion of cases in order to see the general style of the public vaccinator's work. To examine critically the vaccination scars of half-a-million babies every year would be rather too much to expect of Government inspectors; and they must, therefore, take a great deal for granted.

On the whole, it may, I think, fairly be said that a little over a half of the number of public vaccinations in England and Wales are of the first quality. But we have to deal, not only with public, but with private vaccinations; and the latter notoriously yield less thorough results than the former. Taking, therefore, the whole of the vaccinations in

this country in a given year, I think the figures fairly show that, to say that a half only of these vaccinations yield really protective results, is to err on the side of over-estimating the proportion. At the same time, I am conscious that, in this calculation, a great deal has to be taken for granted; and, with a view of clearing up some of the difficulties which still obscure the actual facts, it would seem desirable to procure a Parliamentary return, giving the figures as to each public vaccinator's work, and the reasons which disqualified him for award. This I shall endeavour next session to obtain through the intervention of some friendly member of the House of Commons.

5. *Preservation of Calf-Lymph.*—The objection of Dr. Seaton that calf-lymph does not keep well was founded on the fact that, in the early history of animal vaccination, fluid lymph in tubes was alone employed. There can be no doubt that calf-lymph preserved in tubes does not give satisfactory results, unless it be defibrinated by the method now adopted by Dr. Warlomont at Brussels. Dr. Warlomont used formerly to mix the lymph with glycerine, and separate out the more solid matters in the lymph before putting it into the tubes; but he now, by an extremely simple manœuvre, defibrinates the lymph before putting it into the capillary tubes, and nothing is added to it. The tubes, which are of the ordinary capillary sort, are then hermetically closed. Vaccine thus prepared keeps pretty well, but a much shorter time than human lymph collected in tubes. Dr. Warlomont says that one can hardly count upon it for a week; and it is so much the surer in its results in proportion to the shortness of the interval between its collection and its use. For these reasons, Dr. Warlomont much prefers the method of keeping lymph dry on ivory points, which is too well known to be described. The points, first dipped in a solution of gum Arabic, are coated with one, two, or sometimes three applications of lymph. They will then preserve all their power for weeks, months, and even years.

At the Bureau d'Hygiène of Brussels, however, the lymph employed is that purchased at Milan. It is furnished by the contents of the vesicle which has been cut off the calf, and is sent by post in sealed quills mixed with equal quantities of glycerine. This lymph is largely patronised by the best practitioners of Brussels and other parts of Belgium; it is exclusively used at the vaccination-stations of the Hôtel de Ville; and my own observation, as well as all available reports, and the personal assurances which I receive from Professor Hyernaux and other eminent practitioners, testify to its excellence and to its unvarying efficiency.

Dr. Martin expresses a strong opinion that calf-lymph in tubes is unreliable within twenty-four hours after its collection. He does not give the reasons for his views, and I am unable, therefore, to comment on them, except to say that he is probably unacquainted with Dr. Warlomont's mode of defibrinating the lymph. Dr. Martin says that dried lymph on ivory or bone points or on quills keeps as well as any other, and so does the virus in the form of the dried vesicle or scab; this latter, however, seems rather a nasty plan, and I think it is not a desirable way of sending out lymph, except under necessity. Animal virus sent to California every day or two during the summer of 1877, to the amount of many thousand points, proved, so far as is known, efficient, although much of it was kept nearly three months in that warm climate without particular precaution. Points of animal virus sent also by Dr. Martin to New Mexico, Constantinople, the West Indies, Peru, and to England, are reported by him as having been invariably used with success after arrival.

On the whole, there is a certain weight of evidence in favour of not trusting to tube-lymph, as that on points or quills is equally efficacious, and is not liable to undergo the alterations which tube-lymph may undergo. M. Lanoix, who says that animal vaccine lymph will generally keep in tubes, is in the habit of recommending that it should always be used, if possible, within twenty-four hours of its being taken, and that puncture should not be trusted to for its insertion, but abrasion only employed.

6. *Expense.*—It may and has been objected that calf-lymph is expensive and difficult to obtain, and that its use will necessitate the devotion of certain persons to its propagation, from whom alone it can be obtained; whilst every primary vaccination affords an abundant supply without any expense or trouble beyond the slight labour of collecting it. But is this altogether an objection? Our object is not to supersede vaccination from arm-to-arm altogether by animal vaccination, but *to provide for the frequent renewal from a central office of the stocks by which series of arm-to-arm vaccinations are commenced, and to facilitate the employment of calf-lymph as an alternative method in cases where parents desire it, or when, from any cause, arm-to-arm vaccination cannot be carried on.* It is of very great importance to the profession to be able to draw material for vaccination from a known responsible source, to which all complaints of those vaccinated can be referred; and the alleged expense of propagating calf-lymph, which is, however, much exaggerated, is a reason for its being under the direct supervision of Government, whose interest it would, of course, be to maintain such an institution in the highest state of efficiency.

I have entered into these details in endeavouring to furnish the answers to the objections raised against animal vaccination, because it has appeared to me that these would be the greatest difficulties that would be officially cast in our path in our endeavours to bring about a remodelling of the present National Vaccine Establishment. But I have thus left myself but little space for the discussion of the advantages of animal vaccination. This, however, is a matter of the less consequence as, at the forthcoming Conference, these advantages will be fully brought out and discussed by others. I therefore confine myself to a mere categorical statement of them. 1. Animal vaccine fresh from the calf induces a more perfect development of *vaccinia* than follows the use of virus of long humanisation. Whatever opinions may be held as to the degree and permanence of the protection afforded by long-humanised vaccination, it can hardly be doubted that the nearer the intentionally produced disease approaches in its phenomena to that casually produced on the hands of milkers, and which has alone been *proved* to be permanently protective, the safer are we in assuming for it a like permanent protective influence. The opinion is now very widely, though not universally, held, that the results of vaccination are not such as they used to be during the earlier years of the practice of vaccination; in fact, that, by repeated human transmissions, the virus has become weakened, and that the pocks produced by the introduction of lymph which has passed through a large number of human beings are not so fine or so perfect as those which result from the use of lymph derived recently from the cow. It was on this ground that the Commission of the Belgian Academy of Medicine reported in favour of animal vaccination. Jenner himself was not without apprehension that the repeated transmission of vaccine lymph from one human being to another, without recurring to the cow, might impair its virtue; and Mr. Simon has stated some strong reasons for suspecting that the "occasional impermanence of protection may depend upon impairment in the specific power of vaccine contagion—an impairment arising in the transmission of that contagion through many generations of men".* There seems indeed to be much ground for this opinion; and it is strongly upheld by Dr. Martin, who has devoted immense attention and pains to the subject. 2. The advantage, and in fact necessity, of being able at will to renew a "stock" of vaccine by return to the animal, which can only be had by the maintenance of one or more perfectly reliable services of animal vaccination in continuous operation. 3. It affords means to the physician of tracing the whole pedigree of the lymph he is using; so that doubts as to its quality can be silenced by detailing its entire history. 4. True bovine lymph is certainly free from all possibility of syphilitic contamination, such as has been alleged against humanised lymph. 5. Animal vaccination can furnish large amounts of lymph regularly and at very short notice. The supply need only be limited by the demand, as all that is needed is a multiplication of the animals vaccinated. One calf alone will furnish sufficient lymph for the vaccination of about four hundred persons. During the late epidemic of small-pox in the metropolis, the medical papers constantly contained complaints of the difficulty of procuring vaccine lymph from head-quarters, and the paucity of the supply when obtained. The vaccination of an extra calf or two on occasion would have saved all this angry remonstrance, as well as much overdraining of vesicles that were used for supplying lymph. 6. An additional advantage in this connection would be derived from the less frequent occasions on which the vaccinator would be obliged to tap vesicles to obtain lymph, thus allowing the vaccine disease to be developed without interruption in a larger proportion of cases than at present. 7. True bovine vaccination is, according to the experience of Dr. Martin, entirely free from erysipelas. 8. Animal vaccine induces unmistakable vaccinal effect in a very large proportion (larger, it is alleged, than humanised lymph) of revaccinations. This is a very general experience, though I am not now able to adduce any comparative statistics to prove it. Dr. Martin affirms that the number of those revaccinated with animal virus and virus of very early human removes is, in his experience, a fraction over 80 per cent.—a much larger percentage, it must be confessed, than obtains with lymph of long humanisation. He believes that the difference in the percentage of success of the two lymphs in revaccinations approximately represents the number of those insensible to the enfeebled influence of long-humanised virus, but sensible to the intense contagion of small-pox just in the same degree as sensible to the intense power of bovine virus and that of the very early human removes from it. 9. Calf-lymph produces, in primary

* *Papers relating to the History and Practice of Vaccination*, p. xxxvi.

cases, a clear and characteristic scar, equal, if not superior, to the best of those produced by our most careful vaccinators with selected human lymph.

III.—Suggestions for Future Action.

The reform which I wish to suggest, and up to which the preceding statement leads, is not a very large one, but it is one which, in my opinion, will afford a satisfactory solution of the principal difficulties which are at present felt. Briefly, it is this: that, instead of our National Vaccine Establishment distributing, as it does at present, lymph of long humanisation, it should distribute only lymph direct from the calf, in the same way as the Belgian Institut Vaccinal de l'État. By this means, medical men who are obliged to appeal to Whitehall for material to start their vaccinations would not feel that they were inoculating their patients with matter of which they must take the previous history for granted, and the Government, on the other hand, would be able to assert much more satisfactorily than it can at present that the lymph which it sends out is absolutely pure. Any subsequent mischance must necessarily be due to the carelessness of the operator himself, and the present shifting of blame from one person to the other could not take place.

Under such a system, the Government would establish a central vaccinal establishment at which a small series of calves would be maintained, and from week to week fresh vaccinations of such heifers would be made. This would take the place of the two vaccination-stations now maintained by Government, the services of the present able vaccinators being retained for this new work. The lymph collected would be distributed upon demand, as at present, without payment to public vaccinators, for maintaining arm-to-arm vaccinations at their stations, and to all registered private practitioners on payment of a small fee, such a sixpence per tube or per ten points, a rate of payment now recognised by the Local Government Board under certain circumstances. In this, the public vaccinators would always have at their command, for the service of new stations, a supply of lymph of undoubted purity of source and protective energy; while the private practitioner could for an insignificant sum secure for his patients the like privilege. This would place the vaccination system of the country on a larger and firmer basis than it now occupies, and would relieve both public and private vaccinators from many of their present difficulties, while it would cut away all solid ground for that mischievous agitation against vaccination which gives so much trouble to legislators and magistrates, and does much to interfere with the means necessary for the extinction of small-pox.

No doubt an objection will be made here, based on a supposed great increase of expense that will ensue from the cultivation of calf-lymph by the Government. Let us see how this argument is borne out by facts. Our present National Vaccine Establishment costs the country £1,700 a year. Of this, £400 is spent on the salary of an assistant-inspector; £300 on the remuneration of two vaccinators; and £1,000 for the purchase of lymph, ivory points, tubes, and other apparatus. Now, I have the authority of the opinion of Dr. Warlomont for the assertion, and, after personal examination of all the facts, I have no doubt, that for £1,000 a year a perfectly satisfactory animal vaccine service could be established in London. It seems to me a very reasonable estimate; and, even allowing a considerable margin in excess of it, it will be seen that the reorganisation of our present system so as to supply from headquarters animal vaccine only would be productive of little, if any, additional expense to the country. All this could not be done in a day. No doubt much care, patience and experience must be brought into play before perfectly successful results can be attained; but that they are attainable is, I hope, manifest from what has preceded.

I must apologise for the length of this report; but, in entering into these details, I have been actuated by the desire to lay before the Committee, and through it to the Conference and those who may take part in it, as complete an examination of the subject as is possible within reasonable limits of space. I trust that the particulars which I have collected and the conference which, with the authority of the Committee, I have succeeded in organising for Thursday next, the 4th instant, at 4 P.M., at the rooms of the Medical Society of London, may be of some assistance in facilitating the discussion, and in securing a long-wanted reform in our English vaccination system.

Offices of the British Medical Association,
161A, Strand, W.C., November 26th, 1879.

The Cavan Board of Guardians, in a false spirit of economy, have refused to ratify a recommendation of the Belturbet Dispensary Committee to appoint a qualified midwife for that district, and in consequence have been informed by the Irish Local Government Board that a sealed order will be forwarded compelling them to do so.

SURGICAL MEMORANDA.

THE CLOVE HITCH.

The description of this knot, illustrated by a woodcut in the last number of the Journal, represents the knot called a clove hitch and half a hitch. This knot has been in use among sailors from time immemorial. Its mode of application by Mr. Tait is novel; still, however it may be formed or applied, there it is—our old familiar friend—the ordinary clove hitch with half a hitch.

George Roper, M.D., Finsbury Circus.

CLINICAL MEMORANDA.

A CASE RESEMBLING LOCOMOTOR ATAXY.

The following case, which bore some resemblance to locomotor ataxy, will, I have no doubt, be interesting. Mrs. M., aged 57, applied for treatment for debility and dyspepsia. In the course of examination for these complaints, she stated that she suffered from pain in the right frontal and temporal regions, and in the left arm, the last being in the course of the musculo-spiral nerve and its branches. She also stated that she had flying pains and spasmodic jerkings in the leg, and that the latter disturbed her a good deal during sleep; that she had weakness of the eyelids, especially the left, which, when awaking from sleep, she was unable to open for some minutes; this I found to be the case on awakening her one day at my visit. There was no ptosis visible, however, after some minutes elapsed from the time of her getting out of sleep. Another symptom to which she directed my attention was a difficulty she experienced when walking, as any irregularity of the ground made her stumble, and, to avoid which, she was obliged to watch every step. She could stand without support, but not if she closed her eyes. When she placed her feet together, she had great difficulty in maintaining her equilibrium; but, if she shut her eyes, she immediately fell down. Her walk was slow, and free from the unsteadiness characteristic of ataxy. I failed to detect any inco-ordination of movement, anæsthesia, etc.

The patient was treated with nourishing diet, stimulants in small quantities, five-grain doses of quinine three times a day, and a blister to the nape of the neck. Under this treatment, she quite recovered her health.

Remarks.—The principal symptoms were the following:

1. The neuralgia and shooting-pains require notice, on account of their being frequently among the premonitory symptoms of ataxy.

2. The liability to stumble also deserves to be mentioned, as it is a well known fact that an ataxic individual has great difficulty in walking on uneven ground.

3. The inability to stand when the feet were placed together, and more especially, if the eyes were closed. This condition is always present in ataxy, and is an important diagnostic test for it. Trousseau says: "If you ask an ataxic individual to stand up, and keep his feet closely applied together along their inner edges, he manages to do it with some difficulty when his eyes are open, even at an early stage of the disease; but, when he shuts his eyes, he immediately oscillates, and falls down." And he regards it of greater importance in diagnosis than the irregularity of the patient's walk. Niemeyer considers it a valuable test. Dr. Bristowe says that it "becomes evident in the most marked manner in the very earliest stage of the disease, when the patient is made to stand blindfold with his feet together. At once he begins to totter and to sway, and, unless he opens his eyes or is supported by others, soon falls to the ground." Dr. Wilks, too, while maintaining its diagnostic value, states that it is seen in cases where this disease is absent.

It is an interesting fact that the inability to stand in the manner above stated is not due to debility, but (so far as my small experience goes) is only observed in those suffering from cerebral derangement. In support of these statements, I will succinctly relate two cases. A man, aged 50, had suffered from debility for a considerable time when I began attending him. He had to keep his bed to avoid getting an attack of syncope; while in this condition, he stood up easily with his feet together and his eyes shut. The other was a woman aged 60, suffering from melancholia, with marked suicidal tendency, who fell down whenever she put her feet together.

W. L. Lane, M.B., Surgeon A.M.D.

CLINICAL LECTURES
ON
STRICTURE OF THE URETHRA.

Delivered in University College Hospital.

BY BERKELEY HILL, M.B., F.R.C.S.Eng.,
Professor of Clinical Surgery in University College.

LECTURE III.—GRADUAL DILATATION *(Continued)*.

BEING furnished with suitable instruments, the next point is to prepare your patient. Let *Festina lente* be your motto. Get rid of any concurrent source of irritation. Violent exercise of all kinds must be avoided, especially long walks on the days the bougie is passed. The digestion should be good; diet plain, and almost free, if not wholly so, of fermented liquors. The urine should not be charged with albumen, and quite free from blood. Should acute or subacute urethritis be present, that must be subdued before a bougie is passed. There should be no chronic retention and consequent cystitis. If the kidneys and bladder be much irritated by the stricture, they must be relieved by rest in bed, saline purges, and the regular complete evacuation of the bladder through a catheter small enough to pass the stricture readily, which may be either tied in continuously, or passed twice or thrice daily until the urine is acid as it escapes from the bladder and nearly free from pus. The patient being ready for treatment, and the position and calibre of the several strictures being ascertained, the urethra is gradually accustomed to the passage of bougies by never passing one large enough to be firmly held in the stricture. Not more than two or three sizes should be passed at each visit, and each sitting should be begun with a size smaller than the largest passed at the preceding sitting. Nor should the sittings take place oftener than twice, or at most thrice, a week. Usually, two clear days should intervene between each sitting. Instruments are best passed in the morning, most easily before the patient rises from bed; therefore it should be an invariable rule to require the patient to make his visit to you the first business of the day, and to drive to your house if he live at a distance. Both sounds and flexible bougies should be well warmed in cold weather, and oiled with weakly carbolised olive-oil. The best position for the patient is horizontal: the head comfortably raised, and the knees slightly supported by a small bolster or pillow under the hams. The muscles and fasciæ are thus more completely relaxed, and there is no danger of the patient suddenly falling if he faint: an accident that may happen without warning, and quite irrespective of the slightest pain or dread of the operation. Patients who are accustomed to the operation may be allowed to stand if they prefer it, as there is no danger of their falling through faintness. If they stand, they should lean against a wall or other support, with their feet a foot or so asunder, that they may be balanced without effort of the pelvic muscles. Thus the perinæum is more lax. Having placed your patient in suitable position, it is best to pass the instrument always on the same plan; for by doing so the operation, by force of habit, becomes easier to the surgeon, and less likely to annoy the patient by little hitches or interruptions, which, if they give no pain, may disconcert him and diminish his confidence in the surgeon's skill.

In passing rigid instruments, the horizontal position is always best for cases of stricture, though for certain conditions of the bladder it is advantageous that the patient be upright. There are three parts of the urethra in which an instrument is liable to hitch; and, as these hitches are more likely to happen with a rigid than with a flexible instrument, I will briefly advert to them. The first is the fossa navicularis in the roof of the urethra, just within the meatus. This is readily avoided by directing the point of the sound against the floor of the urethra; but, after that point is passed, the beak, as a rule, should be kept gently pressing along the roof. The second locality for catch or stop is at the end of the bulbous part, just where the urethra passes through the anterior perineal fascia. Here the floor of the bulb can be easily depressed by the sound, so that the beak strikes the wall of the urethra below the point where it perforates the perineal fascia: an obstruction that is easily avoided by keeping the sound along the roof of the urethra. The last obstruction is one also produced by pressing the instrument downwards towards the anus during the last part of its passage. The beak catches in the prostatic portion, and thrusts before it the neck of the bladder until, that part being stretched, the sound slips on with a sudden painful jump; and the operator explains the mishap by talking of "stricture at the neck of the bladder". Bearing in mind these pitfalls in your route, avoid them by directing the beak away from them. Pass your sound thus:—the patient lying flat, shoulders low, especially if he be corpulent, so that his belly may be out of the way of the stem of the sound,—go to his left side and hold the sound, beak downwards, lightly by the handle between the thumb and first two fingers. So held, the impediments experienced by the point of the sound are most quickly detected; and, which is equally important, you cannot inadvertently give the instrument a thrusting impetus; for it must always be borne in mind that no more force is to be used with a rigid than can be applied to a flexible instrument. Then take hold of the penis behind the glans between the middle and ring fingers of the left hand, leaving the thumb and forefinger to push back the foreskin and expose the meatus. Next, holding the instrument across the patient's left groin, draw the penis on to it with the left hand; the right hand, after it has for a moment directed the point against the floor of the urethra, remaining motionless. When four inches of the sound have disappeared, carry the right towards the umbilicus without raising the sound from the patient's body; then push onwards the beak while the stem is raised from a nearly horizontal to a vertical position, and from that lowered again towards the patient's feet. By a proper combination of these two movements—the onward passage and the elevation and depression of the stem—the beak is kept sliding against the roof of the urethra, slips through the perineal fascia, and enters the bladder without catching in any of the irregularities already mentioned. In carrying the instrument through the curve, no force must be used; nor must the rapidity of this sweeping movement exceed the rate of progress of the beak, or that point will be tilted upwards too much to allow it to pass under the symphysis pubis, and a violent strain will be put on the urethra by the long leverage of the stem, besides causing an abrupt arrest of the progress of the sound. *Post mortem*, I have produced transverse laceration of the urethra at the point where it is fixed to the perineal fascia, simply by forcible and hasty sweep of the sound. Of course, on the dead body, much force was employed purposely to demonstrate the injury that may ensue from clumsy management of this long lever, if it be used as a lever at all. But, in the living, the pain felt by the patient is caused by improper stretching of this part of the urethra, though the strain may not be great enough to cause laceration. In withdrawing the sound, the stem is carried upwards and backwards in a direction contrary to that it followed when the beak traversed the bulbous and membrano-prostatic portions. To the foregoing must be added some additional directions for manipulations to pass the abnormal obstructions of stricture. These obstructions, as well as those caused by unskilful operators who may have preceded you, lie most commonly in the floor; hence they are generally avoided by keeping the beak steadily sliding along the roof. But not infrequently the direction of the urethra at the entry of a stricture is diverted to one or other side or downwards; and thus the point, when it fails to enter along the roof, must be methodically applied to the other parts—first to one side, then the other, and lastly to the floor. If a false passage exist, that generally starts from the left side of the mouth of the stricture when the patient has been operated on by others, and from the floor or right side when he has himself been passing sounds. By patience, lightness of hand, and constantly recollecting the natural direction of the urethra and the direction of the point, as indicated by the position of the handle, most, if not all, urethral strictures can be passed by rigid instruments, though often less speedily and less pleasantly than by flexible ones. Hence generally it is wise to reserve rigid instruments for cases where flexible ones are unavailable.

To pass flexible bougies, commence as for passing the rigid sound, and, pushing back the prepuce with the left thumb and forefinger, draw gently forwards the whole penis, so as to stretch the spongy portion of the urethra. Introducing the bougie with the right hand, holding it lightly with the tips or the fingers, direct its point at first along the floor to avoid the navicular fossa in the roof. After that, simply push the instrument steadily onwards. If it catch at any point, usually the floor of the bulb, use no force to push it on—that only deepens the depression in which the bougie has caught; but withdraw it a little, and roll it between the finger and thumb to disengage the point and make it, in its somewhat twisted condition, press against another side of the urethra. Should it still hitch at the same place, after two or three patient attempts, withdraw the bougie and employ one with a different point—an English one in lieu of a French one, or *vice versâ;* so that

the impediment which arrests one may not be struck in the same way by a point of another shape. Give the English bougie a little curve by softening it well in hot water, and then plunging it into cold water while holding the instrument in curve. Such a point can be directed along the roof of the urethra, and thus escape the pitfalls of the floor. An instrument arrested by being too large to pass a stricture gives a sense of resistance different from that caused by stoppage of the point. In the first, the bougie is held by the stricture, and a little force is needed to withdraw it; in the second, the bougie, not being grasped, is drawn away without clinging, or oftentimes is ejected by the urethra, so that it slips slowly out again if left to itself. Having passed your bougie through the stricture—into the bladder, if you please, though that is not necessary—withdraw it at once. Do not leave it for a few minutes in the urethra: a practice still followed by some surgeons. If left in the urethra for a few minutes, muscular spasm is excited, often a severe spasm; but no further or vital dilatation is procured until the bougie has been for several hours in the urethra.

This process of interruptedly passing instruments is continued till the stricture is widened sufficiently for an instrument as large as the meatus to pass readily; or, if that outlet be below No. 24 or No. 25, it should be incised when it no longer allows the larger bougies to pass. You will recollect that, as I have already pointed out, much of even a tight subpubic stricture may be due to reflex spasm of the muscles there—spasm excited by the irritation of a narrow meatus, or of a narrowing of the urethra half an inch from that point. Such contractions near the meatus are vainly treated by interrupted passage of bougies, and are speedily managed by internal division. The deeper stricture will then frequently be found to have vanished. In appropriate cases, the earlier dilatation is employed the more likely is it to be successful; but, to be of permanent benefit, it must be long continued. Hence, when you have restored the strictured part of the urethra to, or pretty nearly to, the diameter which you have ascertained by preliminary measurement the non-strictured parts possess, train your patient to pass a full-sized bougie himself, and impress upon him the necessity of doing this at regular intervals for a long time—possibly for life. Never let a patient quit your hands till he is master of an instrument that fairly distends his stricture, and impress upon him the unavoidable necessity for using it. Exert all your persuasive power, still you will often fail; and I know none more remiss in carrying out this instruction than our own medical brethren, when sufferers in their own persons. Every now and again, you will find that your quondam patient returns to claim your aid in re-establishing that distensibility of the canal which he has neglected to keep up himself.

In describing the methods of passing sounds and bougies, it was assumed that the strictures to be treated were not of extreme contraction, but that the passage was still wide enough for the urine to escape in a stream. Let us now consider the resources which exist for passing instruments through very narrow strictures. Syme used to declare that an instrument could always be got to the bladder whenever urine was passed *per urethram;* and, if not invariably true, the cases where this is impossible are most rare. To conquer in difficult cases, is generally a question of patience and tenuity. Spin out your patience and fine down your bougie sufficiently, and you will generally succeed. An important preparation in difficult cases is complete rest in bed, with warm baths and saline aperients. A week or a fortnight so occupied is often saving of time in the end. Thus constitutional pyrexia and spasmodic irritation and inflammatory congestion are often removed; so that nothing remains to be dealt with but the permanent fibrous thickening, which, as museum preparations abundantly show, is rarely *per se* too narrow to allow a small instrument to pass. At length, when general and local conditions are favourable for your first sitting, allow plenty of time, and be provided with a variety of small instruments. Of filiform bougies, as they are called, there are fine tapering French bougies of silk, catgut, whalebone, or silkworm-gut—Nos. 1 and 2 of the French scale. English flexible catheters, called No. ½ by the makers, are about two or three *millimètres* in circumference, and are as small as an open tube can be made. Thin whalebone bougies of extreme fineness, but twenty-six inches long, are also useful, as along one of them, when it has cleared the stricture, a fine silver catheter open at both ends can be threaded. Mr. Coxeter has made such a catheter for me one *millimètre* in circumference. A small exhausting syringe, with a nozzle to fit these fine catheters, is useful, in order to test its actual presence in the bladder by drawing out a few drops of urine, when the narrowness of the interior, blocked by mucus or a clot, delays the flow of urine. A small syringe to inject two or three drachms of olive-oil into the urethra, so as to distend the passage while the narrow bougie is passing along it, is also at times serviceable. Mr. Lund of Manchester passes along the urethra to the tight stricture the straight part of a silver catheter (No. 12 or 13 French), through which he then slides down the filiform bougie to the tight stricture, and thus saves himself from the annoyance of having his filiform bougie hitching obstinately in a pocket before the stricture is reached. This plan is better than that, adopted by some, of passing down filiform bougie after bougie until, all the false passages and pockets being filled, the last bougie, having no other road open, is obliged to go through the stricture. This method, pretty in theory, I have often found to fail in practice, as the bundle of bougies are apt to cling together and all stick fast. When a very narrow stricture at two or three inches exists, with a second beyond, it is sometimes requisite to widen the anterior stricture with the fine urethrotome of Mr. Lund, sufficiently to allow the straight silver tube to be passed and open a way for the direct attack of the bougie on the hinder contraction.

When patient trial at more than one sitting has shown the hopelessness of getting flexible instruments past the obstruction—a conjuncture of great rarity—the finest silver catheter may be employed; No. ½ and No. ⅓ English being the smallest which retain sufficient rigidity to allow the point to be directed by the hand. The solid probe-pointed catheter No. ½ through the curve, and No. 2 English (7 French) in the straight part, of Sir Henry Thompson, are very valuable instruments in skilful hands. But, as these instruments are almost as sharp as needles, a very small force suffices to drive their points through the wall of the urethra and create a false passage; and they should never be employed with the notion that they must be driven along the urethra, for such an attempt invariably lands them between the bladder and the rectum, or even in the rectum itself.

When, by any plan, an instrument has reached the bladder through these fine structures, it should at once be tied in, as, even if it be itself too fine to act as a tube, the urethra quickly widens around it, and in twenty-four hours will allow a larger one to replace it, or permit other methods of treatment.

2. *Gradual dilatation by continuous tying in* consists of keeping a flexible catheter, or filiform bougie if the narrowness of the stricture require it, day and night in the stricture; replacing it every forty-eight hours by a larger one, until the natural calibre of the urethra is restored to the strictured part. This replacement is needed, lest, being too loose in the urethra, the catheter slip out of the stricture, and so interrupt the process of dilatation. But the enlarging process is kept up quite as rapidly by a small catheter as by one which nearly fits the stricture. This process usually occupies from eight to twelve days. The method is easy, rapid, and safe. It requires three precautions. 1. The catheter should always be a loose fit; that is, two or three numbers smaller than the stricture. 2. The patient should be confined to his room, not necessarily in bed, but to avoid walking about, though I have known adventurous spirits who have gone to and fro the City daily during the process. 3. The catheter should not quite reach the bladder, but its beak should lie in the membranous part of the urethra, leaving the neck of the bladder free. When it is desired to draw off urine, the catheter is pushed into the bladder while the urine flows, to be again withdrawn and the end stopped by a little spigot when the bladder has been emptied. Flexible instruments are tied in place in several ways. The plan I adopt is to pass the catheter through the stricture till it has reached the bladder and urine escapes. I then withdraw the catheter till urine ceases to run, and tie tightly round the catheter, an inch or so beyond the meatus, a piece of silk or cotton twist, of which the ends are again knotted together about one inch from the catheter, then carried round the penis behind the glans and tied. The foreskin is then drawn forwards, the catheter shortened by cutting off the superfluous three or four inches, and the spigot put in.

The process that widens the stricture seems to be similar to that which goes on in parts where a seton or other foreign body has been placed. The tissue becomes swollen and succulent; its cells enlarge, and the intercellular spaces are crowded with leucocytes. The further disintegration and development of the tissue into pus quickly widen the space in which the foreign body lies. But the fibrous contraction is only temporarily altered in nature, not removed; and the width gained is seldom long maintained. When dilatation is slowly produced by tying in, there is probably a copious deposit of fibrous tissue; and, in such cases, rapid shrinkage is inevitable. When the expansion is quickly obtained, there is but a scanty production of stricture-tissue, and much of the contraction is muscular.

Continuous tying in has these disadvantages. 1. As just mentioned, it is in many cases followed by speedy recontraction of the stricture, so that the passage of a bougie of fair size, indispensable to maintain patency, becomes either impossible or so difficult that the patient abandons the use of his instrument, and soon reverts to the condition he was in before treatment. Referring to Mr. Davies's table, I find that three patients were treated by continuous tying in alone. In two cases, re-

lapse had begun when they were last heard of; of the third no intelligence had been obtained since he left hospital. In one of the three men, the stricture had been widened previously to his admission to hospital, once by interrupted passage of bougies, and twice by tying in catheters. After widening by interrupted passage, the stricture in four months had shrunk again to No. ½ English. The immediate occasion of the patient's admission to University College Hospital was a strangulated hernia, caused by straining to pass urine. Herniotomy was performed, and the stricture dilated by tying in. At the last intelligence, four months afterwards, recontraction was already beginning. Also the previous histories of ten other cases, where gradual dilatation had been employed before they came to hospital, showed that shrinkage after tying in had been even more rapid than after simple stretching by passing bougies, six months being usually the length of time in which freedom in micturition is obtained by this method.

2. Again, some patients cannot support the constant presence of a catheter in the urethra for more than two or three days consecutively, even when the neck of the bladder is not continuously touched by the instrument, and the precautions already mentioned have been duly observed. In such cases, *malaise*, general febrile reaction, sometimes very severe, with considerable pain at the neck of the bladder, compel the removal of the catheter, either altogether or for three or four days, until the disturbance has subsided; in which time, however, much of the width gained has been lost.

Nevertheless, tying in may be employed in exceptional cases with advantage. These are (1) when time presses and it is important to drain the chronically distended bladder and relieve renal irritation; or (2), again, in cases where the irritable temperament of the patient causes much pain or shivering to follow each passage of the sound in simple dilatation. Such persons are, by the way, generally best treated by internal division. Tying in may also be employed for strictures of long standing, where there is also considerable renal disease. In such cases, the risk of a cutting operation in the urethra often outweighs the benefit of the greater relief which that method affords. From the foregoing, you may gather that tying in is never trustworthy for permanent relief; for it is followed by recontraction more rapidly than is any other form of dilatation.

3. Next come *forcible dilatation* and *divulsion*. Forcible dilatation differs from divulsion by tearing the fibres of the urethra at the strictured portion slowly asunder, instead of ripping them apart instantaneously. In principle, the methods are similar, and the permanent results much the same. Probably the immediate danger is less after forcible dilatation than after divulsion. For forcible dilatation, the best instrument with which I am acquainted is that of Sir Henry Thompson: a split sound, of which the halves, when close together, equal No. 12, but can be separated by a lever till they are equal to No. 26 or more. When used, the sound is first passed through the stricture; then the blades are slowly separated until, in the course of ten to fifteen minutes, the strictured part is stretched to the natural diameter of the urethra.

I have abandoned the use of both forcible dilatation and divulsion, mainly for their ill success. This is manifested, on the one hand, by the speedy shrinkage of the stretched or split tissue to its former narrowness, or even beyond its former narrowness; and, on the other, by the greater difficulty which ensues when a second course of treatment is undertaken. Some strictures—perhaps the majority—retain considerable elasticity. Those which have much of this quality are simply expanded for a few hours or days by the divulsor, and then resume their former narrowness. Certain others, situate at the bulb, develop a large amount of fibrous tissue. When this is torn or split asunder by the divulsor, a ragged rent is left, which, in healing, produces a new formation of fibrous tissue; so that, when sufficient time has elapsed (in two patients of Mr. Davies's tables, where Holt's method had been previously practised, retraction occurred in eighteen and five months respectively), a tighter stricture, with thicker and harder surrounding tissue than had been there before, has developed. Possibly the great successes which are announced to follow divulsion have occurred in those cases of stricture of no great duration, where a moderate contraction of the antescrotal part—near the orifice, for example—of which the existence is suspected by neither surgeon nor patient, has caused much spasmodic narrowing of the bulbo-membranous portion. Such a penile stricture is split across by the divulsor, which must be carried past it to reach the narrow bulbous stricture; and, this being divided, the spasmodic narrowing of the bulb is no longer produced, and the case is claimed as a cure of narrow bulbous stricture, when it is really one of a moderate antescrotal contraction.

Being once present when Holt's divulsor broke to pieces in the hands of a skilful operator, I was led to contrive a divulsor of simpler construction, in which the dangerous friction unavoidable in Holt's instrument does not occur. The split sound, which is the guide to the splitting part of the apparatus, is also narrower than Holt's, and consequently will pass through a closer stricture. It consists of a slender sound the size of No. 7 French (No. 2 English), and a wedge with dovetailed edges, that slides readily on the halves of the split sound, and thrusts them asunder with very small effort and no strain to the instrument. I have now added to it a concealed knife, and have thus converted it into a cutting instrument, the mode of action of which I will explain when speaking of internal urethrotomy.

4. *Urethrotomy* is practised from within and from without, the latter operation being one of high antiquity. The internal division of stricture, now that the locality and causes of urethral contractions and also the conditions necessary for proper performance of the operation are better understood, is gaining more general adoption. So much is the knife again rising into favour in the treatment of strictures—caustics having had their day, and splitting having now reached its autumnal season—that there is risk of the knife being applied too often and carried too deeply. In suitable cases and cautiously performed, internal urethrotomy is a safe procedure; while it has this crowning advantage, that it gives in all cases, so far as my knowledge goes, a period of relief from the stricture always measured by years, and often by a long tale of years.

Nevertheless, as you know, urethrotomy is applied to only a part of the cases of stricture which come here for treatment; so it is necessary to define the conditions of the patient or of the stricture which call for this operation. The conditions of the patient which favour internal urethrotomy are these. The first is youth. A man between twenty and thirty with stricture has seldom suffered long enough to have undergone much degeneration of his kidneys; that consequence of stricture is more frequent between fifty and sixty. A young man's stricture most commonly is a bridle or ring near the meatus, the deeper portion being not at all or only slightly affected. Again, a young man desires to lead a more active life, to enjoy its pleasures as well as undergo its toils; hence, he is more ready to submit to severe treatment to obtain complete relief from his stricture than is an elderly man who is satisfied if he obtains some relief from pain and danger. Lastly, a small number of persons cannot endure the retention of catheters nor the passage of instruments with sufficient frequency to procure dilatation of a narrow stricture. If pursued for more than three or four days, fever sets in, with rigors and vomiting, great pain in the perinæum and neck of the bladder, purulent, albuminous, even bloody urine—in short, all the conditions which, grouped together, are termed urethral fever. These complications of course require cessation of instrumental treatment until they have passed away. In such cases, the risk attending internal incision is less than that of any other plan open to the surgeon.

But the locality and form of the stricture, providing there be no forbidding degeneration of the kidneys, are generally the prevailing conditions for or against operation. First among strictures generally needing incision, are those *anterior to the peno-scrotal angle*. Strictures of this region are often of great elasticity, yielding before the bougie readily, and shrinking again after its withdrawal almost as readily. Even when not elastic, such strictures either contract very rapidly after gradual dilatation or do not widen beyond a certain extent, and attempts to pass this extent cause dangerous irritation. Again, many penile narrowings are "bridle" strictures, or strictures devoid of a large amount of fibrous development. Internal division of such cases has three advantages: (*a*) it obtains sufficient amplification of the stricture, if it be unyielding; (*b*) it renders subsequent shrinkage slow instead of rapid; and (*c*) incision in the antescrotal region very seldom excites dangerous constitutional disturbance.

Next, strictures at the *bulbous or bulbo-membranous region* are often of great thickness, composed of hard fibrous tissue that yields very slowly to the passage of bougies, and contracts speedily when so dilated. Incision may be safely practised in these cases also.

To revert to some of the assertions I have just made respecting internal incision: first, that subsequent shrinkage of a stricture is slower after incision than after gradual dilatation. On turning to Mr. Davies's tables, it appears that, of the thirty-two cases there noted, five were treated in hospital by passing bougies only; the strictures in three patients were equal to Nos. 7, 11, and 15 (French) respectively; in the remaining two, they were No. 3 (French). All but one, who left after only a few days' stay in hospital, were able to pass No. 22 (French) themselves when they left. Some of them in a few months, all in less than two years, reported their strictures to be much shrunken, the passage of a bougie with more or less regularity notwithstanding. One patient had even undergone a fresh course of treatment at the hands of a surgeon unconnected with the hospital. Again, ten of the remaining twenty-seven cases are reported to have been subjected to gradual dilatation either by passing or tying in catheters before reaching us—some of them

two or three times; yet their strictures on admission were narrow, most allowing only a filiform No. 2 or 3 (French) bougie to pass, and the largest not exceeding No. 7 (French) (2 English) in size. In two other cases, whose treatment in hospital was limited to continuous dilatation by tying in catheters, a similar short duration was noticed. When this interval of comfort, varying betweed a few months and one and three-quarter years, had elapsed, the contraction had so far returned that delay and straining during the act harassed the patient as before. If we turn to the account of the after-condition of the cases of internal urethrotomy, we find a much longer period of freedom from difficulty. In none of these cases, when they were last heard of, had difficult micturition returned, though in nearly all had some slight diminution of size taken place. From six patients, the last report was received more than a year after their operation; and in the rest, with one exception, more than six months after their operation. The latest report I received only three days ago from a patient who methodically reports himself every six months as being perfectly well—never in any difficulty in passing urine, but using his instrument regularly.

Thus far, I have been quoting only the cases in Mr. Davies's table; but I have a tolerably numerous account of patients operated on in former years who have enjoyed some years of freedom from symptoms. Two cases have come to my knowledge where the contraction after urethrotomy has called for further treatment, but their relapse may fairly be attributed to the non-passage of the bougie after the operation. On the other hand, I have intelligence of many others who remain well and free from urinary troubles without applying to a surgeou.

Next, I mentioned the fact that incision in the antescrotal region seldom causes dangerous constitutional disturbance. Had it not been for one case which occurred to me several years ago in these wards, I should have been tempted to use the word "never" instead of "seldom"; for, with that exception, I have never seen more than very trifling febrile disturbance, which passes off in a few hours, and commonly none at all results. In the patient alluded to, incision of a very tight stricture in the second inch was followed by erysipelas and sloughing at the part incised, leaving an obstinate penile fistula.

Again, I said that incision may be safely practised on strictures at the bulbo-membranous part when there is considerable development of fibrous stricture-tissue. Here I would remind you that, in some cases, much of the narrowing of the urethra at the perinæum is not permanent loss of elasticity, but reflex muscular contraction increasing a really moderate amount of fibrous stricture. Nay, fibrous stricture may be altogether wanting at the perinæum; and the contraction there entirely due to reflex spasm set up by a moderate antescrotal stricture. Under these circumstances, incision must be very cautiously applied, lest the vascular tissue surrounding the urethra at that part be deeply wounded. Hence, before operating upon a bulbo-membranous stricture, the condition of the penile urethra should be exactly ascertained, and the strictures which are nearly always to be found there properly divided before the narrowing at the bulb is attacked. If this be done, it sometimes happens that an apparently narrow stricture at that locality disappears altogether. This is one of my reasons for discarding all incisors which cut from behind forwards. They attack first the part which should be last incised. I have thought fit to return to this point, because it is one which I conceive to be of great importance, and not generally comprehended, that a moderately narrow stricture in the antescrotal portion—commonly the first inch—may cause a reflex muscular contraction at the bulb which clings to a bougie passing along the urethra, and hence causes the impression that the organic stricture is placed at the bulb, instead of much nearer to the surgeon's hand. Of course, strictures do develop at the bulb; further, in long-standing cases, the amount of fibrous development is often very great there. And, where there is considerable fibrous development, incision at the bulbo-membranous portion is followed by very little, if any, constitutional disturbance at this locality. Judged by such results alone, incision would be as safe and satisfactory a procedure as in the antescrotal part of the urethra. Unhappily, as our records show, considerable constitutional disturbance has followed incision of stricture in cases where the previous investigation discovered no special condition adverse to the operation. Of course, in some cases, the amount of vesical or renal disease is such that any operation on the urinary tract, however slight, may excite dangerous complication; but at this moment I am not speaking of such exhausted conditions. I mean cases where, gradual dilatation having failed to afford sufficient relief to the stricture, incision is employed with good prospect of success. Doubtless, such cases are rare; but they exist, and are more likely to be among subpubic strictures of scanty rather than of ample development; hence this accident will probably disappear from clinical observation as our knowledge of the locality of fibrous stricture is improved and a more general recognition of the varied nature of strictures at the bulbo-membranous portion obtains. In Mr. Davies's tables is recorded a fatal case after internal urethrotomy in a patient with long-standing stricture terminating in complete retention for several hours before admission, during which interval several surgeons had introduced many instruments without reaching the bladder. After the bladder had been relieved and the patient restored by rest in bed and continuous drainage of his bladder for six days, the stricture (No. 2 French, No. ½ English) was divided. Pyæmia set in on the third day, and death followed on the tenth. We had thus an opportunity of examining the incision. This is the note taken by the surgical registrar, who made the *post mortem* examination. "Incision covered with adherent lymph. Bulb contained a firm dark clot, which did not extend beyond its investing fascia. No plugging of veins. Kidneys cirrhosed; ureters, bladder, and prostate healthy." The "cirrhosed" state of the kidney indicates advanced interstitial nephritis, and consequently dangerously impeded the circulation of blood through an organ that had lost much of its glandular tissue. The opportunity of examining the line of incision showed that, by employing the knife in the free manner usually recommended in theory, if not always carried out in practice, incision must be carried into the natural vascular tissue beyond the stricture; which vascular tissue has free communication with the periprostatic and iliac veins, from which blood is easily extravasated, and into which septic matters readily enter. Indeed, I suspect the reason why so little hesitation has yet arisen among the advocates of free incision is that, by the instruments they employ, they really cut much less than they conceive they divide. Maisonneuve's instrument is especially apt to work its way through a stricture, partly by cutting, partly by stretching; thus leaving the fibres only stretched capable of speedy recontraction. Possibly to overcome this fault, those who still employ it have widened the blade till it can cut for half an inch or more through tissue which cannot yield before it. But only very tough extensive strictures can be so treated safely; and they may often be safely cut even more deeply without exposing any vascular erectile tissue. Reybard, renowned nearly thirty years ago for the depth of his incisions, made, it is said, the blade of his knife appear in the perinæum before he was satisfied with the completeness of the division. This, coupled perhaps with the untoward consequences of such hardihood, helped to bring internal urethrotomy into a bad repute, which it has not yet quite shaken off.

I am aware that, in urging this necessity for letting the incision penetrate no deeper than the extent of the fibrous induration, I am running counter to the opinion of some eminent operators, who direct that incisions be made freely, if made at all. I especially disagree with that school of surgeons—more influential, perhaps, in America than in Europe—who urge that, unless the incision be carried even slightly beyond the induration into the healthy tissue, speedy recontraction of the stricture must always result; whereas, when the strictures are thoroughly severed, they assert that the new tissue which is formed in the gash cut by the knife has no contracting tendency, but forms a wide splice or "gusset", that henceforth affords a free passage to the urine, or to a full-sized sound whenever that may be introduced. In short, according to this view, strictures are curable in the precise meaning of the term. I confess that I demur to the statement, for two reasons. First, those who maintain it in England do not employ an instrument capable of ensuring complete division. Much of the stricture-tissue may remain undivided when either Civiale's or Maisonneuve's urethrotome is used. Their incisions are really more shallow than the operators believe; while those in America who teach the necessity for deep incisions, using an instrument which sets the parts on the stretch before the knife is applied to them, are also cautious to employ a blade which can only make a very shallow cut, and thus they probably do not pass far beyond the indurated tissue.

When speaking of internal division of stricture, a word on the question of cutting through the floor or the roof of the passage must not be omitted. Through the meatus, an incision injures the erectile tissue least at the floor. If it were possible to ascertain beforehand where the thickest formation of induration-tissue is placed, it would be well to cut through that, whether it be floor, roof, or sides; but that is not so. In penile strictures, probably one part is not more frequently attacked by induration than another, while the natural thickness of fibrous envelopment is probably slightly greater in the roof. If the septum between the corpus spongiosum and corpora cavernosa could be hit exactly, the cut should be made there; a difficulty that is not easily surmounted. Therefore, attention must be steadily directed to cutting through the fibrous tissue only, and not at all beyond the fibrous tissue, then it will matter little whether the knife traverse the floor or any other part. In the bulbo-membranous part, the induration is necessarily in the floor; hence incisions in that region are most safely carried along the floor. For this reason, I habitually incise in the floor; though occasionally, when I have only a limited incision to make near, not at, the meatus, I carry it in the mesial line along the roof.

CLINICAL LECTURE
ON
LOCOMOTOR ATAXIA.

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GENTLEMEN,—I take as the subject of my lecture to-day, sclerosis of the posterior columns of the spinal cord, or tabes dorsalis, or progressive locomotor ataxia, as it has been variously termed. I will illustrate the disease by three cases, in which three different portions of the cord were affected. In the first case, the phenomena resulting from the sclerosis were manifested in the upper extremities chiefly; in the second, in the trunk of the body; and in the third, in the lower extremities.

CASE I. *Locomotor Ataxia Affecting the Upper Portion of the Spinal Cord and the Upper Extremities Chiefly.*—Joseph Ritchie, aged 48, had, for fourteen years previous to 1870, played a wind-instrument requiring skilful fingering, in the band of the 78th regiment. From 1872 till a few months before his admission on September 27th, 1877, he had worked in Messrs. Pullar's dye-works in Perth, where his hands were immersed in the fluids a considerable part of each day. His habits had been very irregular, including one good drinking bout each year, lasting a month or six weeks.

His illness began about eight months before admission, with severe, sudden, transient, stabbing pains in the extremities, followed by numbness and anæsthesia in the fingers, and a loss of command over the movements of the fingers, so that his tools fell out of his hands; when he was in the band of the Perth Militia, in June and July 1877 (three months before admission), he found his execution failing him; he could not strike the notes with his wonted speed and precision.

November 3rd, 1877. His state on examination was as follows. He had still occasional attacks of the shooting pains. Sensibility to touch and pain were both decidedly diminished on the extensor aspects of both arms all the way up; also, though to a less degree, on the flexor aspects. On the back of each arm there were two small areas, about one inch in circumference, one situated near the elbow, the other about the middle of the upper arm. In these, sensibility to painful impressions was almost annulled, for the needle might be passed through the mass of muscles, etc., right down to the bone, and pressed against it, without any sensation whatever being experienced. Sometimes the patient felt when the needle was passed through the periosteum. The needle might be left sticking deep in the muscles without exciting any feeling whatever. Once, under these circumstances, the patient, who was unaware of the presence of the needle, at distinct intervals of about half a minute cried out that he had been momentarily touched with something hot at the spot where the needle had been all along sticking. At some points immediately contiguous to these almost absolutely anæsthetic areas, the cutaneous sensibility was perfectly normal. Touch and sudden pressure were felt in some areas better than painful impressions.

A curious fact was noted in this case (which has been observed in all the subsequent cases I have seen), viz., that, after repeatedly pricking or otherwise exciting some of the anæsthetic areas, the sensibility was so far restored that a very slight pressure could be felt. In other areas, very frequent piercing of the tissues and other excitations failed to have the slightest restorative effect.

Sensation was delayed at some points, being felt at a distinct interval of two or three seconds after the application of the needle.

In the lower extremities (which were also affected later and to a less extent in this case), this curious fact was observed, that, if the skin were suddenly punctured with a sharp-pointed instrument, the patient at once exclaimed that he was touched, and then, after a short but distinct interval, cried out "That's hot!" and pulled up his leg with a sudden jerk. He stated that he felt, at different times, first the touch and then the heat. In many of the anæsthetic areas, he mistook heat for cold, and *vice versâ*.

When asked, with his eyes shut, to bring the points of his index fingers together, he first looked at his fingers carefully, then shut his eyes, and rapidly brought his fingers to within an inch or two of each other; then he hesitated, and was quite at a loss how to proceed; because, as he stated, although conscious that his hands were near one another, he was quite uncertain as to their relative position. If he tried to touch a given point with his eyes open, he looked at it, took aim with his finger, advanced it rapidly and tolerably steadily till near it; then the movement became very unsteady, and was finished slowly and with evident effort to control the irregular action of the muscles. In writing, he pressed hard upon the paper, as if to increase the intensity of the sensory impressions. He could thus write legibly, but badly, with the eyes open, and fixed anxiously on his fingers. When his eyes were shut, he made only a few widely disconnected strokes. The power of distinguishing weights was impaired in both arms.

The pupils were contracted. The diameter of the right was two lines; of the left, one line. There was no colour-blindness. The fundus was healthy in both eyes. Micturition was often painful and feeble.

CASE II. *Locomotor Ataxia Affecting Principally the Portion of the Cord between the Cervical and Lumbar Enlargements, and consequently the Trunk Chiefly.*—The case is an interesting one, as there was no locomotor ataxia present in either arms or legs. The possibility of the occurrence of such a case should be borne in mind.

Frederick B., a lamplighter, aged 32, had fallen off the top of a railway-carriage six years before his admission in October 1878; but, although stunned and severely bruised, he recovered, and was well until a year ago, when, during an attack of bronchitis, he first complained of pain in the back. It left him after a time, but returned a few months later, after an attack of pleurisy, and his condition at the beginning of November last may be briefly described as follows. He was well nourished. He complained of a constant dull aching pain over the spine, which was aggravated by movement, and then became sharp and stinging in character. There was no paralysis, spasm, or atrophy of any muscle. The pain in the spine was not increased by hot or cold sponges passed over the painful parts; there was no paralysis of the sphincters of the bladder or rectum. The disturbances were entirely limited to the sensory nerves and nerve-tracts. There was marked hyperæsthesia from the second dorsal vertebra downwards; the slightest superficial touch causing severe pain. This was most intense over the eighth, ninth, tenth, and eleventh dorsal vertebræ. Curiously, over this very area, where the hyperæsthesia was greatest, the power to distinguish the heat of a very hot sponge was completely lost. The lateral aspects of the back of the body, on each side of the spine, were similarly affected.

Anæsthetic areas—insensible to impressions of touch and pain—were discovered and carefully mapped out in the following regions; one about the insertion of the deltoid on both arms; on the right arm, one a little below this, and one on the posterior surface of the forearm; one over the right ilium, passing on to the trochanter; and one similarly situated on the opposite side. Electro-sensibility was diminished over the triceps and deltoid on the left arm, and over the anæsthetic area on the right thigh.

It was thought advisable to have the circumference of each area mapped out with nitrate of silver. This was done on the right side, and partly on the left. Next day, it was found that the caustic had been applied too strongly, and had blistered the skin along the line of its application. This curious and interesting fact was also further noted, that, in some of the anæsthetic areas so treated, sensibility was completely restored; in the others it was partially so; while, on that day, the areas on the left side, not so treated, remained quite as anæsthetic as before. On the second day after the application of the caustic, sensibility was found to have been recovered to a considerable extent in those areas which had not been mapped out with nitrate of silver. This interesting fact corresponds to the effect of repeated pricking in the other cases.

CASE III. *Lower Portion of the Cord and Lower Extremities Chiefly Affected.*—John S., aged 38, labourer, married, had, at twenty years of age, contracted syphilis, and, at twenty-three years of age, was ill for a month from a cart having passed over the middle of his body. He had been a hard drinker, and in early life was addicted to venereal excesses. The family history was unimportant.

Seven months before admission on January 4th, 1879, he began to complain of weakness in the legs; also of instantaneous, sharp, darting pains, shooting from the knees to the toes; slighter pains of similar character in both lumbar regions; also formication, numbness, etc., in the lower limbs. Some weeks later, he noticed a tendency to fall forward into the basin while washing his face.

He is fairly well nourished. He has no feeling of constriction round the body or limbs. Besides the pains already referred to, he has occasional numbness and tingling of the lower limbs. Sensibility to touch is somewhat impaired in both lower limbs; but over the dorsum of both feet, and over the middle of the tibia, he cannot distinguish between the prick of a needle, and pressure with the finger firmly applied. With his eyes closed, he can describe accurately how

his legs are placed or flexed. There is an absence, in his case, of that feeling of something soft, like felt or wool, under the feet, which is so frequent in and characteristic of this disease. Sensibility to impressions of heat and cold is normal, except over the lower two-thirds of the posterior surfaces of both legs, where both hot and cold sponges are felt warm. Tickling the soles of the feet is felt, but occasions no reflex movement. Tickling the dorsum of the foot is felt as scratching.

On pricking the patient deeply with a needle on both lower limbs, a considerable interval elapses between his feeling the touch and the sensation of pain. Over the tibia and the upper surface of the great toe, the interval is sometimes several seconds. At the lower part of the right tibia on the inner side, there are two small absolutely anæsthetic areas, a quarter of an inch and half an inch in diameter respectively. On the back of the trunk, the interval between the perception of touch and pain is marked, and there are some small anæsthetic areas in the lower lumbar and upper gluteal regions. The patellar tendon-reflex is entirely absent in the right lower limb; almost so in the left. Standing with the feet close together, and the eyes shut, he first sways from side to side, and then falls. With his eyes open, he can stand, but he closely watches his feet; and the whole of the balancing muscles of the limbs are seen to be in a state of rapid clonic contraction, evidently in order to steady him. In walking, he separates his feet somewhat, and lifts the foot higher, and throws it more outwards than normal. When the foot is brought to the ground, the heel comes down first with some force, and afterwards the foot with a flap. On attempting to describe an arc of a circle in the air with his leg, he can only do so in a jerking zig-zag way. Although his legs are small, there is no muscular atrophy. His muscular power in both legs is good, and he can overcome powerful attempts made to prevent his extending or flexing his lower limbs. Electro-contractility is normal. His eyesight is much impaired. Both pupils are dilated, especially the right; but contract on looking at a near object, and with strong light. Ophthalmoscopic examination reveals grey degeneration of the optic nerve in both eyes, most marked in the right.

He has great difficulty sometimes in micturating. The urine is strongly alkaline, and contains abundant triple phosphates. His intelligence and memory are somewhat impaired. He often has cramps in the upper and lower extremities.

This disease attacks males much more frequently than females. It occurs usually between thirty and fifty years of age. Its occurrence has been attributed to a good many causes, among which may be mentioned: 1. A neuropathic tendency, which is certainly often present; 2. Certain occupations entailing great exposure or bodily exertion; especially such as necessitate unusual movements of co-ordination, as in the case of railway-guards or musicians; 3. Mental fatigue and over anxiety; 4. Acute and chronic diseases; 5. Accidents; 6. Sexual excesses and onanism; 7. Syphilis, and many others.

In all the cases read, we have, at first, symptoms of an initial period, indicating slight commencing sclerosis and congestion, *e.g.*: 1. Sharp electric-like neuralgiform pains; 2. Disturbances of vision, such as diplopia, amblyopia, etc.; 3. Various forms of paræsthesia, such as numbness, formication, sense of something soft under the feet, girdle-feeling of constriction round the body; 4. Sensation of motor insecurity, fatigue on slight exertion, tendency to fall in the dark or with the eyes shut; 5. Disturbances of the bladder and sexual organs.

The cases given illustrate very well the most important characteristics of the fully formed disease. We may sum these up as follows: 1. Alterations in the cutaneous and deep sensibility, and conduction of centripetal impressions; 2. Absence of any true motor paralysis; 3. Absence of any true muscular atrophy; 4. Loss of ability to co-ordinate the muscles; 5. Ocular affections.

In these cases, we have seen that the alterations of cutaneous sensibility may affect: 1. Sensibility to tactile impressions, as estimated by touching, and by testing the power to distinguish accurately the distance between the points of the æsthesiometer; 2. The ability to feel pain, estimated by piercing the skin with a sharp-pointed instrument, etc.; 3. The power to distinguish between different degrees of temperature; 4. The sensibility to electrical impressions.

All of these may be modified, as we have seen, in the following ways: 1. They may be increased or diminished—usually they are diminished; 2. The transmission of impressions may be delayed; 3. The power to localise the impressions accurately may be lost; 4. One kind of impression may give rise to a sensation of a different kind, as when a sensation of heat resulted from piercing the skin with a needle.

The muscular sensibility may be affected in similar ways; but of course it is more difficult to test the exact conditions in the deeper tissues. In Ritchie's case, wherever the skin was sufficiently insensible to permit of a needle being passed through it unperceived, it could be run down through the muscles to the bone without being felt.

The power of distinguishing accurately between different weights is usually, as in these cases, more or less impaired.

The action of the reflex tendons is, as a rule, greatly diminished or altogether abolished, so that, *e.g.*, a smart blow on the ligamentum patellæ fails to elicit any resulting muscular contraction of the quadriceps extensor.

The errors in the transmission of the deeper centripetal impressions—not necessarily revealed to consciousness—must be interpreted by and regarded as similar to, those which can be accurately studied as sensory disturbances.

It is very noticeable in all these cases, that spots quite insensible to painful impressions—so anæsthetic in Ritchie's case, that a needle driven right down to the bone through several inches of muscle was not felt—were distant not more than two or three lines from spots where the slightest superficial prick was acutely felt. If the two points of the æsthesiometer strike two such different areas, of course only one will be felt. Hence it is not, strictly speaking, an accurate test of the power of distinguishing distance between the points.

Sometimes, repeated or prolonged excitation of one of these abnormally insensible areas—by pricking, as in Ritchie's or Smith's cases, or, as in the case of Birnie, by caustic—had the effect of restoring their sensibility for a time; overcoming, in some manner not yet very clear to me, the obstacle presented to the transmission of impressions in nerve-tubes not yet completely interrupted. This fact explains in some measure that delay in the transmission of impressions which is met with to a very marked degree in some cases; as, for example, in the case recorded by Dr. Hammond, in which, "when the feet were put into hot water, the sensation was not felt for almost three minutes" (*Diseases of the Nervous System*, p. 586). In such a case, the continued excitation, acting as repeated stimulations, may, by acquiring a cumulative force, overcome the resistance in the obstructed nerve-path, and sensation ultimately result. In a similar manner, in one area in Ritchie's arm, the needle left sticking deep in the tissues, gave rise only to a transient sensation felt every half-minute; the influence passing as it were slowly, *guttatim*, along the imperfect conductor.

The case is altogether different when a single, momentary, or very brief impression is not felt until some time after the exciting body has been removed. Here a real delay in transmission seems to occur. In Smith's case, when a sharp-pointed instrument was applied to the skin, the tactile sensation was felt at once, and the painful impression a second or two later. In Ritchie's case, there was this very curious modification of the result, that, while the patient exclaimed at once that he was touched, after a short but distinct interval he cried out "That's hot!" and pulled up his legs. This point was most carefully tested by repeated experiments. In both cases, it would appear that the tactile and painful impressions travelled at different rates of rapidity along their respective nerve-paths, the painful impression being abnormally delayed.

The conversion of one kind of impression into a quite different resulting sensation, was well exemplified in Ritchie's case; the painful impression giving rise, not to a sensation of pain, but to one of heat. The same curious fact was also observed in the case of a man, Silver, in the same ward.

The erroneous localisation of impressions was present to a certain extent in Ritchie's case, and is often well seen in cases of locomotor ataxia; a tactile impression made at one point being referred to a quite different locality, perhaps to the opposite limb.

The ocular disorders vary much in different cases, and bear no proportionate relation to the severity or extent of the disease. In Ritchie's case, in which the disease was very extensive, all that was observed was, that contraction of the pupils, not influenced by light, and only moderately removed by atropia, which is usually met with from implication of the sympathetic nerves when the so-called "cilio-spinal centre" in the spinal cord, opposite the lower cervical and upper dorsal vertebræ, is implicated in the sclerosis; otherwise his eyes were healthy. In John Smith's case, where only the lower extremities are affected, diplopia, and also commencing amaurosis from grey atrophy of the optic nerve, are present.

In some cases, the power to distinguish certain colours is lost.

The first and third cases have furnished you with a good idea of the forms of inco-ordination met with in this disease. The mechanism of that inco-ordination I will discuss further on.

What are the anatomical lesions in this disease? You will remember that, in early life, the posterior columns of the spinal cord are divided by a deep fissure into two unequal parts. The inner portion is the slender column of Burdach or the column of Goll; the outer and larger, bounded internally by the column of Goll, and externally by the

posterior cornua of grey matter, is the external band of the posterior column; it is also called the posterior root-zone. Sclerosis of the inner division of the posterior column—the column of Goll—does not appear to give rise to the characteristic phenomena of this disease; while it is always present when the posterior root-zones are affected.

Dr. J. Lockhart Clarke has further demonstrated that to the posterior root-zones are principally attached the posterior or sensory roots of the spinal nerves, not to the lateral columns, as was once believed. Usually the posterior cornua of grey matter are to some extent implicated in the sclerosis. The posterior roots of the spinal nerves are almost always found to be atrophied.

Similar alterations from degeneration are found in parts within the cranium, which are closely related to the posterior columns of the cord; as, for example, in the lower cerebral peduncles, the restiform bodies, and the optic thalami. The optic nerve is often affected, and the grey degeneration in it may often be detected very early in the disease by means of the ophthalmoscope.

Chronic neuritis—the result of implication of the cilio-spinal centre, upon which also depends the contraction of the pupil in these cases—is also frequently met with in this as in other spinal diseases.

You must not expect to find the disease always strictly limited to the posterior root-zones and the adjacent grey matter of the spinal cord. Other regions are often invaded in the progress of the disease, and you will then have contractions, paralysis, atrophy, or disease of joints superadded, according to the region involved.

[*To be continued.*]

PNEUMONIA, WITH COPIOUS HÆMOPTYSIS, TREATED BY ERGOT: SPEEDY RECOVERY.

By C. HANDFIELD JONES, M.B.Cantab., F.R.S.,
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J. D., AGED 21, messenger, was admitted May 19th, 1873. His health had been generally good. His family were healthy; there was no phthisis in his brothers and sisters. He was taken ill on the 16th, about noon, with pains in the chest and back; he had no shivering. He had some dry cough before he was attacked, but did not spit up anything. He had not lost flesh. There was a little trace of herpes at the left corner of the mouth. On the 16th, he brought up by coughing much blood, and had continued to do so till noon; he estimated the quantity at a pint. The cheeks were flushed. Temperature 104°; pulse 96, pausing completely now and then; respiration 47. There was good resonance in both fronts. The breath-sound was harsh and rather weak under the left clavicle; in the third space it was normal. Below the right clavicle the breathing was also weak and harsh, and attended with prolonged expiration. Good resonance and breathing were heard in all the right back and in the upper third of the left; in the lower half, or rather more to the left, there were marked dulness, bronchial breathing, and bronchophony. He had had pain in the left side; not much now. He lay down flat. He slept very badly last night. He was ordered to have a turpentine fomentation applied to the whole back, and to take a drachm of fluid extract of ergot and an ounce of mistura ammoniæ acetatis four times a day, and to have simple diet, with milk. On the 20th, he had had a better night; the bronchial breathing and crepitations were heard higher up in the left back than on the 19th. The sputa were mucous, mixed with red blood. Beef-tea and two eggs were added to the diet. He was ordered to have five grains of mercury and colocynth pill at bed-time. On the 21st, the sputa were still much blood-stained. On the 22nd, the left lower back was decidedly more resonant; bronchial breathing had ceased; some vesicular respiration was heard. The sputa were less, almost quite free from blood; his appetite was better. 24th. There were scarcely any sputa; what there was was only clear mucus. He was eating boiled sole. There was fairly good breathing in the lower left back. The ergot was omitted, and he was ordered to take twenty minims of liquor ferri muriatis and fifteen minims of spirit of chloric ether, in an ounce of water, three times a day. On the 29th, breathing under both clavicles was somewhat weak and harsh; he had no expectoration; and he was walking about apparently well.

Date.	Temp.	Resp.	Pulse.
May 19	104	47	96
May 20	102.9	48	102, arrested by 174 *grammes*.
May 21	100.7	33	86
May 22	98.6	44	78, arrested by 174 *grammes*.
May 23	97.8	—	—
May 24	97.8	34	66, arrested by 150 *grammes*.
May 27	—	—	—, arrested by 200 *grammes*.

The duration of the disease, from commencement to defervescence, was six days; to nearly complete resorption of exudation, eight days. The hæmoptysis was unusually profuse, and naturally suggested the remedy.

The foregoing history was recalled to my recollection by perusing the case recorded in the JOURNAL of November 15th (page 772), of "rapid cure" of pleuropneumonia by ergot. In both, the action of ergot seems to have been beneficial; but I demur to the assumption that it effected a cure. Nothing seems to me more certain than that ordinary pneumonia (*pneumonie franche*), at any rate as we see it now-a-days in London, runs a determinate course; the inflammatory process terminating, by more or less rapid defervescence, about the sixth or seventh day from the initial rigor; while the exudation undergoes resorption sooner or later, according to the energy of the vital powers. If this be so, it is clear that we must be very careful not to deceive ourselves by attributing to our remedies what is really due to the natural course of the disease. Further, we must take good heed not to employ any means which injuriously affect the patient's strength, and especially we must be cautious of doing anything which may enfeeble the heart. Jurgensen emphasises this caution strongly (*German Clinical Lectures*, New Sydenham Society, 1876), and I quite agree with him, though I do not think his heroic measures are often requisite. Though we cannot *cure* the disease, we may, however, materially mitigate its severity, and sometimes no doubt save life. Ergot and liquor ferri perchloridi may check and control the inflammation; opium may allay pain, and calm and steady the nervous system; bark and ammonia, with wine, may give tone to the failing heart, especially in the collapse of the crisis; effervescing salines, or brandy and soda-water, with or without a dose or two of calomel, may quiet gastric irritation, and enable the patient to take food better; quinine in large doses, or the cold bath, may serve our need in dangerous hyperpyrexia. There is plenty of scope for beneficent and well-directed action; but, as we have only to gain time to win, no risk should be incurred with the idea of cutting short the disease. Such, at least, is my experience in London. It would be very interesting to know whether that of other practitioners elsewhere is different. Hjaltelin's in Iceland certainly seems to have been so; but Dr. Hughes Bennett's at Edinburgh, and Jurgensen's at Kiel, is essentially similar. With regard to ergot, I may mention that, though I have tried it in various inflammatory affections, notably in bronchitis, it has on the whole disappointed my expectations. Theoretically, it ought to be a great remedy for inflammation; but practically, it has not often accomplished much.

STATISTICAL REPORT OF ALL OPERATIONS PERFORMED ON HEALTHY JOINTS IN HOSPITAL PRACTICE, BY MR. LISTER, FROM SEPTEMBER 1871 TO THE PRESENT TIME, TOGETHER WITH SUCH ACCIDENTAL WOUNDS OF JOINTS AS OCCURRED DURING THE SAME PERIOD.

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A DESIRE has been frequently expressed that a statistical account of some of the results of the antiseptic method of treatment in Mr. Lister's own hands should be published; and with the view of satisfying this reasonable wish the following cases are brought forward.

In comparing the results of one method of treatment with those of another, it is not sufficient to state these results merely numerically; some idea of the nature of the individual cases must be given; but to publish all those which have occurred in Mr. Lister's practice since the commencement of antiseptic treatment in sufficient detail to convey a correct impression of their nature would be a very laborious work; and further, such a paper would contain many cases of little interest, which, however, could not be omitted without laying oneself open to the charge of withholding part of the results. I have, therefore, with Mr. Lister's permission, selected a series of cases which must be looked on as crucial tests of the treatment, viz., those where healthy joints have been opened by incision or through accident and kept open for some days.

This paper will accordingly contain an account of all such cases which have occurred in Mr. Lister's hospital practice since September 1871 up to the present time. I begin at 1871, partly because the note-books conveniently accessible to me commence at that date, and partly because the treatment has been carried out in its present form only since that time, the spray and gauze being substituted during that year for syringes and lac-plaster.*

* See the BRITISH MEDICAL JOURNAL for January 14th, 1871, where the first mention is made of the use of the gauze and spray, and where a very instructive case of incision into the elbow-joint to remove the head of the radius which was dislocated forwards is given. (Compare with this case No. 10.)

It may not be amiss to recall here the chief features of the treatment, the results of which are under consideration. The theories, I might almost say natural laws, on which it is founded are: that putrefaction or other fermentative changes occurring in a wound are the chief sources of danger to a patient after operation, the degree of danger varying with the situation and nature of the wound, the constitutional condition of the patient, and the character of the ferments present; that the cause of fermentative changes in organic liquids is the growth of organisms (generally bacteria) in them; that these organisms are never developed *de novo*, but always from a parent; that they gain access to a wound only from the air and the surrounding objects;* and that it is possible, by a proper use of various chemical substances, to destroy the vitality of these organisms before they reach the wound. The great aim of the operator or dresser is, therefore, so to manipulate as to prevent the access of living organisms to a wound. Those in the air are destroyed by having a spray containing some sufficiently powerful antiseptic playing around the wound; those on the instruments, sponges, skin of patient or operator, etc., are destroyed by washing these with a strong antiseptic lotion. The operator performs the necessary manipulations in the antiseptic atmosphere, merely taking care that nothing impure comes in contact with the wound, and also that, should his fingers or any instrument be removed from this atmosphere, they are repurified before reinsertion into the wound. At the conclusion of the operation, an antiseptic dressing of suitable material and dimensions is so arranged that causes of putrefaction shall not gain access to the wound during the time which elapses till the dressings are changed, and at each change of the dressings the same care is taken as during the operation.

It will thus be apparent that the cases here recorded are examples of the results of the practical carrying out of a principle, and not of the application of any particular medicament in any special form to the tissues. The use of the spray is not more important as an antiseptic means than the purification of instruments, etc., in the antiseptic lotion. The spray merely purifies the atmosphere; and, as there are undoubtedly fewer organisms floating about in the air than are present on any instrument which has got dust or water on it, if one were compelled from any cause to give up one or other antiseptic means, one would at once choose the spray as the least important and that which could be the most easily dispensed with. In fact, the antiseptic treatment was carried on for years by Mr. Lister without any spray; the wounds being washed out with carbolic lotion and carbolic putty, lac plaster, or other dressing acting on similar principles immediately applied.

Hence, to say that, because a surgeon uses the spray, or, indeed, all the materials for antiseptic work, he therefore employs the antiseptic treatment, is incorrect, unless the various means are used with the definite aim of excluding the putrefactive ferments. On the other hand, to say that, because a surgeon does not use a spray or even carbolic acid, he therefore does not employ the antiseptic method, would be equally incorrect. So long as the result of his treatment is to exclude or render inert the causes of putrefaction, he has been practising antiseptic treatment.

Besides the avoidance of putrefaction an essential element in the treatment is to provide free drainage for blood and serum, and so avoid inflammatory disturbance from tension.

It will prevent repetition if I give here a case in full as a type of the course usually followed under antiseptic treatment by incised wounds in healthy tissues. Cases behaving similarly will be referred to in the sequel as having run an "aseptic course".

John D., aged 43, was admitted into the Edinburgh Royal Infirmary on February 12th, 1874, suffering from exostosis growing from the external condyle of the right femur. The patient stated that for the last thirty years a swelling had existed on the outer side of the lower end of the right femur. This had increased very slowly, but of late it had interfered with the movements of the knee-joint. There was a small tumour about the size of an orange, quite hard, situated on the outer side of the right knee, apparently growing from the external condyle of the femur. The patient complained of great pain in walking.

Operation.—February 12th. A longitudinal incision about three inches in length was made on the outer side of the knee over the tumour. Some synovial fluid escaped, probably from a wound in the capsule of the knee-joint. The tumour was found to be pedunculated, and the pedicle was cut across by bone-forceps. (The rough ridge corresponding to the base of the tumour extended to a point three-quarters of an inch below the level of the upper border of the patella, the limb being extended.) Two drainage-tubes were inserted, and the rest of the wound was stitched up.

February 13th. Morning temperature 99.2 deg.; pulse 70. The patient had not slept well, in consequence of chloroform-sickness. He had taken a good breakfast. There was almost no pain in the wound. The dressing was changed, and found to be soaked with a sero-sanguineous fluid. One drainage-tube was removed.

February 14th. Morning temperature 99 deg; pulse 76. The patient felt quite well. As no discharge appeared outside the dressing at the usual time of visit, the dressing was not changed.

February 15th. Only the superficial dressing was changed to-day. There was only a very slight serous stain on it. There was no redness nor pain on pressure round the wound.

February 19th. The patient had not been dressed since last date. The whole dressing was changed to-day. One stitch and the remaining tube were removed.

February 26th. The patient was dressed. There was only a slight serous stain on the dressing; no pus. All the remaining stitches were removed. Cicatrisation was complete, except where the drainage-tube was, and there blood-clot filled the channel.

March 5th. Healing was complete everywhere, except a minute point where the drainage-tube had been. There had never been any pus or granulations.

March 12th. The wound was quite healed. The knee-joint movable.

March 25th. The patient was dismissed cured.

Here we observe that there was no local or constitutional disturbance after the operation; and such is the typical aseptic course. It is unfortunate that in this case, which I have selected as being one where the knee-joint was probably opened, a complete record of the temperature has not been kept. I may, however, state, from careful examination of many temperature-charts of cases treated antiseptically, that the following is their usual course. On the evening after the operation, the temperature is generally slightly below the normal, especially if the operation have been a severe one. Next morning, it is normal, or slightly elevated (one or two tenths of a degree). On the following evening, it is generally at its greatest height, being rarely higher than 100 deg. Fahr. It then rapidly falls, and is again normal twenty-four hours later. It never rises again, unless putrefaction occurs, or unless other causes of elevation of temperature, such as tension, come into play.

After the effects of the chloroform have passed off, the patient who has been operated on antiseptically has the aspect of perfect health, no impairment of appetite or other symptom of fever being present.

As regards the local effects, there is no pain, no inflammation, no suppuration; the discharge, which is serous in quality, rapidly diminishes in amount, and hence the dressing requires to be but seldom changed. If a joint be opened, there is no impairment of its mobility.

Any deviation from the typical aseptic course will be noted in the report of the cases.

In cases where the joint has been opened by accident, the state of matters is, of course, very different from that where the incision has been made under antiseptic precautions. In the accidental wounds, dirt or air with its dust have entered the joint before the surgeon sees the case; and the problem then is not only to prevent the entrance of causes of putrefaction, but also to destroy the vitality of those which have already gained admission. This is done by the injection into the wound and joint of a strong antiseptic lotion, care being taken that the fluid enters all the recesses of the wound, while at the same time any such distension as would force the fluid into the cellular tissue is avoided. The lotion used is, in cases seen an hour or two after the accident, 1-20 carbolic solution, and where several hours have elapsed, a solution of carbolic acid in rectified spirit 1 in 5.

The method of procedure is as follows. The surrounding skin having been washed with 1-20 carbolic lotion, and the external wound having been enlarged if necessary, the end of a gum-elastic catheter, connected with a syringe containing the lotion, is introduced into all the recesses of the wound, and the fluid is thus applied to all parts, the large opening allowing its free exit. Any coagula found in the wound are at the same time sponged away. Suitable drainage is then provided for, and an antiseptic dressing applied, the whole operation being done in a cloud of carbolic spray.

Here, of course, success is no longer a matter of certainty. It may be that the wound is a very complex one, and that some of its recesses may not have been reached by the lotion. When, however, success is attained, the case follows a course similar to that just described.

In accordance with this difference in the conditions, I have arranged the cases in two groups, according as the incision into the joint was made by the surgeon or was the result of accident.

* In some rare instances organisms have been found in the pus of previously unopened abscesses. This has been notably the case in acute necrosis. These exceptions are, however, so rare, as to justify the general statement in the text. (See a paper by myself "On the Relation of Organisms to Antiseptic Dressings", in the *Pathological Transactions* for 1879.)

Table A.—Operations on Joints.

No.	Name and Age.	Date of Admission, Operation, and Discharge; with Result.	Disease.	Treatment.	Remarks.
1	John C., 46.	*Ad.*, April 5, 1872. *Op.*, April 6, ,, *Dis.*, May 9, ,, *Result*, cured.	Caries of metacarpal bone and first phalanx of ring-finger.	Removal of the finger and the whole of the metacarpal bone; the articulations being of course opened.	On April 23rd, the wound had entirely healed, except a small point at the distal end. Aseptic course.
2	David B., 39.	*Ad.*, July 22, 1872. *Op.*, July 22, ,, *Dis.*, Aug 5, ,, *Result*, cured.	Loose cartilage in knee-joint.	Free incision into joint; cartilage removed.	Wound was completely healed on August 5th. It had been dressed four times. Aseptic course. Knee freely movable.
3	John McI., 34.	*Ad.*, March 13, 1873. *Op.*, March 28, ,, *Dis.*, June 6, ,, *Result*, cured.	Ununited fracture of olecranon; fracture oblique; considerable separation of fragments. Patient unable to extend the arm. Accident occurred five months previously.	Incision over olecranon, the cartilaginous end of the humerus being at once freely exposed. Ends of fragments refreshed, drilled, and tied together by strong silver wire. Wound left open. Splint applied so as to keep the arm extended.	The wound had completely healed on May 2nd, except where the wire projected. Dressed ten times. Wire removed on May 19th, when union was complete. Passive motion was commenced on April 8th, and was performed at each dressing. Typical aseptic course. When dismissed, the movements of the arm were almost perfect. In a letter received from the patient some time afterwards, he stated that the one arm was as good as the other.
4	John H., 19.	*Ad.*, May 6, 1873. *Op.*, May 31, ,, *Dis.*, Aug. 15, ,, *Result*, cured.	Dislocation of the lower end of the ulna backwards. The lower end of the radius was much thickened. Suppuration had occurred in the sheaths of the tendons. The movements of the wrist-joint were painless, but limited, more especially as regards extension.	Abscesses opened; end of ulna removed; drainage-tube introduced into the wrist-joint, which was healthy.	No local or constitutional disturbance followed the operation. When sent to the convalescent home on August 15th, there was still a small sinus, but this soon healed. The movements of the wrist-joint were greatly improved.
5	William T., 31.	*Ad.*, Nov. 19, 1873. *Op.*, Nov. 26, ,, *Dis.*, Jan. 8, 1874. *Result*, cured.	Loose cartilages in the elbow-joint. The movements of flexion and extension were impaired, more especially the former. Pain on attempting to complete these movements.	Longitudinal incision over external condyle. Joint opened; loose bodies (about 200 in number) scooped out. two drainage-tubes were inserted; wound stitched.	Healed on December 17th. Dressed seven times. Aseptic course. Arm was paralysed at first, owing to the pressure of the tourniquet; but, under the use of galvanism, this was cured. When dismissed, the movements were much improved. (See paper by Mr. Sampson Gamgee in *Lancet* for January 10th, 1874.)
6	Frances G., 54.	*Ad.*, Nov. 3, 1873. *Op.*, Feb. 8, 1874. *Dis.*, Sep. 14, ,, *Result*, improved.	Ununited fracture of neck of right femur. Accident happened 18 months ago. Right limb, 29⅞ in.; left limb, 31½ in. Suffered great pain; could neither sit nor walk.	The limb having been drawn down to full length by pulleys, an incision was made over and above the trochanter, and the ends of the fragments were refreshed with the gouge and hammer, the joint being opened in the process. Drainage-tubes inserted into joint; no stitches; long splint and extension with weight and pulley applied. Length of right leg after operation, 30⅝ in.	Healed on March 28th; aseptic course. Extension was maintained till April 3rd; and when it was at length removed, it was discovered that the weight had been too heavy, and that the limb operated on was longer than the other. When the patient left the hospital, there was not osseous union, but she was able to walk fairly and to sit, and the pain which she previously suffered had completely disappeared.
7	Grace S., 15.	*Ad.*, May 6, 1874. *Op.*, May 14, ,, *Dis.*, May 27, ,, *Result*, cured.	Ganglion on the back of both wrists beneath the extensor tendons, which had resisted all treatment: multilocular.	Both ganglia were removed, the tendons being exposed during the operation and held aside. On the right side the wrist-joint was opened, the articular surfaces of the scaphoid and radius being exposed.	When dismissed to be treated as an out-patient, healing was not complete. On June 2nd, the left wrist was found healed; on June 7th, the right had also healed. Left dressed seven times; right eight. Drainage-tubes removed May 20th. Typical aseptic course. Movements of fingers and wrist-joints on both sides were perfect.
8	Agnes ——, 17.	*Ad.*, July 1875. *Op.*, July 13, 1875. *Dis.*, Oct. 20, ,, *Result*, cured.	Ostitis of the tibia; bone much thickened. A sinus was present, leading down to bare bone.	Thinking that the case was one of necrosis, Mr. Lister cut down and gouged out a portion of the bone. In doing so, he found the interior of the shaft softened, and converted into a sort of granulation material. In scraping out the matter, the gouge accidentally passed into the ankle-joint, which was healthy. Chloride of zinc was applied, and a drainage-tube inserted.	When the patient was discharged, the wound had completely healed. There was no pain, and the ankle-joint was freely movable. No constitutional or local disturbance followed the operation.
9	Edward R., 59.	*Ad.*, Aug. 12, 1875. *Op.*, Aug. 17, ,, *Dis.*, Dec. 16, ,, *Result*, cured.	Enchondroma of scapula. A tumour had been removed from the same region seven years before the patient's admission to hospital.	The whole of the scapula below the spine, the spine itself, and about one-third of the glenoid cavity was removed, the upper border of the scapula and part of the glenoid fossa being left.	A portion of one of the flaps lost its vitality, leaving a large deep hole, at the bottom of which the articular end of the humerus could be seen. This took a long time to fill up, but was completely healed when the patient was discharged. The rest of the wound healed by first intention. Passive movement was kept up; and when the patient was dismissed, there was good movement at the shoulder-joint.
10	Alexander —, 26.	*Ad.*, Nov. 10, 1875. *Op.*, Nov. 16, ,, *Dis.*, Dec. 26, ,, *Result*, cured.	Four months before admission, patient met with an accident, causing fracture of the ulna a little above its middle, and dislocation of the head of radius backwards. Pronation and supination were almost impossible. Extension could be carried slightly beyond a right angle.	External lateral ligament of the elbow-joint divided and head of radius snipped off. Drainage-tube inserted into joint. No stitches.	Healing was complete on December 8th. Dressed six times; aseptic course. Passive movements were begun on November 18th. When discharged, the movements in all directions were very fair. When seen again on September 1877, all the movements were almost absolutely perfect.
11	James D., 16.	*Ad.*, Feb. 14, 1876. *Op.*, Feb. 14, ,, *Dis.*, Mar. 20, ,, *Result*, cured.	Patient was run over immediately before admission. Left ankle much bruised and distended with effused blood.	Joint incised and clots evacuated.	Aseptic course. On March 10th, the wound was quite superficial, and boracic dressing was applied. Movements of joint normal.
12	John D., 64.	*Ad.*, May 18, 1877. *Op.*, June 1, ,, *Dis.*, Sept. 8, ,, *Result*, much improved.	Rupture of rectus femoris and crureus in both thighs, the vasti being still attached to the sides of the patella. No power of extension; though, if the leg were extended, it could be kept so. If it became at all bent, the patient fell.	Vasti detached from the sides of the patella. Upper border of patella was rawed, and the vasti were stitched to it—a V-shaped portion being taken out of the rectus and crureus. Counter-opening made at the sides of the joint and drainage-tubes inserted. Only one knee operated on.	Wound went on well for about three weeks, when, owing to the patient pushing his hand under the dressings, the wound putrefied; but by this time the opening into the joint had closed, and no harm resulted. When dismissed, the patient could extend his knee after it had been bent to an angle of 135 deg., the other knee being kept extended by means of a splint: he could walk without fear of falling. (See report of case by Dr. Roxburgh in *Lancet*, 1878.)

[*Table of Operations on Joints continued.*

No.	Name and Age.	Date of Admission, Operation, and Discharge; with Result.	Disease.	Treatment.	Remarks.
13	Adam W., 7.	*Ad.*, May 27, 1877. *Op.*, July 6, ,, *Dis.*, Aug. 24, ,, *Result*, cured.	Badly united fracture of the lower end of the humerus, the lower part of the upper fragment projecting backwards and locking the olecranon, thus causing inability to extend the forearm beyond an angle of 120 deg.	Two longitudinal incisions made on the posterior aspect of the joint: one between the external condyle and the olecranon, the other between the olecranon and the ulnar nerve; these incisions, of course, opening the articulation. The projecting portion of the humerus was removed through the incision, the attachment of the triceps to the olecranon process being left intact, and a hollow was gouged for the reception of the olecranon process. In order to get complete extension, it was necessary to remove the whole of the external condyle; drainage-tubes inserted.	The wounds had quite healed on July 30th; dressed six times; typical aseptic course. When discharged, the movements of the elbow-joint were almost absolutely perfect.
14	William T., 35. (See No. 5.)	*Ad.*, July 19, 1877. *Op.*, July 25, ,, *Dis.*, Aug. 11, ,, *Result*, cured.	Return of previous symptoms.	Elbow-joint opened; no loose bodies found, but a number of bodies attached to a fringe of synovial membrane were removed.	Aseptic course. Wound had healed, and the movements were restored when the patient was discharged.
15	Francis S., 40.	*Ad.*, Oct. 24, 1877. *Op.*, Oct. 26, ,, *Dis.*, Jan. 11, 1878. *Result*, cured.	Transverse fracture of the right patella, produced by striking the bent knee against a bar. Patient was admitted on October 12th, but insisted on going home, and on being treated by apparatus. As the apparatus did not answer, he now readily consented to the performance of the operation previously proposed.	A longitudinal incision about three inches in length was made over the patella, when it appeared that the fragments were mutually displaced, and a mass of firm coagulum, mixed with fibrous tissue, interposed between them, so that it would have been impossible to bring the osseous surfaces into contact except by operative means. This was removed, and the ends of the fragments were then refreshed, drilled obliquely, and tied together with strong silver wire. An opening was made into the joint on the outer side for the introduction of a horsehair-drain. The wound was closed by stitches, and the limb placed on a posterior Gooch's splint.	The wound had completely healed on November 17th, except where the wire was. Drain removed from knee on November 4th. Incision into side of knee healed November 11th. Dressed seven times; typical aseptic course. Wire was removed on December 21st. The splint was left off on January 7th. Patella firmly united. There was naturally considerable stiffness of the knee, owing to the limb having lain so long in the splint, but it could be moved with ease through an angle of about 45 deg. Patient would not submit to forcible movement under chloroform, or even to wear an elastic apparatus for gradual flexion.
16	John S., 5.	*Ad.*, Feb. 6, 1878. *Op.*, Feb. 6, ,, *Dis.*, Mar. 29, ,, *Result*, cured.	Hæmophilia, with effusion of blood into the right ankle-joint. Stated that he was kicked on the ankle three days before admission. Patient was suffering great pain and constitutional disturbance. The joint was tense from the presence of fluid; and, as Mr. Lister feared that suppuration might ensue, he incised the joint.	An incision was made on each side of the ankle-joint. A quantity of dark fluid-blood escaped. Horsehair-drain passed through the joint.	Both wounds had healed on March 22nd. Hæmorrhage occurred from one of the wounds on the morning after the operation, and recurred at intervals for three days, being at length checked by the application of a solution of perchloride of iron in glycerine. Wounds were quite superficial on March 12th, and boracic dressing was therefore applied. No suppuration; aseptic course. When discharged, there was no pain in the joint: the joint was quite movable, and the boy was able to run about. Patient was in hospital in September 1879, on account of bleeding from his finger. The ankle was then in every respect quite normal.
17	William B., 45.	*Ad.*, March 18, 1879. *Op.*, March 20, ,, *Dis.*, May 4, ,, *Result*, cured.	Ununited fracture of the olecranon of nine weeks' standing. Patient could not extend his forearm. The fracture was oblique; and, on flexion, there was considerable separation of the fragments.	An incision was made on the ulnar side of the posterior surface of the olecranon. Ends of fragments were refreshed with a chisel and hammer, the joint being of course opened. Fragments were then drilled obliquely and tied together with strong silver wire. Horsehair-drain passed into joint. Wound stitched; arm placed on a splint in the extended position.	The wound had entirely healed on April 9th, except where the wire was. Typical aseptic course. Drain and stitches were removed on March 27th. Passive motion was begun on March 31st; wire removed May 11th, the union of the fragments being then complete. When discharged, he was able to extend his arm almost completely. In a letter received from him in October 1878, he states that this arm is almost as useful as the other, and that he can carry on his trade as a plasterer, which he could not do before the operation.
18	Edward W., 12.	*Ad.*, Jan. 5, 1879. *Op.*, Jan. 15, ,, *Dis.*, June 12, ,, *Result*, in process of cure.	Badly united fracture of the lower end of the humerus, with dislocation of both bones of the forearm backward. Accident happened three months before admission. The movements of the elbow-joint were very limited.	On the supposition that the case was simply one of fracture, a longitudinal incision was made behind the joint, with the intention of excising it; but the true nature of the case being revealed, it was determined to avoid interference with the bones of the forearm. A small slice was sawn away from the lower end of the humerus, which was greatly distorted and thickened by callus. The lower end of the humerus was then pared and shaped with chisel and gouge, so as to resemble the natural form of the articular end of the bone, hollows being gouged for the reception of the coronoid and olecranon processes. The dislocation was then reduced; drainage-tubes inserted, and wound stitched. The reason for preferring this operation to complete excision was to avoid the lagging behind in growth of the forearm and hand, which is so apt to occur after that operation in young children.	Aseptic course. Passive motion began on the day after the operation. Pronation and supination were perfect from the first, and always continued so. Owing to the movements, a sore remained on the olecranon till April 10th, when it had completely healed. The limb was very strong. The movements of extension and flexion were fair, and were constantly improving when the patient was discharged.

[*Table of Operations on Joints continued.*

No.	Name and Age.	Date of Admission, Operation, and Discharge; with Result.	Disease.	Treatment.	Remarks.
19	James P., 34.	*Ad.*, March 19, 1879. *Op.*, March 24, ,, *Dis.*, April 25, ,, *Result*, right cured; left *in statu quo*.	Loose cartilages in both knee-joints.	Having fixed the cartilage in the right knee, Mr. Lister cut down and removed it. Drainage-tube put into joint. Two days afterwards, a free incision was made into the other joint, in search of a very small loose cartilage, which could not be fixed, but which the patient could generally bring by his own manipulations to the spot incised. Protracted manipulations on his own part, carried out under the spray with carbolised hands, failed however to bring the body to the wound; nor could it be discovered, after a long search, with the finger and hooks.	Both wounds followed an aseptic course. Drainage-tubes removed from each the day after the operation. Right knee healed April 12th; left knee had healed before the patient left the hospital. Movements on both sides unimpaired.
20	Andrew G., 28.	*Ad.*, June 6, 1879. *Op.*, June 6, ,, *Dis.*, July 11, ,, *Result*, cured.	Patient was a medical man. He had suffered from bunion, beside metatarso-phalangeal joint of the great toe of the right foot, for 14 years. Pads, etc., had been used, but without effect. Patient was unable to walk even short distances without great pain; and he could not enter on the practice for which his medical education had now qualified him.	Mr. Lister made a longitudinal incision over the inner side of the joint on the dorsal aspect. The joint was opened, and the projecting inner end of the extremity of the metatarsal bone cut off. The remainder of the joint left intact. Drainage-tube inserted; no stitches.	Aseptic course. Wound was quite healed on July 9th. When discharged, the joint was quite movable; the swelling from thickening of the soft part much less. In a note received from him on September 16th, 1879, patient writes: "The prominence on the inner side of the foot has entirely disappeared, and I have perfect use of the joint, with entire absence of pain. I can walk ten miles without any inconvenience."

Table B.—Wounds of Joints.

No.	Name and Age.	Date of Admission, Operation, and Discharge; with Result.	Disease.	Treatment.	Remarks.
21	Frank K., 29.	*Ad.*, Nov. 20, 1871. *Op.*, Nov. 20, ,, *Dis.*, Dec. 23, ,, *Result*, cured.	Little finger-joint fractured in various places. Skin over hand contused. Fourth metacarpal bone laid bare in the greater part of its extent. Fourth metacarpo-phalangeal joint opened.	Little finger amputated; other parts well syringed with 1-20 carbolic lotion.	Some sloughing and suppuration occurred among the contused parts in the hand, and an abscess formed in the forearm. Entirely healed December 23rd. Passive movements were begun in December, and could be easily performed.
22	George G., 60.	*Ad.*, June 28, 1872. *Op.*, June 28, ,, *Dis.*, Oct. 1, ,, *Result*, cured.	Compound comminuted fracture of the humerus, caused by the wheel of a wagon passing over his arm. Humerus fractured in two places; the lower fracture communicating with the elbow-joint. Patient admitted about two hours and a half after the accident.	Wound injected with 1-20 carbolic lotion. Some loose pieces of bone were removed from the lower wound.	Putrefaction was avoided; typical aseptic course. The fracture had quite united on August 10th. The wound was quite superficial on Aug. 3rd, and boracic dressing was applied. On August 15th, erysipelas attacked the wound. This passed off, and the wounds were quite healed on Sept. 20th. When dismissed, patient was able to flex his arm sufficiently to enable him to touch his opposite shoulder.
23	Robert H., 30.	*Ad.*, May 12, 1873. *Op.*, May 12, ,, *Dis.*, July 17, ,, *Result*, failed; amputation.	Compound fracture of the carpal bones of the left hand. Extensive laceration of the soft parts. Machinery accident. Patient admitted immediately after the accident.	Wound injected with a solution of carbolic acid in rectified spirit (1 in 5).	Putrefaction occurred in spite of the injection; and as fever set in, Mr. Lister operated on May 16th, removing the carpus and fingers, but leaving the trapezium and the thumb. The flaps were left gaping, and carbolic oiled lint (1-10) was introduced between the flaps. Flaps brought together on May 24th. Stump was quite healed on June 25th.
24	Walter S., 42.	*Ad.*, May 17, 1875. *Op.*, May 17, ,, *Dis.*, May 21, ,, *Result*, in process of cure.	Wound of metacarpo-phalangeal joint.	Washed out with 1-20 carbolic lotion.	Putrefaction was avoided. Treated as an out-patient. Wound followed an aseptic course.
25	Francis J., 48.	*Ad.*, Oct. 4, 1875. *Op.*, Oct. 4, ,, *Dis.*, Dec. 4, ,, *Result*, cured.	Compound dislocation of the ankle; the articular surface of the tibia protruding through a large wound anteriorly. Both malleoli torn off.	The wound was injected with 1-20 carbolic lotion, and an attempt was then made to reduce the dislocation. This failing, the articular surface of the tibia was sawn off, the astragalus being left untouched. Foot fixed at right angles to leg.	Aseptic course. The wound was almost absolutely healed when the patient was discharged. Joint strong and slightly movable. The temperature was on one occasion as high as 100 deg.
26	Henry W.	*Ad.*, June 8, 1876. *Op.*, June 8, ,, *Dis.*, June 13, ,, *Result*, cured.	Thumb and trapezium nearly torn off, and the carpal joints opened. Gunshot-wound.	The thumb, with its metacarpal bone, was removed; the trapezium was also dissected out. The wound and the carpal joints, as far as possible, were injected with 1–5 solution of carbolic acid in rectified spirit.	Aseptic course. Treated as an out-patient after June 13th. On June 31st, it was almost absolutely healed.
27	David S., 13.	*Ad.*, May 2, 1877. *Dis.*, after Mr. Lister left Edinburgh. *Result*, cured.	Large lacerated wound of right knee. Large flap of skin thrown to one side. The mud was ground into the cartilaginous surface of the internal condyle of the femur. The accident resulted from a wheel of a heavy cart passing over his leg.	Shreds of tissue were clipped away, and the cartilage of the condyle was pared with a knife where the dirt was most ground in. The whole of the dirty wound was scrubbed with a nail-brush, and 1-20 carbolic lotion, and, in addition, 1-5 spirituous solution of carbolic acid, was applied. No stitches were inserted. The limb was placed on a posterior splint.	The wound became filled with blood-clot, the deeper part of which became organised. On May 27th, there was a large granulating surface. The wound was quite superficial on June 26th, when boracic dressing was substituted for the carbolic acid. There was at that time very considerable movement of the knee-joint, without pain. In August 1878, "patient visited the hospital, walking without any assistance, the two knees being equally useful, except that the injured one was still somewhat stiff".
28	Ellen M., 12.	*Ad.*, Nov. 6, 1877. *Op.*, Nov. 6, ,, *Dis.*, Nov. 17, ,, *Result*, cured.	Punctured wound of ankle-joint, caused by scissors. The accident happened twenty-one hours before admission. Glairy fluid escaped, and a probe passed into the joint. Foot red and swollen.	Wound enlarged, and joint injected with a solution of carbolic acid in spirit (1-5).	The wound had quite healed on November 17th. Aseptic course; dressed four times. When patient was discharged, the ankle was quite normal, with perfect movement.

[*Table of Wounds of Joints, continued.*

No.	Name and Age.	Date of Admission, Operation, and Discharge; with Result.	Disease.	Treatment.	Remarks.
29	Jane D., 50.	*Ad.*, Oct. 15, 1878. *Op.*, Oct. 15, ,, *Dis.*, June 20, 1879. *Result*, cured.	Compound fracture of the lower end of the femur, with splintering of the condyles into the joint. Patient was seen one hour and a half after the accident.	The opening in the skin was enlarged. The projecting end of the femur was sawn off, and reduction was effected. The wound was washed out with 1 to 20 carbolic lotion. An incision was made into the knee-joint on the outer side, and a drainage-tube was inserted into the joint, to prevent accumulation of fluid.	Aseptic course. The drainage-tube was removed from the joint on October 28th, and the wound of the joint had completely healed on November 24th: the wound in the thigh healed on December 13th. As the fracture remained ununited, Mr. Lister injected iodine between the ends of the fragments on February 14th. Union not yet occurring, Mr. Lister cut off the ends of the bones and wired them together with thick silver wire. The femur is still ununited, but is under treatment.
30	Maria L., 60.	*Ad.*, Nov. 12, 1878. *Op.*, Nov. 12, ,, *Dis.*, April 19, 1879. *Result*, in process of cure.	Compound dislocation of the left ankle-joint, with comminuted fracture of the fibula and fracture of the internal malleolus. Skin in the neighbourhood of the wound much contused.	The detached portions of bone were removed; wound syringed out with 1 in 20 carbolic lotion. Dislocation reduced. Drainage-tubes inserted. Dupuytren's splint.	Aseptic course. Some portions of the skin sloughed. When discharged, the wound was almost healed, but the ankle-joint was stiff.
31	Henry B., 22.	*Ad.*, April 20, 1879. *Op.*, April 21, ,, *Dis.*, May 30th, to come as out-patient. *Result*, cured.	Patient jumped over Waterloo Bridge; in his descent, struck his left elbow against the side of the parapet. The result was an oblique fracture into the elbow-joint, detaching the internal condyle. There was a small opening in the skin communicating with the fracture.	Wound enlarged; some small fragments of bone removed, and the wound and joint syringed out with 1 to 20 carbolic lotion. Drainage-tubes inserted.	Aseptic course. Wound completely healed on June 30th. The movements of the joint were then very good, and have since that time steadily improved.
32	Samuel M., 54.	*Ad.*, July 8, 1879. *Op.*, July 8, ,, *Dis.*, July 24, ,, *Result*, cured.	Punctured wound of the left knee-joint, just above the patella. The finger, when introduced into the wound, passed into the joint, and felt the under surface of the patella. Synovial fluid escaped. Great pain on movement of the joint. The wound was inflicted about fourteen hours before the patient came to the hospital.	Joint washed out with 1 in 20 carbolic lotion, and with a solution of carbolic acid in rectified spirit (1.5). Drainage-tube inserted; posterior splint applied.	Aseptic course. Pain on moving the knee ceased a few hours after it had been washed out. The wound was quite superficial when the patient was discharged, and the knee was quite movable. Healing was complete on July 31st. The patient was seen in October, the movements of the knee being then perfect.

ON THE INSIDIOUS PROGRESS OF GRANULAR DISEASE OF THE KIDNEY.*

By W. R. THOMAS, M.D., M.R.C.P.,
Physician to the Sheffield Public Hospital and Dispensary; Lecturer on Medicine, Sheffield Medical School.

Granular disease of the kidney is often very slow in its progress, and the symptoms are frequently slight, apparently trivial, and such as are not likely to direct our attention to these organs. The urine may not contain albumen for some time, and the symptoms complained of may be attributed to disease of other organs. I bring the following cases of that kind before the notice of this Society.

Case I.—A gentleman aged 42, who had worked hard for many years, and who had found that he had great difficulties to encounter in endeavouring to make his way in the world, but had ultimately attained a very good position and had amassed a good deal of wealth, found that, during the last twelve months, he had become weaker day by day; his appetite had been impaired; he had not that aptitude for mental work he used to have; he had a desire to micturate about thrice every night; his sight had gradually become more and more dim; and work, which to him had hitherto been a pleasure, was now looked upon by him with a sense of dislike. He had frequently suffered from pains across the forehead, and had come to the conclusion that he had overworked his brain and that he required rest. I was called in because he suffered from an attack of severe vomiting, which, in spite of treatment, lasted for many weeks. His urine, when examined, was loaded with albumen, and casts were found on making a microscopic examination; it was alkaline, and phosphates were plentiful. The vomiting continued for several weeks, and was always worse in the morning. The quantity of albumen diminished, casts of tubes continued to show themselves, and at last slight general anasarca became visible; the patient one evening suddenly became comatose, and died. On making a *post mortem* examination, the kidneys were found to be very much diminished in size; the capsules were quite adherent; their surface was granular. It was an ordinary granular kidney, in which large cysts were found.

Case II.—Mrs. ——, aged 34, married had borne four children, and had always enjoyed perfect health until two years ago. Ever since that time, she had noticed that her strength was gradually failing her; she suffered from severe dyspeptic symptoms, with frequent vomiting and diarrhœa, the latter alternating with severe cough from bronchitis, but there was not any evidence of phthisis; frequent desire to micturate was complained of, and the act of micturition was accompanied by pain; the urine was loaded with albumen, exhibited casts, and oxalates were plentiful. No history of alcoholism could be found, nor could the disease be accounted for. The severe vomiting continued, the diarrhœa also. Then for a few weeks but very little urine was passed, uræmic convulsions came on, and the patient died. *Post mortem*, granular kidney was found.

Case III.—Mr. —— complained that, for the last four years, his health had gradually become more and more shattered; he had suffered from aching pains in all his limbs, nausea with vomiting, constipation; his sight had lately failed him; his legs tottered; the urine contained albumen and casts. A distinct blue line could be seen along the gums. He had been in the habit for the last twenty years of taking snuff; he was recommended to abstain from using it. The symptoms to a certain extent now subsided, and he partly regained his former state of health; but, in a few months afterwards, he caught a severe cold, and died of pneumonia. After death, among other appearances, the kidneys were found to be very small and in a granular state.

The first patient was a gentleman who had always undergone a great deal of mental exertion and worry, which had ultimately brought on serious renal disease. This is a case somewhat similar to those ably described by Dr. Clifford Allbutt, in a paper written by him in 1877. The symptoms complained of by him at first were simply those of dyspepsia, with head-symptoms, from which we would naturally expect one who had overworked his brain to suffer, yet, at the same time, grave disease was, I have no doubt, progressing in the kidneys, which would have been found out had medical advice been sought for earlier.

The second patient complained at first only of dyspeptic symptoms, with failing health; then came on severe vomiting and diarrhœa, and death ensued from convulsions. As the patient's health had been becoming worse for two years, I doubt not that the renal disease had been steadily progressing long before the more serious symptoms appeared.

The third patient had a number of the symptoms complained of by patients poisoned by lead, and at the same time chronic renal disease was progressing, owing no doubt to the irritation produced by the presence of lead in the blood circulating through the kidneys.

I have brought these cases before the notice of this Society because, in the first place, *post mortem* examinations were made, which proved (though I have not troubled you with the other *post mortem* appearances) that granular disease of the kidney was the principal cause of death in every instance; and to remark, that our attention may often be drawn to the fact of renal disease being present by the patient complaining of such symptoms as persistent frontal headache; symptoms of cardiac hypertrophy, without valvular disease; dyspepsia; vomiting;

* Read before the Yorkshire Branch of the British Medical Association

gradually increasing debility, with no evidence of other disease to account for it; frequent micturition at night; impaired vision; and other symptoms, which may not directly turn our attention to the kidneys. In fact, I consider that it is always advisable, whenever such symptoms evince themselves, to examine the urine; and then probably some abnormal conditions of it may be found, which will aid us in forming our diagnosis and in treating the patient.

I have frequently found that the presence of albumen and of casts may be intermittent or entirely wanting. The urine may be examined time after time, and be found perfectly free for weeks; then, for a week or two, both become apparent; then comes another intermission; and all this time the disease is steadily progressing; and at last, as has happened in a case which came under my eye lately, the patient dies suddenly from uræmic convulsions, or some of the other accompaniments of this disease.

I believe that, whatever the cause of the disease may be; whether in the gouty patient there be excess of lithic acid in the blood; whether the drunkard have his blood poisoned by alcohol; whether the plumber have lead in his; whether there be excess of phosphates in the blood from too much mental work, in the case of the over-anxious or worried merchant; whether there be excess of lithates or oxalates, oftentimes produced by faulty digestion; whether some other material be thrown upon the kidney for excretion by imperfect actions of skin or other organs—all act in a similar way. Owing to the increased amount of work the kidneys have to do, this disease is produced; and not only are the kidneys acted upon by the fluid circulating through them, but other parts—such as the blood-vessels, heart, and even the nervous centres; but, as the kidneys have the principal work of excretion to perform, they become sooner affected, and are to the physician the local manifestations of a constitutional disease.

Hence the necessity there is for us, when the most trivial symptoms tend to point out renal disease, to examine the urine; and, from the result of such and other examinations, to form a proper idea of the cause of the disease and of the treatment to be adopted.

CASE OF CARCINOMATOUS DISEASE OF THE RECTUM TREATED BY EXCISION.

By KELBURNE KING, F.R.C.S.,
Surgeon to the General Infirmary, Hull.

WILLIAM COUSINS, aged 54, was admitted into the Hull General Infirmary on December 21st, 1878, on account of the following symptoms. He had constant calls to evacuate the bowel, with much straining and bloody discharge, getting quit occasionally of small, hard, round fæces, which he compared to nuts. He had no real relief, except in consequence of purgative medicines, which caused him great pain. He had of late had much pain in sitting, and even in walking. His symptoms had been much increased in severity during the last six months, though they had existed more or less for a long period. On passing the finger into the bowel, three hard tumours were felt occupying the whole circumference, about the size of small walnuts. They were quite within the anus; but the finger could be passed beyond them, and the surface of the rectum could be felt healthy above them. They were sensitive to the touch and of preternatural hardness. Until the last six months, the man had enjoyed very good health, attributing any ailment he had to slight attacks of piles. He had recently fallen off in strength and health, owing to the constant state of pain and straining of the bowel.

On January 11th, 1879, I made an incision from the anus in the middle line straight backwards towards the coccyx. This gave me ample room to pull down the growths and the adjacent mucous membrane. Grasping them in my left hand, I carefully removed them with the right, cutting away the whole circumference of the bowel from the depth of between an inch and a half and two inches. Three or four vessels required to be ligatured. The wound at first presented a rather formidable appearance; but no bad symptom of any kind took place. The temperature never rose above 100°, and that only happened for two or three nights. He had immediate relief from all his sufferings, and left the infirmary on April 14th, 1879, apparently perfectly cured, and with complete command of the sphincter muscle.

I have thought this case of sufficient interest to bring before you, as operative procedures for malignant disease of the rectum have been usually strongly condemned until quite a recent period. Mr. Henry Smith, writing in Holmes's *System of Surgery*, makes the following remarks. "Some surgeons were a few years since in the habit of performing excision of the lower part of the rectum when affected with cancer; but this proceeding must be looked upon both as barbarous and unscientific, and it is now happily exploded from the catalogue of surgical operations." Of late, however, Mr. Cripps and others have published several cases demonstrating its practicability and giving very good results. The above is the first case in which I have had an opportunity of putting the operation to the test, and the results seem to justify its performance; and I would certainly be inclined in similar cases to perform it and to recommend its performance.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 25TH, 1879.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

TREPHINING FOR TRAUMATIC EPILEPSY.

BY JAMES F. WEST, F.R.C.S., (BIRMINGHAM).

[COMMUNICATED BY THE PRESIDENT.]

MR. WEST of Birmingham brought forward a case in which trephining had been successfully employed by him for traumatic epilepsy in a girl aged 14. The injury was due to a blow from a stone, which caused fracture of the skull and concussion of the brain. Since 1871, when it was inflicted, the girl had been subject to epileptic fits, which had year by year increased in number and severity, until they had at last reduced her to an almost idiotic state. Two circles of bone over the site of the depressed fracture (which was, however, found to involve only the outer table) were removed on November 25th, 1878, with antiseptic precautions. From that date, the girl began to improve: speech returned, also the power of controlling the bladder and rectum. Antiseptic treatment was discontinued on December 3rd, and at the end of the month she left the Queen's Hospital cured; and from that time to the present she had had no return of the epileptic convulsions. Mr. West gave a brief *résumé* of the surgical writings on the operation of trephining for epilepsy, calling special attention to the work of Dr. Lucas-Championnière on the subject (*La Trépanation guidée par les Localisations Cérébrales*, Paris 1878), and to the valuable paper by Dr. Echeverria on Trephining for Epilepsy depending upon Injuries of the Skull, in the *Archives de Médecine* for December 1878. He considered that the trephine might be applied with advantage in many cases where epilepsy was dependent on a traumatic origin; that there were, owing to recent discoveries in physiology, valuable indications to be derived as to the exact nature of the lesion, and the site at which the operation should be performed; and lastly, that, with antiseptic precautions, trephining might at the present day be performed with a greater prospect of success than it formerly could have been, and that it might now, therefore, he looked upon as a justifiable operation.

Dr. ALTHAUS said that Mr. West's paper was one of much interest; but he believed that epilepsy following injury of the cranial bones was extremely rare. In 3,000 cases of epilepsy which had come under his notice during the last fourteen years, he had found none traceable to injury of the cranial bones with depression or decided lesion. There was indeed a history of injury in some cases; but in most of these the patients recovered under the use of iodide of potassium. It was remarkable that in Mr. West's case an injury of the skull on the right side was followed by aphasia; but cases of aphasia had been met with in which the third left frontal convolution was not affected. The function of speech was evidently bilateral, and was under the control of the right hemisphere as well as of the left. He doubted whether cerebral localisation could guide the surgeon in the selection of the locality for operation. The aphasia would have suggested operation on the left side; and the motor centres were not in the frontal but in the parietal region. As regarded the operation of trephining for injury of the skull, the practice was not so successful as the published cases indicated. In France, the operation had been strongly opposed by M. Gosselin, on account of its danger. The directions given by M. Lucas-Championnière were very difficult to follow, and appeared to be rather calculated for physiological research than for surgical practice.—Mr. BELLAMY had had a case at Charing Cross Hospital, in which he had trephined over the fissure of Rolando with success, in a case of epilepsy, following an injury received thirteen years previously. The fits ceased after the operation: one or two occurred subsequently, probably from the formation of an abscess. The details of the case would be brought before the Clinical Society by Dr. Lees, under whose care the patient was.—Mr. WILLIAM ADAMS said that it was difficult to explain the success in Mr. West's case, as there was no depression of the inner table. He had met with two cases of the kind. In one, the late Mr. Green operated unsuccessfully. A few years ago, a patient was brought to the Great Northern Hospital with fracture of the skull. He became subject to fits. A consultation

was held, and trephining was suggested; but the place for operating could not be decided on. The man recovered under the continued use of tartarised antimony, given, according to Stromeyer's plan, in quarter-grain doses every three hours.—Mr. JONATHAN HUTCHINSON thanked Mr. West for the report of his case and for the evidence which he had collected. As regarded the occurrence of aphasia with injury of the right side, it must not be assumed that the injury was limited to the fracture; there might also have been injury by *contrecoup*. The epilepsy in the case was possibly quite distinct in origin from the other symptoms. He preferred the old rule of trephining at the seat of injury to endeavouring to find a place for operating by anatomical and physiological reasoning. He agreed with Dr. Althaus that epilepsy after injury of the cranial bones was not common: he had never been asked to operate in such a case. He believed that the operation of trephining was in itself not attended with much danger, whether performed with or without antiseptics. The statistics of the subject were very fallacious: in many cases, the patients died of causes independent of the trephining. No operation had suffered more in repute from loosely collected statistics than trephining. He had often trephined in cases of compound fracture of the skull in anticipation of cerebral irritation, with very favourable results.—Mr. GAY referred to the case of a man who some time ago was brought into the Great Northern Hospital in consequence of having attempted suicide by drowning, and who some days afterwards cut his throat. Four years previously, he had fallen from a height and fractured the skull in the right parietal region. Portions of bone necrosed, and after a time the wound healed; after this, he became despondent, so much so that he was unable to work, and attempted suicide. At the *post mortem* examination, a portion of the inner table, rounded, and without sharp edges, was found driven in just in front of the fissure of Rolando: it was adherent to the dura mater, which was thickened and pressed on the brain-substance. No trace of disease could be found elsewhere in the brain. Pressure over the seat of injury in this case produced hallucinations of sight, which became more distinct if the pressure were increased. Immediate trephining after injury was a dangerous operation, and only to be done under urgent circumstances.—Mr. HOLMES had many years ago seen a case in which trephining was performed on account of epileptic symptoms following injury to the head. The dura mater was injured in the operation, and the patient died of meningitis. At the necropsy, chronic inflammation of the brain and membranes was found. Such a case, however, afforded no argument against operating in cases where the patient's condition was evidently tending to death. Mr. West's case was successful; but he might be disappointed in a second case. In spite of antiseptics, trephining was a most dangerous operation.—Mr. T. SMITH asked whether Mr. West attributed the recovery to the trephining.—Mr. F. DURHAM had, as surgical registrar of Guy's Hospital, seen two cases of trephining for traumatic epilepsy. In one case, under the care of Mr. Cooper Forster, the fits diminished after the operation and at last ceased. In the second case, under Mr. Howse, the operation was done antiseptically. The patient recovered from it, but the fits recurred. In neither case was trephining followed by any bad results.—Mr. BRYANT asked whether something less than trephining would not be sufficient in these cases. A man under his care had had a scalp-wound, which was followed by severe localised pain. Mr. Bryant thought he felt a depression in the site of the cicatrix, and made an incision; the bone was found quite healthy, without any sign of injury. The remarkable fact was, that the patient was relieved of his pain by the incision, and had no return of it. He had adopted the same treatment in two other cases of injury of the head with cerebral symptoms, in one of which there were convulsions. He agreed with Mr. Holmes that trephining was not a safe operation; the membranes were often liable to be injured. In certain cases of epilepsy, however, following injury of the skull, trephining was justifiable; he had once performed the operation under such circumstances, with some success. He was surprised to hear of Mr. Hutchinson's success with anticipatory trephining in cases of depressed fracture.*—Dr. DOUGLAS POWELL asked whether the injury to the skull in Mr. West's case was regarded as a direct or an indirect cause of epilepsy. He had seen a case in which an exostosis on the tibia, the result of a kick, was followed by epileptic symptoms, which were lessened in frequency after trephining the tibia.—Mr. WEST said that his case was in some respects remarkable. He did not pretend to think that the report of a single successful case would lead to the adoption of trephining in all cases of traumatic epilepsy; but where the conditions were analogous to those in his case, trephining would be not only justified but demanded. When he operated, he expected to find a fracture with depression, and was much surprised at finding none. The result, however—whether *post hoc* or *propter hoc* he would not say—was a remarkable alleviation of the symptoms. He agreed with Dr. Althaus that cases of epilepsy attributed to traumatic causes were rare; but he believed that careful inquiry would show injury to be the source of epilepsy more often than was supposed. It was rarely that a history of injury could be obtained in cases of disease of the spine or hip-joint; and yet injury was known to be the starting-point of the disease in a number of the cases. The same might be the case with respect to injury of the head as a source of epilepsy. No operation should be undertaken until all medical means had been tried; but he doubted whether, in such a case as his, iodide of potassium would have done good. Regarding Mr. Hutchinson's suggestion of *contrecoup*, he thought this was not so common as was supposed; and it could scarcely have been the source of the epilepsy in his case, for, if it had been, why should not the epileptic fits have continued after the operation? He agreed with previous speakers that trephining should be done at the seat of injury. He thought that trephining performed with care and under antiseptic precautions was not in itself dangerous. He had never tried simple incision as described by Mr. Bryant, and could not understand how it acted. In reply to Dr. Powell, he said that he thought the epilepsy must have arisen from reflex irritation.

* Mr. Bryant somewhat misunderstood Mr. Hutchinson's meaning here. What Mr. Hutchinson referred to was, preventive trephining in *compound* fracture, not in every case of *depressed* fracture.

SOUTH-EASTERN BRANCH: EAST KENT DISTRICT.

SEPTEMBER 25TH, 1879.

Traumatic Tetanus: Recovery.—Mr. HICKS reported a case of recovery from traumatic tetanus. J. S., gardener, aged 46, was first seen on July 10th. He was in profuse perspiration and great pain. His jaw was fixed; the eyeballs were prominent; and risus Sardonicus was well marked. He gave the following history. On June 24th, sixteen days previously, he received a wound in the finger from a broken crock, which healed in a few days. Ten days afterwards, his wife noticed a peculiar look about the eyes; and on the twelfth day he felt stiffness in the jaws. The symptoms increased; and on the fifteenth day he had the first spasm, and suffered severe pain in the region of the diaphragm. Linseed poultices were applied to the stomach, and tincture of Indian hemp given in ten-minim, and afterwards in fifteen-minim, doses. Animal broths and stout were freely administered. An incision down to the bone was made above the cicatrix, which was inflamed. The spasms increased, involving all the muscles of the body, and especially the recti abdominales. Opisthotonos was well marked. On July 20th, the jaw began to relax; and this relaxation gradually spread from above downwards, the last muscles to relax being those of the foot. On August 3rd, the patient was able to leave his bed, and subsequently made a good recovery.—Dr. Hicks also reported another case under his care, which also recovered under the Indian hemp.

Strangulated Hernia.—Mr. EDMUND OWEN read a paper, in the course of which he alluded to the necessity of making a thorough examination of the groins and other regions in every case of obstinate vomiting and so-called colic. He also urged the importance of an early operation in all those cases where, on the administration of chloroform, taxis, gently and discreetly applied, gave no good result. He regretted that there was so generally a waste of time before the patients were sent into hospital for operation, and that there had so often been made desperate and repeated attempts at reduction; and he suggested that it would be much better if the general practitioner were prepared to operate, and lost no time in relieving the strangulation. He deprecated the employment of the warm bath, as well as the local application of ice; and remarked that, with the introduction of chloroform, there should have been a greater improvement in the treatment of strangulated hernia than had in fact obtained.

Disguised Scarlatina.—Mr. RAVEN reported that, out of a family of six persons, four girls were found to be suffering from desquamative nephritis. One of these girls had recently had scarlet fever; the other three had shown no symptoms of the disease, and it only found expression through the kidney. The other two members of the family, having previously had scarlatina, were unaffected by albuminuria. Mr. Raven suggested that many cases of albuminuria, perhaps attributed to cold, might be true cases of zymotic disease, and possibly liable to spread the infection of scarlatina.

VACCINATION.—Mr. Crocker, public vaccinator for the Bingley district, has, a second time, received the Government grant for efficient and successful vaccination in his district.

DONATIONS.—Mr. W. H. Crawford has given £200 to the Building Fund of the Home for Protestant Incurables, Cork. Mr. Vere Foster has given £30 to the Society for Providing Nurses for the Sick Poor of Belfast.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, NOVEMBER 29TH, 1879.

IMPENDING LEGISLATION ON ANIMAL VACCINATION.

THE proposed reintroduction into the House of Commons next session of the Bill of Dr. Cameron, the able Member for Glasgow, which has as its aim the establishment of a national system of vaccination by lymph from the calf, has raised in a very definite form a question on which the medical profession is profoundly interested on behalf of the public. It is therefore reasonable and right that they should be amply consulted, and that they should have the opportunity of giving deliberate consideration before any conclusion is arrived at, or before even any discussion takes place on the subject in the much less informed, although more authoritative, arena of the House of Commons. Under ordinary circumstances, Bills affecting medical interest are dealt with by the Parliamentary Bills Committee of the Association, with the assistance of the delegates sent to that Committee by each of the Branches; every Branch is represented on the Committee, as well as the whole Association, by members appointed at the annual meeting, and occasionally advantage is had of further assistance which experts in the profession especially invited to attend have from time to time been most ready and generous in affording to the Committee at its stated meetings.

In this matter, however, the scientific as well as the public interests are so large; the number of practitioners concerned is so great, being nearly coequal with that of all men in practice—and there are very few who are not called upon from time to time either to vaccinate or to decide questions concerning vaccination—that the Committee has resolved to authorise its chairman to arrange an open conference, to which all members of the Association possessing special interest in the question are invited to attend, and before which Dr. Cameron will explain the grounds upon which he had based his Bill; while Dr. Warlomont of Brussels, who has perhaps the largest experience of vaccination from the calf of any man living, will give an exposition of that experience *vivâ voce*. For this purpose, he has kindly accepted the invitation of the chairman to come expressly from Brussels. Sir Thomas Watson, Mr. John Simon, Dr. Cory, Mr. Greene of Birmingham, Mr. Ceely of Aylesbury, and many others whose names are identified with the progress of vaccination in this country during the last half century, recognising the importance of the occasion, will be present, and, as occasion suggests, take part in the discussion. The President of the Local Government Board has expressed his interest in this discussion and the proceedings which may follow it, and has officially deputed one of the inspectors of the Board to attend the meeting on his behalf, in order to put that department of the Government in official communication with the Parliamentary Bills Committee of the Association in this matter. We learn that Dr. Ballard, who has already given great attention to the subject, and written a valuable treatise upon it, has been selected for this purpose. Four o'clock in the afternoon of Thursday next has been fixed as the date of the meeting, which will take place at the rooms of the Medical Society of London, in Chandos Street. An afternoon hour has been selected as being most convenient to the veteran Sir Thomas Watson, Mr. Simon, and others who are unable to attend evening meetings during this inclement season.

As little time will be available for the many important communications which will be made at this meeting, and with the view of clearing the ground for discussion by providing a basis of ascertained information on the subject, and suggesting the broad lines of discussion, the Chairman of the Parliamentary Bills Committee has prepared a report summarising, on the one hand, the result of personal observations of the working of animal vaccination abroad, together with a review of the authentic data available from the reports of the numerous existing institutions throughout Europe and in America; and on the other hand, adding a short statement of suggested conclusions, which will probably afford a convenient basis for the debate. In order to save time, and to put all who are interested on the footing of being fully informed of the existing status of the question, and of the arguments thus far used for and against the introduction of vaccination from the calf, this report is printed in the present number of the JOURNAL. It has been impossible to prevent its running to a greater length than we could have desired, although great trouble has been taken to condense the mass of matter on which it has been based into the smallest possible limit.

It is desired that both sides of the question should be amply represented in the discussion, especially as it must be remembered that Dr. Seaton, the principal medical officer of the Local Government Board, who takes so deep an interest in the question, and to whom we are so largely indebted in this country for the effective organisation of the vaccination arrangements, has more than once expressed himself as opposed to the introduction of calf vaccination in the past. Unfortunately, the state of health of Dr. Seaton will render it quite impossible for him to be present. We could earnestly have desired that he could be present to repeat them on this occasion, and to hear and discuss what is to be said on the other and on all sides of the question. The Local Government Board, however, will be ably represented on the occasion, and it is a matter of satisfaction that the Association and that great department of the public service will in this matter proceed harmoniously to the endeavour to obtain a satisfactory solution of a question which has been repeatedly raised in urgent form, without obtaining any satisfactory solution in this country, and which is still encumbered by difficulties which give rise to constant agitation, to many heart-burnings, and to much legislative difficulty.

It is the part of our Association to contribute powerfully to the solution of such legislative difficulties, and it will, we hope, be felt that, in taking these special pains to contribute a very large and important quota to the enlightenment of the public mind on this subject, the Parliamentary Bills Committee is fulfilling satisfactorily its duty towards the Association, which extends to it the highly important duty of watching over all legislation affecting medical subjects.

THE REGISTRATION OF INFECTIOUS DISEASE IN EDINBURGH.

THREE years ago, Dr. Littlejohn, the able Medical Officer of Health for Edinburgh, published a paper of great value and interest on the subject of the compulsory intimation of infectious diseases to sanitary authorities. Dr. Littlejohn showed clearly, from his experience, how impossible it was to cope satisfactorily with the spread of such diseases in Edinburgh, unless the sanitary staff had information of the occurrence of each case as soon as it was recognised; and he mapped out a plan by which this might be accomplished. No result of any moment seems, however, to have followed the issue of this report until the present year, when a clause was inserted in a local Bill, making such notification compulsory. This clause has now been passed into law as Section 208 of the "Edinburgh Municipal and Police Act, 1879", which came into force on the 7th instant. The clause requires that "every medical practitioner practising within the burgh shall, within twenty-four hours of the same coming to his knowledge, report to the Medical Officer of Health every case of cholera, typhus fever, typhoid fever, diphtheria, small-pox, scarlet fever, scarlatina, and measles (in this Act characterised as infectious or contagious diseases) occurring in his practice, and stating the house or place where the patient is being treated, under a penalty

not exceeding forty shillings; and if it be found on inquiry by the Medical Officer of Health that the diagnosis of such practitioner was correct, such practitioner shall be paid the sum of two shillings and sixpence for each case reported and verified as aforesaid; and in order to facilitate the making of such report, every such practitioner shall from time to time be furnished, on application to the Medical Officer of Health, with printed forms stamped for postal transmission".

Considering the now considerable experience that Parliament has gained with reference to the proper way of providing for this notification, it is to be regretted that a clause so imperfect should have been allowed to pass without question. The explanation is probably to be found in the fact that the English Local Government Board, who are taking a real interest in having this question settled on right principles, have no control over Scotch local bills, and have thus had no voice in the matter. In order that such a clause as that reproduced above may not be perpetuated, it may be well to explain at once the objections to it. In the first place, no duty at all is cast upon the occupier, upon whom (for the reasons explained in the Report of the Chairman of the Parliamentary Bills Committee, published in the JOURNAL of November 22nd, the onus of giving the information should primarily fall. The fact that, if they call in a medical attendant, the local authorities will know of the existence of infectious disease in their houses, and perhaps take action which may interfere with their business transactions, will inevitably deter ignorant or unscrupulous persons from seeking medical advice—at all events till too late to be of service; or it will, which is quite as great an evil, lead to the employment of quacks and unqualified persons, and to more frequent application to druggists. Again: it is manifest, from the arguments of the Registration of Disease Committee of the Association, that it is improper to put medical practitioners into the relationship with the local authorities that this clause contemplates. The certificate of disease should be given by the medical attendant to the occupier or other responsible person, with whom the responsibility of acquainting the local authority should lie. We are aware that Dr. Littlejohn holds a strong opinion in opposition to this view, and doubtless it is owing to his influence that the clause has been framed in its present form. But we cannot believe that Dr. Littlejohn is responsible for the extraordinary proviso that the fee of half-a-crown, to be paid for every medical certificate, is to be given only "if it is found on inquiry by the Medical Officer of Health that the diagnosis of such practitioner was correct". It is difficult to understand the purpose for which this proviso was inserted. Is it seriously meant that the Medical Officer of Health is to inquire into the merits of every case before payment is made? And if so, how is he to satisfy himself of the accuracy of the diagnosis, except by personal examination of the patient? It is, of course, superfluous to say that this, even if practicable, would be resented by every right-minded practitioner, who would feel his half-crown very dearly bought at the loss of his self-respect. It appears to us that this proviso will cause an unmeasurable amount of unpleasantness to the Medical Officer of Health, as well as to the medical profession in the town. It assumes in effect superior accuracy of diagnosis to the Medical Officer of Health than to his colleagues, and cannot but bring him into collision with some one or other of them before long. It is a needless, though probably unintentional, slight upon the qualifications of medical men, and, it is to be hoped, will be allowed to lapse into desuetude.

We may take this opportunity of explaining how it is intended to work the new clause. A book of forms and stamped envelopes, addressed to the Medical Officer of Health, have been sent to every practitioner in the town—the form having spaces for the date, disease, and locality of its occurrence, with the words beneath "No immediate attention required". Should any reported case appear suitable for removal to a public hospital, or should the surroundings of the dwelling, or any circumstances connected with the patient, appear of sufficient importance to have the attention of the authorities directed to it, the medical attendant is to draw his pen through the word "No", in the phrase at the bottom of the slip. Should a notice so marked reach the Medical Officer of Health, an inspector will call and take all necessary steps under his direction. If, however, the word "No" is allowed to stand, it will be understood that the medical practitioner considers it unnecessary or undesirable that steps of any kind should be taken in the public interest. In a fortnight, however, he will receive a notice from the sanitary office reminding him of his intimation, and of the ability and willingness of the officials to aid in fumigation and disinfection of rooms, clothing, etc. It is intended that a record of the reported cases of illness, arranged according to the various streets, etc., shall be kept, which will be open to the inspection of medical practitioners only.

CHLORAL AS AN ANÆSTHETIC.

ALTHOUGH chloral is accepted as an anæsthetic by nearly general consent, there is far from being a general agreement as to the manner in which sensibility is abolished by its use. M. Arloing, in a paper on the subject recently submitted to the Académie des Sciences, thus states the present state of opinion on the question.

According to Liebreich, chloral produces anæsthesia by the chloroform it furnishes, by being broken up on contact with the alkalies of the blood. According to Byasson, Lessonde, etc., by the combined action of chloroform and the alkaline formiates which also result from this disintegration. Finally, Demarquay, Gubler, Claude Bernard, Vulpian, etc., are of opinion that chloral acts as chloral, and that its effects have nothing in common with those of chloroform. The three following questions are still unanswered: 1. Does chloral undergo decomposition in the animal economy, or does it not? 2. In the case of an affirmative answer, is this separation the condition necessary to the production of anæsthesia? 3. What are the respective parts appertaining to chloroform and to the alkaline formiates in the phenomena following absorption of chloral?

On these points, M. Arloing formulates the following opinions. It is especially in the name of chemistry that the partisans of disintegration have spoken, and M. Arloing has endeavoured, by the help of the physiological reactions of the organism, to find if this separation exist; since those persons who refuse to accept it base their refusal on arguments drawn from the physiological effects of chloral. He chose as a reagent the circulation, a function which undergoes modification under the influence of the slightest causes, and of which it is possible to study the changes even to their smallest details; besides which, the special effects of chloral, chloroform, and formiate of soda on the circulation being known, he in a manner made the synthesis of chloral in the interior of the vessels, by injecting separately the quantity of chloroform and of alkaline formiate which would be furnished by an anæsthetic dose of chloral, and has registered all its effects, starting from the idea that, if he obtained by the experimental procedure all the modifications of the circulation which characterise the absorption of chloral, he would be in possession of the notion of separation of this body in the blood. M. Arloing notes in passing that, by injecting a solution of formiate of soda into the veins of an ass or a horse already chloroformed, the tracings of arterial and venous pressure, of the pulse and of the rate of the flow of the blood in the arteries, gradually assume the characteristics of the tracings of chloralisation. The disturbances of circulation produced by chloral present, then, the result of the modifications which belong to chloroform and to the alkaline formiates; and for this reason, he believes that the separation of chloral in the blood cannot be doubted. Likewise, if a small dose of chloral be injected into the veins of a dog, which has also received a somewhat large quantity of formiate of soda, two effects of the same tendency are combined, and the disturbances of circulation which belong to strong doses of chloral are obtained at once. M. Arloing is of opinion that disintegration is a phenomenon indispensable to the production of anæsthesia by chloral. This assertion is based on the following fact. It is known that the irritability of the sensitive plant is abolished by the vapours of chloroform. M. Arloing has shown, in a recent note, that the absorption of chloroform by the roots of this plant leads to the same result, whilst the absorption of chloral kills the sensitive plant without modifying its excitability. Why, then, does not the anæsthetic action of chloral, so

marked in the animal creation, persevere in a plant which is yet so sensitive to the action of chloroform and ether? M. Arloing believes that the cause of this difference is the fact that, reaction of the tissues of the sensitive plant being acid, chloral does not find in this plant the alkaline condition necessary for its disintegration; otherwise, M. Arloing cannot understand how chloral can lose its properties when the other anæsthetics retain theirs.

M. Arloing is of opinion that the anæsthetic effects of chloral are not due, as M. Byasson believes, to the combined action of nascent chloroform and formic acid, for the experiments which M. Arloing has undertaken, with an alkaline formiate, have convinced him that this salt does not diminish sensibility. He considers that chloralic anæsthesia is produced by chloroform. As to the alkaline formiates which become developed simultaneously, they contribute to the anæsthesia by their vaso-dilator action, by carrying the chloroform more rapidly and in greater abundance to the nerve-centres and the termination of the sensory nerves.

The adversaries of disintegration especially object that the slowness with which it is effected agrees but ill with the sudden appearance of anæsthesia after intravenous injections of chloral, and that the quantity of chloroform which would be derived from an anæsthetic dose of chloral would be incapable of producing deep and prolonged sleep. On reflecting that, in administration by inhalation, a large quantity of chloroform is dissipated in the air, whilst that which enters in the vessels is entirely utilised, this objection appears less striking. M. Arloing has also assured himself experimentally that the quantity of chloroform necessary to put an animal to sleep is always less than that which would be yielded by an anæsthetic dose of chloral. Thus, with from five to six *grammes* of highly diluted chloroform, slowly injected into the veins, M. Arloing has thoroughly anæsthetised large solipeds; to obtain this result with chloral, he was obliged to inject from thirty to forty *grammes*. The hydrate of chloral giving, then, 72.2 per cent. of chloroform, the quantity of chloral necessary to anæsthetise a horse would yield from twenty-two to thirty *grammes* of chloroform; that is to say, five times as much as in the free state, it would be necessary to inject to produce anæsthesia. If, also, the large quantity of chloroform which results from the disintegraion of an anæsthetic dose of chloral and the necessary slowness of this operation be taken into account, both the almost overwhelming onset and the long duration of the sleep in subjects which have had intravenous injections of chloral, can be understood. M. Arloing, therefore, concludes that chloral becomes decomposed into chloroform and alkaline formiates in the blood of animals, that the anæsthetic effects of chloral are due to chloroform, that the alkaline formiates favour their production mechanically by increasing the quickness of the circulation, and by thus facilitating the impregnation of the nerve-elements with the anæsthetic agent.

THE RECORDS OF ANTISEPTIC SURGERY.

It has of late been more than once made a sort of reproach to the author of antiseptic surgery, that his statistical results are not published. We have pointed out the weakness as well as the strength of this argument. Its weakness lies in the fact that irresistible evidence of the magnificent results of antiseptic surgery are to be found outside a bare statistical list of Mr. Lister's cases. Such individual clinical records and startling surgical achievements; such unknown immunity from surgical fever, suppuration, or shock, as might be seen continuously in his wards, and in the wards of other antiseptic surgeons, do not essentially require statistical proof. If any one thinks that he can under any other method open joints, puncture psoas abscesses, ovariotomise, hysterectomise the human frame with the almost absolute security from surgical calamity which may be daily and constantly observed among the results of antiseptic surgeons, he should bring forward the direct experience which justifies the statement. The mere charge that immunity from accident has bred temerity, is in itself a tribute to the protective working of the strict antiseptic method. There are great operations now which hardly any surgeon will venture to do except with the safeguard of Listerian precautions.

To-day, however, our columns furnish a record of all the cases of joint-opening in Mr. Lister's wards for a series of years, supplied in a paper by Mr. Watson Cheyne. The result shown is so marvellous a triumph over accidents known to be inseparable from a series of such operations till Lister robbed them of their danger, that they require no comment. Next Wednesday evening, at the South London district meeting, further evidence of like nature will be forthcoming.

We have before us, also, some statistical evidence of a remarkable character, which was volunteered by Mr. McEwen, the Chairman of the Glasgow Infirmary, who happened to be present at Amsterdam at the International Congress. The precise figures which Mr. McEwen then gave have only just reached us in detail; we shall refer to them again next week. They afford additional evidence of the statistical kind, which some have asked for.

Dr. Huntley has been a second time elected Mayor of Jarrow-on-Tyne.

The Baroness Burdett Coutts has given £100 to the St. Marylebone Fund of the Ophthalmic Department of the Royal Free Hospital.

In reference to the recent discussion by the Huddersfield Board of Guardians, which we noticed last week on the subject of small-pox "not being contagious", which we quoted from the *Huddersfield Chronicle*, we are glad to learn from the editor of that journal that "the mischievous trash" to which we alluded was commented upon and condemned by himself as well as ourselves.

Deputy Surgeon-General Alexander Smith, M.D., and Deputy Surgeon-General Headley, M.D., have been gazetted Companions of the Most Honourable Order of the Bath for services rendered during the Afghan campaign. A long general order, a copy of which will be found on p. 879, gives due thanks to the medical officers of the recent Afghan expedition for the conspicuous services which they rendered in the field. We shall take the earliest opportunity which space affords of putting on record this honourable testimony to the services of our army medical brethren.

St. Thomas's Hospital men feel, we learn, no small pride that Mr. R. P. Smith, at present the house-physician of Dr. Ord, has carried off the gold medal in Medicine at the second M.B. examination at the University of London, inasmuch as he is not the first St. Thomas's man who has been first in Medicine in several successive years. Such continuous successes can hardly be a matter of mere luck. It probably points to the admirable clinical training in Medicine for which Dr. Murchison, Dr. Bristowe, and Dr. Ord have rendered the medical wards of St. Thomas's Hospital widely and justly celebrated. Clinical teaching as a systematic art, whether in medicine or surgery, is often so imperfectly studied or so largely neglected in our hospital wards, that it is a pleasure to be able to point to a systematic and careful instruction reaping its due reward in public honours.

THE NEW ARMY MEDICAL WARRANT.

At the dinner of the British Medical Association to Surgeon-Major Reynolds, V.C., on Wednesday evening, Surgeon-General Longmore, C.B., in returning thanks for the Army Medical Department on behalf of the Director-General and of the Department, made the satisfactory announcement that he had the best authority for stating that the new medical warrant, which might be expected in the course of a very few days, would not only contain all the improvements in pay, retirement, and term of service, to which we have referred recently with much satisfaction, but it would also contain the provision for allowing forage to surgeons-major in accordance with the terms of the warrant of Lord Herbert, which we have more than once taken occasion to point out as being a further indispensable requirement in order to restore contentment to the Department and to satisfy the profession. The general

terms of this warrant will, therefore, be such as will, we trust, be found to be entirely satisfactory to the army and to the profession, and we heartily congratulate the War Office and the profession on this satisfactory result. If, however, an adequate number of candidates are to be obtained for the announced examination for existing vacancies, it is very necessary that not a day should be lost in issuing this warrant.

THE UNIVERSITY OF LONDON EXAMINATIONS.

WE have so often and earnestly urged that the examination degrees of the University of London are arranged without due regard to the requirements of medical curricula or fitness for practice, that we learn with much pleasure that a commencement is about to be made of a serious attempt to bring some of the examinations into better harmony with the course of study and the natural occupations of an earnest student at the various stages of his career. It is a poor little piece of patchwork which is being begun, but it is something, and it is in the right direction.

DINNER TO SURGEON-MAJOR REYNOLDS, V.C.

THE dinner in honour of Surgeon-Major Reynolds, V.C., the gold medallist of the British Medical Association, took place on Wednesday evening at Willis's Rooms, and passed off most successfully. Dr. Carpenter, President of the Council, occupied the chair; and about one hundred and forty members were present. After the toasts of "The Queen", "The Prince and Princess of Wales, and the rest of the Royal Family", and "The Army, Navy, and Reserve Forces" had been duly honoured (the last being responded to by Surgeon-General Longmore and Dr. Walter Dickson), the Chairman proposed the health of Surgeon-Major Reynolds, which was received with long-continued applause and duly responded to. The "British Medical Association" was proposed by Sir Joseph Fayrer, K.S.I., and acknowledged by Dr. Carpenter. The proceedings of the evening were enlivened with some excellent singing by Dr. Lavies, Mr. Casson, Mr. Anderson Critchett, and other members of the medical profession. We shall publish a full report in next week's JOURNAL.

THE LATE DR. HARRY LEACH.

WITH great regret, we have to announce the death of Dr. Harry Leach, who has for many years been favourably known to the profession as first Medical Officer to the *Dreadnought*, and subsequently as Medical Officer of the Port of London. Dr. Harry Leach was a man of great enterprise and activity of mind, who fulfilled his duties at the *Dreadnought* with remarkable energy, and showed much public spirit. He became deeply interested in the losses which the merchant navy endured, and in the sufferings of the merchant sailors from scurvy, due to defective provisions and want of pure and good lime-juice. As Medical Officer of the *Dreadnought*, he had at one time only too constant opportunities of witnessing the terrible sufferings and frequent deaths among the crews of trading-ships due to the defective provisions, and especially to irregularity in quantity and defective quality of lime-juice supplied. He was unwearied in his exertions in bringing the facts to the notice of the public and the Government, and was very influential in procuring those legislative improvements which have now insured a pure and regular supply of lime-juice for all merchant ships, and inspection of their provisions. He has thus been the means of conferring an inestimable boon upon the mercantile marine. Dr. Leach was the author of an excellent series of reports which appeared upwards of ten years since in this JOURNAL, on the necessity of inspection of the shipping arriving in the Thames, and on the sanitary control of that port, with the view of improving the health and comfort of the immense community of seamen and their families in constantly plying and coming to and from the Port of London. These reports attracted great attention; they were reprinted, and they were, we believe, a main instrument in procuring that sanitary inspection of the Port of London which has now been carried on with so much advantage, and has been imitated at other ports. Dr. Leach received the just recompense of his labours in being appointed the first Medical Officer of the Port of London. He organised that work with characteristic skill and energy, although greatly tried by the severe and insidious illness which has now proved fatal. He has died a comparatively young man, from lung-disease, which has compelled him to take, during the last few years, frequent leave of absence from his work, although to the last he continued to work bravely.

SCARLET FEVER AND DIPHTHERIA IN LONDON.

THE fatal cases of scarlet fever in London, which had been 69, 101, and 113 in the three preceding weeks, were 106 last week, and exceeded the corrected weekly average by 21; they again showed the largest proportional excess in East London, and included 7 in Pancras, 11 in Stepney, 11 in Mile End Old Town, 12 in Southwark, 7 in Newington, and 8 in Battersea. The Metropolitan Asylum Hospitals contained 317 scarlet fever patients on Saturday last (against 259 and 290 at the end of the two previous weeks), and 60 new cases were admitted during the week; the London Fever Hospital contained 112 scarlet fever patients on Saturday last.—The deaths referred to diphtheria, which had been 11 and 14 in the two previous weeks, further rose to 20 last week, and exceeded the number in any week since the beginning of this year; 2 were recorded in Marylebone, and 9 in South London, of which 3 occurred in Lambeth and 3 in Camberwell. The 17 deaths referred to croup also exceeded the average, and, like the fatal cases of diphtheria, were proportionally most numerous in South London.

THE TYPHOID OF TRAVELLERS.

SIR HENRY THOMPSON has rendered a valuable service to English travellers by calling public attention to a fact which has long been known to medical men, and especially to those of London who are largely engaged in consulting practice, viz., the frequency with which English travellers abroad contract typhoid fever, presumably from contamination of the drinking-water. It is well known to physicians that susceptibility to typhoid is special to two classes—those who enter as new comers into a district and become liable to the sources of infection, and adults. This peculiar susceptibility of new comers to a poison to which those gradually resident under its influence have become more or less accustomed, exists in reference to many fevers, but has been particularly pointed out in reference to typhoid fever by the late Dr. Charles Murchison, and has on many occasions been strongly exemplified in the history of local outbreaks. It was, for instance, a notable fact in the domestic outbreak of typhoid fever at Scarborough, in which the Prince of Wales, Lord Chesterfield, and many other of Lord Londesborough's guests were attacked, that the intensity of the outbreak spent itself almost exclusively upon the guests newly arrived at the house; and so it is with travellers drinking for the first time a water infected with typhoid germs. The rule is far from being absolute, but it has a very marked application. There are few physicians in good practice who cannot call to mind among their patients returning from the continent or travelling on the continent, individuals who have were attacked with typhoid fever contracted in the course of their travel. The last season has been very prolific in such instances. Not only have we had to deplore in our own ranks the death of Dr. Leared and the serious illness of Dr. Hare at Vienna; but from Homburg, and now from Dinan, comes the news of severe outbreaks, to which publicity has been given by the families of the mourners. It is, of course, easy to make light of such facts; but their evil consequences are neither to be dissipated by ridicule nor laughed out of existence; nor is the remedy, as Sir Henry Thompson has pointed out, very difficult to achieve. In the case of Sir Henry Thompson, who is a water-drinker, the remedy is to employ only a natural mineral water of known purity, of which there are many throughout the continent; while even wine-drinkers will find security in drinking no ordinary potable water supplied to them at any hotel or any other place, unless they have reason to feel absolutely secure as to its organic purity. As a matter of fact, the wells from which the water is drawn are commonly found to be near the surface, and are constantly liable to pollution by infiltration through the soil. Even wine-drinkers would do well to add to their wine, not common water, but a good mineral water. Dr. Hermann Weber,

whose experience in this matter is larger, perhaps, than that of any other English physician, recently gave emphatic expression to this warning on data derived from his own observation; and there can be no doubt that it is a caution of vital importance to travellers, and which cannot be too often repeated. It is, moreover, unquestionably true that the syphons filled with aërated water which are sold and used so largely on the continent are not by any means always derived from unsuspected sources, inasmuch as they are commonly filled either with the ordinary drinking-water of the town—frequently a source liable to pollution—or from some surface-well on the premises of the proprietor, which is itself by no means free from suspicion. Twelve or fifteen years ago, when English soda-waters were examined, and a statement of the result published by a well known English chemist, it was found that many of them were very far from being organically pure. Since attention has been turned to this subject, there is no doubt that in England considerable progress has been made; but it would be very rash for any traveller to assume that the syphon of eau-de-Seltz is free from risk. It is not uncommon to find the water from such a syphon, if it be left in the glass after the gas has escaped, absolutely stinking—a tolerably strong and sure evidence that it is polluted with organic matter.

THE NURSING QUESTION AT GUY'S HOSPITAL.

We much regret to hear that the agitation which has sprung up among the students at Guy's Hospital concerning some changes in the administration of the nurses has reached a very disagreeable stage. The Treasurer of Guy's Hospital, Mr. Lushington, is a gentleman of great ability, excellent good sense, and conciliatory character. He has deeply at heart the interests of the institution over the administration of which he presides, and we feel satisfied that he would give the fullest weight to the representations of authorised persons in the hospital on all subjects connected with its administration. This is a matter in which the plaintiffs have little to say, and with which they should be very careful not unnecessarily or improperly to interfere. We are warm advocates of all the just privileges of students' life; but meddling and interference with ward administration is reprehensible on their part, and we regret to see a disposition in some quarters to convert into a party question or a student's question matters of administration which is quite foreign to such considerations. Mr. Lushington has the advantage of the advice of one of the ablest hospital managers in England in the Resident Superintendent Dr. Steele, and among the staff men not only of European reputation but tried skill, and specially interested in nursing questions. We feel certain, therefore, that the interference of students will do no good, but may do much harm. The question should be left to settle itself, with the help of the constituted authorities.

DEATH FROM CHLOROFORM.

We are much indebted to Mr. H. H. Robinson, House-Surgeon of the General Infirmary, Hull, for the report of a death from chloroform which occurred in that Institution last week. The facts of the case are, briefly, as follows. The patient, a powerfully built country labourer, was admitted under Mr. Craven with a disorganised eyeball, the result of old injury. He came to the hospital for the purpose of having the eye removed, and, on November 21st, this was done by Mr. Craven. Chloroform was administered on a towel by Mr. W. H. Smith, one of the assistant house-surgeons, and the patient was quickly under its influence, without a struggle. The operation was then proceeded with and completed in something less than five minutes, the effect of the chloroform being kept up during part of that time. When on the point of dressing the eye, the patient suddenly ceased breathing, and his face became livid. The tongue was at once pulled forwards, and artificial respiration resorted to. Galvanism and nitrite of amyl were also tried, but unfortunately without success. So far as can be judged, the patient had not inhaled any of the vapour for three or four minutes previous to the respiration ceasing. Mr. Smith states that when the administration was stopped, the pulse was a fairly good one. *Post mortem*, beyond intense congestion of the kidneys, nothing was discovered to throw any light on the case, the heart and lungs being apparently perfectly healthy. Mr. Robinson says that chloroform has been administered daily in this hospital for many years, and only once previously, twenty-five years ago, with fatal effects.

ADULTERATION OF CREAM OF TARTAR.

The *Pharmaceutical Journal* calls attention to the continued systematic adulteration of cream of tartar.

"Some two years ago," it says, "the presence of sulphate of baryta in 'cream of tartar' was noticed by Mr. Kinninmont and other of our correspondents; and the examination of a number of samples, all purporting to be obtained from the same source, showed that those samples all contained sulphate of baryta. But notwithstanding the circumstance that the samples represented the same original bulk of ground 'cream of tartar', the percentage amount of sulphate of baryta was, strange to say, very different in the several samples; in some it exceeded 3 per cent., and in others it did not exceed ½ per cent." There is one point, which our contemporary considers especially conclusive in regard to the origin of the sulphate of baryta in 'cream of tartar', and explanatory of the varying proportion; and this is the fact that, by shaking a cask of 'cream of tartar' crystals in such a manner as to make all the dust settle down to the bottom, almost all the sulphate of baryta will be found in this dust—in one instance that lately came within our knowledge the amount was no less than 45 per cent. The *Pharmaceutical Journal* has, therefore, "reason to believe that the adulteration of 'cream of tartar' with 'heavy spar' is systematically practised, and it is probably carried out by throwing a handful of the coarse powder here and there into the casks while they are being packed. By the base ingenuity thus exercised, it becomes possible for the seller, at some stage of the commercial history of the article, either to sell below the market-rate, and thus to put honest dealers at a disadvantage, or to obtain an extra profit when selling at the market-rate. In the manufacture of tartaric acid, the presence of such an adulterating material as 'heavy spar' may well escape detection; and in the use of 'cream of tartar' for various other purposes, it may happen that the presence of 2 to 6 per cent. of sulphate of baryta may pass unnoticed until some one of the commodities into which 'cream of tartar' enters falls into the hands of a public analyst, and either the seller or the manufacturer comes to grief on a charge of adulterating his wares."

SOLDIERS' FEET.

Under the title of "A Special Affection of the Feet in Railway Navvies, and a Tumour of the Feet occurring in Infantry after Forced Marches", Dr. Dawosky and Surgeon-Major Weisbach of the German army describe one and the same affection, observed by the one in navvies employed on the railway, and by the other in foot-soldiers (*Deutsche Militärärtzliche Zeitschrift* and *Archives Médicales Belges*, April 1879). This affection, characterised by a swelling of the upper part of the foot, with redness and heat, is accompanied by extremely sharp, lancinating, and burning pain. This pain constitutes the initial symptom, and commences at the sole of the foot, whence it spreads towards the middle of the top of the foot, and even as far as the knee and thigh. In navvies, this affection has shown itself more especially in the right foot; in some cases, however, both feet have become involved. In soldiers, Herr Weisbach has found it in both feet, and more especially pronounced and painful along the course of extensor tendons of the second, third, and fourth toes, as well as in the vicinity of the metatarso-phalangeal joints of the same toes. Both writers attribute this affection to a change in the position of the foot, brought on in the case of navvies by the necessity of wheeling earth on narrow planks, on which the foot cannot spread itself out completely as in ordinary walking; in soldiers, by fatigue and muscular relaxation. This change has the effect of inclining the foot more inwards and throwing the weight of the body more outwards, thus causing contusion of the heads of the metatarsal bones and strain of the ligaments, especially the transverse ones, twisting them together. This continuous morbid action becoming permanent, naturally ends by producing inflammation of these ligaments and of the adjacent tendinous sheaths, whence the affection gradually spreading, soon shows itself in a more definite form on the upper surface of the foot, where the looser cellular tissue is more amenable to œdematous distension. Both authors recommend rest in the way of treatment above all things for the injured organ immediately on

the appearance of the initial symptom, pain. Thus, the development of the affection may be arrested. Should it be completely established, M. Dawosky recommends multiplied scarifier irons round the affected portion, and even the opening of the superficial veins to induce a more copious hæmorrhage. When this has ceased, the patient should remain quiet for several days, and have recourse to cold water bandages if necessary. In the case of workmen who can be carried to a hospital in the vicinity, simple scarifications are replaced by cupping with the scarificator.

CHEAP DOCTORING.

THE *Thorn Advertiser* tells us that Mr. Joseph Chamberlain, surgeon, of Rawcliffe, lately took out sixty summonses against persons whom he had attended, and the whole of one afternoon was occupied in hearing the cases. It appears that Mr. Chamberlain settled at Rawcliffe about a year ago, and announced himself as "a cheap doctor". He made no charge for distance, and only charged one shilling and sixpence per bottle for medicine. Many persons, chiefly of the working class, were induced to apply to him; but, instead of finding him a cheap doctor, they were soon involved in bills of £3, £4, and £5. Under these circumstances, they refused to pay, and Mr. Chamberlain took out summonses against them. In nearly every case, the charges were either totally disputed, or were stated to be far in excess of what was reasonable. In the end, verdicts were given for about half the amounts that were claimed, and the working people of Rawcliffe were taught that "cheap doctoring" is, in the long run, not altogether an inexpensive business.

HOSPITAL SUNDAY IN CUMBERLAND AND WESTMORLAND.

FROM the tenth annual report of the Committee appointed to organise a Hospital Sunday for the benefit of the principal medical charities connected with the above-named two counties, it appears that, during the last ten years, the sum of £9,172 has been collected. In 1879, the amount was £1,045 13s. 2d., and of this sum the Cumberland Infirmary received £493 10s. 3d.; the Carlisle Dispensary £108 6s. 6d.; the Carlisle Fever Hospital £99 4s. 3d.; the Convalescent Institution at Silloth £223 19s.; the Whitehaven Infirmary £108 18s. 9d. The expenses of the year were £13 1s. 4d.

ANTISEPTIC SURGERY.

AT the next meeting of the South London District of the Metropolitan Counties Branch, to be held at St. Thomas's Hospital (Westminster Bridge entrance), on Wednesday, December 3rd, at 8 P.M.—Mr. John Wood, F.R.S., President of the Branch, in the chair—the evening will be devoted to a discussion on Antiseptic Surgery, to be opened by Mr. William Mac Cormac. Professor Lister, F.R.S., and many other hospital surgeons, are expected to take part. Previously to the commencement of the meeting, there will be an exhibition of apparatus and appliances used in antiseptic surgery. All members of the Metropolitan Counties Branch are entitled to attend, and to introduce professional friends.

THE SOCIAL STATUS OF THE MEDICAL PROFESSION.

DR. J. MILNER FOTHERGILL, writing to the *Philadelphia Medical Times*, makes the following extraordinary statement: "In the United States of America, a doctor holds at least a respectable social status. In this country, with few exceptions, his position is anomalous, and his wife is a social pariah." Under what singular inspiration this amiable physician could have penned so extraordinary a paragraph for the information of our medical cousins, it is difficult to imagine. We hope that Dr. Fothergill considers himself at least one of the exceptions, and that he does not find his position particularly anomalous. On the conjugal question, he is, we believe, a bachelor; and perhaps not, therefore, altogether in a position to estimate the social status of other men's wives; but where and how he has arrived at the conclusion that the wives of his medical friends and colleagues are to be designated by this uncomplimentary Indian term is a mystery which perhaps he alone can clear up. At any rate, as Dr. Fothergill is a writer who enjoys some credit both here and abroad, it is as well to notice the singular statement to which he lends the weight of his reputation as a London correspondent to American papers, although we are sorry to say that, in doing so, we can only characterise it as a statement which is utterly absurd and without a shadow of foundation. It must have been written as Dr. Fothergill's idea of a "goak"; but, from the notices we have seen of it abroad, it is evidently supposed that he was serious when he wrote it. A gentleman who professes to represent his country abroad should be a little more careful in his statements.

VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

ON Monday morning, the 24th inst., the Princess Louise paid a private and unofficial visit to the Victoria Hospital for Children. Her Royal Highness was met and conducted through the wards by Dr. Allchin and Mr. Cowell. The little patients were all much delighted by the few kindly words addressed to each of them by the Princess. Having visited the wards, the Princess made a careful inspection of the out-patient department, where several of some most necessary and urgent alterations in contemplation were pointed out to her. Her Royal Highness has graciously consented to give her support to a concert in aid of the funds of the hospital, which will take place at St. James's Hall on December 2nd, under the direction of Herr Henschel.

AN ECHO OF THE CORK MEETING.

A CORRESPONDENT writes to us:—In connection with the recent meeting of the British Medical Association at Cork, an excursion which was made to the North of Ireland by some of the members is worth recording. A party of twenty-two gentlemen and six ladies of their families had visited Glengariff and Killarney; thence they proceeded to Dublin; and, after inspecting the lions of the capital and neighbourhood, the party, as a whole, broke up. Twelve remained together, and made a short tour to the north; one of the chief objects of interest which they visited being the Grianan of Aileach. The Grianan is the name of an ancient palace or fort of the Druidical period, which is supposed to date from at least 1000 B.C. From tradition and history, we glean that it rivalled the "Halls of Tara", and that it withstood the ravages of the time until the twelfth century of the Christian era; when, partly by age and partly by spoliation, it fell into ruin, and so for centuries it remained. It owes, however, its present interest to the fact that, in the supposed main outline of its original structure, it has been restored entirely under the initiative and by the exertions of one of the members of our Association, Dr. Bernard of Londonderry. When this gentleman took the matter in hand, there was nothing to be seen on the summit of Aileach but a huge confused heap of stones; nothing daunted, however, he managed to enlist the sympathies of the neighbouring farmers and peasants, and presently gathered together a band of twenty to forty voluntary labourers. After working with and directing them in all their leisure time during the spring, summer, and autumn of four successive years, the last stone was laid in June 1878. Scarcely a stone was added to the old materials; and in the work of restoration Dr. Bernard seems to have followed much the same principle as Cuvier or Owen would have done in putting together the newly discovered and jumbled fragments of an extinct gigantic lizard. From the portions of the building left standing two or three feet above the ground, he was enabled to infer the plan of the superstructure, so that he believes that almost each individual stone now occupies the same relative place that it did in the original pile. To describe the Grianan in detail, would be out of place here. Full particulars may be found in the *Proceedings of the Royal Irish Academy*, second series, vol. i. The holiday-makers before referred to, after a drive of seven or eight miles out of Londonderry, the latter part of a mountainous character, and then a steep moorland walk of half a mile, found themselves on the summit of Aileach, about eight hundred feet above the level of the sea. Here stands the Grianan; but, in addition to this object of interest, one of the most splendid panoramic views that it is possible to conceive is unfolded. A great portion of the northern coast of Ireland meets the eye, the beautiful lake of shadows (Lough Swilly) with its innumerable inlets and promontories, Lough Foyle, and a long line of coast to the eastward, with the black

Donegal mountains on the west. Inland, the four counties of Antrim, Londonderry, Donegal, and Tyrone may be seen through a great part of their extent. Dr. Bernard, having been the guide and philosopher of the visitors in the demonstration of the Grianan and the wide stretch of coast line, mountain, and moor surrounding it, proved himself no less their friend by inviting them to a substantial and sumptuous *al fresco* repast, which had been carried to the top of the hill, and at which Mrs. and Miss Bernard did the honours.

FACTORY LEGISLATION IN INDIA.

ON October 17th, Mr. Colin obtained leave to introduce a Bill to regulate labour in factories. The Bill is to be permissive in its operation, and will merely provide for the security of life and limb from accident, and for the protection of children and young persons who have not attained to an age when they can be considered free agents. Mr. Colin said that it was better not to introduce into a Bill for India many of the points for which legislation had been found necessary at home. The differences of climate, character, and habits of life of the people were so great that much which it had been necessary to enforce in England would not only be inapplicable, but perhaps actually injurious, here. The Bill would contain nothing beyond these two points, except certain provisions enabling local Governments to arrange for the inspection of factories, and to compel their managers to report accidents when they occurred. It appears, in short, that the Bill is an imperfect one, and that the Government has yielded to a great extent to interested opposition. We should nevertheless be glad to see any Act passed, trusting to the future for more advanced legislation.

A NEW INDIAN APPOINTMENT.

ACCORDING to the *Puna Observer*, it is understood that it is under contemplation by Government to create an appointment of Inspector-General of Lock Hospitals for the Bombay Presidency, on a salary of twelve hundred rupees a month. The officer selected to fill the appointment will be made from the list of cantonment magistrates, and is in every way qualified for the post, having had many years' experience in the said department.

DIPHTHERIA IN RUSSIA.

DIPHTHERIA, which has for several years back made great ravages in Russia, is reported by the correspondent of the *Times* to be apparently gaining ground. The disease, says the *Novoye Vremya*, has attained such frightful proportions in some regions that the percentage of mortality far exceeds that of births. In the small district of Mirgorod, for instance, where the epidemic has been raging since 1875, 414 persons succumbed to it in 1876; in 1877, no fewer than 1,308. In Odessa, since May, diphtheria has snatched away 76 per cent. of the children; while in Stavropol, in the course of four months, half the infant population of the town fell victims. In Kishineff and in the vicinity of Kieff and Poltava, the epidemic has been raging for the last two years without interruption. In the village of Kaploonofka, government of Kharkoff, fifty children died of the malady in two weeks; while in the hamlet of Nacomobka more than two hundred infants have been carried away by it since last January, in addition to a large number of adults. Again, in the village of Tamarofka, not one child has escaped; while the Mariopol district showed an average daily death-roll of ten. The *Novoye Vremya*, moreover, adds a long list of places where diphtheria is raging in the same frightful degree, and even worse. More than eleven vast districts are afflicted with the disease; and the mortality both of the youthful and adult population is so enormous that the Government has at last appointed a special commission under M. Karel, Physician-in-Ordinary to the Emperor, to inquire into the causes, etc., of the epidemic; issuing at the same time strict injunctions to the local authorities about measures for its arrest and extinction. In order to convey an approximate idea of the deadly power of this disease, as compared with that of other epidemic maladies, the *Novoye Vremya* quotes certain statistics carefully drawn up by the eminent physician Dr. Speranski, from which it appears that, whereas the death-rate by small-pox in Russia is 25.5 out of every 100 attacked; by scarlatina, 25; by measles, 12.8; by whooping-cough, 5.1; by typhus, 11.2; the percentage of mortality by diphtheria reaches the alarming figure of 40.

SCOTLAND.

UNDER the Sale of Food and Drugs Act, Dr. G. D. Macdougall, Public Analyst, Dundee, has been appointed Public Analyst for the large and important county of Perthshire.

THE Right Honourable W. E. Gladstone, Rector of Glasgow University, will deliver his rectorial address there on Thursday or Friday next week. The arrangements are not yet complete.

BURSARIES IN MEDICINE IN EDINBURGH.

THE Faculty of Medicine in Edinburgh University was long without any pecuniary aid to students, as rewards in the form of bursaries or fellowships; but the last ten years have seen a remarkable change and improvement, as there are now a considerable number, although as yet not in proportion to the number of students. Competitions took place for various of the prizes in the first week of this month; and, as the result of these, the Neil Arnott Prize in Experimental Physics (value £40), open to first year medical students, was gained by William L. Goodwin. The Thomson Bursary (£25 a-year, tenable for four years), for students commencing, was awarded to R. Davidson, a preferential candidate. The Grierson Bursaries (value £20), open to students of any year, were gained by first year's student Alexander Ferguson, for Preliminary subjects; second year's student Archibald Mackenzie, for Botany, Chemistry, and Zoology; third year's student John Bowes, in Anatomy and Physiology; and fourth year's student J. Macdonald Brown, in Materia Medica and Pathology. The Tyndall-Bruce Bursary (value £25), was gained by G. A. Atkinson, in Materia Medica and Pathology.

SICK CHILDREN'S HOSPITAL, EDINBURGH.

THE directors of the Royal Hospital for Sick Children, Edinburgh, met on Monday, and appointed Dr. R. J. Blair Cunynghame one of the ordinary physicians to the hospital, in succession to Dr. Linton, whose term of office has expired. The vacancy in the staff of extra physicians, caused by Dr. Cunynghame's appointment, was at the same time filled up by the appointment of Dr. Playfair as extra physician.

ROYAL PHYSICAL SOCIETY, EDINBURGH.

THE one hundred and ninth session of the Edinburgh Royal Physical Society was opened by Dr. Ramsay of Traquair, its President, last week. He delivered an address, and in it alluded appropriately to the loss the Society had sustained during the year by the deaths of Dr. McBean, Trinity, and Professor Page, Newcastle.

ST. ANDREW'S UNIVERSITY.

THE appointment of Assessor to represent the General Council of the University of St. Andrew's, which has been held by Dr. Richardson of London, becomes vacant soon. The London Committee of the University, at a meeting last week, unanimously agreed to re-elect Dr. Richardson to the office; it being desirous, they considered, to have a representative in the Court residing in London, in view of the impending medical and university legislation.

EDINBURGH MEDICAL MISSIONARY SOCIETY.

THE annual meeting of this Society (one of the most successful and useful of its kind) was held in the Royal Hotel, Edinburgh, on November 20th. Dr. William Brown, President, occupied the chair; a great many were present. The annual report of the professional work done showed that, during the year, there had been 6,266 new patients treated at the dispensary; 3,672 visited at their own homes; 344 midwifery cases attended; and 262 vaccinations. The financial report showed a balance in favour of the Society. Details of the evangelistic work done

was also given regarding the stations at Nazareth and Nugata in Japan, and also regarding a proposed branch mission to the Fiji Islands, suggested by Sir Arthur Gordon. Directors for the ensuing year were appointed.

THE SOUTHERN COUNTIES ASYLUM, DUMFRIES.

THE office of Superintendent of the Crichton Institution and Southern Counties Asylum, Dumfries, has been filled by the appointment by the directors of Dr. James Adam, Superintendent of the Caterham Asylum, Surrey. The asylum is one of the most important in Scotland, and there were a good many candidates for the appointment.

ROYAL MEDICAL SOCIETY OF EDINBURGH.

AT a meeting of the Royal Medical Society of Edinburgh, held on Friday, November 21st, the following gentlemen were elected Presidents for the ensuing year: E. Hyla Greves, M.B.; Alexander Bruce, M.A., M.B.; T. S. F. Caverhill, M.B.; and E. F. Scougal, M.B.

SPECIAL SERMON TO MEDICAL STUDENTS.

DURING the winter session in Edinburgh, there is usually a sermon or course of sermons to medical students. This year, Professor Flint of the Faculty of Divinity, Edinburgh University, delivered the sermon in St. George's Church, on Sunday evening. There was a large attendance of students, who formed an attentive audience and heard a good sound sermon.

IMPORTANT DECISION REGARDING LOBBIES IN SCOTLAND.

IN Scotland, where the system of houses being divided into flats, each occupied by one or more families and entered from a common lobby and stair, largely prevails, an important question was decided by Sheriff Spens, Glasgow, last week. In very few of those lobbies and stairs is any arrangement made for ventilation, or proper lighting by day. Not unfrequently as many as eight water-closet windows open on the staircase, and as frequently there is no outlet at the roof for impure air. The Local Authority raised the question in Glasgow, by asking the Court to ordain that a certain house-factor should provide sufficient light and ventilation in the lobbies of a house in Balmanno Street, Glasgow. Sheriff Spens has issued an interlocutor, in which he finds "that the second, third, and fourth storeys are, through defective light and ventilation, injurious to the health of the inmates entering the lobbies, and that a nuisance exists"; he, therefore, ordains the respondent to make a thorough system of ventilation in the lobbies.

IRELAND.

LAST week, two deaths were registered in Belfast from scarlet fever, being the first fatal cases recorded since the week ending October 4th.

DR. HENRY FITZGIBBON, Surgeon to the City of Dublin and to the Dublin Lock Hospitals, has been appointed by the Postmaster-General Medical Officer to the General Post Office Department in Dublin, *vice* Dr. John Toler, resigned.

THE epidemic of measles in Cape Clear is abating, and the additional cases which have lately occurred are of a very much milder type. Up to last Saturday, the mortality from the disease has amounted to eighteen.

DR. JOHN GREELY died last week at Carraroe from typhus fever contracted in the discharge of his duties as dispensary medical officer of the district. The deceased, who was in the thirty-ninth year of his age, was regarded as a most efficient practitioner, and was much repected by all classes.

CORK RURAL SANITARY BOARD.

AT a recent meeting of this Board, the sewerage of the town of Ballincollig was referred to as being in an unsatisfactory condition. Some years ago, it was proposed to improve the drainage, but only a portion of the works were completed. As regards the sewerage from the barracks at Ballincolig, which finds its way into the river and pollutes the water, Dr. Brodie, Local Government Board Inspector, states that the military authorities have constructed, at a cost of £500, a cemented bank, from which the fluid escapes by an overflow-pipe into an adjoining field; and that the scheme will come into operation at once, and prevent the river being contaminated as heretofore.

DUBLIN OBSTETRICAL SOCIETY.

AT the annual general meeting of the Society, held on Saturday last, the President, Dr. Sinclair, King's Professor of Midwifery in the School of Physic, delivered an address, and the following officers for the ensuing session were elected. *President*, Dr. Sinclair (re-elected); *Vice-Presidents*, Dr. Churchill and Dr. Dill, Professor of Midwifery, Queen's College, Belfast; *Treasurer*, Dr. Cranny; *Honorary Secretary*, Dr. Roe. The President's address consisted chiefly of a retrospect of the position of the midwifery practitioner in connection with the Board of Trinity College and the King and Queen's College of Physicians, during the past century. He showed that to Sir Fielding Ould, the Second Master of the Rotunda Lying-in Hospital, and to Trinity College, the status which the gynæcologist how holds was mainly due. The Provost and Senior Fellows of the University had also, too, lately granted the degree of Master in Obstetric Science to their medical graduates; thus placing the branch of the profession which the members of their Society practised on a similar footing with that of its twin sisters, Medicine and Surgery. A vote of thanks to Dr. Sinclair for his address was proposed by the Rev. Dr. Haughton, and, having been seconded by Dr. McClintock, was carried unanimously.

OVARIOTOMY IN A CHILD.

LAST week, Dr. Kidd removed a large dermoid ovarian cyst from a child aged 3 years, in the Coombe Hospital. The tumour, which was about the size of a cocoa-nut, had contracted firm adhesions; thus necessitating considerable extension of the abdominal incision. Death occurred two hours after the operation. No *post mortem* examination was permitted.

SANITARY CONDITION OF IRISH DISTRICTS.

IN the Report of the Registrar-General for Ireland for the September quarter of the year, attention is directed to the registrars' notes as containing much valuable information in reference to the sanitary condition of the country and locally prevailing diseases. These notes are of peculiar value, being furnished by those not only occupying the position of registrars, but also of dispensary medical officers and medical officers of health, who have special opportunities of being acquainted with the sanitary defects and requirements of their respective districts. The registrar of Donaghadee remarks that the power of compelling destitute fever-patients to go to hospital is much required, as in their hovels, where nothing but destitution exists, the contagion concentrates, and is carried from house to house by the numerous visitors who frequent those houses where sickness is, the friends of the sick denying the existence of fever. In Gweedore district, the sanitary arrangements are stated to be very bad, most of the houses being kept dirty, and in a great number the residents keep their cattle in the same room with themselves. This latter arrangement also exists in Doochany district, where also manure-heaps and cesspits in close proximity to the dwellings are the rule. The registrar of Carrickmacross reports that a case of malignant typhus fever occurred in his district in a boy; and, as his parents refused to allow him to be sent to hospital and there were five other persons sleeping in the same room, a magistrate's order had to be obtained for his removal. There was much illness in the Goleen district during the quarter; measles was very prevalent, also typhus and enteric fever. The registrar reports that accommodation for the sick is very bad. The sanitary state of the district is also in a deplorable condition, the water not being fit for use, as not a single well is protected from pollution, and there are no pumps.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

A MEETING of this district will be held at St. Thomas's Hospital, on Wednesday, December 3rd, at 8 P.M.; when a discussion on Antiseptic Surgery will be introduced by Mr. William Mac Cormac.

H. NELSON HARDY, *Honorary Secretary.*

The Grove, Dulwich, S.E., November 24th, 1879.

METROPOLITAN COUNTIES BRANCH.

AN adjourned general meeting of this Branch will be held at the house of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Saturday, December 6th, to receive and discuss the Report of the Committee appointed to consider the subject of the Education of the General Practitioner of Medicine.

The Chair will be taken by the President, JOHN WOOD, Esq., F.R.S., at 8 o'clock precisely.

ALEXANDER HENRY, M.D.
W. CHAPMAN GRIGG, M.D. } *Hon. Secs.*

57, Doughty Street, W.C., November 19th, 1879.

NORTH OF IRELAND BRANCH.

A MEETING of this Branch will be held at the Belfast Royal Hospital, on Friday, December 5th, 1879, at 12 o'clock noon.

Members desirous of making any communication to the Branch are requested to communicate with

JOHN MOORE, M.D., *Honorary Secretary.*

2, Carlisle Terrace, Belfast, November 10th, 1879.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting will be held on Thursday, December 11th, at the Greyhound Hotel, Croydon, at 4 P.M.; Dr. PARSONS SMITH in the Chair. The following papers are promised.

1. Dr. Coles: On Aids during Lingering Labour.
2. Dr. Roper: On Suppuration of the Knee-Joint following an attack of Gout.
3. Dr. H. G. Thomson: On Acute Albuminuria.
4. Mr. Bryant will demonstrate the advantages of his Double Splint in Disease and Injury of the Hip-Joint.
5. Dr. Semon: On the Treatment of Acute and Chronic Laryngitis in Adults.

Dinner will be served at 6 P.M. precisely; charge 6s., exclusive of wine.

JOHN H. GALTON, M.D.Lond., *Honorary Secretary.*

Woodside, Anerley Road, S.E., November 25th, 1879.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the Branch will be held at the Bristol Museum and Library, on Wednesday evening, December 17th, at half-past seven o'clock; J. BEDDOE, M.D., President, in the Chair.

EDMUND C. BOARD, *Honorary Secretary.*

7, Caledonian Place, Clifton, November 26th, 1879.

GLASGOW AND WEST OF SCOTLAND BRANCH.

A MEETING will be held in the Faculty Hall, on Friday, December 19th, at 3 P.M.

There will be some references made as to the question of Fees in Medico-legal Cases; and a discussion on the Relation of Croup and Diphtheria; introduced by Dr. J. B. Russell, from the statistical point of view.

METROPOLITAN COUNTIES BRANCH: NORTHERN DISTRICT.

A MEETING of this district was held at the Myddleton Hall, Islington, on Thursday, November 20th; E. H. CREE, M.D., in the Chair.

Communications.—The following communications were made.

1. Dr. Milner Fothergill read a paper on the Gouty Heart, explaining the signs and symptoms by which it might be diagnosed.
2. Mr. Henry Baker exhibited an ingenious apparatus for the treatment of Talipes. He explained the object of the apparatus from a mechanical and anatomical point of view. Its greatest feature consisted in its being so constructed that pressure upon any given point may be relieved without in any way interfering with the position of the limb, and so preventing ulceration of the skin, a not uncommon trouble with the old form of Scarpa's boot.

CORRESPONDENCE.

RETREATS FOR HABITUAL DRUNKARDS.

SIR,—In reply to the inquiry from "M.D.," "Where are the retreats?", any of the existing establishments may be registered under the Act if they comply with the regulations. Our Society is anxious to promote the establishment of an efficient inebriate home; and such can soon be started if sufficient means be forthcoming. We propose to promote a self-supporting institution for males; to furnish and start such will require £2,000.—I am, sir, yours truly,

STEPHEN S. ALFORD, Hon. Sec.

61, Haverstock Hill, N.W., November 25th, 1879.

VACCINATION FROM THE CALF DIRECT.

SIR,—In February 1878, you inserted in your JOURNAL a letter from me, advocating the use of vaccine lymph derived from calves as a substitute for lymph taken from the arms of infants.

My argument was, that there existed a wide-spread impression that the lymph now in use was not so efficient as that used by Jenner and his early followers. This impression arose from the fact that, whereas small-pox appeared during the first forty or fifty years of this century to have been nearly stamped out of Great Britain, there had, during the last twenty years, reappeared amongst us several epidemics of this disease, notwithstanding the fact that ninety-six per cent. of the population had been vaccinated.

My argument was, further, that the natural habitat of vaccinia being the bovine race, this vaccinia had probably deteriorated during eighty years of successive transmission through a foreign soil—the human race.

I also urged that, as there had for many years existed a popular outcry against compulsory vaccination, on the ground that vaccination carelessly performed might possibly convey syphilis, it was inexpedient to enforce this law unless the non-existence of the supposed danger could be guaranteed; and I stated that the only method of vaccination in which the existence of this danger could be demonstrated to be an impossibility, was that in which the lymph used was drawn from animals which could not possibly either receive or convey syphilis.

I have since been engaged, with the assistance of Dr. Wilson and Dr. Warlomont, for nearly two years in distributing a continual supply of calf vaccine lymph to the profession. My calculation is that, during that period, nearly five thousand children and adults must have been vaccinated with the calf-lymph which I have sent out. The demand has been chiefly from London and the large manufacturing towns, such as Liverpool, Manchester, Leeds, Bristol, and Bradford; but I have received very few applications from Ireland, and scarcely any from Scotland.

In my correspondence with numerous members of the profession, I have been much struck with the different reports they have sent to me as to their success with the calf-lymph. Some have said: "I have fifty per cent. of failures with your lymph"; others, "I have thirty per cent. failures"; others have said, "I rarely fail"; while a few have said, "I can only occasionally succeed with your lymph".

As I myself have had only one failure in two years in my attempts to vaccinate infants with this lymph, I am compelled to conclude that those who extensively fail must do so from an inexpert use of the material. The knowledge of the best method can be conveyed in a few minutes to anyone who can use his fingers with dexterity.

I would strongly urge on our London hospitals a trial of this lymph; and, should any of them act on this suggestion, it would give me great pleasure to attend at such hospitals, and instruct any gentlemen who may be appointed to perform the vaccinations how to use the large American ivory lancet-point with best effect.

I may add, in conclusion, that it will afford me much pleasure to place at the disposal of any committee of medical men, or any individual medical man seeking information as to details, all the practical results of my experience of the last two years.

12, Great Cumberland Place. GEORGE WYLD, M.D.Edin.

THE ADMISSION OF STUDENTS TO THE METROPOLITAN SICK ASYLUMS.

SIR,—I am glad to see that Mr. Benton has thought proper to bring this subject before the readers of your JOURNAL, and I am quite sure that his views will meet with the approval of all sensible men. Having been connected with one of these institutions for some years, and furthermore having upon many occasions given this question serious consideration, I am, perhaps, in a position to say a word or two in reference to the subject.

In the first place, there can be no doubt that these asylums, with their splendid wards, are beginning to occupy a position among the charitable institutions of this country apart from the workhouses; and in the majority of instances they are fairly well conducted; and I cannot but think that the time will come when the cases will be utilised for the scientific investigation of disease. It would be unwise to open these wards to the admission of freshmen and in unlimited numbers; for they would interfere with the routine business of the hospital, which must, I take it, not be unnecessarily tampered with; and, besides this, the material which is found in these institutions is not of the kind from which the young student could hope to learn much; but to the advanced student, who is working at any special subject, the field for research would be found invaluable—"a perfect gold-mine of medical treasure".

I am sure, sir, in your position, with your extensive and varied interests, you could bring this important matter to some practical issue. It is of no use, I am afraid, to appeal to the guardians; nor is it of any use soliciting the help of the Local Government Board; and I am afraid the Middlesex magistrates (even in the plenitude of their great wisdom) would not look upon the scheme with much favour. I would suggest that the question be ventilated and brought before the Medical Council, and then let the whole subject be brought before Parliament. If the scheme were properly carried out, it would in no way interfere with the duties of the medical superintendent, and the immense gain to the scientific study of medicine would be incalculable.—I am, sir, your obedient servant,

T. STRETCH DOWSE.

Old Burlington Street, W., November 1879.

TYPHOID FEVER AND SEWAGE.

SIR,—I have read, with much interest, the communication by Mr. G. Thompson of the Bristol Lunatic Asylum, in reference to the causation of certain outbreaks of enteric fever in that asylum. The facts which he adduces are, in my opinion, deserving of special attention, and tend strongly to corroborate similar evidence brought forward (in a former number of the BRITISH MEDICAL JOURNAL) by Dr. Clifford Allbutt; by Dr. Wohlrab (*Archiv der Heilkunde*, vol. xii, page 134: 1871); and by Dr. Ballard, in his report to the Local Government Board on an outbreak of enteric fever at Nunney, September 1872. In all these instances, very polluted water had for a considerable time been used by the inhabitants; but, it was not until cases had been imported from a distance, that enteric fever made its appearance, and spread in the districts in question. Whilst, then, we cannot altogether discard such contrary evidence as is afforded by Dr. Downes (*Lancet*, April 27th, 1872), who records six cases of enteric fever resulting from the overflow of *non-typhoid* sewage into a well; yet the positive evidence showing that the presence, in the drinking-water, of the *specific* poison of enteric fever, as conveyed by the evacuations, is necessary for the origin of the disease from that source, is gradually accumulating, and even now far outweighs recorded facts to the contrary. It would be premature, I think, to speculate as to the cause of the unfortunate outbreak at the Chester County Asylum until we have fuller information than that at present before us, which will doubtless be afforded by the report of the Government Inspector, who has made full inquiry into the subject. It is a fact, however, that, though the emanations from ordinary sewage have been known to give rise to *dysentery*, when the sewage was spread over an *impervious* subsoil (as at the Cumberland Lunatic Asylum, recorded by Dr. Clouston), no satisfactory evidence of the origin of *enteric* fever, in this way has yet been placed on record; and, as you remark (and as is remarked by Dr. Parkes in his work on *Hygiene*), this is a point on which more evidence is highly desirable. And it has occurred to me (having had some experience in Lunatic Asylums) that, what with their sewage-farms, their diverse sources of water-supply, their various drainage systems, and the alterations continually going on therein, the medical superintendents of such institutions are probably in possession of a mass of unrecorded facts, bearing on the question of the origin of enteric fever and the effect of sewage-emanations on health, which would be well worth communication to your columns, for our general edification with regard to this important matter; and it is to invite such further valuable information—such as that recorded by the medical superintendents already referred to—that is my principal object in asking you to find room for this letter.—I am, sir, your obedient servant,

J. WILKIE BURMAN, S.Sc.Cert.Camb.,
Late Medical Superintendent of the Wilts County Lunatic Asylum.

Maid of Honour Row, Richmond, S.W., Nov. 17th, 1879.

SIR,—The letter of Mr. George Thompson, in the BRITISH MEDICAL JOURNAL of November 15th, recalls to my mind a case which, I think, affords a very strong argument in favour of the view that typhoid fever may at times be generated from healthy fæcal matter. The case is typical in many respects, and I think goes far to prove that the presence of a "first case", or specific germ, must not be too absolutely insisted on.

In 1875, I was in medical charge of three hundred and fifty emigrants from London to Auckland, New Zealand. Including the time passed in the Channel, the voyage lasted in all about one hundred and four days, during which time we had no communication whatever with any land. The passengers were all inspected by myself before starting, and found to be healthy. The food-supplies during the voyage were excellent, and the drinking-water was distilled daily as required. The latrines were on deck, except the one attached to the single women's end of the ship, which opened by a pipe directly into the sea. All question of either sewage-gas or water-contamination is thus disposed of.

One individual was specially appointed, before the ship left Gravesend, to superintend all the latrines on board, to flush them regularly, and to disinfect them with carbolate of lime as required. This work, which was no sinecure, he performed assiduously until about eighty days after leaving England, when he was attacked with typhoid fever of a very typical form. He was still suffering from the disease when the ship arrived in port, where other medical men confirmed my diagnosis.

During the voyage, one death occurred from acute rheumatism, and four from infantile diarrhœa in the tropics. No one else, either of the passengers or crew, contracted typhoid fever, nor, so far as I could find, had suffered from it at all recently before embarkation. I think it is more reasonable to suppose that, in the only case in which the disease manifested itself, it was due to the patient's peculiar avocations, rather than to suppose that he may have brought the germs of it on board with him, and that these only fructified after he had been eighty days at sea.—Yours, etc.,

LITTON FORBES,
Late Surgeon-Superintendent ship *Dilharree*.

53, Margaret Street, W.

SELF-SUPPORTING HOSPITALS AND PROVIDENT DISPENSARIES.

SIR,—Will you allow me to ask for an expression of opinion on the part of the profession upon the following scheme of medical relief? It has been suggested that a hospital may be affiliated to a provident dispensary, on the Devonport plan for out-patients, and on the following scheme for those who desire in-patient treatment. Let us take the cost of each in-patient at £1 per week. Every member of the provident dispensary to pay fifteen shillings per week, or such less sum as his means permit, towards the cost of his maintenance in the hospital. The balance between the member's payments and the actual cost of his maintenance to be defrayed, like the management expenses of the provident dispensary, from the subscriptions of the honorary members. In the case of members of the provident dispensary, the cost of their medical attendance has of course been provided for; but all other patients, who are admitted to the hospital by paying £1 per week, or the full cost of their maintenance, will be called upon to defray the ordinary visiting fees of the doctor who attends them. In other words, an artisan who has bad accommodation in sickness at home, can get the skilled nursing and lodging at the hospital for an inclusive payment within his means, and his usual medical attendant will visit him at the hospital for the same fees he charged the artisan when living in his own house. What are the objections to such a scheme of in-patient relief?—Yours, etc.,

HENRY C. BURDETT.

Seamen's Hospital, Greenwich, S.E., November 18th, 1879.

TREATMENT OF CANCER OF THE RECTUM.

SIR,—Will you kindly permit me to make good an omission in your report of the proceedings of the Royal Medical and Chirurgical Society at the meeting on November 11th?

Beside the specimen of cancerous stricture of the rectum of my own which was reported upon, I exhibited another, of non-malignant stricture, that had been removed by Dr. Lowson of Huddersfield. The

stricture was situated about two inches above the anus; it had existed for eight years, and, although attempts at dilatation had been repeatedly made with more or less benefit, it was temporary only; the tissue had gradually hardened and ulcerated, and the passage became narrower, until at length it was threatened with practical obliteration. Under these conditions, Dr. Lowson excised the ring of bowel including the stricture on December 5th, 1877. On the 9th of the following March, the patient (a female) had made a fairly good recovery; and on March 31st, 1879, Dr. Lowson reported that some contraction had taken place in the original seat of the stricture, but that a medium-sized bougie could be readily passed, and the motions without difficulty. Excepting during an attack of diarrhœa, the sphincter power was perfect.

This case, together with my own, in which the patient (also a female) survived the operation for many months, and succumbed at last to a recurrence of the cancer, is in favour of ablation in some of the diseases of the rectum, especially stricture, that are otherwise absolutely intractable; a mode of dealing with them that is not new, but has been in abeyance since the time of Dieffenbach, although this distinguished surgeon practised it with success.

In carefully selected cases, and with certain modifications in the method of operating as well as in the after treatment, I cannot but think that this procedure might be made the means of saving life on a large scale; and that the rate of mortality in cases operated upon would not exceed, if it even attained, that which has marked the splendid success achieved by Mr. Wells and others in ovarian operations.—I am, sir, your obedient servant, JOHN GAY, F.R.C.S.,

Senior Surgeon to the Great Northern Hospital, etc.

10, Finsbury Place South, E.C., November 18th, 1879.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

KILMALLOCK UNION.

THE Kilmallock Guardians, having recently reduced the salaries of their medical officers of health, received a communication last week from the Local Government Board in reference to the subject. The Board refused, they stated, to sanction the arrangement, inasmuch as the duties of the medical officers had been increased; and they felt it necessary to exercise the power granted to them by the eleventh section of the Public Health Act of 1878, and to regulate those salaries by a sealed order. They had, therefore, allowed the medical officers of health in the union the same remuneration which they received as sanitary officers under the Public Health Act of 1874.

SANITARY *VERSUS* VACCINATION AUTHORITIES.

IN a recent report to the Town Council of Glasgow, Dr. Russell has given an account, in his usual thorough and conscientious fashion, of the action which has been taken in his department to secure the vaccination of defaulters under the Scotch Vaccination Act. Briefly, the upshot of the inquiry is this. Dr. Russell, seeing how much larger a proportion of children escaped vaccination in Glasgow than in the rest of Scotland, made arrangements for the transmission to him of lists of all defaulters who had evaded the means at the disposal of the Poor-law authorities for the discovery and vaccination of the children reported. Of a total of 745 children given up as undiscoverable, fully 26 per cent. were successfully followed up and discovered by Dr. Russell's inspectors, frequently through several removals. It was found that one hundred and nine of these children had been already vaccinated, thirty-nine were dead, and four had certificates of postponement, leaving forty-four who were still unvaccinated, and who were in all cases vaccinated at the instance of the sanitary department. The moral of this report is sufficiently obvious. Why the Poor-law authority should be entrusted with the responsibility of preventing the possibility ef epidemic small-pox, whilst the sanitary authority is responsible for the treatment of the disease when it arises, is one of those administrative puzzles which it is hopeless to unravel. Here at Glasgow is a large and well organised staff for the sanitary supervision of the population, more particularly for the detection and stamping out of infectious disease, having small-pox hospitals, and yet having no control whatever over the arrangements, under an Act which is intended to strike at the very root of epidemic small-pox. The anomaly of this is rendered the more absurd by the fact that the class of the population who supply vaccination defaulters are exactly those who, in all other sanitary aspects, require tutelage and supervision, and receive it from the sanitary staff. In making the inquiries at Glasgow, the inspectors found themselves among their ordinary clients, and in the streets and closes to which their ordinary work led them. Another argument in favour of a change in the Vaccination Act, in this part of its administrative machinery, may be based upon the results narrated by Dr. Russell, of the voluntary and assumed work of inquiring into the defaulters of Glasgow. Without any special organisation, simply by work taken up in the course of ordinary duty by the inspectors, and brought to bear upon material which had passed through the present machinery of the Vaccination Act, a large number of children were found, and many were vaccinated who otherwise would have escaped. We are, with Dr. Russell, clearly of opinion that the statutory work of dealing with vaccination defaulters should, in towns, be wholly entrusted to the local authority under the Public Health Act; but, even although no such duty has been imposed upon them, it is clearly in the interest of public health that they should so far assume it.

THE DIFFUSION OF SCARLATINA.

WE recently referred to an important inquiry undertaken by Dr. Ogle, into the circumstances of scarlatina prevalence in the mining district of Pontypool. Two other inquiries into the subject appear to have been contemporaneously made on behalf of the Local Government Board by Mr. John Spear, at the "woollen" district of Yeadon in Yorkshire, and by Dr. Horace Swete in the cotton-spinning town of Crompton, near Oldham. Dr. Swete's report may be dismissed in a few words. He makes no attempt to trace out the causes of the epid emic of scarlatina, which killed twenty-six persons in the district during the first half of the year, but contents himself with showing how high is the general death-rate, how prevalent are zymotic diseases, especially that of evil augury, "fever", and how deficient are the sanitary arrangements—especially the excrement-disposal and the removal of nuisances—within the district. Mr. Spear's report, coming from an officer who has great experience of scarlatina, is worthy of serious attention. The scarlatina epidemic at Yeadon, investigated by Mr. Spear, commenced in the third quarter of 1878, when four deaths from it were registered. In the following quarter, there were seventeen deaths, and in the first quarter of 1879, eleven deaths registered in the district from scarlatina. The number of cases of sickness that occurred during this period is variously estimated at from 300 to 500; and from Mr. Spear's own observation, the latter will appear to be within the actual number. The disease in some streets invaded almost every house; and a large proportion of the sufferers were unattended by a medical practitioner. Of the total number of children of school age in the district, 890 children, or 75 per cent., are educated at one or other of the Board-schools; and the average attendance at these schools dropped from 518 in the summer to 219 in December, the prevalent sickness being the sole cause assignable. The disease was violently epidemic; and the township of Yeadon formed a centre of infection to the districts around. The sanitary circumstances under which the people live at Yeadon were found to be such as to offer every explanation for the wide diffusion of the disease, and its fatality afterwards experienced. After careful inquiry, however, no evidence was forthcoming that would warrant the expression of an opinion as to the origin of this epidemic. What part, if any, the water-supply played in the diffusion of the disease can never be determined. The water, as a mass of testimony proves, has been obviously impure, and is exposed to both excremental and slop-water pollution. But assuming that such pollution actually occurred, evidence is wholly wanting (though carefully sought for) of its specific infection. Further, in epidemics that have been ascribed to the distribution of polluted water, more or less suddenness or apparent spontaneity in the outbreak has been a marked characteristic; although it does not follow that the introduction of the scarlatinal contagion into a body of water would lead to its equal or even general diffusion therein. It cannot be said that this outbreak was peculiarly sudden in occurrence; and as regards its incidence on families, the experience in scarlet fever epidemics, that in a large number of cases one member of a family is distinctly first infected, was generally observed. At the time of this outbreak, extensive sewerage works had been commenced. In nearly every part of the district, old rubble-drains were opened, and much sewage-polluted earth disturbed. These operations formed for the time the main interest of the village children, and during the intervals of the school-time, every sewer-trench had its group of eager watchers. The child who was the first in the district to be attacked was, according to the mother, "always at the sewers", and there was often, she added, a "very bad smell". Indeed, so repeated were such occurrences, that a conviction arose in the minds of many parents that a connection existed between the sewer-works and the sickness of their children. It is not impossible that they may have been the means of

bringing into activity the germs of a former epidemic; for the scarlatinal poison retains its potency for lengthened periods. While much obscurity surrounds the first invasion of the disease, the reasons of its wide diffusion are obvious. The sanitary condition of the district is most wretched. The sanitary authority appear to have put in force no preventive measures. No means of isolation were provided; nor was isolation, except in very exceptional cases, attempted at the sufferers' homes. Disinfectants were supplied in only a small proportion of the cases, and even then the people were mostly not instructed in their use. Persons suffering from the fever were allowed, apparently unquestioned, to expose themselves in public places; things that had been exposed to infection were freely dealt with and transmitted. Milk has been sold from dairies by people convalescing from the disease; and articles from provision-shops in which scarlatina cases were retained were served out by people in attendance on the sufferers. No special precautions were taken to prevent children imperfectly recovered from the fever from attending the schools, and there appears to have been at least no effectual prohibition against the attendance of children from infected homes. The congregation of children in the day-schools, without proper precautions, no doubt contributed largely to the spread of the disease.

COMBINED SANITARY DISTRICTS.

THERE are growing indications that the whole subject of the appointment, duties, and tenure of office of medical officers of health will have to be considered in some broad and not piecemeal fashion during the next session of Parliament. With the view of helping to a just estimate of the merits of the question, we think it important to publish at the present juncture the opinions on the subject of a former medical officer of health for a combined district, whose name, if we were at liberty to mention it, would be quite sufficient guarantee for the soundness and wisdom of his views. This gentleman writes:

"With regard to the question whether the medical officer of health should be a local practitioner in private practice, or an officer appointed for a large district and debarred from private practice, I think that there is something to be said on both sides. The medical officer who devotes his whole time to his official duties is in a more independent position, not having the fear of losing his patients before his eyes; he may also be supposed to be more likely to keep himself posted up in the progress of public hygiene, and to be less likely to come into collision with other medical practitioners. Yet I must admit that I had to encounter much suspicion and jealousy on the part of medical practitioners when I first commenced my duties, although debarred from private practice. On the other hand, the medical officer of health 'on the small scale', if I may use the expression, is more likely to be acquainted with all that goes on in his district, and his private practice gives him opportunities of becoming acquainted with the existence of disease, and of estimating the effect of various conditions—*e.g.*, unhealthy trades—upon the health of the community which the officer 'on the large scale' has not. Although my area was not nearly so large as many combined districts, I found it difficult to visit and keep under observation all households where the graver infectious diseases occur (such diseases as measles and whooping-cough I gave up attempting), and I am certain that many cases escaped my knowledge. I fear, also, that there is a danger of the medical officer of health, who is debarred from practice, losing that intimate and practical familiarity with disease which is the *raison d'être* of a medical officer of health; and I consider it very desirable that such an officer should be allowed, if he thought fit, to hold a public medical appointment, as to a hospital or dispensary, or even to take consulting practice. A point on which I think that improvement is needed, is the relation in which the inspectors of nuisances stand to the medical officer of health. It is obvious that one man cannot be expected to keep under continuous observation the whole of a large district; and the medical officer of health to a large combined district ought, therefore, to have officers under him to keep him informed as to the existence of infectious disease, and of nuisances injurious to health in the several portions of his area. In practice, however, I have not found this the case. The inspectors of nuisances are appointed by the local authority, and are not in any way responsible to the medical officer; and although personally I never had any occasion to complain of any want of respect on their part, yet I had no authority in any way to direct their movements or require their services. It frequently happens that the inspector holds some other office as well—*e.g.*, surveyor or collector—or, if not, he is made a sort of 'useful man' by the authority. Although the major part of his salary is assigned to the inspectorship, in order to get the Government grant, the major part of his time is taken up by his other duties, which are pleaded by him as an excuse for not attending to sanitary inspection, which is often unpleasant work, and tends to procure the ill-will of influential neighbours. Hence 'inspectors of nuisances' too often omit to inspect nuisances, but leave that part of their work to be done, if at all, 'by the medical officer'."

MEDICAL MEN AND INFECTIOUS DISEASE.

SIR,—I desire to ask the following question, not out of curiosity, but because it has more than once been one of considerable practical importance to me, and is one of a kind to which it does not do to have to seek for an answer at the time, but for which an answer must be ready. The question is: If A. be a man with a shop, or in business, and have scarlet-fever or other infectious disorder in his house, for which his medical man (B.) is attending, and C. (a customer of A. and patient of B. in a higher rank of life) ask B., "in confidence, as he has a particular reason for asking", what is the matter at A.'s, is B. justified in communicating to C., without A.'s permission, the nature of the illness? and if not, in what terms will he at once, both efficiently and gracefully, excuse himself, so as neither on the one hand to lose the confidence of A., nor on the other to offend C.?—Yours obediently, X.

*** A medical practitioner is hardly justified in acquainting any private person with the nature of the illness at the house of another without the consent of the latter. To be silent to laymen as to the nature of patients' ailments is one of the ethics of medical practice; and our correspondent cannot do better than plead this in declining to gratify C.'s curiosity.

FACTORY ACT.

SIR,—I beg to inform "Certifying Surgeon" that I filled up my books this year as heretofore, using my own judgment as to the truth or otherwise of the boys' statements of their ages. The inspector at his visit wrote across the pages: "These certificates are invalid, no documentary evidence of birth having been produced." Notice was given to all the boys to obtain copies of the register of their births, and my work had to be done over again.—I am, etc., EDWARD GARRAWAY.

Faversham, November 20th, 1879.

POOR-LAW MEDICAL APPOINTMENTS.

GEORGE, A. Brooke, L.R.C.P.Ed., appointed Medical Officer and Public Vaccinator to the Whitchurch (Salop) Union Workhouse and Medical District, *vice* J. Bromfield, M.R.C.S.Eng., resigned.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

HACKNEY.—The death-rate of this district for 1878 was somewhat above the average, viz., 20.2 per 1,000, against 19.9 for the eight years 1871-8. The excess was due partly to small-pox, but chiefly to diarrhœa, whooping-cough, and scarlatina, as well as to a very slight extent from typhoid and other fevers. Small-pox caused 86 deaths, or three more than the average; but the district was free from it for some time before the end of the year. There seems to be a liberal interpretation of Poor-law orders in the district, so that servants and other non-paupers are removed without question to the Homerton Small-pox Hospital. There were a few cases of persons without proper lodging or accommodation who at first refused to go to hospital, but these yielded on being threatened with compulsory removal. The total number of small-pox cases reported to the sanitary department during the year was 342, of which 207 were removed to hospital. The mortality from diarrhœa was greater than at any period since the cholera epidemic, a total of 154 deaths being recorded. No fewer than 86 per cent. of these deaths occurred in the ten warmest weeks of the year, and 122 of them were in children under one year of age. Scarlatina caused 123 deaths, against an average of 93; and whooping-cough was also very fatal, 135 deaths being registered from this cause, against an average of 77. Typhoid fever was fatal in as many as 62 cases. A careful examination was made as to the drainage, water-supply, and general sanitary condition of every house in which patients suffering from the disease had lived, and also as to the milk-supply, with, to a considerable extent, negative results. In one house, where the drainage and water-supply were not defective, there were seven cases, the circumstances of which led Dr. Tripe to the belief that the disease was spread by contagion only. An outbreak of typhoid in two institutions, both supplied by a milkman who had the disease in his house, is shown to be related to the measuring out of the milk sent to these institutions by a person in charge of the sick, who left the sick-room for the purpose. A total of 4,066 articles were disinfected at the disinfecting-chambers of the Board of Works, at an expense of £114. The death-rate from zymotic diseases generally was unusually high, viz., 21.6 per cent. of the total deaths, and the infantile deaths were somewhat over the average, representing 25.3 of the whole. Dr. Tripe's tables range back over a series of forty years, and are at once painstaking and valuable, though they do not admit of condensation. Sanitary work appears to be well sustained in the district, 18,129 loads of dust being removed, 5,912 nuisances abated, and 8,212 premises inspected, or nearly a third of the houses in the district. During the year, 121 samples were analysed by Dr. Tripe in his capacity as public analyst, 17 being found adulterated, in addition to several others which were sold as mixtures.

MILITARY AND NAVAL MEDICAL SERVICES.

WAR OFFICE RATES OF PAY FOR CIVIL PRACTITIONERS.

A CORRESPONDENT calls attention to the very low rates of pay awarded by the Government to civil medical practitioners, when they are employed to replace military medical officers in medical attendance on troops. These rates are 2d. per week for each person from one to fifty inclusive, and 1½d. per week for each person above that number when medicines are supplied; and 1½d. per week up to fifty in number, and 1d. per week for each person above fifty, when medicines are not supplied. Thus, supposing the number of persons in a detachment entitled to medical attendance to be thirty, the private practitioner will be entitled to receive 5s. a week for attendance and medicine, or 3s. 9d. a week if he does not supply medicines. Such weekly rates of remuneration as these, our correspondent regards as a sufficient indication of the low appreciation by the ruling military authorities of professional services, and the offer of them as an offence which ought to be resisted. On the other hand, we are informed that the contract rates of pay abovementioned accord with the scale of remuneration which has been in force for many years past, and that no difficulty has been met with in getting private practitioners to accept them when their services have been needed. If this statement be true, and the services of qualified medical practitioners can be obtained on such terms, there is obviously little reason for expecting that the officials of the War Office who control matters of finance will be inclined to increase the pay. In the interest of the medical profession, however, we should be glad to have further information respecting the working of the Government rates of remuneration from civil practitioners who have had practical experience in the matter.

THE ARMY MEDICAL SERVICE: GENERAL ORDER.

THE following satisfactory general order has been issued from headquarters, Simla, October 14th, 1879.

1. The Commander-in-Chief has had before him a report from the Surgeon-General of British troops of the medical arrangements and events connected with the return to India from Afghanistan, through the Khyber Pass, in June last, of the 1st and 2nd Divisions of the Peshawar Valley Field Force. 2. With cholera on the line of march, excessive heat, entire absence of shade, and a scarcity of water, the return march of the advanced columns must be considered one of the most trying operations of the war; and His Excellency is gratified to learn that the troops met the hardships to which they were inevitably exposed with cheerfulness, and that throughout an excellent and self-denying spirit animated all ranks. 3. Sir Frederick Haines desires, however, to place more especially on record his appreciation of the valuable services rendered to the army on the occasion referred to by the medical staff of both services during the march itself and subsequently in the severe outbreak of cholera to which the garrisons in the Khyber and at Peshawar were subjected. 4. That the medical staff did not spare themselves in meeting the anxious and arduous responsibilities that devolved upon them, is too sadly proved by the lamentable death, within a few weeks, of four of their number (Surgeon-Majors Kelsall, Wright, Gray, Wallace), and the large amount of sickness amongst the remainder. 5. While grateful to all for the zeal and devotion displayed in the discharge of most trying duties, the Commander-in-Chief is more especially so to Surgeons-Major J. H. Porter and J. A. Hanbury, of the British Medical Service, for their able and efficient arrangements; and to Surgeon-Major C. J. McKenna, and Surgeons S. H. Browne and W. H. Cadge, of the Indian Medical Department, and Surgeons-Major Melville Jones, G. J. H. Evatt, and H. Cornish, and Surgeons C. P. Turner and W. J. LeGrand, of the British Medical Service, for their praiseworthy exertions. 6. Sir Frederick Haines is authorised to state, that His Excellency the Viceroy and Governor-General in Council entertains the highest opinion of the efficient and meritorious services performed by the medical officers in the late campaign, and on the return march to India; and, while deploring the loss of so many valuable officers, His Excellency has requested the Commander-in-Chief to communicate the thanks of the Government of India to the members of the two services generally, and specially to those named in the preceding paragraph; and to the undermentioned officers who have also been brought to notice for their good services during the campaign:

First Division Peshawar Valley Field Force.—Deputy Surgeon-General J. Gibbons, British Medical Service, Principal Medical Officer; Surgeon-Major G. S. Davie, British Medical Service, in charge Divisional Field Hospital; Surgeon-Major F. W. Moore, British Medical Service, in charge Base Hospital, Peshawar; Surgeons-Major R. H. Hutchinson, S. C. Amesbury, G. C. Chesnaye, A. P. Holmes, H. Cookson, and Surgeon H. Mallins, Indian Medical Service.

Second Division Peshawar Valley Field Force.—Surgeon-Major A. M. Tippetts, British Medical Service, Temporary Principal Medical Officer; Surgeon-Major N. Ffolliott, British Medical Service, Base Hospital.

Kuram Force.—Deputy Surgeon-General F. F. Allen, C.B., Indian Medical Service, Principal Medical Officer; Deputy Surgeon-General S. C. Townsend, Indian Medical Service; Surgeon-Major J. Meane, British Medical Service, Senior Medical Officer; Surgeon-Major Curtiss Martin, British Medical Service, in charge Base Hospital, Kohat, and subsequently of Field Hospital; Surgeon-Major W. Nash, British Medical Service, Field Hospital, Ali Kheyl; Surgeon-Major G. J. Gibson, British Medical Service, Field Hospital, Peiwar.

Kandahar Force.—Deputy Surgeon-General A. Smith, British Medical Service, Principal Medical Officer under General Stewart; Deputy Surgeon-General J. Hendley, British Medical Service, Principal Medical Officer, Quetta Force; Surgeon-Major W. S. Whylock, British Medical Service, Field Hospital Kandahar Force; Surgeon-Major J. B. C. Reade, British Medical Service, Field Hospital, Kandahar Force; Surgeon-Major W. G. N. Manley, V.C., British Medical Service, Field Hospital, Quetta Field Force; Surgeon-Major J. J. McCarthy, British Medical Service, Divisional Base Hospital, Quetta; Surgeon M. Knox, British Medical Service, served with Field Divisional Hospital.

Warrant Medical Officers.—Apothecaries E. Vyall, J. Hogan, H. C. Hodgkins, C. Cordell, J. Barker, H. I. Finnamore, J. Forsyth, and P. Barrett, in submedical charge of the several field and base hospitals attached to all the columns.

7. His Excellency in Council also desires his warmest acknowledgments to be conveyed to Surgeon-General J. H. Ker Innes, C.B., for the very valuable aid he has rendered the Government. Sir Frederick Haines would add his own sincere thanks for the ready and able assistance he has at all times received from Surgeon-General Innes, who has added to a remarkable list of previous campaigns the distinction of having most successfully administered the medical department in the field throughout the late Afghan war. The Surgeon-General prominently notes the valuable services rendered to him by his Secretary-Surgeon J. A. Marston, M.D., Army Medical Department.

PUBLIC HEALTH.—During last week (the forty-seventh week of the year), 4,021 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 17 per 1,000 in Edinburgh, 21 in Glasgow, and 38 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth 15, Sheffield 17, Hull 18, Oldham 21, Brighton 21, Newcastle-upon-Tyne 22, Plymouth 22, Leicester 22, Bradford 23, Bristol 23, Wolverhampton 24, Sunderland 24, Salford 24, Birmingham 25, Nottingham 25, London 25, Leeds 25, Norwich 26, Manchester 27, and the highest rate 31 in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 3.8 per 1,000 in the twenty towns, and ranged from 1.4 and 1.5 in Oldham and Nottingham, to 6.2 and 6.4 in Leeds and Sunderland. Scarlet fever showed the largest proportional fatality in Sunderland, Newcastle-upon-Tyne, Bradford, and Manchester. Measles was fatally prevalent in Leeds and Liverpool. In the nineteen provincial towns only 4 deaths were referred to diphtheria, against 20 in London. A fatal case of small-pox was recorded in London, but not one in any of the nineteen other large towns. In London, 1,760 deaths were registered, being 27 above the average, and equal to an annual death-rate of 25.4, which exceeded the rate prevailing in any week since the end of April last. The 1,760 deaths included one from small-pox, 57 from measles, 106 from scarlet fever, 20 from diphtheria, 41 from whooping-cough, 33 from different forms of fever, and 20 from diarrhœa—in all, 278 deaths, which were 16 above the average, and equal to an annual rate of 4.0 per 1,000. The deaths referred to diseases of the respiratory organs, which in the six preceding weeks had ranged from 190 to 405, further rose last week to 499, and exceeded the corrected weekly average by 26; 302 resulted from bronchitis and 147 from pneumonia. Different forms of violence caused 70 deaths; 65 were the result of negligence or accident, including 30 from fractures and contusions, 13 from burns and scalds, 3 from drowning, 4 from poison, and 15 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 37.4°, and 4.0° below the average. The direction of the wind was variable, and the horizontal movement of the air averaged 10.7 miles per hour, which was 1.8 below the average. Rain or melted snow was measured on four days of the week, to the aggregate amount of 0.68 of an inch. The duration of registered bright sunshine in the week was equal to 14 per cent. of its possible duration.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Second M.B. Examination, 1879. Pass List.

[This portion of the list was accidentally omitted from last week's JOURNAL.[

Second Division.

Barker, Frederick Rowland, St. Thomas's Hospital
Beevor, Charles Edward, University College
Dymott, Donald Frederick, University College
Forsbrook, Wm. Henry Russell, Westminster Hospital
Gill, Richard, B.Sc., St. Bartholomew's Hospital
Hayle, Thomas Hahnemann, Owens College and Manchester Royal Infirmary
Hudson, James, University College
Lendon, Alfred Austin, University College and Middlesex Hospital
Maylard, Alfred Ernest, Guy's Hospital
Neale, William Henry, University College
Shain, William Frederick, Liverpool School of Medicine
Taylor, Harold Gilbertson, King's College

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners on November 19th.

Barnes, Henry J., Thornhill Crescent
Bernard, A. G. F., Birmingham
Close, Percy, York
Compton, Francis C., L.R.C.P.Ed., Hans Place
Cuffe, E. Meade, Woodhall Spa, Lincolnshire
Firth, Robert H., Ware, Herts
Griffith, Edward P., Oakley Square
Gwillim, R. D. H., Marlborough
Hare, F. W. E., Welbeck Street
Henderson, William H., M.D.Kingston, Kingston, Canada
Humphry, Laurence, B.A.Cantab., Princes Square
Jones, G. H. W., L.S.A., Eckington, Chesterfield
Millican, Kenneth W., Shepherd's Bush
Nicholson, R. W. E. H., Exeter
Penny, William John, Crewkerne
Pollard, Bilton, West Dulwich
Rentoul, Robert R., L.R.C.P.Ed., Lisburn, co. Antrim
Smyth, Sydney, East Worlington, Devon
Swabey, Louis W., Faringdon, Berks

Five candidates were rejected.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 13th, 1879.

Jefferson, Arthur John, New Hampton, Middlesex
Liebstein, Herman John, Highbury Hill, N.
Priest, James Damer, Waltham Abbey
Rice, Richard, Little Barrington Vicarage, Burford, Oxon
Thorn, Wm. Hershell Perceval, 87, Harrow Road, W.

The following gentleman also on the same day passed his primary professional examination.

Bertolacci, John Hewetson, St. George's Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 20th, 1879.

Hackman, Leonard King Havelock, Landport, Hants
Hewitt, John, Leaf Square, Manchester
Munyard, Thomas Guillaume, Coombe Bury, Kingston Hill
Neale, William Henry, 60, Boundary Road, N.W.
Pound, Francis Joseph, Odiham, Hants

The following gentlemen also on the same day passed their primary professional examination.

Bissill, Arthur Kent, St. Bartholomew's Hospital
Harvey, Eldon, St. Thomas's Hospital
Moore, Alexander Mathew, Guy's Hospital
Pounds, Thomas Henderson, Charing Cross Hospital
Quicke, William Henry, Westminster Hospital

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced :—

ADDENBROOKE'S HOSPITAL, Cambridge—House-Physician, Salary, £65 per annum, with board and lodging. Applications on or before December 1st.

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

*BRISTOL ROYAL INFIRMARY—House-Surgeon. Salary, £100 per annum, with furnished apartments, board, and washing. Applications on or before December 1st.

BURY DISPENSARY—House-Surgeon. Salary, £100 per annum, with apartments, etc. Applications to the Secretary on or before November 29th.

*CARLISLE DISPENSARY—Junior House-Surgeon. Salary, £90 per annum, with apartments, coal, gas, and attendance. Duties to commence on Dec. 1st.

CENTRAL LONDON OPHTHALMIC HOSPITAL—Assistant Surgeon. Applications on or before December 10th.

CITY OF LONDON LYING-IN HOSPITAL, City Road—Consulting Surgeon. Applications on or before December 2nd.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

*GREAT NORTHERN HOSPITAL, Caledonian Road—Two Physicians. Applications on or before December 4th.

*INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST—Visiting Physician.

*JERSEY GENERAL DISPENSARY—Resident Visiting and Dispensing Medical Officer. Salary, £120 per annum, with furnished rooms, attendance, coal, and gas. Duties to commence December 1st.

*LONDON LOCK HOSPITAL—House-Surgeon. Applications on or before December 10th.

NEW BOROUGH ASYLUM, Nottingham—Medical Superintendent. Salary, £450 per annum, with furnished apartments, gas, coals, vegetables, and washing. Applications on or before December 16th.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney Road—House-Surgeon. Salary, £100 per annum, with rooms, attendance, coals, and gas. Applications on or before December 1st.

SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon. Salary, £80 per annum, with board. Applications on or before December 22nd.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

*ADAM, James, M.D., Superintendent of the District Asylum, Caterham, appointed Medical Superintendent of the Crichton Institution and Southern Counties Asylum, Dumfries.

*ARMSTRONG, H. G., M.R.C.S.Eng., appointed Assistant-Surgeon to the Royal Berks Hospital, Reading.

CRISP, Thomas, M.R.C.S., appointed Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest at Brompton.

GRAY, J. Allan, M.A., M.B., appointed Assistant to the Professor of Medical Jurisprudence in the University of Edinburgh, *vice* J. O. Affleck, M.D., resigned.

LUNN, J. R., L.R.C.P., appointed Assistant House-Physician to St. Thomas's Hospital.

MYLES, George, L.R.C.S.E., appointed one of the Visiting Surgeons to Barrington's Hospital, Limerick, *vice* B. Kavanagh, M.D., deceased.

NEWSHOLME, A., M.R.C.S., appointed Assistant House-Surgeon to St. Thomas's Hospital.

RUTHERFORD, R. L., L.K.Q.C.P., Clinical Assistant in the West Riding Asylum, appointed Assistant Medical Officer in the Durham County Asylum.

SHEPPARD, C. E., M.B., appointed Resident Accoucheur to St. Thomas's Hospital.

WALTERS, J. Hopkins, M.R.C.S.Eng., appointed Assistant-Surgeon to the Royal Berkshire Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

NAPIER.—At Abbey Lands, Dunbar, on November 24th, the wife of A. D. Leith Napier, M.D., of a son.

DEATH.

TAYLOR, Joseph Ogilvie, L.R.C.P.Ed., aged 41, in London, on November 20th.

BRAND'S ESSENCES.—An appeal has been heard before Vice-Chancellor Malins, in an action by T. Duce and J. J. Mason, known in business under the title of Brand and Co., Little Stanhope Street, to restrain Frank Mason from using their name on labels, in selling similar articles to those which constitute the specialities of Brand and Co. The Vice-Chancellor held that the plaintiffs had the only right to use the title of Brand and Co.; and "that the defendant had, from first to last, resorted to trickery and fraud in order to deceive purchasers". This decision was now confirmed, and the defendant was restrained on appeal from using the title of Brand and Co.

PRESENTATION TO MR. C. WILLIAMS.—On Tuesday last, the friends of Mr. Charles Williams, surgeon, of Northwich, met at the Navigation Office, to present him with a testimonial on his retiring from practice. The testimonial consisted of a handsome silver fruit-stand of Greco-Roman pattern, with two silver compotiers to match. The first bore the following inscription: "Presented to Charles Williams by his friends at Northwich, in recognition of his professional ability, and in remembrance of his invariable kindness and attention." The testimonial was presented to him by Mr. Blake, in an appropriate address; and a few highly complimentary words were added by the Rev. A. J. Blencowe, the Rev. R. Marsh, and Mr. Neumann, to which Mr. Williams responded in a most feeling manner.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Lichtenberg will show a Splint for Excision of Knee-joint in cases treated Antiseptically; Mr. J. Knowsley Thornton, "Ovariotomy, following Incision, long Drainage, and supposed case of Ovarian Tumour– three cases"; Mr. H. A. Reeves, "On the Treatment of some affections of the Urethra and Bladder in the Female".—Odontological Society of Great Britain, 8 P.M. Professor Flower, F.R.S., "On some recent Specimens of Abnormal Dentition in the Royal College of Surgeons' Museum". Casual communications from Dr. Walker, Mr. F. Canton, and Mr. Van der Pant.

TUESDAY.—Pathological Society of London. Specimens on view at 8 P.M.; Chair at 8.30 P.M. Dr. N. Moore: 1. Calvaria from a Case of Congenital Syphilis; 2. Cancer of Gall-Bladder; Ulceration into Duodenum. Mr. H. Cripps: Enchondroma of the Arm. Dr. W. Ewart: Aneurism of Aorta; Hæmorrhage into Pericardium. Dr. Barlow: 1. Emphysematous Cyst of the Lung, with Atelectasis; 2. Congenital Syphilitic Bone-Disease. Mr. Hutchinson: 1. Supposed Rupture of Roots of Brachial Plexus (living specimen); 2. Two Cases of peculiar Skin-Disease (living specimen).—Card Specimens. Dr. Ewart: Two Specimens of Aneurism at Base of Heart. Mr. Walsham: Myo-sarcoma of Head of Tibia.

WEDNESDAY.—Epidemiological Society of London, 8 P.M. Dr. J. F. Payne: "On Certain Points connected with the late Epidemic of Plague in Russia"; Dr. Norman Chevers, "Notes on the Relapsing Fever of India".—Obstetrical Society of London, 8 P.M. Specimens:—Dr. Godson: Ruptured Fallopian Tube. Dr. Galabin: Menstrual Decidua, etc. Dr. Cleveland: Milk Gelatinous Cord. Dr. Heywood Smith: Uterus removed by Hysterotomy, Ovum Forceps, and other instruments. Paper:—"Report of Experiments on Transfusion of Blood", by Mr. Schäfer.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

WHOOPING-COUGH.

SIR,—I should feel obliged to any member who would kindly inform me if specific treatment can avail in arresting the progress of whooping-cough; and, if so, the remedy most likely to answer.– Yours truly, F.R.C.S.

November 19th, 1879.

CABS FOR COUNTRY PRACTICE.

SIR,—Will some of your correspondents kindly advise me as to the suitability of two-wheeled cabs for general country practice? The roads in this district are good, but moderately hilly. I should be glad to know who is the best maker; and whether horses 15.2 high would be big enough?—I am, sir, your obedient servant,

November 18th, 1879. GENERAL PRACTITIONER.

BATH IN COLD WEATHER.

SIR,—In the BRITISH MEDICAL JOURNAL of November 8th, Dr. Edis suggests that those who are not robust enough to take an ordinary cold sponge-bath in cold weather should place their bath, with a little warm water in it, close in front of the basin-stand, then stand in that and sponge themselves with cold water from the hand-basin. I used to follow that plan, but changed it some years ago for a better one, suggested by a non-medical friend. I place my bath close in front of the basin-stand, as Dr. Edis proposes; but instead of putting in warm water, I put in a sheet of cork about fifteen inches square, which can be got from any corkcutter for 2s. 6d., then stand on that and sponge with cold water from the basin. The cork feels warm to the feet in all weathers, and with its help I can enjoy my cold sponge all the year round without the trouble of getting warm water.—I am, etc.,

Houghton-le-Spring, Nov. 24th, 1879. WALTER LYON, M.D.

MR. J. W. DAVIES (Clun, Salop) asks where he could obtain information relative to the preparation of the "temperance tinctures" of Sir James Murray, M.D., of Dublin.

AMERICAN BREAKFAST CEREALS.

SIR,—Attracted by your interesting articles on diet in the JOURNAL, I felt anxious to try the steam-cooked hominy, etc., of the Cereals Manufacturing Company, but can nowhere find the address of the London agency to which I could write. Will you oblige me so much as to send me the address if you know it?—Yours faithfully,

Richmond Lawn, Southsea, Nov. 25th, 1879. JOHN OGILVY, M.D.

*** We have received so many similar applications, that, to save the trouble of sending private answers, we may say that the London agents of the Cereals Manufacturing Company are H. Gate and Co., 20, Upper Thames Street; the Hull agents are Messrs. White, Son, and Stratton, Commercial Chambers; and that we believe that most large grocers and provision dealers are now supplying them.

MR. J. FARRAR (Morecambe) is thanked for the further particulars which he kindly furnishes of his interesting case, and which we shall publish the record at an early date.

THE MILLERCHIP FUND.

SIR,—Would you kindly acknowledge in your next issue the receipt of a cheque for £2 10s. from Mr. Newton, Honorary Secretary of the Hunts Medico-Chirurgical Society, being the balance, after paying expenses, of the Society?—I am, sir, yours, etc., JOS. ROGERS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the candidates at the written examination on the 14th instant, when they were required to answer at least four, including one of the first two, out of the six questions. 1. Describe, in their position, the several parts in relation with the quadratus lumborum. 2. Describe the operation of tying the subclavian artery in the third part of its course. Give the channels through which the collateral circulation would be afterwards carried on. 3. What are the usual complications of scalp-wounds, and the appropriate treatment in each case? 4. What consequences, proximate or remote, may follow a blow upon the perinæum? State what would be your early treatment in such a case. 5. Describe the course, symptoms, and treatment of acute inflammation of a superficial bursa. 6. What is the cause of lateral curvature of the spine? Describe the anatomical changes which take place in this affection, the signs of the deformity, and the principles of treatment.

The following were the questions on the Principles and Practice of Medicine submitted to the candidates on the 15th instant. 1. Describe the emphysema of the lungs. How is it produced? on what diseases does it supervene? and what are the symptomatic and other consequences to which it gives rise? 2. Give the chemical and physical characters of gall-stones. Discuss the symptoms which may arise in the progress of a gall-stone from the gall-bladder to the duodenum. And especially consider the effects of obstruction of the common duct directly on the liver and indirectly on the general system. 3. What are the special uses and doses of the following drugs: Sulphuric acid, nitric acid, bicarbonate of potash, acid tartrate of potash, iodide of potassium, sulphate of zinc, nitrate of silver, tincture of senega, tincture of Indian hemp, tincture of nux vomica, ethereal tincture of lobelia, croton oil, elaterium, tincture of belladonna, and wine of aloes?

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

AN APPEAL.

SIR,—Would you kindly allow me to make an appeal to the readers of your influential JOURNAL on behalf of the widow of a medical man, cut off in the prime of life by fever. He has left a widow and five children (one a cripple), and the total amount they have to subsist on is £46 *per annum*, the proceeds of his life insurance. The eldest son is sixteen, and the youngest eight years old. It is desired to raise a sum sufficient to place one boy at the Epsom College for a year, in the hope that, by the kind help of the governors, he may be elected a foundation scholar at the expiration of the year.

Full particulars of this case will be given to anyone kindly disposed to help, by H. M. Fernie, Esq., Park Green, Macclesfield, and by myself. We shall be most grateful for any kind help.—Believe me, sir, yours very faithfully,

J. P. BARTLETT, Rector of Exbury, Southampton.

PRURITUS ANI.

IN reply to the query of M.D. on this subject, the following answers have been received.

M.D.CANTAB. recommends a trial of the following mode of treatment. It was successful in his hands last year, in a case which had resisted all other modes. 1. Ablution with tepid water to be substituted for the use of paper after defæcation. 2. A suppository of a quarter to half a grain of extract of belladonna to be used every night. 3. The bowels to be regulated with a mild laxative, such as the acid tartrate of potash, with confection of senna. 4. A mixture containing small doses of quinine with arsenic two or three times a-day.

MR. W. PROWSE (Cambridge) has found two remedies of the greatest use in the immediate relief, and ultimate cure, of this affection of the skin. The glycerinum acidi carbolici (P.B.) should be carefully applied at bedtime every night; and an ointment—made of calomel, ℥i; camphor, ℥ss; and six and a half drachms of vaseline—every morning. Stimulants and tobacco-smoke are contraindicated.

A MEMBER says that forty years' experience has taught him that the best local application is a mixture of carbolic acid, ℥i, in olive oil, ℥i or ℥iss, applied with the finger at bedtime, being careful to have the rectum empty, the laden condition of which seems to aggravate the annoyance. In pruritus pudendi, nitrate of silver (five grains to the ounce of distilled water) is a specific, applied with a sponge instead of giving way to rubbing, which only increases the local misery. The lithic acid diathesis seems to be the cause in both cases, and attention should be directed by alkalies, etc., to correct this.

MR. P. MIALL (Bradford) writes that he can strongly recommend the glycerine of tannic acid, or the lotion made by precipitating compound tincture of benzoin with its bulk of water. But the best application is strong mercurial ointment applied somewhat soaringly at bedtime. One application is enough, for a time at least. In some cases, he has found the following answer better. ℞ Unguenti hydrargyri fortioris ℥i; chloroform ℥i; adipis benzoati, ℥ij; acidi carbolici gr. xv. This must be used every night, and causes a burning, said to be rather pleasant. Oleate of mercury 20 per cent. may be used, instead of blue ointment. For constitutional treatment, he advises hot-air baths, mineral acids after meals, abstinence from pastry, sweets, and other unwholesome diet.

DR. J. OLIVER (Darlington) suggests the following lotion. Scheele's hydrocyanic acid thirty minims; solution of morphia, ℥i; best birdseye tobacco, ℥i; water to half a pint. "To be used night and morning, or when necessary."

MR. JAMES PARTRIDGE.—We know of no good work such as our correspondent asks for, giving a good description of food—fish, meat, etc.—and their appearances in health and disease. We believe, however, that the two papers by Mr. Francis Vacher, Medical Officer of Health for Birkenhead, published in the *Sanitary Record*, are at present the principal sources of reference and information on this subject to medical officers of health. Mr. Vacher's first paper on The Diseases of Animals rendering them Unfit for Man, was published in the *Sanitary Record* of September 27th and October 4th, 1878. His papers on The Diseases of Animals which do not necessarily render them Unfit for the Food of Man, was published in the *Sanitary Record* of June 20th and June 27th, 1879. Reprints may probably be obtained from Mr. Vacher himself.

WHO IS TO BLAME?

A CIRCUMSTANCE, which clearly demands some explanation from the medical practitioner concerned, is reported in a recent report of Mr. Harris Butterfield to the Town Council of Bradford (Yorkshire). Mr. Butterfield reports that scarlet fever is increasingly prevalent throughout the borough, and owing to the very general neglect of precautions against the spread of infection, it is to be feared that the disease will still further extend. In one case, which became known to the medical officer through an anonymous letter, the good intentions of the father of a family were actually frustrated. On visiting the house, three children were found to be suffering from scarlet fever; they were all in the living-room, and were attended to as well as she was able by the mother, who had been recently confined. The parents in vain requested their medical man to procure the admission of the children to the Fever Hospital. On the father himself applying at the hospital, he was furnished with the necessary forms for the signature of his doctor, who, however, refused to take any action in the matter. On the certificate of another medical man, who had seen the cases, the children were at once removed. If the facts be as stated, it is clear that, in this instance, a neighbourhood was put into considerable danger, and the lives of patients imperilled, without, as far as can be seen, the shadow of an excuse. No one with any knowledge of scarlet fever would consider the risk of removing a patient in a properly constructed ambulance to a hospital especially planned and organised for the treatment of infectious disease, as at all comparable with the danger of retaining him in an overcrowded, ill-ventilated apartment, in which cooking, washing, and other household work was performed by a poor woman enfeebled by recent childbirth, who, in addition to the care of her baby, had to be the day and night nurse of three sick children. It was to meet such cases as this that the Fever Hospital of the town was erected; and it is eminently desirable that the public should in every way be encouraged to appreciate more and more the advantages of such an institution.

MR. JESSE, on behalf of the "Society for the Total Abolition of Vivisection", writes to disclaim any connection with the recent meeting at Peterborough, or with "the persons alluded to by Mr. Erichsen and Mr. Wells" in their letters in the JOURNAL of November 15th. How these antivivisectionists love each other!

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

A PRACTICAL HINT.

SIR,—In several cases lately I have had recourse to the use of a cold-water pillow, with very marked benefit, where headache, heat of head, and similar symptoms have prevailed. Any one who has experienced the vain attempt to find any permanent cool place in a feather pillow when desired will at once appreciate the above expedient, which, however, may not occur to every one at the required time.—I am, sir, your obedient servant,

WM. WOODWARD, M.D.

Worcester, November 21st, 1879.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. Berkeley Hill, London; Dr. John Duncan, Edinburgh; Dr. Clifford Allbutt, Leeds; Dr. T. Lauder Brunton, London; Dr. Perry, Glasgow; Dr. T. Barlow, London; Dr. Thorburn, Manchester; Dr. H. Charlton Bastian, London; Dr. J. W. Burman, Richmond; Dr. Allchin, London; Dr. Drummond, Newcastle-upon-Tyne; Dr. Gowers, London; Dr. A. T. H. Waters, Liverpool; Dr. J. Crichton Browne, London; Mr. Lawson Tait, Birmingham; Mr. Bowman, London; Dr. Bowles, Folkestone; Dr. Berkart, London; Mr. Vincent Jackson, Wolverhampton; Dr. George Johnson, London; M.D.; Dr. de Pietra Santa, Paris; A London Undergraduate; Mr. Richard Wood, Bromsgrove; Dr. Pissin, Berlin; Dr. J. Greig Smith, Clifton; Dr. Israels, Amsterdam; Dr. J. J. Gorham, Letterfrack; Optic; Mr. H. C. Burdett, Greenwich; R.; Our Glasgow Correspondent; Dr. D. Duckworth, London; Dr. Litton Forbes, London; A. D. L. N.; Our Dublin Correspondent; Mr. Henry Davies, Morriston; Mr. George Brown, London; Mr. Gay, London; A Certifying Surgeon; Dr. Atthill, Dublin; T. M. R.; Dunelm; Dr. W. Woodward, Worcester; Dr. C. Cameron, Glasgow; Dr. Wyld, London; M.B., M.A.; Dr. H. Barnes, Carlisle; Dr. Sawyer, Birmingham; Mr. Walter Sindall, London; Dr. Tytler, Manchester; Dr. Edge, Manchester; Sir Louis Mallet, London; Dr. F. Barnes, London; Mr. Withers, Shrewsbury; Dr. McCall Anderson, Glasgow; Dr. P. H. Watson, Edinburgh; Dr. Lloyd Roberts, Manchester; Mr. E. Amphlett, London; Mr. Furneaux Jordan, Birmingham; Mr. Chiene, Edinburgh; Mr. McHardy, London; Dr. Bradbury, Cambridge; Dr. Church, London; Mr. G. A. Critchett, London; Dr. John Brunton, London; Dr. S. Ringer, London; Mr. J. F. West, Birmingham; Dr. McKendrick, Glasgow; Mr. H. Bernays, Old Charlton; The Town Clerk, Dewsbury; Mr. G. Dippu, Scarborough; Mr. G. Davies, Clun; Mr. J. Fowler, Wakefield; Mr. Geo. Miles, Plympton; Mr. H. G. Cartwright, Narborough; D. H.; F.R.C.S.; Dr. Wade, Birmingham; B.; Dr. Spencer, Bristol; Mr. G. R. Jesse, Macclesfield; Dr. E. H. Jacob, Leeds; Mr. J. H. Walters, Reading; M.R.C.S., L.S.A.; Mr. F. Vacher, Birkenhead; The Secretary of the Epidemiological Society; Mr. Thomas White, Veytaux, Vund; Mr. R. D. Fox, Manchester; Mr. Geo. Eastes, London; Mr. W. Prowse, Cambridge; Dr. Smith-Shand, Aderdeen; Mr. Nelson Hardy, London; Mr. W. R. Barker, London; Dr. G. de Courcy Morris, Birkenhead; Dr. E. Haughton, Upper Norwood; Dr. Perry, Glasgow; Mr. J. W. Wilson, Plymouth; The Secretary of Apothecaries' Hall; Mr. C. A. Barrett, Wallingford; Dr. Rooke, Cheltenham; Dr. N. Kerr, London; Dr. V. Poulain, London; The Secretary of the Medical Society of London; Mr. Garraway, Faversham; Mr. A. G. Miller, Edinburgh; The Registrar-General of England; Dr. G. S. Ranking, Chester; Mr. R. L. Rutherford, Wakefield; Mr. W. P. Thornton, London; The Registrar-General of Ireland; Mr. G. E. Walker, Peterborough; Dr. A. Strange, Shrewsbury; Mr. J. Walters, Reigate; Our Edinburgh Correspondent; Dr. C. Handfield Jones, London; Mr. W. W. Cheyne, London; Dr. Ferguson, Peebles; A Member; Mr. H. B. Harrison, Caterham; Mr. E. Walford, Ramsgate; Dr. J. Jamieson, Melbourne; Mr. H. Carr, Clapham Common; Mr. W. R. Sergeant, Crowland; Mr. B. B. Ruddock, Clifton; G. M.; Mr. D'O. Carte, London; Mr. J. Barrs, Dudley; Dr. Mitchell, Barnard Castle; Dr. P. M. Braidwood, Birkenhead; Dr. J. Crocker, Bringley; Mr. G. Jackson, Plymouth; Mr. A. D. Hughes, Barmouth; Mr. E. Street, London; Mr. Roper, Croydon; Dr. Bond, Gloucester; Dr. Slade-King, Ilfracombe; Dr. Walter Lyon, Houghton-le-Spring; Mr. S. W. North, York; Dr. J. Broom, Clifton; etc.

BOOKS, ETC., RECEIVED.

Practical Surgery: including Surgical Dressings, Bandaging, Ligations, and Amputations. By J. Ewing Mears, M.D. With Two Hundred and Twenty-seven Illustrations. Philadelphia: Lindsay and Blakiston. 1878.

The Advantages and Accidents of Artificial Anæsthesia: a Manual of Anæsthetic Agents, and their Employment in the Treatment of Disease. By Laurence Turnbull, M.D., Ph.G. Second Edition, Revised and Enlarged. With Twen ty seven Illustrations. London: H. K. Lewis. 1880.

CLINICAL LECTURES
ON
STRICTURE OF THE URETHRA.

Delivered in University College Hospital.

By BERKELEY HILL, M.B., F.R.C.S.Eng.,
Professor of Clinical Surgery in University College.

Lecture IV.—Internal and External Urethrotomy.

In describing the mode of operating by internal urethrotomy, I need not take up your time with showing you the numerous armament of instruments, each of which is intended to carry out the special fancy of its contriver for cutting through the stricture. They may all be collected into two classes: those which cut from behind towards the meatus urinarius, and those which cut as they proceed backwards along the passage. Civiale's, which I have here in my hand, is a good representative of those which cut from behind forwards, and is, perhaps, more generally used than any other urethrotome constructed on that principle. It consists of a stem with bulbous extremity, from which can be protruded a sharp knife. It has two disadvantages: the first, that it cannot be employed for very narrow strictures—those too narrow for its bulb to pass through—as it cuts when withdrawn along the passage. Next—a far more serious objection—there is no means for fixing the stricture in the perinæum, so that it is difficult to obtain sufficient division of the fibrous tissue. The knife often slips through without doing more than scoring the tissue it ought to divide. The absence of any means for fixing and tightening the tissue to be cut is a defect that belongs to nearly all urethrotomes, and which has been a principal cause of the uncertainty of cure attributed to internal urethrotomy. By a moment's reflection, you will comprehend that division of the non-expanding fibrous tissue is far more likely to be accomplished if the bands to be cut be held steady and stretched before the sharp edge attacks them. Everyone adopts this principle before cutting a bit of string; he pulls tight the string before the knife crosses it.

Having pointed out this cardinal principle in the construction of an efficient urethrotome, but of which too many instruments are devoid, I will proceed to describe to you the one which I have now employed for some years.

This urethrotome or "wedge-incisor" is devised in accordance with the following principles. 1. It approaches the stricture from before backwards; hence it divides all anterior bands as they are approached before the deeper contractions are attacked. And, further, the narrowest stricture through which a filiform bougie can be passed may be at once divided without a preliminary dilatation by wearing catheters. 2. The constricting fibres are alone attacked, and are cut until they yield sufficiently to give to the urethra at the strictured parts the same calibre it has at the unstrictured parts; but the cutting edge does not invade the normal highly elastic vascular tissue. 3. All fibres to be cut shall be fixed and stretched tightly before the knife reaches them.

Before operating, the patient, if not in condition for it, is prepared by rest in bed and attention to the natural functions. When fit, his temperature is normal; his urine acid, or at least neutral, nearly free from pus and albumen, and of specific gravity not lower than 1012 or 1010; in amount, forty or fifty ounces per twenty-four hours. Later on, I shall explain the importance of these conditions. The urethra itself should also be clear of purulent discharge or active congestion. These precautions having been observed, the patient is first anæsthetised; and, if the natural gauge of the urethra have not been previously ascertained, the passage is explored by a bullet-sound, or, if there be stricture near the meatus, by the urethrometer; the largest bullet-sound or widest expansion of the meter that slides without force along the urethra in its non-strictured part being taken as the size to which the strictured part must be incised. Should the meatus be too contracted to permit the wedge to enter, that is divided by a touch of a bistoury. The meatus being freed, a split sound is next passed to the bladder. The two halves of this sound are welded together at the point, but separated for the rest of their length. When closed, they equal in size No. 2 of the English and No. 8 of the French scale. (See Fig. 4.) When the stricture is tight or tortuous, the introduction of the split sound is facilitated by previously passing a filiform guide-bougie (No. 2 French) of silkworm gut mounted with a screw-head, to which the split sound may be screwed. Should it be doubtful whether the guide has reached the bladder, a No. 3 French (No. ½ English) flexible catheter is screwed to the guide-bougie, and the whole pushed onwards till the catheter has passed eight inches inwards. A small exhausting syringe is then applied to the catheter, and a few drops of urine are drawn through it. The communication with the bladder being

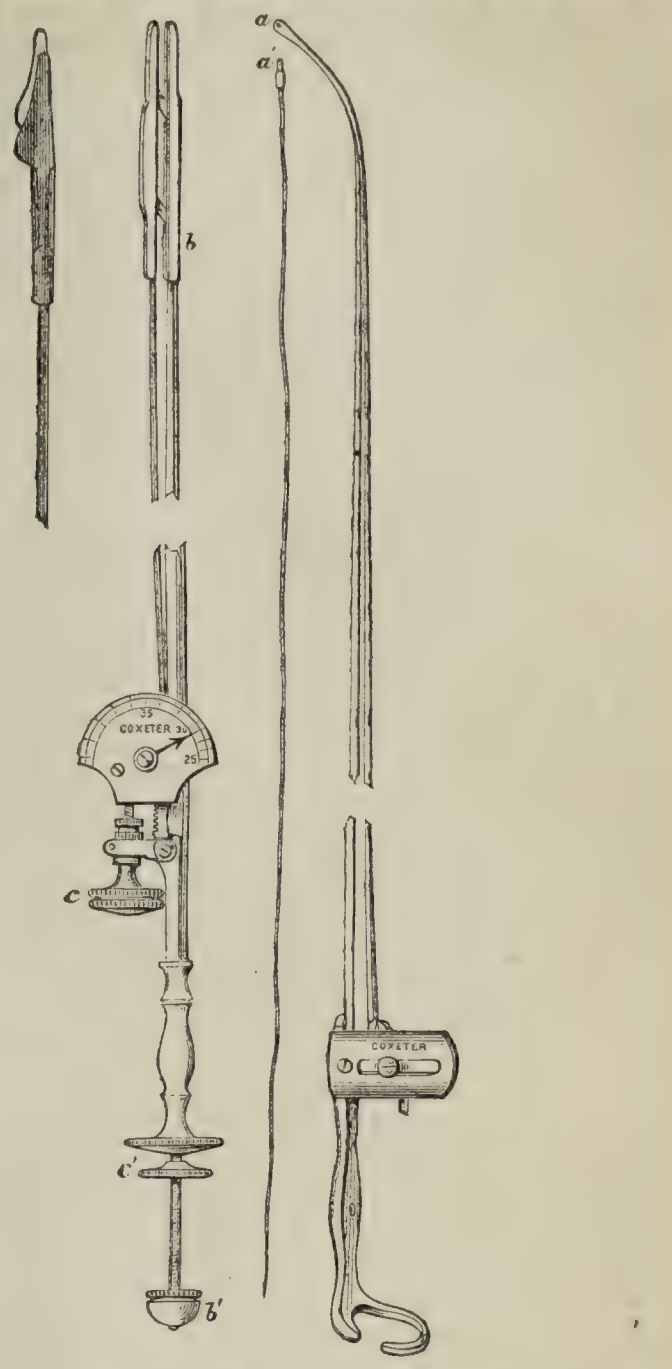


Fig. 4.

put beyond doubt, the catheter is withdrawn and unscrewed from the guide-bougie; the split sound is screwed on instead, and then guided into the bladder. In practice, this preliminary testing of the path followed by the guide-bougie is seldom needed; the presence of the end of the bougie in the bladder is sufficiently indicated by the freedom with which it can be pushed in and withdrawn, having no tendency to slip out spontaneously, as has the bougie which is engaged in a false passage or is only partly through a stricture.

The split sound being thus safely in the bladder, a wedge containing a concealed knife is then pushed down the urethra between the halves of the split sound, on which it runs in dovetail grooves. The wedge separates the blades of the split sound, and when a stricture is approached sets tight the constricting fibres. The knife is then pushed forward between the separated blades, and, dividing the tense fibres, allows the wedge to advance until it traverses the urethra from end to end. The knife retreats within the wedge, and is only protruded when a tight band opposes the free passage of the wedge. Thus, band after band of fibres are cut, and a calibre is given to the urethra, equal to the size of the easily fitting bullet-sound previously used. The size of the wedge employed depends upon that of the urethra, and may be obtained either by having a wedge that expands like a parallel ruler, and so can be set to any size, such an one as I hold in my hand; or by having a

series of wedges, Nos. 24, 26, 28, 30 (French), being found sufficient in practice to meet the varying widths of different urethræ. Of course, one split sound and one knife fit them all. After the strictures are fairly divided, the wedge-cutter is removed, and a wedge a size or two larger may be passed without force along the split sound to test the completeness of the division of the strictures. After the split-sound is removed, a flexible catheter of moderate size (No. 20, French) is passed, and tied in for twenty-four or forty-eight hours; that is, until free secretion of mucus allows it to be withdrawn easily. The patient is further cautioned not to micturate, even through the catheter, for at least five or six hours afterwards. This delay gives time for a blood-clot by fibrinous exudation to protect the wound from the contact of urine. The catheter withdrawn, the urine flows through the natural channel, and no instrument is again passed until the sixth day after the operation. Then a steel sound of the size to which the strictures were cut is passed beyond them; and this operation is repeated, at first every fourth day, then every week for two or three months afterwards, and ultimately every three months by the patient, who is trained in the use of the maintaining bougie before he leaves the hospital.

Instead of the steel sound, I frequently use a dilating sound, one that can be passed to the bladder at the size of No. 16 or 18 (French), and by turning a screw at the handle can be widened to any size required. It is then withdrawn in its widened state, and thus demonstrates the width of the passage. It is a process easier to the patient than that of passing a full-sized sound.

After the operation, usually no opiate or anodyne is needed. The patient remains in bed for three days; but is then generally able to get up, dress, and move about the ward; and in ten days may leave the hospital for his usual occupation. During the remainder of his stay there after the first week has elapsed, he is trained to pass the bougie for himself, that he may be able to keep the passage wide for the remainder of his life.

I have stated that I tie a catheter in the urethra from twenty-four to forty-eight hours after operation. This custom being condemned by some, I must tell you why I do so. About three years ago, I tied in a catheter in every alternate case in a series of thirty-eight urethrotomies, leaving the urethra unprotected from the urine in half the cases, without regard to the gravity or lightness of the case. On comparing the after-progress of these cases, I found that elevation of temperature and rigors occurred in both sets of cases, but far more frequently in the set where a catheter was not tied in. Though shivering was not invariable, a rise of temperature *always* took place where a catheter did not lead off the urine during the first twenty-four hours. This effect of the flow of urine over the wound is unmistakable. The temperature after the operation remains normal for as many hours as the patient refrains from micturition. But within half an hour after urine has flowed through the urethra, the thermometer shows unnatural heat; in some cases not rising above 100° Fahr., and subsiding in five or six hours to a normal range. When the reaction is great enough to produce higher elevation of temperature and rigor, the amount of previous kidney degeneration is probably considerable, and the approach to danger is pretty close. In Mr. Davies's table, there are 20 cases where the temperature after incision of subpubic strictures was noted hourly: in 12, a catheter was tied in; in 8, it was omitted. In all of the 8, the temperature rose in the first twenty-four hours; the lowest being 102° Fahr., and the highest 106.6° Fahr. Of the 12 where the catheter was tied in, in 6 the temperature remained normal throughout. In 3 others, the temperature remained normal until after the catheter had been removed. In the last 3 cases, notwithstanding the presence of the catheter, the temperature rose on the night of the operation to 100°, 102°, and 103° Fahr. respectively, becoming normal the next day.

Now, before leaving internal urethrotomy, I must explain to you wherein lie the dangers of the operation. Considering the large number of times this operation is said to have been performed, without a single death directly due to the proceeding, in France and in the United States, the risk ought not to be very great, even supposing this statement to be not quite exact. But, confining myself to my own experience, I have found the risk of danger to arise in two ways. First, the knife may penetrate the normal vascular erectile tissue of the corpus spongiosum or corpora cavernosa. This I have already described to you. Second, shock may be caused to the kidneys by the operation on the genito-urinary organs. This is of trifling importance if the patient have not previously degeneration of the kidney, for, after the shock has passed off, the natural action of the kidney is resumed. The explanation of this consequence of operating on the urinary tract, however slight the operation may have been, we owe to Mr. Marcus Beck; and, since he has demonstrated it, I have always found the signs of it in serious operations on the deeper urethra or bladder when I have looked for them, and oftentimes in slight ones. Even the passage of a catheter done with skill and gentleness is sufficient to arouse it. It is not unknown after lithotrity. I have seen it follow the trifling operation of meatotomy, though this is excessively rare, for commonly no such reaction occurs unless the deeper urethra be invaded. The signs are these: from two to five hours after an operation on the deeper urethra, the urine, at first free from albumen and blood, is often tinged deep red with blood, and, if not charged so copiously, a short exploration with the microscope is sufficient to discover the discs. The blood is evenly diffused through the urine and free from clots, thus differing from blood derived from the wound even if precautions have not been taken to prevent such admixture. Moreover, in many cases urine can be collected, which is at first mixed with clots of blood from the wound, then free from blood, and lastly charged with evenly diffused blood from the kidney. This condition of the urine generally continues for eighteen or twenty-four hours, but in slight cases not more than eight or ten hours. Before the blood appears, the urine may be scanty or almost suppressed, and gradually increase in quantity as it becomes mixed with blood. Less frequently, an increase in *quantity* may occur almost immediately after the operation, before blood begins to escape from the kidney; such urine is then watery and of low specific gravity. The quantity of blood is rarely sufficient to cause casts of the kidney-tubules to appear in the urine. The pathology of this phenomenon Mr. Beck explains to be due to irritation of the sympathetic system, whereby the shock applied to the membranous urethra or base of the bladder is communicated to the kidney, producing first contraction of the arteries and anæmia of the kidney. This stasis is soon followed by expansion of the arteries, increased afflux of blood, and active congestion. The consequences of these effects show themselves, first, in a temporary diminution of the secretion of urine; next comes the increase, and with it escape of blood into the urine.* Sometimes the period of contraction is so short as to be not recognisable, and the increased flow of urine, soon to be bloody urine, seems to begin immediately. Should the kidneys be healthy or only moderately affected, this temporary disturbance of function settles down, and no further mischief ensues. But as frequently, in cases of stricture so far advanced as to induce their bearers to seek treatment, the impediment to the flow of urine has existed, always for some months, generally for some years, the kidney is no longer healthy: chronic interstitial nephritis, if not also attacks of subacute or acute nephritis, has altered the structure of the organ to a greater or less extent. The connective tissue is increased, impeding the flow of blood, especially in the veins and Malpighian tufts, many of which are frequently found to be obliterated by the pressure; and further, a large part of the pyramids may have been absorbed. Hence, in two ways is the kidney less able to recover from a sudden congestion, and consequently the danger of the congestion becoming either complete stasis, when suppression of urine, that must be fatal if not speedily relieved, takes place, or, if the congestion be less complete, the chronic interstitial nephritis becomes acute, and so damages the organ that it can no longer perform its functions.

The foregoing demonstrates the great importance of the following three points in the treatment of stricture. 1. Strictures should be treated early, before serious operations are requisite, and before the long-continued obstruction has produced changes in the kidney's structure. The stricture itself is only indirectly an impediment to the exudation of urine from the kidney-tubules. As a cause, it is only in operation during micturition. During that act, it excites increased effort on the part of the bladder to void its contents. To meet this, hypertrophy of the muscular coats of that viscus takes place. This thickening, together with that caused by chronic inflammation of the mucous lining, narrows the outlets of the ureters. These ducts become charged; and, as the overloading of the ureters increases that in the kidney-tubules, impediment to secretion of urine into the overcharged tubules is constantly present, and thus the changes in the kidney tissue are slowly brought about. 2. The contraction in the deep urethra should not be attacked until those anterior to it in the penile part are thoroughly divided, lest the knife be applied deeply to a stricture which is mainly spasmodic in its nature, and disappears when that condition is removed. 3. Before operating at all in cases of long duration, every effort should be made to ascertain the condition of the kidneys, and to remove temporary congestion. Unfortunately, symptoms of the presence or of changes produced by bygone interstitial nephritis are very few. A kidney that is even seriously affected may do its work so well as to cause the patient very little inconvenience under ordinary circumstances, but might very likely be excited into fatal inflammation if subjected to the shock of an operation, and is still more likely

* For further details, see Mr. Beck's article on "Nephritis and Pyelitis consecutive to Affections of the Lower Urinary Tract", *Reynolds' System of Medicine*, vol. v. p. 529.

to be so if directly irritated by putrid ammoniacal urine in its pelvis and calyces. There is not necessarily œdema or marked anæmia; nor pain nor tenderness of the loins to mark the occurrence of these changes in the kidney.

Most important is the examination of the urine. The daily quantity and specific gravity of the whole amount should be ascertained for several days. Large increase in the quantity and low specific gravity indicate impediment to the circulation by interstitial thickening and excessive blood-pressure in the Malpighian tufts. The further examination of the urine as it escapes from the urethra is almost always impeded by admixture with pus and mucus from the bladder, and not unfrequently by blood. Hence it is often necessary to wait, before drawing further inferences, until rest and regular drainage and washing of the bladder have prevented the secretion of much of the pus and mucus added to the urine after its arrival in the bladder. It is often possible to obtain a small quantity of urine comparatively pure by carefully washing the bladder with warm water and collecting, through the retained catheter, the first few drops of urine exuded from the kidneys; thus putting the test-tube into almost direct connection with the pelvis of the kidneys. In such unmixed urine, free from bladder and urethral pollution, an examination may be carried out. Albumen may be present only in traces or altogether absent in chronic interstitial nephritis; when tolerably copious, it indicates much congestion or subacute inflammation. Casts are few, and, if found, are hyaline. The reaction of the urine is a valuable indicator. It is usually alkaline when, or soon after, being voided, if cystitis be present, from putrefactive changes set in motion by the bladder-mucus. The urine is always acid before it reaches the bladder, unless putrefaction take place in the pelvis of the kidney from advanced pyelitis. With such a state of the pelvis, it is rarely possible that the kidney can withstand the shock of an operation. Hence the invariable rule, that before urethrotomy the patient's urine shall be acid. The amount of urea in the daily excretion is not necessarily affected, and sometimes is normal. Thus, the most important indicators of chronic interstitial nephritis are, increased bulk of the urine, with specific gravity lower than corresponds to the increase of fluid. Nevertheless, they are not always present, nor are they always sure guides. In estimating their value in a given case, moreover, reference must be taken to the amount of liquid imbibed, the season, etc. But on the other hand, in forming a judgment of the degree to which this destructive change has advanced in the kidneys, the previous history gives assistance; the length of the period of marked difficulty in micturition or increased frequency, the number of attacks of retention, the continuance of ropy urine, all show how long the kidney has been exposed to irritation and continual unnatural pressure of urine from the stricture upwards to the beginnings of the tubules. You will now understand why, when describing the operation, I told you the patient must be prepared for it. Briefly to recapitulate, the urine shall be acid as it is voided, quite free from blood, almost if not quite free of albumen, pus and bladder-mucus scanty in quantity, if present at all; the whole quantity of urine forty to sixty ounces at most, and the average specific gravity not under 1010. If a more or less complete approach to this condition of the urine be not obtained, no cutting operation is justifiable, except in very exceptional cases, where the suffering to be relieved calls for any method having chance of success.

As just said, it is a standing rule that the albumen should have disappeared almost entirely from the urine before any operation is carried out; a rule which has its exceptions, nevertheless. There comes to us occasionally a retired police-sergeant, for whom, five years ago, I performed external urethrotomy to cure a perineal fistula, which had opened a second time, after the dilatation of his stricture by simple bougie-passing had enabled it to close. At the time of the operation, the man excreted urine with one-fifth to one-third albumen; yet he made a fairly rapid recovery, the albumen disappeared, and he has been in the enjoyment of excellent health ever since. Some of you may identify him, as he has a short congenital fistula of the neck; and when he comes to the hospital to report himself, the attention of the students is generally attracted to that abnormal peculiarity.

Another condition which justifies urethrotomy with advanced renal disease is rapid and repeated contraction of a very irritable stricture, after dilatation by gentler methods. Such a case was operated on last winter. The patient was aged 52, old for his years, and had, a year before, been in hospital for stricture, with cystitis and much renal disturbance. His urine was, on admission, alkaline, 1010 specific gravity, with one-third albumen; blood-discs, granular casts; and when the pus had been nearly got rid of, hyaline casts were detected. As soon as the urine had become acid, as it escaped from the bladder, and the patient's temperature had become normal at night as well as in the forenoon, and his general condition as favourable as could be expected, internal urethrotomy was performed. The recovery was slow, delayed by considerable reaction in the kidneys, resulting in the production of some small septic abscesses in the cellular tissue of the axilla, loin, and groin. The patient is now (ten months after operation) much improved, and his stricture, with the occasional passage of No. 23 French bougie, shows no sign of shrinking. The albumen has disappeared; the urine is only slightly turbid, pale, and the specific gravity of the specimen he brought with him to the hospital lately was 1015; hence the condition of the kidneys has very decidedly improved, while the patient has gathered flesh and strength to an amount much greater than he had before enjoyed for several years.

5. *External Urethrotomy.*—In Mr. Davies' table are three cases where the perinæum was opened for the division of stricture, and three more for extravasation of urine into the cellular tissue with urethral stricture. As you know, the external division of stricture is now much less frequently adopted than it was thirty years ago. Still it is called for in certain cases, which may be thus classified. 1. Where there is much induration of the perinæum, and more than one fistula from the urethra behind the stricture to the surface; such cases, if treated by dilatation or by internal division, seldom recover rapidly or satisfactorily. They are liable to formation of a fresh abscess and continued irritation. For these reasons, such strictures do best when thoroughly divided in the perineal part from without. At the same time, all penile strictures must be carefully searched for and divided internally, or the patient will recover from his external section only half cured of his disease. 2. When urine has copiously escaped into the cellular tissue from a rent in the urethra behind the stricture, and there is impending or actual sloughing inflammation of the integuments, it is often possible, by an incision in the middle line, to give free outlet to the urine as it passes from the bladder, and thus, by relieving the patient from irritation, afford him some chance for recovery. Sometimes this is not possible, and the operator must be content to incise the integuments freely wherever the urine is collecting and setting up gangrenous action, waiting until the febrile action and swelling have subsided before dividing the stricture. The bladder is relieved through these devious channels, and chance given to the patient to struggle through the effects that follow the outpouring of fœtid decomposing urine into the cellular tissue; for it is its putrid condition that renders urine noxious. Normal urine, when injected into the cellular tissue, is quickly absorbed and excreted by the kidneys, without causing local inflammation or general constitutional disturbance. Such urine is, however, rarely present in cases of extravasation from stricture. Before the urethra gives way, the morbid bladder mucus excites putrefaction in the urine before it leaves the bladder, producing sulphide of ammonia and other products in considerable quantity. 3. When the urethra is impassable for a guide to the bladder, it is necessary to open the urethra from without, either behind the stricture or just in front of it. Such cases are very rare; and when urine escapes along the urethra, though it be only in small quantity, by patience an instrument can be nearly always introduced to the bladder. I say nearly always, because in two of the cases of external urethrotomy in Mr. Davies' tables, the patients habitually passed all the urine through perineal fistulæ, but they maintained that occasionally a little urine escaped from the meatus. Be this as it might, we never saw it do so, and protracted attempts to pass catheters or bougies of any kind utterly failed, though repeated during many weeks. One patient had, two years before his admission to hospital, suffered from a crushing injury to the pelvis by a mass of earth falling on him. In the other, a negro, the perinæum and genitals were much altered by elephantiasis.

Mr. Guthrie, in his surgical works, has described two methods of reaching the bladder and dividing the stricture from the perinæum. In the first, he opens the urethra in the membranous part between the rectum and the stricture, for gonorrhœal strictures never occupy all the membranous portion, and generally do not even reach it; and only rarely in cases of traumatic stricture is the membranous part either destroyed, or so involved in the cicatrix as not to be traceable. In the operation referred to, and which I adopted in one of the three cases of extravasation of urine in Mr. Davies' tables, Mr. Guthrie (*Lancet*, 1851, vol. i, p. 595), bases his directions on the fact that the membranous portion can be reached without any guide through a cellular interval between the last part of the rectum and the bulb of the urethra, *i.e.*, behind the situation of stricture, provided that the incision be made exactly in the mesial line. The patient is directed to hold his urine that the bladder may fill, and is then put into the lithotomy position with a good light. The surgeon has at hand probes, probe-pointed directors, scalpel, artery forceps, No. 20 silver catheter, sponges, tapes, etc. He begins the operation by passing the left forefinger into the rectum to indicate the precise position of that part; a straight, short, sharp-pointed bistoury held in the right hand with its cutting edge forwards, makes an incision in the middle line one inch and a half long,

starting half an inch in front of the anus. Should that be much indurated, a transverse crucial cut through the skin may also be made across the first to give freedom to the deeper cuts of the knife, which henceforth must continue precisely in the mesial line. This mesial incision is gradually deepened for one inch, the left forefinger still in the rectum, and the knife's edge directed forwards throughout. At this depth, the urethra can often be distinguished by the left forefinger in the wound, especially if the patient cough or strain. It is sometimes dilated, but generally is not sufficiently enlarged to be distinguished the more readily on that account. The left finger still guarding the gut, the knife punctures the urethra during a strain, and if the bladder be full, the ease with which the urethra is reached is greatly increased. While urine escapes at the puncture, a fine director is passed into the urethra, and the track to the bladder made certain. Along this guide a catheter may be passed at once, or the stricture in front attacked by carrying a director forward along the urethra into the stricture, and bringing towards it, along the penile urethra, a staff or silver catheter. Sometimes the staff will slip into the stricture and meet the guide from behind. The complete division of the stricture is then easily accomplished. The next step, Mr. Guthrie warns his pupils, is often by no means easy, namely, the introduction of a catheter along the urethra, and past the wound into the bladder, if the guide to the bladder have been incautiously removed before the catheter also reaches the bladder. He advises the operator to have ready a director, narrow at the point, but widening rapidly at the handle; along such a guide the beak of the catheter can be readily directed into the bladder. The last stage in the operation consists in fastening securely the catheter, which is worn for twenty-four to forty-eight hours, according to the patient's condition.

In the patient on whom the mass of earth fell, the urethra, from the scrotum to the neck of the bladder, was converted, with the other structures of the perinæum, into gristly tissue about three inches deep, through which several fistulæ let out the urine from the bladder, but where the membranous urethra could not be traced. It was not possible, therefore, to carry out the operation exactly according to Guthrie's directions. But, beginning the incision half an inch in front of the anus, the gristly tissue was gradually cut through stroke by stroke, exactly in the middle line, until the neck of the bladder was reached and the forefinger could be introduced. The incision through this indurated perinæum was then prolonged forwards until the end of a No. 20 French (No. 12 English) silver catheter that had been passed along the anterior urethra was laid bare. This was then directed through the deep incision, and guided by the finger to the bladder, where it was secured. There was very little hæmorrhage to obscure the steps of the operation, far less than would take place if the natural condition of the parts had existed; this cicatricial tissue being only slightly vascular. The patient made a slow recovery, but is now, nearly three years after the operation, working in a mine, in good health, and maintaining patency of his channel for the urine by a daily introduction of No. 18 or 19 French bougie.

Mr. Guthrie also practised another operation for dividing strictures and reaching the bladder from without, which has been revived and greatly improved in its details by Mr. Wheelhouse of Leeds. It should be reserved for cases where no guide can be passed, and yet where a track exists through the stricture to the portion behind. I selected it for the second case of perineal section, where the perinæum and genitals were much altered by elephantiasis, and the track of the urethra lost in false passages. The patient was placed, as in the other case, in the lithotomy position, and the same preparations as to instruments are needed. To the instruments, Mr. Wheelhouse has added some special ones that greatly facilitate the operation. They are (1) a straight staff, in which a deep groove is continued to one-fourth of an inch from its tip. The tip itself is turned backwards, to form a knob or blunt hook. (2) A gorget, tapering to a point that is small enough to run along the groove of the fine director to the bladder. (3) Two pairs of straight-toothed forceps, with spring catch. The staff is steadily held in the urethra by an assistant, so that its groove is directed forwards, but the beak is kept from pressing closely against the stricture, so as not to chafe or tear its anterior opening before the urethra is incised. The incisions in this operation, as in the other, are limited to the mesial line. The first was carried through the skin, from an inch in front of the anus to the juncture of the perinæum and scrotum, to which point a No. 18 French catheter could be passed by previous dilatation. The urethra was opened on the staff, and the margins of the incision seized on each side by the toothed forceps, and held steadily apart. The staff was then turned round, so that its hook caught in the anterior end of the cut into the urethra, and drawn upwards, to hold the opening steady while the passage through the stricture was sought and found; when with a little delay a fine director was coaxed through the stricture into the bladder. On this director the thickened walls of the urethra were cut, and the pointed gorget run until it also reached the bladder. It served as a guide for a catheter, which replaced the staff, and was tied into the bladder.

If reserved solely for cases where no guide can be passed along the urethra to the bladder before the operation is commenced, this form of perineal section is seldom required, and becomes rare in proportion as the surgeon has been persevering in his preliminary attempts to coax a guide along the urethra.

External urethrotomy with a guide, an operation perfected by Syme, is a very much simpler procedure, and much more often practised. It is, however, with us reserved for cases where the perinæum is honeycombed by abscesses and urinary infiltration, with considerable amount of subpubic induration of the urethra. Here, external section is preferable, as it gives free drainage through the wound and thus obtains speedy closure and sound healing of the fistula. Syme's operation requires a curved staff, of which the five inches next the handle are straight, and as large as 20 or 22 French; beyond this, the staff is narrowed abruptly, to the size of No. 7 French, and grooved on its convexity in the mesial line from the shoulder or thick part to the tip. The operation begins by passing this staff along the urethra to the bladder, until the narrow part has traversed the stricture, and the thick part is arrested by the contraction. The urethra is then opened on the grooved staff, held steady by an assistant, so that its curve projects well in the perinæum, and the knife at last reaches the groove. The edge of the knife is now directed forwards, and thus the bands of stricture which check the onward passages of the thick part of the staff are thoroughly divided, till no obstacle remains. The staff is then withdrawn, and replaced by a catheter. Here often begins a difficulty; the part of the urethra from the wound to the bladder cannot be hit by the beak of the catheter. This obstruction is prevented, if the tapering gorget of Mr. Wheelhouse be led along the groove of the staff to the bladder before the latter is removed. The gorget then acts as a guide for the catheter past the wound to the bladder.

Mr. Marshall, years ago, devised a simple apparatus for ensuring the entry of the catheter into the bladder. Instead of a shouldered staff, he uses a staff the size of No. 7 French throughout, and without a handle, but with an additional stem of the same thickness, on which a flexible No 20 French catheter can be threaded. The beak of the catheter is cut off and replaced by a silver mount to receive the strokes of the scalpel when the stricture is being divided against it. When the narrow staff has been passed through the stricture, the flexible catheter is slid down the urethra till it is arrested by the stricture, and there waits until, that impediment having been reached and divided from without, the catheter can be pushed along the staff into the bladder. Then the staff is withdrawn through the catheter, and the latter remains in its place.

Now, as to the results of external division. Complete division of the stricture from without is no more a permanent cure than internal division. The sound or bougie must be passed every third or fourth day during the healing of the wound, and, after that, at intervals of gradually increasing length is still necessary. This interval can seldom be extended beyond three months.

SLOW PULSE.

I.

THE following case is similar to that recorded by Mr. Noble in the BRITISH MEDICAL JOURNAL of November 22nd. Mr. E. has been a carver and gilder, and, I am informed, has been "a heavy drinker" for some years. He is now in his seventy-second year, and first came under my notice just twelve months ago. His pulse was then 40, regular, and full in tone. He is in full possession of all his faculties; and, upon my visiting him on November 24th, I found him in good spirits, with a pulse 36, temperature 96, respiration normal. He is rather lethargic, and spends most of his time in bed.

JOHN WHEELER, M.D., Ch.M., Bayswater.

II.

I HAVE seen a patient aged sixty-eight frequently in consultation, during the last four years, whose pulse, in his best health, is 26 in the minute. There is hypertrophy of the heart amounting to the "cor taurinium". There is occasionally a slight mitral musical murmur, and albumen has been found in his urine on two or three occasions by his regular medical attendant. The patient is subject to attacks of syncope, and has for some months had swelling about the ankles. I may also mention that I have frequently had pulses varying from 30 to 40 in the minute, in cases of typhoid fever, when the temperatures were typical of typhoid.

J. PATERSON NORRIS, M.D., Dalbeattie, Scotland.

CLINICAL LECTURE
ON
LOCOMOTOR ATAXIA.

By DAVID J. BRAKENRIDGE, M.D., F.R.C.P.E.,
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REGARDING the pathology of this disease, it is not difficult, when we consider the nature of these anatomical changes, to understand the inequality and irregularity of the disturbances of sensibility which we have seen to be present in this disease. A gradually developing sclerosis of the neuroglia, exceedingly delicate and somewhat soft in texture, will, in the initial stage—which is probably always more or less inflammatory—by pressure upon, and irritation of, the sensory nerve-roots, cause those electric-like pains which are characteristic of the initial period of the disease and of each extension of it into new regions of the cord, and which pains, although referred to the limbs, are probably centric in their origin.

The advancing sclerosis, pressing unequally on different adjacent nerve-fibres, may cause great differences in the degree of the loss of sensibility in quite contiguous peripheral areas.

In those cases where absolute anæsthesia was present, but was temporarily removed by repeated strong excitations, we must assume that, in the nerve-path, the conductivity, although seriously interrupted, was not yet abolished or closed.

Delay of sensations usually affects painful impressions only, and is almost invariably associated with sclerosis of the posterior cornua of grey matter.

What is the mechanism of the inco-ordination, which is the most characteristic feature of this disease? Is there lesion of any co-ordinating centre? And, if so, what is the centre which governs the co-ordination of the movements of the arms and legs?

The centre which regulates the co-ordination of a particular muscular movement is situated, I believe, in that portion of the spinal cord from which arise the nerves which supply the muscles necessary to effect that movement. To understand the pathology of locomotor ataxia, it is necessary that you should have clear ideas on this point.

I will now endeavour to make good this assertion, that the co-ordinating centre for such highly complex muscular movements is situated in the spinal cord.

The following experiment must be familiar to all of you who have studied physiology. Take a frog and irritate the upper part of the right thigh with a strong acid. It will immediately put up the foot of the same side and rub off the acid. If by any means it be prevented from using this foot, it will then raise the left foot and rub it off. This act is an example of co-ordination. It appears like an intelligent use of the limbs, and seems at first sight to be governed by the brain. The question is easily settled. Cut off the frog's head, and repeat the experiment. You again irritate the right thigh of the decapitated frog with the acid. Again it raises the foot of the same side and rubs off the acid. Cut off the right foot, and once more apply the acid to the thigh. It raises the footless leg, cannot reach the spot, pauses a moment as if for reflection, then lifts the left foot and rubs the acid off, just as if its head were on.

In this case, an influence is transmitted along afferent nerve-fibres to the proper nerve-centre in the grey matter in the spinal cord, and in virtue of an inherent power to produce orderly reflex movements—the result of education by frequent repetition, or inherited—possessed by certain combinations of ganglion cells in the spinal cord, definite motor influences are originated, and conveyed by efferent nerve-fibres to certain associated muscles, which are brought into play in the most exact manner possible.

It is thus apparent that, in the frog, beautifully co-ordinated complex muscular movements are performed by the spinal cord as a centre. To those who are familiar, as you all are, with the number of separate muscles and nerve-fibres concerned in such a movement, this is a remarkable fact. Our patient Joseph Ritchie cannot, with his eyes shut, touch the point of his nose, of the position of which he is quite conscious; but our headless frog carries its feet accurately to the irritated spot.

Flying is a movement exactly analogous to walking. Birds suddenly decapitated often fly for a considerable distance before death brings the co-ordinating mechanism to a standstill. I have repeatedly satisfied myself of this by experiment. I have also seen a partridge whose head had been shot right off continue its flight over half a field in the most perfect manner, until it suddenly fell dead. These are examples in a higher class of animals of spinal co-ordination. It is plain, then, that, as the result of education by frequent repetition of certain movements, there arise in the grey matter of the spinal cord "certain co-ordinations of motor elements which can apparently be called into activity, not only in a reflex manner, but also by the will". The will, however, in such cases, does not require to stimulate "each individual fibre supplying the muscles, but may simply render active the same apparatus as would have been brought into play in the reflex production of the same movement. If this were not so, the mind would have more work than it could accomplish in the production of the innumerable muscular movements required in such an apparently simple operation as walking" (Hermann's *Physiology*, Gamgee, p. 487). We may assume, then, that we do not need to go further than the spinal cord in search of those co-ordinating centres which are at fault in locomotor ataxia.

What, then, is the mechanism of co-ordination of muscular movements? For the performance of orderly movements of this kind, the following factors are necessary, in addition to the bony framework of the body: 1. Healthy muscles; 2. Healthy afferent nerve-fibres; 3. A healthy nerve-centre, fitted by education or inherited power to regulate exactly the muscles under its control, so as to produce harmonious action of these.

Now, you must bear in mind that, in every muscular movement, not only are the muscles directly producing the movement contracted, but there is, moreover, a simultaneous balancing and regulating action of all the antagonistic muscles, whereby the movement is rendered steady and graceful.

You will excuse a simple illustration, which may serve to fix on your memories the process of education of, and the power acquired by, the associated nerve-cells in such a finely complex movement, for example, as writing. Suppose that you have a long pole fixed to a firm base by means of a ball-and-socket joint or hinge, so as to permit of its free movement in many directions. To its free end are attached twenty ropes. These are arranged in a circle around it, and are capable, when worked by twenty men, of causing the free extremity to describe a great variety of movements. Hold a rod to some spot within reach of the point of the pole, and ask the men, by means of the ropes, to bring the pole straight to that spot. They will pull it about in a most irregular zig-zag manner before, by their combined action, it is brought to the spot indicated. But keep your rod at the same place, and let the men try it over and over again. They will observe and correct their mistakes, and coming to work more and more in harmony, will gradually bring it with less effort and in a steadier line to the point required. By careful training, the twenty men would learn to adapt their efforts so skilfully to the requirements of the case, that they would in time be able, with their eyes shut, to describe quickly and gracefully, with the point of the pole, many definite complex movements, such as the circle, figure of 8, etc.

In the spinal cord, the twenty men are represented by thousands of associated nerve-cells, which, acting by means of nerves and muscles, regulate all the complex movements of the body. In writing, for example, movements very much like those performed by the men with the pole—but infinitely more complex and difficult—are actually performed by the nerve-cells, muscles, and fingers. You know how difficult it is for a child commencing to acquire the art of penmanship to learn to make even simple straight strokes; and yet, with practice, he after a time acquires the power of forming quickly, elegantly, and without consciousness of effort, the most difficult letters and the still more difficult combinations of letters called words.

In order that perfect co-ordination be maintained, it is necessary that the whole circle we have named, of afferent nerve-fibres, nerve-centre, efferent nerve-fibres and muscles, should be in a perfectly normal condition relatively. As this disease—posterior sclerosis—affects the root-zones of the posterior or sensory roots of the spinal nerves, we may sum up the various sources from which, in the normal condition, those impressions, not necessarily revealed to consciousness, are derived which guide the actions of the co-ordinating centres. These impressions are derived through centripetal nerve-fibres from, 1. The skin; 2. The muscles and tendons; 3. Deeper structures, such as the joints, periosteum, etc.; 4. The brain.

That co-ordinate purposive movements can be excited by cutaneous centripetal impressions without the intervention of consciousness, is evident from the experiment which we have described in the decapitated frog; and that a perfectly co-ordinated movement can be continued without the brain, by the agency of the spinal centres alone, is proved by the bird performing the repeated highly complex movements of flying for a considerable distance after being suddenly decapitated.

So much for the mechanism of co-ordination. How, in the next

* Concluded from p. 859 of last number.

place, is that inco-ordination which is so characteristic of the disease produced? The inco-ordinate movements have by some writers—such as Leyden, Landry, Ruehle, Clifford Allbutt, etc.—been attributed solely to the simple loss of tactile sensibility. Leyden's theory of ataxia is thus stated by Professor Erb (Ziemssen's *Cyclopædia of Practice of Medicine*, English edition, vol. xiii, p. 87): "Co-ordination of movements is rendered possible and is effected through sensibility; suspension of the sensibility (of the skin, joints, muscles, etc.) suspends co-ordination; grey degeneration of the posterior columns is accompanied by disturbance of sensibility along with the ataxia; we are acquainted with no other than sensory functions in the posterior columns; consequently, ataxia is a result of disturbance of sensibility." Friedreich, Niemeyer, Späth, Erb, and others, hold, on the contrary, that the inco-ordination is a motor phenomenon, caused by disturbance of the centrifugal paths.

There is evidence, both physiological and pathological, to show that complete abolition of the transmission of centripetal impressions, either cutaneous or muscular, does not produce true ataxia. The movements of a skinned frog are not ataxic; neither does division of the posterior roots of the spinal nerves, although it impairs the muscular movements, produce true ataxia in the limb which the divided nerves supply. In the case of Remigius Leins cited by Professor Erb, sensibility to all impressions is almost entirely extinct in the upper extremities and in the soles of the feet; in the legs and trunk, there is diminished sensibility. In this case, voluntary co-ordinated movements are perfectly and strongly performed. There is, however, in this case no evidence of those peculiar inequalities and errors of sensibility or other centripetal impressions which are characteristic of posterior sclerosis.

Späth, Erb, and others, are disposed to believe that there must exist in the spinal cord special centrifugal co-ordinating nerve-fibres, situated probably in the posterior columns, implication of which in the sclerotic process is the cause of the ataxia.

Among those who have looked for the fault exclusively in connection with the muscles and their nerves, is Dr. J. Lockhart Clarke. He regards the habitual state of the muscles in health as one of reflex tension or tone, a moderate but constant state of contraction, by which antagonistic groups are kept in equilibrium or static tension; and upon the integrity of which tension the proper performance of combined voluntary movements depends. If some of the muscles of the group employed for any complex movement have in any degree lost their normal tension or tone, they will fail to the same degree to respond to the voluntary stimulus, and to perform their proper part in balancing the effects of the other muscles of the group that retain their tension, and thus the resulting movement will be proportionally disorderly. (British Medical Journal, September 20th, 1869.)

Now, unfortunately for this view, automatic muscular tonus is by no means proved. On the contrary, physiological experiments tend directly to disprove its existence, and to show that the retraction of severed muscles is due, not to any contraction of this kind, but to the fact that, in the normal condition, the muscles of the body are, in virtue of their elasticity, extended somewhat beyond their natural length. "Thus the retractation of severed muscles, which was supposed to be due to muscular tonus, takes place when the nerves supplying the muscles have been previously divided." (Hermann's *Physiology*, Gamgee's translation, p. 487.) Nor would this theory of Dr. J. Lockhart Clarke explain—what is unquestionable—the occurrence of well marked ataxic symptoms where there is little interference with the transmission of muscular centripetal impressions, and where the principal cause of the inco-ordination is evidently interruption to the transmission of cutaneous centripetal impressions.

The following appears to me the true interpretation of the phenomena met with in this disease. Correct centripetal impressions—not necessarily sensations, remember—regarding the movement, or changes in the position of the limb or portion of a limb acted upon, received during the successive stages of the movement must greatly influence the properly co-ordinated performance of it. The movement of a limb is believed to be estimated, not merely by impressions received by the nerve centre regarding the state of muscular contraction, but also by impressions received regarding the state of tension, relaxation, or folding of the skin and the state of pressure on the joints, etc. Now it stands to reason that, if there reach the nerve-centre regarding these points such a series of erroneous impressions as are present in, and characteristic of, posterior spinal sclerosis, the resulting act must cease to manifest that precision and smoothness of co-ordination which would characterise it in a perfect state of the mechanism.

While, therefore, it is not proved that there exists any loss of tonus in individual muscles previous to movement, and while I consider Dr. Lockhart Clarke's view insufficient to account for all the phenomena of the disease, I may now sum up what I believe to be the correct explanation of the various phenomena connected with the mechanism of the inco-ordination of locomotor ataxia in this way. During every co-ordinate movement, there is an exact, but constantly changing, degree of contraction of each of the muscles which directly effect the movement, and of each of the antagonistic or balancing muscles which steady and regulate the movement. The degree of contraction of each of these muscles is accurately and continuously regulated by impressions continually received by the nerve-centre through centripetal nerve-fibres from the muscles, on the one hand, regarding their state of contraction and the amount of resistance encountered by them, and from the skin, joints, ligaments, etc.; on the other hand, regarding the changes being effected in the position of the limb by the movement. The inco-ordination which characterises this disease is not caused by any general abolition of sensibility or of superficial or deep centripetal impressions, as we have seen proved by the experiment of the skinned frog, and division of the posterior roots of the spinal nerves, and by the case of Remigius Leins; but is the result of false, unequal, varying, and otherwise misleading impressions received by the nerve-cells in the grey matter of the spinal cord during the succeeding stages of the actual movements regarding the state of certain muscles in the acting groups, and regarding the actual position of the limbs. These must, of course, originate equally untrue resulting combinations of muscular movements when the automatic reflex spinal centre is called into action by the will. To make this intelligible, I recapitulate the principal errors in the centripetal impressions met with in this disease; and with regard to each of these, it should be borne in mind that quite contiguous portions of the cutaneous and deep tissues may present the most widely different conditions of sensibility or other centripetal nerve conductivity. These sources of error are: 1. Diminished intensity of impressions; 2. Erroneous localisation of impressions; 3. Delay in the rapidity of their transmission; 4. Conversion of one kind of impression into another; 5. Variability of the phenomena in the same spot at different times and under different conditions.

Recall to mind the illustration of the twenty men educated to perform, with closed eyes, by means of ropes, co-ordinate movements with the end of the pole. Imagine similar errors to those just enumerated introduced into the impressions received by their hands through the ropes regarding the movements and position of the point of the pole. One man receives diminished impressions and will act too feebly; another delayed impressions and will act too late; another erroneously localised impressions and will act in the wrong direction; another false impressions and will act wrongly; and so on. You will see at once that the resulting action must be irregular and ataxic. With their eyes open, the men will be able by constant corrections partially to improve the movement, just as all the muscles of the balancing groups in the leg of an ataxic patient, when standing, are seen to be in a perpetual state of movements of correction. The analogy is complete.

The explanation here given has this advantage, that it embraces all the varieties of the disease which have been insisted on by different authorities, instead of necessitating their separation, which some propose. It satisfactorily accounts for, 1. Those cases in which cutaneous sensibility and centripetal impressions are principally or entirely at fault; 2. Those cases in which the conduction of muscular centripetal impressions is principally deranged; 3. Those cases in which both of these causes of inco-ordination are present; 4. It accounts also for the "confusion worse confounded", which is met with in the advanced stages of many cases of all these varieties, when even the last guide, the eye itself, becoming afflicted with diplopia, amblyopia, or amaurosis, the once perfect automatic mechanism of the body can only produce movements which are utterly disorderly and purposeless.

Advanced cases of this disease present a further stage, in which, the sclerosis having overstepped the boundary line of the posterior columns and the adjacent posterior cornua of grey matter, new phenomena, indicative of the other tracts invaded, are added to the clinical picture. This third stage, through which most cases finally pass in their progress towards the almost inevitable fatal termination, is really no longer simple posterior spinal sclerosis; and its complex phenomena must be interpreted by a correct knowledge of the symptoms referable to sclerosis of the various other tracts of the spinal cord. Thus invasion of the posterior portion of the anterior cornua of grey matter is often associated with trophic disturbance in the joints; a further extension forwards leads to muscular paralysis and rapid atrophy; while, if the lateral columns be implicated, besides paralysis, various clonic and tonic contractions result; and so on.

I will not detain you many minutes with the treatment of this disease. As a rule, patients suffering from posterior spinal sclerosis go on from bad to worse; and whether the cases of cure which have been recorded were really cases of locomotor ataxia is, to say the least, doubtful. But the disease *may*, and often *does*, become stationary; and, if this result

can be brought about by any means, it is worth our efforts as physicians. For the damaged mechanism, if it cannot be repaired, can, to a certain extent, be re-educated; and, by learning to make allowance for certain errors, the nerve-centres may reacquire a certain amount of the lost power of co-ordination. Thus we may have apparent, but only apparent, improvement. Our patient Ritchie, by finding that his forefinger, when he tried to touch his nose, went two inches beyond it, learned by practice to correct this error, and could after a time, with his eyes shut, hit the mark much better.

In the earlier stages of the disease, when there is reason to believe that there is a good deal of congestion or even of inflammation, ergot of rye in full doses—a drachm of the liquid extract three times a day—or bromide of potassium or sodium, may be given. Under this treatment, Joseph Hunter, who was in Ward 7 in 1877, and whose case, although not severe, was an unquestionable one and in the early stage, improved greatly. The electric-like pains disappeared, and he recovered the power, which he had lost, of standing with his heels and toes together and his eyes closed, although he swayed from side to side a good deal. Nitrate of silver in quarter-grain doses has been extolled by many authorities, and my experience of it has been satisfactory. The constant galvanic current to the spine and nerves is often useful. The actual cautery is most worthy of trial, having been employed in some cases with encouraging results. The electric-like pains are best treated by means of the subcutaneous injection of morphia. Where a syphilitic history is present, the prognosis is more hopeful, and bichloride of mercury with iodide of potassium should be given.

Some of the facts brought out in these cases seem to indicate that an important part of treatment may consist in stimulating the anæsthetic areas. However, I hope to be able to speak more fully and decidedly on this subject in a future lecture.

ENLARGEMENT OF BRONCHIAL GLANDS WITH RELATION TO WHOOPING-COUGH.

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I WISH to give a few facts in reply to Dr. Gueneau de Mussy's remarks on the above subject in this JOURNAL of October 25th. Since the beginning of 1877, when there was considerable discussion of Dr. Gueneau de Mussy's doctrine, I have seized such few chances as came to my hand of testing, by *post mortem* examination, the statement that the bronchial glands are enlarged in whooping-cough.

1. Out of seven *post mortem* examinations on cases of undoubted whooping-cough, there was one in which the enlargement was considerable; and I took the specimen to the Pathological Society at the same time as the one to which Dr. Gueneau de Mussy has referred. There was one where the enlargement, though slight, was, I believe, definite; and there were five where there was no enlargement. The actual measurements I cannot give; but I have a note about one of the above cases, a child aged four months, that not one of the bronchial glands was as big as a red currant. I strongly suspect, from other observations, that the amount of enlargement of the bronchial glands, when found, must have some sort of relation either to the severity of the bronchitis, or, still more, to the extent of bronchopneumonia, if present. It seems possible, also, that the idiosyncrasy of the patient may have something to do with it. But this is speculative; and I am concerned only at present to state that the enlargement is not constant.

2. Dr. Gueneau de Mussy objects to arguments drawn from chronic enlargement of the bronchial glands, where nothing like whooping-cough had been present; but it is necessary that he should show how such cases anatomically differ from other chronic cases where paroxysmal cough is present, and which he claims in support of his theory. The distinction drawn between the effect likely to be produced by a slow chronic enlargement and an acute sudden congestion is reasonable; and therefore, at present, I will not consider the cases of tuberculosis with involvement of bronchial glands where the process is at all chronic. But, in infants under twelve months, tuberculosis is often moderately acute. I have examined such children in whom the duration of illness had been from six weeks to two months. Paroxysmal cough had not been present, and the tracheo-bronchial glands were considerably enlarged.

To consider still more acute cases: Along with my colleague Dr. David Lees, I have lately made *post mortem* examinations on two children where there was considerable enlargement of bronchial glands, associated in one case with severe bronchitis and collapse, and, in the other, with extensive bronchopneumonia. In neither case had whooping-cough been present during life, nor had the cough been at all paroxysmal. I have made *post mortem* examinations, also, on cases of diphtheria with bronchopneumonia, where acute enlargement of bronchial glands occurred, although, during life, no cough simulating whooping-cough had been present.

To sum up these conclusions:

1. Enlargement of the bronchial glands in whooping-cough is not constant.

2. Acute and subacute enlargement of bronchial glands occurs without paroxysmal cough.

To these may be added:

3. Dr. Gueneau de Mussy's admission that paroxysmal cough may occur without enlargement of bronchial glands.

Holding these three propositions to be true, I cannot admit that enlargement of bronchial glands pressing on the vagus is the *vera causa* of the characteristic symptom of whooping-cough.

There are many clinical arguments which might be considered, but I do not think with much profit. In spite of all that has been written on the subject, I cannot acknowledge that the diagnosis of enlargement of the bronchial glands during life is sufficiently satisfactory to admit of sound deductions. Where such enlargement is guessed at with a fair amount of probability, it is, in the majority of cases, so much complicated by morbid conditions of lung, pleura, or bronchus, that it seems a fruitless task to attempt to unravel results special to it.

RECURRENT HEADACHES IN CHILDREN, AND ASSOCIATED PATHOLOGICAL CONDITIONS.*

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THE object of this paper is to draw attention to the frequency of recurrent headaches at an early age, and to point out some symptoms and objective conditions commonly associated with headaches in children; some clinical facts which seem to be connected with the development of chorea will also be noted.

In studying a group of cases as to which we have no known pathology to define the class, it appears convenient to start with a general description; and, for this practical purpose, a summary has been made of the principal symptoms of fifty-eight cases of headache in children under fifteen years of age. Though recurrent headache was the most prominent and constant symptom met with in this group of cases, it was not always the one first complained of by the patient or mother. Classifying the symptoms, we find the largest number referable to the mental and cerebral condition of the child. We are told that he is excitable, melancholy, passionate, or fretful; that sleep is restless and disturbed by dreams and night-talking, by attacks of terror and screaming, or by somnambulism. Often there are vague pains in the limbs, chest, or abdomen. The appetite is often variable, voracious or entirely lost; there may be considerable emaciation with a good appetite, and without any accompanying signs of organic disease; often there is considerable nausea or retching with the attacks of headache. Hacking cough, without physical signs to account for it, is often met with, and usually the child is excessively fidgety.

In studying this group of nervous excitable children in whom recurrent headache was a main symptom, it was first necessary to look out for certain objective signs by which they might be identified; and these were principally found in the condition of the nervo-muscular system, the teeth and the urine, but chiefly in the muscular system.

The principal means at our disposal for studying the condition of the brain during life is by observing nervo-muscular phenomena. All expression of the subjective states is effected by muscular action, whether expression be produced by speech in words, by the facial movements or gesture, in which cases voluntary muscles are called into play; and such modes as dilatation of the pupil, erection of the hair, or disturbed action of the heart, are due to the condition of inorganic muscular fibre.

Local paralysis, and, in some cases, localised convulsion, may give definite indication as to the part of the brain affected and its conditions. We commonly recognise certain appearances of the face, and certain positions of the body and limbs, as indicating a fatigued or exhausted condition of the brain; and it is frequently with truth said that such an one looks as if he had a headache. Again, the look of expression in the face, and the tremulous condition of the muscular fibre of the tongue, is characteristic in general paralysis, as the depression of the angles of the mouth and the other signs of mental dejection are in melancholia. All these symptomatic conditions will, I think, if analysed, be found to depend on muscular conditions due to the conditions of the nerve-centres. Indeed, excluding the use of the ophthalmoscope, we have but

* Read before the Hunterian Society.

few means of ascertaining the condition of the brain, except the nervo-muscular phenomena; these are the chief index as to the cerebral condition. For these reasons, the muscular condition was carefully observed in this group of cases. Usually, the child was made to stand with the heels together, looking straight before him, the hands being down by his side. The general steadiness of the body, trunk, and limbs was then observed, as well as the condition of the face and eyes. He was next directed to put out his tongue, and, finally, to hold out both arms straight before him, on a level with the shoulder, at the same time separating the fingers. Observations were then made as to the muscles of these parts. The state of the heart, lungs, teeth, and urine, was examined, and the patient's weight was recorded. As the result of these examinations, it was observed that frequently there was marked fidgetiness, and irregular movement of the trunk and limbs; the trunk was often swayed about, frequently it was inclined backwards, apparently to preserve equilibrium, while the hands were held out in front. Twitchings of the fingers were very commonly seen, the movements being usually of independent digits, and most commonly either lateral or flexor, less commonly extensor; the lateral movements appeared to be the most characteristic. The tongue was usually very unsteady, but not distinctly jerked in and out, as in chorea. Twitchings of the facial muscles were not very common.

A certain passive condition of the hand and face will be referred to presently. In a large proportion of the cases, the teeth were found flattened on their edges, as the result of "tooth-grinding"; the teeth mostly ground were the incisors and canines, but the special teeth flattened depended upon their arrangement in the jaws. The pupils were measured in some cases with a catheter-gauge, after the manner suggested by Mr. Hutchinson. No special conclusion was arrived at; on the average, they were not large, except in a few cases near the age of puberty.

A certain facial expression indicative of depression was often observed, and, when seen, appeared to give strong evidence characterising the child as the subject of recurrent headaches. To analyse this condition of the face, the faces of adults, the subjects of migraine, were studied. The most noticeable point was the look of depression, and heaviness and fulness about the eyes, especially the under eyelid. If a paper were held so as to cover either half of the face, the expression observed still remained, proving the condition of the face bilateral; if the forehead above the eyebrows were covered, or the face below the lower margin of the orbit, in each case the expression seemed still apparent; while if the paper were held so as to cover that portion of the face which lies between the eyebrows and the lower margin of the orbit, it seemed impossible to recognise the peculiar *facies* under consideration. If these observations be confirmed, it appears that this expression must be due principally to the condition of the orbicularis palpebrarum. Specially observing this muscle and the parts adjacent, there seemed to be a loss of tone in the muscle; there was an appearance of fulness and flabbiness about the lower eyelid; the skin hung too loose, with an increase in the number of folds; and, in place of falling against the lower eyelid neatly, as a convex surface, it fell more or less in a plane from the ciliary margin to the lower margin of the orbit, a condition that is often best seen by looking at the patient's face in profile. This condition of the parts about the eye was unaccompanied by any general change in the skin of the face, such as the flabbiness seen in emphysema, and the loose inelastic skin of senile decay; further, the facial expression is not at all necessarily permanent, but may disappear with improving health. It is not suggested that this muscular condition only accompanies headache; it appears common to other conditions of depression.

A peculiar passive condition of the hand was also frequently observed. When the hands were held out, the wrists drooped slightly, thus being partially flexed upon the forearm; at the same time, the first phalanges of the fingers were extended backwards upon the metacarpus, the second phalanges being slightly flexed, and the ungual phalanx either flexed or kept in a straight line with the middle phalanx. This may be the position of all the phalanges equally or in a varying degree. The thumb is usually simply extended backwards, and somewhat abducted from the fingers. Such a cramped position of the hand appears to be very common in these nervous children who suffer from recurrent headaches; the same thing is often seen in those convalescent from chorea. This position of the hand is exactly represented in the statue of the Venus de' Medici at Florence, being used by the unknown sculptor to represent feminine coyness.

Having attempted to demonstrate that we may ascertain something of the condition of the brain by observing these muscular movements, we may now look for signs of irritation of the cranial nerves. Evidence of the motor division of the *fifth nerve* is seen in the great frequency of tooth-grinding; the condition of the muscles supplied by the facial and hypoglossal nerves has been referred to. Irritation of the pneumogastric nerve appears to be indicated by many symptoms. The varying appetite, which is often voracious, though nutrition is deficient, while at other times it is markedly defective; the frequent epigastric pain, and the retching or vomiting with headache, appear to indicate disturbance of the gastric branches; occasional palpitation without heart-disease, and the frequent hacking cough without signs of lung or throat mischief, indicate probable irritation of the cardiac and respiratory branches.

As to the disturbance of sensory nerves, it was difficult to obtain evidence, as the patients were often unable to describe their sensations with accuracy. In five cases, varying from nine to fourteen years of age, distinct dysæsthesia of vision accompanied the attacks of headache, the patient seeing colours, sparks, or other illusions during the attack of headache; in all but one case, the mother also suffered such spectra with headache.

As to the condition of the higher nerve-centres, we must look to the mental state and conditions of sleep; as to these points, some account has already been given. Disturbed and restless sleep was very common; night-terrors were frequent; often the child would scream out that "a lot of people were coming to kill him", that he "saw the School-board man" coming, etc. In six cases, there was the distinct history of somnambulism; in four of these, the acts performed during sleep had been complicated and curious; in one case, that of a boy nine years old, such attacks were frequent at the time he came under observation, on account of his headaches; in the remaining cases, somnambulism had occurred at an earlier period.

Seeing that these cases resembled chorea in the amount of irregular muscular movement, other points of similarity were looked for. The history of rheumatism in the individual or in the family was very unfrequent; so, also, was the presence of heart-disease. As in chorea, so here, the urine was often of high specific gravity, reaching up to 1030-1035, and so loaded with urea as to crystallise readily on the addition of an equal bulk of nitric acid. Uro-hæmatin was found to be abundant in many cases; the urine, when floated on sulphuric acid, developing a deep red or purple colour at the junction of the fluids; this test was applied in cases not under the influence of bromine or iodine. Dr. George Harley has shown that the amount of uro-hæmatin is dependent upon the amount of tissue-consumption in the body.

In seeking the lines of causation of recurrent headaches in children, the cases were arranged in a tabular form according to age and sex.

Ages		3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-15
Males	25	1	2	2	8	2	1	2	2	4	1	0
Females ..	33	0	2	3	1	2	5	5	4	2	4	5
Totals..	58	1	4	5	9	4	6	7	6	6	5	5

As among other groups of nervous cases, the preponderance of number is with the female sex. Heredity appeared to produce a marked predisposition to this neurotic condition. There was a history of recurrent headaches in the mother in twenty-four cases, and in the father in eight, while in three cases there were examples of insanity in the family. As to treatment, the restless excitable condition of these children, and the great want of rest in sleep, appeared to indicate the use of bromides and other sedatives; and this plan of treatment was generally adopted, tonics being occasionally used, together with small doses of chloral at night for short periods, till the habit of sleep was induced. Following upon such treatment without any hygienic change, marked improvement occurred in many cases, the child gaining one or two pounds in weight in a month or six weeks, at the same time losing the headaches, sleeping quietly at night, and again becoming fit for a child's school-life. It must, however, be acknowledged that many cases relapsed on discontinuing the treatment.

Dr. Hughlings Jackson (*Lancet*, July 11th, 1875) has shown that, in cases of chorea, paroxysmal headaches are of common occurrence. Dr. Herman collected the histories of seventy-six cases of chorea, and found that paroxysmal headaches occurred in fifty-three cases; in these, the headaches were not often preceded by ocular spectra. In the group of cases described in this paper, certain active and passive conditions of the muscles, especially the small muscles, are commonly met with in conjunction with disturbance of the higher nerve-centres; this appears to afford evidence that the two conditions may be owing to disturbance of the same nerve-centres, possibly the same as are affected in a greater degree in chorea. A girl, thirteen years of age, came under observation complaining of frequent headaches, with ocular spectra, restless nights, tooth-grinding, and slight muscular twitchings, such as have been described. She had never suffered from rheumatism, but the family were rheumatic; she had no cardiac disease. Three years previously, she had had acute general chorea for four months; it is submitted that probably the same nerve-centres were affected in the greater and lesser illness, but in a different degree.

SURGICAL MEMORANDA.

SUCCESSFUL EXTRACTION OF A HALFPENNY RETAINED IN THE ŒSOPHAGUS TWENTY-EIGHT DAYS.

THE cases reported in some recent numbers of the JOURNAL remind me of one which came under treatment at the Queen's Hospital during my term of office as House-Surgeon to that institution.

On September 1st, 1877, a lad aged 2, whilst playing with a halfpenny, accidentally swallowed it. He was at once taken to the nearest surgeon, who ordered a dose of castor-oil, at the same time advising the parents to carefully watch the effects of the aperient. This, however, was not followed by any good result. Becoming alarmed at the boy's condition, they consulted another medical man, who was of opinion that the matter was best left alone. In the meanwhile, he became gradually worse, losing flesh and experiencing some difficulty in swallowing. On September 29th, twenty-eight days after the mishap, he was brought into hospital suffering from dysphagia and a short dry cough, and always complained of a fixed pain at the lower portion of the sternum. When he was given some water to drink, it could not be swallowed without an effort; solids he positively refused. Having satisfied myself that there were neither pulmonary nor cardiac complications, and gleaning from the history of the case that no operative measures had been resorted to, it occurred to me that the foreign body might still be impacted in the gullet. Accordingly, a double probang was then introduced, until the lower third of that canal was reached; here it was retarded by a somewhat resisting substance, but the difficulty was soon overcome, and the instrument reached the stomach forthwith. It was now expanded, and slowly withdrawn, bringing up within its meshes the missing coin. The copper was much discoloured, its surfaces assuming a brownish-black tinge, and corroded in places. In a few minutes after the operation, small quantities of frothy mucus tinged with blood were vomited; but the little patient was soon able to swallow all fluids and solids which were given to him. He came again four days later, when he could both eat and drink without difficulty, and, to use his own expression, "felt quite well".

HUGH THOMAS, M.R.C.S.Eng., etc., Hockley, Birmingham.

RETENTION OF A FARTHING IN THE STOMACH FOR SEVEN MONTHS.

ABOUT three weeks ago, a child, J. R. S., aged 2½, was brought here for enlarged strumous cervical glands. On inquiring into the history of the case, the mother stated that, about Christmas 1878, she gave her purse to her child to play with. Shortly afterwards, she missed the farthing which the purse contained, and, thinking the child might have swallowed it, she gave it a dose of castor-oil, by the advice of a medical man in the neighbourhood. No ill effects followed, and for seven months nothing unusual was noticed. After this period, the child was suddenly seized with coughing, vomiting ensued, and something was heard to tinkle in the utensil used. This proved to be the long-lost farthing, slightly eroded.

This case illustrates how long a foreign body may remain in the stomach without passing into the intestines, or causing any constitutional disturbance.

JOHN R. LUNN, L.R.C.P.Lond.,
Resident Assistant Medical Officer East London Hospital for Children.

PISTOL-SHOT IN ABDOMEN: RECOVERY.

JANE HIGGENS, aged 12, on October 18th, 1879, accidentally shot herself in the abdomen, by placing the barrel of a small revolver against her body while she pulled the trigger; the ball entering just within the cartilages on the left side, and on a level with the sixth rib. The first symptoms were considerable pain and external hæmorrhage, together with a considerable amount of shock. On probing the wound, the ball could not be felt in any direction. Therefore, considering the position of the wound (just over the left lobe of the liver and part of the stomach), I thought it advisable to let matters alone, fearful of doing more harm than good by a further search for the ball. A pad and bandage were then placed on the wound, and the patient put to bed. Brandy and milk were given frequently throughout the day in very small quantities at a time, but they were always retained; and, as there had been no vomiting of blood or any other matter, I dismissed the idea that the ball had reached the stomach. Still, the collapse increased so much towards evening (the accident occurring about 8.30 A.M.), that I feared there was hæmorrhage going on internally. The external hæmorrhage was arrested, and no pain was complained of.

By the morning (19th), there was considerable fever. Temperature 102°; pulse 110. I gave one grain of opium in pill, and repeated it every four hours, as there was becoming a considerable amount of pain and tenderness all over the abdomen. This increased all day to about 5 P.M., when a muttering delirium set in, from which she could be roused. The temperature was 104°; pulse 124; respiration 30. At 7.30 the same evening, the delirium had increased very much. Temperature 106°; pulse 156; respiration 52. It seemed hardly likely that she could live many hours, but, by midnight, a considerable change had taken place. The temperature had gone down to 99°, the pulse to 82, and the respiration to 20. All the delirium had gone, and she slept well. From that time, her recovery has been practically uninterrupted. The wound gave some little trouble in healing, but had entirely done so by November 20th, just one month and two days from the accident.

Although the ball had penetrated the dress, stays, and chemise, there were no signs of any portion of the clothing having gone into the wound, which had the characters, after a few days, of an indolent ulcer. From time to time, after the first fortnight, she had occasional rigors, sometimes severe, which, as there was no sign of any abscess forming, I attributed to the throwing out and organisation of lymph round the ball. She had tonic medicines, and the wound was dressed with lotio plumbi.

The question is, Where is the bullet? If in the liver, would she have recovered? For, after the first few days, she had no constitutional disturbance, and all the functions of the body have been naturally performed. It may be only just within the abdominal walls; but then I should have probably felt it with the probe. The case has been one of considerable interest; and I should be glad to know from any surgeon of experience in gunshot-injuries whether, supposing the bullet be in the liver, it is likely at any time to cause trouble. My own opinion is that it will not, particularly as all constitutional disturbance is at an end.

HERBERT L. BERNAYS, M.R.C.S., Old Charlton.

INFLUENCE OF SAYRE'S TREATMENT ON THE SPINAL MUSCLES.

SUFFICIENT attention has not been directed to the effects produced on the nutrition of the spinal muscles by the application of Sayre's plaster jacket in slight and moderate cases of lateral curvature of the spine. As far as I know, Mr. Golding-Bird is the first surgeon who has pointed out (see BRITISH MEDICAL JOURNAL, October 11th, 1879) that "the dorsal muscles invariably waste from want of use under the jacket". I cannot understand how this important fact can have been overlooked so long. It is well known that a limb kept immovably fixed in a splint for six *weeks* or longer will show, at the end of that period, a decided amount of wasting of its muscles from want of use. How much greater must be the wasting in the erector spinal and other dorsal muscles when a Sayre's jacket has been worn for six *months* or longer! Mr. Golding-Bird goes on to say that, in lateral curvature, "the muscles are called upon the moment the jacket comes off; so that, if they are wasted, the patient will be often utterly unable to keep himself erect on the removal of the jacket till his muscles are *again* in working order". I maintain that the dorsal muscles were not "in working order" before the plaster jacket was put on. Muscular weakness is a potent, if not the chief, cause in the production of lateral curvature. Now, would it not be more in accordance with common sense to strengthen these weak muscles in cases of slight or moderate lateral curvature, than to apply Sayre's bandage, under which they "invariably waste", as Mr. Golding-Bird admits? In severe cases of lateral curvature, and in Pott's disease (caries) of the spine, the plaster jacket is the only possible and the best treatment, because whether the muscles continue to waste or not is of little or no importance here.

Dr. Sayre advises daily extension of the patient, and Mr. Golding-Bird appears to consider this an efficient means for exercising the spinal muscles. I do not think this can be at all proved. I have now a young lady, aged 19, under treatment, who was treated for more than a year by daily suspension, in addition to wearing a Sayre's jacket for some months, for very slight lateral curvature. This treatment had been discontinued some months before I was consulted, on account of her head "poking" as much or more than before. In this case, the cervical muscles were evidently not strengthened by the daily suspension, although they were necessarily more stretched than the muscles of the dorsal or lumbar regions of the spine.

Mr. Golding-Bird writes that cases of upper dorsal lateral curvature "must have a jury-mast". Now, as a large proportion of slight cases of lateral curvature present this deformity, these patients would have

to submit to the great discomfort of wearing the head-piece, and this probably for an indefinite period, as this extension does not strengthen the muscles, as I have tried to explain above. A much simpler method for correcting the deformity of (upper) dorsal lateral curvature is to direct the patient to stretch the arm corresponding to the concavity of the curvature upwards by the side of the head, and to make himself as tall as possible. This position will be found to improve, or even to quite restore, the normal outline of the spine in slight cases. This voluntary effort is surely a better means for strengthening the weak muscles than any amount of passive extension by hanging. Besides this posture, frequently repeated, other means should be employed for strengthening the muscles, as by voluntary contraction against resistance (medical gymnastics, *Heilgymnastik*), by methodical rubbing and faradisation.

To sum up, I can only re-echo a remark made by Dr. Sayre during his recent visit to Brighton, "that his plaster jacket was the only treatment for spinal caries and *bad* lateral curvature, but that for slight lateral curvature he quite agreed to a treatment for strengthening the spinal muscles without the use of his plaster bandage".

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REVIEWS AND NOTICES.

DIE CHIRURGISCHE BEHANDLUNG DER WUNDEN. Von IGNAZ NEUDÖRFER. Wien. 1877.

AUS DER CHIRURGISCHEN KLINIK FÜR MILITÄRÄRZTE. Von IGNAZ NEUDÖRFER, Vorstand dieser Klinik. Wien. 1879.

THE SURGICAL TREATMENT OF WOUNDS; and EXTRACTS FROM THE CLINIQUE FOR MILITARY SURGEONS. By I. NEUDÖRFER, Principal of that Clinique. Vienna.

DR. NEUDÖRFER is well known as one of the most scientific of the surgeons who are opposed to the theory on which Mr. Lister's treatment of wounds is based, while admitting the practical success of Lister's treatment, and affirming the goodness of his method of dressing in its most essential features. We shall not, therefore, spend more space upon the first of the works mentioned above, especially as a tolerably full notice of its contents, by Mr. Holmes, will be found in the *London Medical Record* for March 15th, 1877. In his more recent treatise, our author commences by a repetition of his attack upon Lister's method; and, whatever may be thought of his theoretical or experimental objections to it, the following observations are at any rate worthy of careful consideration by antisepticists.

"Still worse is the fact, that many surgeons are led on by the method of Lister to perform operations which had better have been omitted. Now it is the almost disused operation of trephining, which is represented as a mere trifle in surgical treatment under Lister's dressing; now, again, it is the opening of the great cavities of the body, or of the great joints, or the stoppage of the great arterial trunks, to which the surgeon is encouraged as being safe under Lister's treatment.....But worst of all is the circumstance, that by Lister's treatment one of the greatest acquisitions of the surgery of this century is put in danger. It is my opinion that that great branch of surgery, only about twenty-five years old, and only slowly making its way, and which in the two short words 'conservative surgery' embraces a multitude of happy surgical novelties and improvements, is threatened by Lister's method. I possess proof that even now, in the short period during which Lister's method of treating wounds has prevailed, a noticeable retrogression has taken place in conservative surgery; and I am in a position to assert that, out of the hundreds of amputations of limbs and resections of large joints performed in the last few years, a considerable percentage have been undertaken only to glorify Lister's method, or in consequence of its influence, and might have been omitted without any detriment to the patient." (Pp. 16, 17.)

We must admit that there is at any rate some truth in the charge, and that both Mr. Lister himself and his followers have been led by their confidence in antiseptics to perform operations which it is a compliment to designate as "dubious".

Dr. Neudörfer adds some instances of cases in which other kinds of treatment were used successfully, with a view of showing that Lister's is not the only method by which surgical operations on the great joints may be safely treated; and though these cases, being only few in number, do not, of course, prove that Lister's is not a better method of treatment than those adopted, yet it is well to recollect that success is constantly attained, even in very complicated cases, by methods which do not rest on any antiseptic principles; and that, although it may be freely admitted that many eminent surgeons believe the antiseptic method to be the best, yet no scientific proof has been offered as yet that this is so. One thing, at any rate, is plain, as bearing on the subject of our author's work, viz., that the details of the method, as at present followed, are entirely incompatible with the exigencies of military surgery; and, in particular, the frequent changes of dressing would often be found impracticable. Dr. Neudörfer has invented several forms of dry dressing, by means of which he proposes to treat wounds with no renewal of the dressing for several weeks. The wound is first cleansed with carbolic lotion; then coated with antiseptic powder to the thickness of about a quarter of an inch; and this covered with layers of cotton-wool, and secured with a bandage. The powders which he uses are various: he prefers salicylic acid pure; but, on account of its high price, he has employed also a mixture with boracic and benzoic acids. Numerous other powders have also been tried, but with less satisfactory results. Some extremely interesting cases are recorded: *e. g.*, one of a bayonet-wound of the skull, penetrating the bone and dura mater, and exposing the external surface of the brain to the extent of two fingers. This formidable wound was coated in the way above described with salicylic acid, and the dressing left undisturbed for twenty-eight days; at which period it was almost entirely cicatrised. No head-symptoms or other alarming phenomena at any time showed themselves. (P. 61.) This is only one of several equally interesting cases thus treated; and in this section of the work—that on "the surgical treatment of wounds"—are some interesting observations on the treatment of erysipelas, in which our author relies much on the subcutaneous injection of carbolic acid; of whitlow, where he recommends a horseshoe incision (or circumcision, as he calls it); of ganglions, where he recommends the injection of a solution of carbolic acid when the simple puncture fails; and of abscesses by congestion, in which he makes a small incision and washes the sac out with the same solution. The author's main object in all these observations seems to be to show that cases of the kinds in question will do well, even if not treated strictly on Lister's method; a conclusion which hardly needs proof in this country, since we have been in the habit of seeing all such cases successfully treated before Lister's method was known. Nor do the most ardent patrons of the antiseptic theory, or of Lister's application of it, deny that a careful surgeon will treat most cases successfully without any antiseptic precautions whatever. What they would say, if we understand right, is, that there will be exceptional cases in the common treatment where the patient will suffer blood-poisoning from atmospheric infection, and that Lister's method, if properly applied, will render such exceptional cases impossible. Such a line of argument is left untouched by a collection of cases such as Dr. Neudörfer's, interesting as the cases themselves are.

In the second part of his book, Dr. Neudörfer pursues Mr. Lister into another of the provinces of his realm, and attacks his carbolised catgut ligatures. We shall pass over this part very lightly, as not being, in our opinion, of much worth or importance. Our author concludes, from some experiments he has made, that the carbolised oil suspends for the time the solubility of the catgut; so that the carbolic acid must first be absorbed before the catgut will melt. But this, if true, is more likely to add to the value of the material as a ligature for large vessels than to detract from it; and, after all, as the author allows, the difference in time of absorption is probably only a few hours. Dr. Neudörfer, however, objects to this ligature for theoretical reasons, which appear to us rather difficult to apprehend, as well as for the broad practical reason of its uncertainty in respect of secondary hæmorrhage. And no doubt it must be admitted, that many cases of secondary hæmorrhage have occurred with catgut ligatures; but it seems to us to be going much too far to revive, as this author does, Sir A. Cooper's dictum that, on the whole, catgut ligatures are not superior to the common ones. The attention of surgeons has been, we believe, far too much directed to the occurrence of secondary hæmorrhage—an occurrence rare with healthy blood and arteries under any circumstances, but, as we believe, hardly proved ever to occur with catgut; while it is probably inevitable with any effectual form of ligature in some cases where the blood or arteries are unhealthy, and too little attention has been given to the perfectly uninterrupted process of union observed when the vessels are successfully secured with catgut. Long observation has proved to us that, in large and deep wounds treated in this manner, the process of union goes on quite as kindly as if there had been no vessels to secure; while permanent ligatures must of necessity act as irritants. Dr. Neudörfer's assertion that any soft material, such as silk or flaxen thread, if rendered impermeable, will serve all the same purposes as catgut, has, we believe, no foundation whatever in fact. As far as we have learned, all the attempts to use silk or thread, however prepared, in the same way as the carbolised gut is used for the ligature of vessels,

have led to disappointment, because the small knots usually (not, indeed, always) work out of the wound and are cast off as foreign bodies; while the use of catgut is becoming more and more common, because the knots formed of this substance usually (though not always) disappear by absorption without setting up any perceptible irritation, and probably in most cases without causing ulceration of the tied vessels. Neudörfer's assertion that the very constriction of the vessel and the infolding of its coats which the ligature causes may lead to secondary hæmorrhage is, we have no doubt, correct; but it is yet to be proved that it is possible effectually to constrict the artery by any kind of ligature, temporary or permanent, without the same risk.

We have no space to follow Dr. Neudörfer's interesting work further, or we should have been glad to call our readers' attention to his proposals for a "safety cannula", designed to make the changing of the tracheal cannula safe and certain when necessarily entrusted to non-surgical hands; to his plan of plugging the trachea by a simpler method than Trendelenburg's (of which the author thinks so well that he has placed a cut of the instrument on the cover of his book); to his remarks on resection; and other matters. We must be content with recommending the surgical reader to peruse a work in which he will find abundant instruction and food for thought, and can only wish that Dr. Neudörfer had been animated by a rather less obvious prejudice against Professor Lister and all his works.

NOTES ON BOOKS.

DR. PAUL BÖRNER'S *Reichs-Medicinal-Kalender für Deutschland auf das Jahr* 1880, is brought out as a pocket-companion and book of reference for German practitioners. It is in two parts, the completion of the second of which has been delayed for a time in consequence of the illness of the author—who is, we are glad to hear, now convalescent. The first part is in the form of a pocket-book with elegant leather cover, and contains, besides ruled pages for memoranda on each day, a large amount of useful information; viz., postage regulations; a table, drawn up by Professor Oscar Liebreich, of the names, doses, and properties of the medicines contained in the *Pharmacopœia Germanica* for 1872; a table of medicines of which an excess over the pharmacopœial maximal dose must be denoted in prescribing by the mark !; a table of the strength of solutions for subcutaneous injection—both these tables being also by Dr. Liebreich; a classified summary, by Dr. M. Schaeffer, of formulæ for inhalation; an enumeration of the most usual medicated baths, by Dr. Reimer; a chapter on weights and measures, including a table for converting the ordinary weight (which is just the same as our apothecaries' weight) into the metric system, and a table for determining the value of a given number of drops of various fluid medicines; a note on "economic pharmacy"; recent alterations in the *Pharmacopœia;* a chapter by Dr. Ewald on clinical thermometry, with typical charts, mostly from Wunderlich; another chapter by Dr. Ewald on the elements of clinical urinary analysis; a table of the weights and measures of the human body; a table for calculating the period of pregnancy; an introduction to the method of determining acuteness of vision, refraction, and accommodation; a tabular view, drawn up by Dr. Liebreich, of the symptoms and treatment of acute poisoning by various substances; a chapter on apparent death and first aid in accidents, by Professor Skrzeczka; the German baths and health-resorts, including also foreign health-resorts, as Ajaccio, Egypt, Algiers, etc., by Dr. Reimer; and an enumeration of the lunatic and idiot asylums in Germany. The portion of the second part which has reached us contains, in the first place, an elaborate statement of the most important tariffs for medical attendance, operations, etc., in force in the German States; summaries of the principal laws affecting the medical profession in Germany; a statement of the most important medico-military orders from July 1878 to July 1879; the *Pharmacopœia Militaris;* a chapter, by Dr. Paul Rupprecht, on the treatment of wounds, with special reference to Lister's method; an introduction to the hygienic examination of air, water, and soil; a chapter on the medical aspect of life-assurance; and the three principal systems of nosology in use in Germany. The forthcoming portion of the second part is, we understand, to contain, *inter alia*, a "personal register" or directory of the medical profession in Germany. This enumeration of the contents of Dr. Börner's *Reichs-Medicinal-Kalender* will show how varied and important are the subjects which the author, with the assistance of skilled coadjutors, has dealt with in this work; and the information is not only varied, but bears internal evidence of careful compilation and condensation. The price of the whole is low—only four mark (four shillings), or four and a half mark if interleaved. We can readily imagine that the book is of great value to the practitioner of medicine in Germany.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 6TH, 1879.

THE NEW ROYAL ARMY MEDICAL WARRANT.

IN the JOURNAL for November 15th, page 781, we were able to give the rates of pay for Army medical officers, as contained in the schedules issued to applicants for service in the Department. The Warrant itself, *in extenso*, as finally settled and approved, was promulgated on the 2nd instant, and a carefully prepared abstract of its contents will be found at page 914. This has been done with a copy of the Warrant of May 1876 before us, to enable us to contrast the provisions of the two documents.

Medical officers by the new Warrant are divided into two classes, A and B. Class B will consist of those who entered the service under the Warrant of 1876 for a limited period of service—viz., ten years; Class A embraces all who entered previously to the issue of the Warrant of 1876, and who enter under the provisions of that just issued. At first sight, it seems a matter for regret that such a distinction should be made at all. It will appear to some that it would have been more generous to admit the ten years' service officers to all the benefits of the new Warrant without qualifications; but it will be seen by a reference to our abstract that the officers in Class B may be transferred to Class A, provided they apply within two years from the date of the new Warrant, *if recommended by the Director-General*—an important qualification, no doubt, and one we admit in the interest of the service, as it enables the Director-General to rid the Department of such as have proved themselves inefficient, and this without breaking the terms under which they entered. A surgeon in Class B who does not accept this offer of transfer, and elects to serve on the original conditions, retains the chance of being one of six to remain in the service, and promoted after twelve years to the rank of surgeon-major. It is highly improbable that many medical officers in Class B will ever attain the rank of deputy surgeon-general or surgeon-general. If they do (as will be seen by reference to the abstract of the Warrant), they must content themselves with a smaller rate of pay. It was hardly worth while to make so invidious a distinction in the case of men of the same rank, doing the same duty, and having the same responsibilities.

Our readers will remember that in our notice of the new conditions of service in the number of the JOURNAL for the 15th of November, we expressed our satisfaction that the Secretary for War had finally decided not to dispense with open competition. The new Warrant has deceived us, and shown that our congratulations on this point were premature. In the schedules issued to intending candidates there is nothing to indicate that any change in this particular was contemplated. We were therefore taken by surprise to find that the Secretary for War, under this Warrant, has opened two doors of admission, which may briefly be described as front and back doors: in plain language, the Minister reserves to himself the privilege of appointing one-half of the candidates for the service by nomination "from such qualified candidates as may be proposed by the governing bodies of public schools of

medicine in the United Kingdom or in the colonies, as he may think proper". The other half, in the language of the Warrant, "shall be filled up by competitors". This, in our opinion—and we are sure it will prove to be the opinion of the profession generally—is the great blot in this otherwise acceptable Warrant. Supposing this piebald system to come into operation, there must of necessity be two classes—those who enter by the fair widely open portal of competition, and those who enter by the back door of nomination. No official stamp of equality between the two will avail : rightly or wrongly the back-door men will go through the service in the estimation not only of their medical brethren, but of their combatant brother-officers, as an inferior class—at least in an intellectual and professional point of view. Justly or unjustly, the stigma will cling to them that they were afraid to enter the lists and to compete for the prize with their fellow-students. We set little store by the provisions of the Warrant, to the effect that every candidate proposed shall be certified by the governing body proposing him to be *duly qualified* according to the standard to be laid down by our Secretary of State, and approved by the Director-General. How, let us ask, is this due qualification to be determined by the governing bodies of our schools of medicines and universities? Let us put the case of, say, six nominations given to a public school of medicine, and that twelve men offer themselves to the "governing" body, how is the selection to be made? Does the Secretary for War imagine that our already over-worked physicians and surgeons, teachers in our schools, will be ready and willing to undertake, without remuneration, the invidious duty of examining the twelve candidates with a view to select the fittest? If they do, it comes after all to a system of competition, only limited, private, and irresponsible. We cannot believe that Parliament will look with approval at this attempt, however limited and partial, to return to a system of nomination, in the face of repeated expressions of its determination to abolish the system entirely in the interests of the public. The Parliamentary Bills Committee of the British Medical Association have the satisfaction of knowing that they protested against this ill judged recommendation of the War Office Committee, thus in part adopted. The Secretary for War has made what, no doubt, he conceives to be a compromise between the two systems ; but compromises, however necessary in political warfare, where extreme opinions are rarely successful on either side, are in matters of administration, nine times out of ten, mistakes. It is possible that, so long as the wants of the service are supplied by open competition, the Secretary for War may not have recourse to nomination ; that he has merely armed himself with this power to meet such a time of difficulties as the service has just passed through. This may be so ; but we submit that the best way to avoid such embarrassing difficulties is to remember and to act on an old and familiar proverb—viz., that "honesty is the best policy". If the Government, departing once and for all from the old faithless system of doing and undoing, giving with one hand and taking away with the other, will only observe their promises in letter and spirit, we venture to prophesy that the honest, fair, open system of competition will never fail to supply them with good and efficient medical servants.

It is, we think, to be regretted that the authorities have not seen their way to attach a medical officer, if not permanently, at least for a fixed period of years, to regiments, and so have met the wishes of the combatant officers, who intensely and naturally dislike the present system of never ceasing changes in their medical officers. We have reason to know, from numerous communications addressed to us, that this would also have been very acceptable to a large class of Army medical officers. We suppose this was a question of money, and that motives of economy enter the final decision on this point.

The abstract we furnish gives such a complete epitome of the Warrant, that it is not necessary to make any further comment upon it. If not all in every particular such as we had hoped for, we yet cheerfully acknowledge that this Warrant is a great improvement on the one that it cancels, and that the majority of the grievances of the service have been fairly considered, and to a very great extent remedied.

HISTORICAL INCIDENTS OF THE DINNER TO SURGEON-MAJOR REYNOLDS.

THE dinner of congratulation to Surgeon-Major Reynolds on November 26th, of which we publish this week a full report, has an interest historical from all the circumstances. Although the British Medical Association has for many years, through its Committee of Council, through its JOURNAL, and through its Parliamentary Committee, taken a prominent, and perhaps we may, without any exaggeration or egotism, say the most prominent part, in constantly maintaining the interests of that service before the public and before ministers, this is the first occasion on which the Association as a whole, speaking with one voice, has had such an opportunity of paying a graceful compliment to the service, in rewarding the heroism of one of its most meritorious officers, who, by his recent achievements, has reflected honour upon his profession and done credit to his department. This recognition, by the striking and rare compliment of the presentation of the gold medal of the Association, has been felt by the members of the Army Medical Department to bind still closer the profession and the service, and to put the seal upon that warm feeling of interest which the profession at large, and the Association acting for it, has at all periods of its history felt, and in various ways shown. Surgeon-Major Reynolds modestly, pointedly, and with perfect taste, made this the prominent theme of his speech on the occasion ; and no doubt he did well to accept the compliment as one not only due to his personal achievement, but also to the great sympathy which the Association feels to the department to which he belongs. The banquet, then, is historical by reason of the great assembly of highly distinguished members of the profession who gave to it its full significance, and whose presence added infinitely to the honour done to the service and to its representative that evening; for this aspect of the banquet is one which is of the largest interest to the profession and to the public, as well as to his fellow-officers.

The banquet is unhappily in another sense also historical. In an able address, which touched upon all the leading points of reform in the Army Medical Department which have been from time to time put before ministers by the Parliamentary Bills Committee, in personal communications, in written correspondence, and in public reports, and through the medium of deputations, the President of Council considered himself, and fairly and honourably considered himself, entitled to state, on the faith of a printed document, that the leading points on which the Committee, by its votes, and through the mouthpiece of its Chairman, and on which the Association at large, at its annual meetings, had unanimously and repeatedly insisted, were nearly all included in the new Conditions of Service set forth in the printed document just issued under the seal of the War Office from Whitehall Yard. Unfortunately, Sir William Muir was prevented by his known delicacy of health from being present to reply to the warm expressions of satisfaction and the warm eulogies of ministers and heads of departments, with which Dr. Carpenter felt able to accompany this announcement. Strangely enough, neither was Surgeon-General Munro present, although it was previously understood he would have been officially deputed to represent the office in which he is a person of great authority, second only to the Director-General himself. The orator of the evening on behalf of the department was, therefore, Surgeon-General Longmore, C.B., the well known professor of military surgery at Netley, one of the most popular, as he is one of the most highly respected and widely beloved, of all the officers of the service on which he reflects such great scientific distinction. Surgeon-General Longmore announced that he spoke with a certain diffidence, inasmuch as he was not officially instructed from Whitehall Yard to appear as the representative of the department, although the intimation had been conveyed by letter to the President of the Council. Speaking, however, thus unprepared, and accepting the responsibility conveyed to him by the communication which Dr. Carpenter had received, Surgeon-General Longmore replied with the characteristic good taste, simplicity, and perfect transparency of purpose which had always distinguished

him. He, too, it appeared, put undoubted faith in the printed declaration of new conditions of service which had been put forward to attract candidates to the forthcoming examination. He, too, assumed, from the wording of the document, what its plain meaning bears, both as to rates of pay and of retirement, and also as to the matter of primary scientific, social, and administrative importance, the retention of the entrance examination. He referred to this with just satisfaction, and his words were greeted with universal cheers.

The strange delay in producing the warrant on which this schedule of new conditions must necessarily hang was adverted to with much delicacy; nevertheless, Surgeon-General Longmore was able to assure his profession, from the result of communications with the chief of his department, that the one thing which appeared to be necessary to crown the satisfaction of the department and the profession, viz., the restoration of forage allowances, would be included in the new warrant. Thus everything bore a smiling aspect. The sequel, however, is seen in the leader which we publish in another column, and in the abstract of altered conditions which we have now to deduce from the Warrant issued on Tuesday night. It will be seen that the new Warrant includes a complete breach of some of the most positive and most valuable conditions set forth in the Conditions of Service which had been published at the nick of time, when the Department was in critical want of officers. It is, of course, quite certain that Surgeon-General Longmore spoke plainly and honestly every word that he believed, and kept back nothing. No one who knows him, no one in the whole service, no one in the whole profession, will doubt this. The charge of deception, therefore, which necessarily arises out of this sudden withdrawal of Public Conditions, and out of the disastrous change which the Warrant introduces into the altered public conditions of service, must rest elsewhere. We are not at all desirous to attempt to fix the responsibility, it lies publicly on the responsible Minister. Nothing is more painful than for a public journalist to have to charge public officers with deception implied or intended, direct or indirect, accidental or premeditated. Nevertheless, from one of these categories of deception it is difficult to acquit the authors of this warrant and those who issued previously the deceptive conditions of service. No doubt, we shall hear more of this when Parliament meets, if not before. Meantime, it will be necessary to consider how the profession, who were so completely deceived at the Reynolds dinner by the fair promises of the document then circulating, shall express to the War Office their strong sense of the imposition practised upon them. To this subject we shall return next week.

THE HEALTH OF SOUTH COAST TOWNS.

THE health of Plymouth, judged by its mortality statistics published by the Registrar-General in his periodical returns, has during a long series of years compared very unfavourably with that of Brighton and of Portsmouth, judged by the same standard. It would be interesting to analyse and compare in detail the mortality statistics of these three south coast towns, with a view to ascertain the cause of the excess of mortality in Plymouth. Unfortunately, however, we have been unable to ascertain that the Town Council of Plymouth; the sanitary authority for that town, has published any detailed reports in recent years on the vital statistics of the borough. Failing this source of information, we have been obliged to content ourselves with analysing such statistics as have been published by the Registrar-General, which, although trustworthy so far as they go, are wanting in much of the detail that we should expect to find in the report of the local Medical Officer of Health. It is now fourteen years since the Registrar-General first began to publish vital and mortal statistics of other large towns as well as London; we propose, therefore, briefly to consider the statistics of mortality in Plymouth during the fourteen years 1865-78. The annual death-rate in the borough, during these fourteen years, averaged 22.6 per 1,000 persons living, against 21.3 in Brighton and 20.8 in Portsmouth. The differences between these rates may appear small; but they signify that the average mortality in Plymouth, throughout the fourteen years, showed an excess of 6.1 per cent., compared with that in Brighton, and 8.7 per cent. compared with that in Portsmouth. The fact of Brighton being a favourite residential town and health-resort, undoubtedly exercises a beneficial effect upon its mortality statistics; but it appears difficult to urge any good reason why the mortality statistics of Plymouth and Portsmouth should not be fairly comparable. The average annual death-rate in Plymouth, during the fourteen years 1865-78, was equal, as we have shown, to 22.6 per 1,000, against 20.8 in Portsmouth. These two rates, if maintained throughout a generation, in a stationary population, would signify that the mean duration of life in Plymouth is only forty-four years, while it is forty-eight years in Portsmouth. Thus the mean duration of life is four years longer in Portsmouth than in Plymouth. Looked at in another way, the excess of mortality in Plymouth, during the fourteen years, resulted in the deaths of 1,746 persons, who would have survived if the death-rate had not exceeded that which prevailed in Portsmouth. Such facts are worthy of consideration.

The death-rate in Plymouth, during these fourteen years, ranged from 19.2 per 1,000 in 1873, to 25.7 and 25.3 in 1866 and 1878. Dividing the period of fourteen years into two periods of seven years, it appears that the death-rate declined from 23.2, in the seven years 1865-71, to 21.9 in the more recent seven years. Thus the rate of mortality in Plymouth showed a decline of 5.5 per cent. in the later, compared with that in the earlier, period of seven years. The decline of mortality in Portsmouth in the second of these two periods of seven years was, however, equal to 8.3 per cent.; showing that the rate of mortality in Portsmouth was not only lower than that in Plymouth, but that the *rate* of decrease (which has recently prevailed in all large English towns) has also been considerably greater.

It may be useful to compare the recent statistics of Plymouth and Portsmouth, bearing upon infant mortality and upon the fatality of the principal zymotic diseases, as likely to afford some insight into the causes of the excess of mortality in Plymouth. Statistics on these points have only appeared in the Registrar-General's returns since the beginning of 1870. During the nine years 1870-8, the proportion of deaths under one year to births registered averaged 174 per 1,000 in the twenty large English towns, and ranged from 144 and 160 in Portsmouth and London, to 219 and 222 in Leicester and Liverpool. In Plymouth, the proportion was 163 per 1,000, which, although 11 below the average proportion in the twenty towns, exceeded the rate in Portsmouth by 19 per 1,000. The low rate of infant mortality in Portsmouth is one of the most satisfactory features of the mortality statistics of that town; and the excess of infant mortality in Plymouth, compared with that in Portsmouth, is deserving of local attention. It also calls for notice that, while the rate of infant mortality averaged 161 per 1,000 in the five years 1870-4, it rose to 166 in the four years 1875-8. In Portsmouth, on the other hand, this infantile death-rate declined from 148 in 1870-4 to 140 in 1875-8. Infant mortality is admitted to be a sensitive test of sanitary condition, although it is to a great extent influenced by social as well as sanitary causes. The new Medical Officer of Health of Plymouth will do well to give this subject his earnest attention, although, being engaged in private practice, he has not the opportunities for special investigations that are possessed by the Medical Officer of Health for Portsmouth, whose services have been so valuable to that town.

The annual death-rate from the seven principal zymotic diseases, in the nine years 1870-8, averaged 4.61 per 1,000, and ranged from 2.87 and 3.74 in Brighton and Bristol, to 6.08 and 6.57 in Salford and Liverpool. This zymotic death-rate was equal to 4.02 and 3.92 per 1,000 respectively, during the nine years, in Plymouth and Portsmouth; the rate was, therefore, almost identical in the two towns. The relative fatality of the individual diseases, however, varied considerably. The death-rate from both measles and whooping-cough showed a marked excess in Plymouth; and to this fact may be due, in great measure, the excess of infant mortality. The average annual death-rate from measles and whooping-cough, in the nine years, were equal to 0.72 and 0.77 per 1,000 in Plymouth, whereas it did not exceed 0.41 and 0.43 in Portsmouth. The fatality of measles in Plymouth, in the nine years, has been remarkable, and considerably higher than in any of the other

twenty large towns, except Liverpool; it exceeded one per 1,000 in four of the last nine years. The average death-rate from measles in the twenty towns during this period was 0.50 per 1,000, ranging from 0.23 and 0.28 in Norwich and Nottingham, to 0.72 and 0.74 in Plymouth and Liverpool. The fatality of whooping-cough in Plymouth, although considerably higher than in Portsmouth, but slightly exceeded the average rate in the twenty towns. The mortality from diphtheria also showed a marked excess in Plymouth, and was considerably higher than in any other of the twenty large towns, except Birmingham. The rate of mortality from diarrhœa was somewhat higher in Plymouth than in Portsmouth, but was below the average rate in the twenty towns. On the other hand, the fatality of fever (including typhus, enteric, and simple) and small-pox was not only smaller than in Portsmouth, but below the average in the twenty towns. The fatality of scarlet fever was remarkably small in Plymouth. The annual death-rate from this disease, which averaged 0.90 per 1,000 in the twenty towns, did not exceed 0.34 in Plymouth, and was very considerably below the rate in any other of the twenty towns. It is a curious fact that the mortality from measles and scarlet fever, taken together, was almost identical in Plymouth and Portsmouth; that from measles showed a marked excess in Plymouth, while that from scarlet fever was considerably more excessive in Portsmouth. With regard to fever mortality, Plymouth compares favourably with Portsmouth: the annual death-rate from fever was equal to 0.78 in Portsmouth, but did not exceed 0.52 in Plymouth, the average rate in the twenty towns being 0.58. The fatality of fever, moreover, has declined in Plymouth in the most recent years, as well as in other towns.

It is evident that no considerable portion of the excess of mortality in Plymouth, compared with Portsmouth, is due to the seven principal zymotic diseases. The annual death-rate from all other diseases averaged 18.1 per 1,000 in Plymouth, against but 16.1 in Portsmouth. This difference of 2 per 1,000 calls for explanation, and we may hope that the subject will engage the attention of the new Medical Officer of Health. We know that part of it is due to excess of infant mortality. We may also conjecture that the remaining excess is, in great measure, due to excessive mortality from diseases of the respiratory organs. A matter, however, of such vital interest to the Plymouth population should be taken out of the regions of conjecture.

MR. ALFRED WILLETT'S election, as Surgeon to St. Bartholomew's Hospital, in the place of the late Mr. Callender, took place on November 26th.

THE sudden death of Dr. Andrew Henderson of Brighton is announced. An inquest was held, at which the medical evidence adduced showed the cause of death to be the rupture of an aneurism of the aorta.

THE Bavarian papers report a typhus fever epidemic at Rüdenschwinden, in the Rhön, where, of two hundred inhabitants, sixty-eight, on the 28th of last month, were attacked by the disease. Insufficient nourishment and clothing are believed to have been the cause of the outbreak.

THE case of Lord Portman *v.* the Home Hospitals Association, for breaking a covenant in the lease of their premises in Manchester Square, by carrying on a hospital there, has been tried. The defence was that the healing art was not carried on for profit, and therefore the covenant had not been violated. The Master of the Rolls, however, decided for Lord Portman.

THE Lower Thames Valley Main Sewerage Board have given notice of their intention to proceed with Colonel Haywood's scheme for conveying the sewage of the district to Molesey. The Kingston Town Council have thereupon authorised the Special Drainage Committee to take all the necessary steps and to incur such expense as might be needful to oppose the project at any public inquiry, or in any other way they might think advisable in the interest of the borough.

THE authorities at Kingston have decided to continue the annual great cattle fair, but to abolish the three days' pleasure fair. Alderman Marsh stated that every year there had been some serious case of infectious disease among the people attending the fair, and some of the inhabitants had probably suffered from the infection brought by the travelling caravans.

PROFESSOR BALL has commenced his clinical course of lectures on mental diseases, at the Asile Sainte-Anne, in Paris. At his first lecture, the new amphitheatre of the institution was filled by a distinguished audience, including Professors Bouchard and Brouardet, MM. Borust, Luys, Dieulafoy, Duguet, Constantin Paul, Moreau of Tours, Laurier, Mesnet, and the chief alienist physicians of France. M. Ball's lecture was highly successful, and was frequently interrupted by enthusiastic applause.

MR. SERJEANT BALLANTINE has announced his intention of moving for a rule for a new trial in the case of Phillips *v.* the London and South-Western Railway Company, in which, it will be remembered, Dr. Phillips, the plaintiff, recovered a verdict for £16,000, in respect of personal injuries suffered in a railway accident. Serjeant Ballantine's grounds for the motion are that the damages were excessive, and that there was misdirection; his object being to have discussed the principles upon which damages are assessed in these cases.

AN inquest has been held at Manchester on the body of a lad, aged 11, who died from hydrophobia. On November 3rd, he was bitten by a black retriever in the face. The wound was dressed by a chemist, and it healed in five or six days. He became ill last Friday; and although every attention was given him at the Clinical Hospital, he died in fearful convulsions the same night. The dog, which was produced during the inquiry, had shown no rabid symptoms. The jury returned a verdict of Death from hydrophobia.

ACCORDING to the *St. Louis Clinical Record* of October, gastrostomy, or the formation of an artificial opening into the stomach for the purpose of securing alimentation in complete closure of the œsophagus, has been successfully performed by Dr. Herff, of San Antonio, Texas. The patient was a little girl who was dying from inanition consequent on stricture of the œsophagus, following the ingestion of a solution of concentrated lye. Feeding through the gastric fistula was performed with facility three weeks after the operation.

THE St. John Ambulance Association is making very satisfactory progress. A new centre is being formed at Leicester, of which the Duke of Rutland has accepted the presidency. Fresh centres, under the direction of Major F. Duncan, R.A., Mr. John Furley, Sir E. A. H. Lechmere, and other members of the Order of St. John, have, within the last month, been opened at Liverpool, Bristol, Keswick, Hereford, Mansfield, Eckington, Twickenham, Eton, and Colchester. The practical utility of the instruction given in these classes has been proved by various incidents lately reported, in which the prompt assistance given by members of them has resulted in the saving of life and limb to the public.

VOTES TO GERMAN UNIVERSITIES.

AMONG the votes of the German Government to the universities of the empire for 1880-81 are the following. University of Bonn: the Medical Clinic and the clinic for Syphilis and Diseases of the Skin to be established in connection with it, an additional grant of 15,000 marks (£750). University of Königsberg: for the enlargement of the site for the Chemical Laboratory, 39,000 marks (£1,950); for increasing the garden of research and for a site for the Physical Institute, 75,000 marks (£3,750); for building the Surgical Clinic, a fourth and last grant of 75,000 marks (£3,750). University of Berlin: for Clinical buildings in the Ziegelstrasse, a third grant of 400,000 marks (£20,000); for a newly built Obstetric and Gynæcological clinic, a second grant of 750,000 marks (£37,500); for building a second Chemical Laboratory and a Pharmaceutical Institute, a second grant of 400,000 marks

(£20,000). University of Halle; for a new Physiological Institute, 180,000 marks (£9,000); for a fifth barrack for the Surgical Clinic, 48,000 marks (£2,400). University of Marburg; for a new Chemical Laboratory, a second and last grant of 100,000 marks (£5,000). University of Bonn; for the building of an isolated Clinical Hospital, 48,000 marks (£24,000). There are also several other grants of smaller amount, to the Universities of Königsberg, Greifswald, Breslau, Halle, Göttingen, Marburg, Bonn, etc.

SCIENCE AND ART.

MR. EDWARD BELLAMY, Surgeon to and Lecturer on Anatomy at the Charing Cross Hospital, has commenced a course of lectures at the National Art Training School, at South Kensington, on the Anatomy of the Human Form, illustrated by demonstrations on the living model. The course is supplemented by twelve demonstrations on the dissected human subject.

MADRAS MEDICAL COLLEGE.

THE Professorship of Materia Medica and Therapeutics, hitherto held by the Superintendent of the Lunatic Asylum, is to be held henceforth by the Assistant-Physician of the General Hospital.

THE LOST MEDICAL SCHOOL.

THE Regius Professor of Medicine at Oxford has suddenly manifested unwonted symptoms of activity. It is many years, we believe, since he has given of the fruits of his knowledge to the world. We are, therefore, glad to see that he has lately delivered a public lecture on the new hospital at Baltimore, United States, and its relations to the studies of the Johns Hopkins University and to medical education in the United States generally. May this new departure be of good omen, and be the forerunner of a new era in medical education at the University in which Dr. Acland holds a position offering much opportunity for the highest kind of oral instruction, but from which medical teaching is still so lamentably exiled, and in which he has never, we believe, during a long course of years, given one systematic lecture as Regius Professor of Medicine, nor one clinical lecture as Professor of Clinical Medicine. Both these posts, however, Dr. Acland has held for upwards of thirty years.

A CRUCIAL EXPERIMENT.

M. PASTEUR, at a recent meeting of the Académie de Médecine in Paris, stated that a sheep died of charbon (anthrax) in a field in the department of Eure-et-Loire, at some distance from any knacker's establishment. The shepherd, therefore, dug a hole in the ground, and buried this anthracoid sheep. The next year, the surface of the ground teemed with millions of germs. In a counter-experiment, M. Pasteur allowed some anthracoid blood to fall on the ground, it became changed into germs, which could be taken out of the earth a year afterwards. He asks how, in face of such facts, is it possible to retain any doubt as to the veritable origin of charbon in the department?

THE BROWN LECTURES.

THESE lectures, in connection with the Brown Institution, will be delivered by Dr. Greenfield, at the University of London, on December 17th, 18th, 19th, 22nd, and 23rd, at 5.30 P.M. The subject will be Recent Investigations on the Pathology of Infective and Contagious Diseases.

THE TELEPHONE AS A MEDIUM OF CONSULTATION AND MEDICAL DIAGNOSIS.

ONE of the advantages of having a telephone in one's house, was, according to the *Cincinnati Lancet*, demonstrated by the experience of a physician of Cincinnati. He was aroused during the night by a summons through his telephone to go at once to the house of the caller, who stated that his child had croup and was coughing violently. As the house was several miles distant, and the doctor very tired, he requested the father to hold his child for a few moments before his telephone. This was done, and the practised ear of the physician at once convinced him that there was no fear of true croup. After informing the father of this, and giving the necessary directions regarding the management of the patient, the doctor again retired. When he saw the infant the next morning, all symptoms of laryngismus stridulus had disappeared, and the child was apparently quite well.

HARVEIAN SOCIETY OF LONDON.

THE Harveian Lectures, on Certain Practical Points in Connection with the Surgery of Childhood, will be delivered by Mr. Edmund Owen, F.R.C.S., on the evenings of December 4th, 11th, and 18th, at 8.30 o'clock, at the Stafford Rooms, Titchborne Street, Edgware Road. The text of these lectures will appear, illustrated, in our issue of next year.

PROFESSOR JOSEPH HALLA.

THE University of Prague celebrated, on November 18th, the twenty-fifth anniversary of Dr. Joseph Halla's appointment to the Chair of Clinical Medicine. Seldom has any one succeeded in gaining so many hearts as Professor Halla, whose sterling merits are recognised at all hands. We wish most cordially that Professor Halla may long remain, as he hitherto has been, an ornament to science and an honour to his country.

WHOOPING-COUGH.

DR. J. J. CALDWELL's mode of treating this disease is to place a steam-atomiser in a position on a table before the patient, charged with the following mixture: ℞ Extracti belladonnæ fluidi gtt. vi—xij; ammonii bromidi ℈i; potassii bromidi ℈ij; aquæ destillatæ fl. ℥ij. This spray is rapidly carried over into the face, mouth, and lungs of the child, and applied ten to fifteen minutes, until the pupils are dilated by the effect of the belladonna mixture. The applications are made morning, noon, and bedtime. This has, it is said, cut short the spasmodic cough within two or three days uniformly, and almost to a certainty.

ENGLISH CORRESPONDENCE ABROAD.

WE publish in another column a curiously worded justification, by Dr. Fothergill, of his demonstration of village doctors and their wives as anomalies and "social pariahs", and of his own reasons for remaining a bachelor. We need make no comment on this singular and really monstrous production; it is evidently an article manufactured for foreign consumption, and highly salted to bear exportation. But, even after making every allowance, and though unwilling to again elicit another vindication, we must call this correspondent's attention to the extreme impropriety of such utterly unwarrantable statements as he appears to be in the habit of using to fill up his correspondence. The following cutting has just been forwarded to us from another of his letters.

"Imposing with its seven pavilions, conspicuous from its position, respectable from its history in the past, St. Thomas's is withering. The lay administrators are there too dominant, and possessed of too much power. The medical staff is simply snubbed; and consequently men hesitate to offer it their services. Stately as it looks, many of its wards are closed; and, what is worse, its students stand lowest in the percentage of passes at the various examinations—the lowest of all the schools in London. That is the position to which the whilom proud St. Thomas's has been brought—by whose sins of commission and by whose sins of omission I do not know, not having been behind the scenes, and possessing no special knowledge, hearing only the rumours which have got about from time to time, especially at the time when Robert Barnes left it for St. George's. Melancholy pervades the mind when one looks at the history of the grand old hospital and thinks of its past. It looks like an old oak with blasted branches—a grand tree, but shrinking. Its closed ward gives it a dismal aspect, and makes the resemblance of a decaying oak most fitting. While University College is a vigorous tree, growing grandly in free air, the other is being blighted by the closeness which surrounds it. But it is unnecessary to study the pathological anatomy of St. Thomas's too closely."

A strange picture is here suggested of Dr. Fothergill, pervaded by melancholy standing on Westminster Bridge, gazing at the "whilom proud St. Thomas's", struck by its similitude to a "grand" but "shrinking old oak" with "blasted branches", "blighted by the closeness which surrounds it", and mournfully reflecting that "its closed ward" "makes the resemblance of a decaying oak most fitting". This may be sup-

posed (wrongly, we should guess) to suit a Transatlantic taste, although a little dislocated in metaphor: it is certainly unsuited for home consumption; but it is not easy to justify the publication abroad of utterly absurd calumnies attacking the reputation, position, and character of one of the most flourishing, progressive, and successful of our great medical schools. Only last week, we had occasion to congratulate St. Thomas's Hospital on the brilliant achievement of furnishing the first man in honours at the second M.B. examination of the University of London for three successive years, which is very much as if the same stable had sent out for three successive years the winner of the Derby. This success is attributed to the admirable system of training in clinical medicine which Bristowe, Murchison, and Ord have established there. It is most true that a block of the hospital is unused, in consequence of the lay administrators having overbuilt. But to found on the very simple facts this "dismal" romance of "a snubbed staff" and "a decaying oak", and "men who hesitate to offer it their services", is really outstepping the usual privileges of historical fiction. To publish it abroad, where it may not be seen by those affected, and is outside the pale of contradiction, does not improve matters.

FEVER IN INDIA.

THE *Bombay Gazette* says:—We quoted some remarks the other day from the Allahabad paper regarding the alarming prevalence of fever in the Pertabghur district; and the disease, we are sorry to find, has a more extensive range. A "District Official" writes that the description of affairs in Pertabghur, above alluded to, is also fully applicable to the districts of Agra, Aligarh, and Meerut, where fever of a severe epidemic form has existed for some time. The mortality in these districts, and particularly in the Aligarh district, has been very great for some months past, and no abatement of the disease is yet noticeable. It is said that deaths in Aligarh district alone have exceeded 20,000 for one month. More medical relief for the suffering villages appears to be greatly needed, for the ravages of the fever are in extent becoming more appalling daily.

YAWS.

WE have been favoured with the third Report of the medical superintendent of Yaws Hospitals, in the island of Dominica. In this report, Dr. Alford Nicholls remarks that, within the last few years, the disease has attacked so many of the families of the peasantry, that considerable alarm has been felt among all classes throughout the island, a special yaws-tax imposed by the legislature testifying to the gravity of what has been there termed the "yaws question". The nature of the disease known in the West Indies as yaws is still obscure, and in Dr. Nicholls' report we gladly welcome a clear and circumstantial account of the leading features of the malady. The French physician had described the affection as syphilitic, an opinion to which Dr. Nicholls is opposed. The characters of the disease are thus given: "At first, the eruption appears as small papules with a somewhat broadened base, usually no larger than a pin's head, and but slightly elevated above the surface of the skin. In a few days these papules enlarge, and the epidermis cracks upon the summit, disclosing a small yellowish point, which has been likened to a globule of pus. The growth of the young tubercle necessitates the pushing aside of the superficial layers of the skin, and this is accomplished by the epidermis splitting in lines radiating from the central prominence, the resulting segments curling away before the rapidly increasing yaw. The mature eruption consists of a number of yellow scabs elevated above the surface of the skin, flat or sometimes depressed at the top, and rounded off from the edges to the base..... In size and shape the tubercles vary much. They may be as small as a split pea, or they may attain to so great a size as to occupy nearly the whole of the cheek with an encrusted mass half an inch thick. Their shape is rarely irregular, a circular form being the most common, and next in point of frequency are ovoid or reniform masses. Sometimes they are found in a circle enclosing sound skin. At other times, they form a ring round the mouth or anus, and, in consequence of the greater moisture in these situations, they do not become dark and dry, as when they develop elsewhere. When in the anal fissure, they are almost moist, but when they exist round the mouth or at the orifice of the nostrils, they dry in some places and remain soft in others." The nails are frequently affected. In some cases, mercury works a cure, and in many, the symptoms rapidly disappear under iodide of potassium; in all, improved hygienic conditions are of the greatest benefit; facts that, taken with Dr. Nicholls' clear picture of the symptoms, will not be lost sight of by those pathologists who incline to accept the syphilitic theory. We are glad to observe that Dr. Nicholls promises a further contribution to the pathology of the disease. Some well executed plates would be very valuable to inquirers in Europe who have no opportunity of personal observations. In illustration of this remark, we have only to refer to the instructive nature of the excellent coloured drawings of the *bouton de Biskra*, for which the profession is indebted to Dr. Vandyke Carter.

THE NURSING STAFF AT GUY'S HOSPITAL.

WE referred last week to the disorganisation which has arisen in the nursing establishment at Guy's Hospital, in consequence of the recent changes having been introduced somewhat injudiciously, abruptly, and in a manner which does not meet with the approval of the staff. We expressed a conviction that Mr. Lushington, the Treasurer, is a man of so much good sense and knowledge of the world as to understand that this is a matter in which the staff of the hospital are at least likely to be as well informed as himself, and in which they are, perhaps, quite as deeply interested. Under these circumstances, it would be extremely deplorable if the Treasurer were to persist in endeavouring to carry out a system which, he is now aware, has in its working produced results which have aroused considerable indignation on the part of the staff. Until the staff had declared the result of their consideration of the matter in quite plain and unmistakable terms, and until the Treasurer had had an opportunity of discussing the subject with them, it seemed to us clear that his authority should be respected, and that his views should as far as possible be accepted. Now, however, another duty is incumbent on Mr. Lushington, and that is to reconcile his views of administration with the experience and wishes of the medical staff, who constitute the glory of the hospital, and by whom its work has been carried on for so many years with signal success. It would be a great pity if a matter such as this were to produce serious trouble or embittered feelings. Firmness may, in such a case, easily be converted into culpable obstinacy; and we cannot help expressing the strong hope that, after the very decided conclusions attained at the conference with the staff this week, Mr. Lushington will carefully consider how far he can harmonise his objects with the experience and wishes of those for whom he is really the prime minister.

THE INDIAN ARMY SANITARY COMMISSION.

THE Army Sanitary Commission have written a memorandum on the report of the Sanitary Commissioner for the North-West Provinces and Oudh for 1877. Since Mr. Planck's report of 1876, the sanitary administration of Oudh, like other public departments, has been conjoined with that of the North-West Provinces; and the present report is the first of a new series, giving the year's facts and experiences for both provinces. It is satisfactory to observe that the Commission consider that works of sanitary improvement have made satisfactory progress during the year 1877. The most important of them are the drainage-works of the North-West Provinces, the value of which is shown by the great decrease of fever-mortality in some of the districts of the Northern Doab. Stress is laid by the Commission on the great mortality from fever in the North-West Provinces and Oudh, in which they point out that the mortality has been found by experience to be to a great extent amenable to sanitary improvements, and recommend such improvements as drainage, cleanliness, and improvement of water-supply. The Commission recommend that the instructions and useful reports of Mr. Planck should be brought to the notice of local officers. The Commis-

sion has also noted on the sanitary report for British Burmah for 1877. The report is of a general character, and the Commission remark that the amount of information it gives on the extent of work done is not altogether satisfactory. However, a beginning of sanitary work has been made at a number of points all over the provinces, and simple instructions on village sanitation were under consideration or had been prepared. The Commission think it would be a great step gained to have Rangoon thoroughly improved; and they point out the necessity for additional care regarding the sanitary state of prisons and prisoners. Remarking on the memorandum of the Commission, the Secretary of State trusts that in future years the sanitary report may be more satisfactory, both as regards the extent of work done and the information afforded.—The Army Sanitary Commission have also commented on the report of the Madras Municipality of 1877-78. Their observations are directed to the sanitary condition of the city of Madras and the measures required for its improvement. The Commission urge that no permanent improvement in the public health can be expected until Madras is drained and its water-supply improved; and that, meanwhile, the greatest practical amount of cleanliness should be obtained in all streets, lanes, compounds, back premises, and houses, by hand-cleansing, without regard to cost; bearing in mind that street-filth is far less prejudicial to health than that which lies concealed in and around houses.

THE LEICESTER FRIENDLY SOCIETIES' MEDICAL ASSOCIATION.

MR. WALTER H. COPE has found it necessary to intimate by public advertisement that he is no longer the Medical Officer of the Leicester Friendly Societies' Association. It appears that he was recently dismissed by the Committee at a few hours' notice, because he refused to sign an agreement, the contents of which he was not acquainted with till more than three weeks after his election. Clause 3 of such agreement is as follows.

"That in case the said Walter H. Cope shall be unable to discharge the duties of his office, by reason of sickness or from any other cause whatever, he shall provide a competent substitute (to be approved of by the managing committee) to perform the same at his own expense; and should he neglect to provide such substitute, the said association shall be at liberty to do so, and to deduct the amount of any remuneration to be paid to such substitute from his before-mentioned salary."

This is rather an important matter to introduce as an after-thought, and we are not surprised to find that Mr. Cope should think that the yoke thus laid upon him was a hard one. If the arrangement had been distinctly made before the contract was concluded, it would perhaps have been strictly just, but it would certainly not have been generous.

DR. GRIMSHAW'S ADDRESS AT THE MEETING IN CORK.

DR. GRIMSHAW, who was President of the Section of Public Medicine at the last annual meeting of the British Medical Association in Cork in August, and who has since been appointed Registrar-General of Ireland, has republished, in pamphlet form, his admirable address to the section, of which the subject was, "The Public Work of the British Medical Association". This valuable pamphlet is one which every member of the Association should possess. It constitutes a record of public work such as few, if any, other associations in any country can show; and it is impossible without pride and satisfaction to go through this long, detailed, and careful analysis of the work which has been done by the British Medical Association and its Committees on such subjects as the medical relief of the sick poor in all its branches, the supervision of the insane and provision for the treatment of lunatics, the registration of births and deaths, the observation and registration of disease, the improvement of the dwellings of the working classes, the protection of infant life, the organisation of the departments of State Medicine, the provision of proper medical attendance for the soldiers and sailors of the army and navy, the prevention of intemperance and the control of habitual drunkards, the prevention of artisans' diseases, and sanitary legislation and administration generally. We note with great satisfaction the large part which Dr. Grimshaw finds on the analysis of the work to be due to the BRITISH MEDICAL JOURNAL and to the Parliamentary Bills Committee; and we trust that to all the members of the Association the perusal of this valuable and interesting record will be a stimulus to increased exertions in the same direction in the future, and an encouragement to make whatever sacrifice of time, labour, or of money may be necessary to enable the Association and its Committees to pursue in an increased measure the grand career of public usefulness which is open to it. Dr. Grimshaw deserves the warm thanks of the Association for the labour which he has expended on this address, for the magnificent tribute to the labours of the Association which he has compiled, and for the public spirit which he has shown in republishing his address in this very readable and handsome form. The pamphlet is published by Messrs. Fannin and Co., Dublin.

SCOTLAND.

THE Council of the Faculty of Physicians and Surgeons of Glasgow have agreed at their next meeting in December to consider any applications which may be made for the Faculty Lectureship this session. The Lectureship, which is open to the whole profession, was established several years ago, mainly for the purpose of stimulating original research. The subject may lie in any department of medicine, theoretical or practical. The Lectureship was first held by Professor McKendrick of Glasgow, and on the last occasion by Dr. B. W. Richardson of London.

TRANSFUSION OF BLOOD.

ON November 20th, Professor Annandale performed the operation of direct transfusion of blood by means of Roussel's apparatus. The patient was a young boy, under Professor Sanders's care, who presented some symptoms of pernicious anæmia. Two years before, he had an attack of typhoid fever. Since then, he had suffered from an anæmia, quite unrelieved by any of the usual remedies. Within the last few days, delirium, probably from anæmia of the brain, had set in. The apparatus did not work quite satisfactorily; and ultimately Mr. Annandale had to substitute a small cannula, passed into one of the veins at the bend of the giver's elbow, for the suction part of Roussel's apparatus. In this way, two ounces and a half of pure blood were transfused. The blood was given by one of Mr. Annandale's dressers.

EDINBURGH UNIVERSITY COURT.

AT a meeting of the University Court, Edinburgh, held last week, Sir Robert Christison, Bart., took his seat as member of the Court in capacity of assessor for the General Council of the University. The following lecturers were recognised as teachers whose courses of instruction would qualify for graduation: Charles Bell, M.D., Lecturer on Midwifery; J. B. Buist, M.D., Lecturer on Pathology; H. Aubrey Husband, M.B., Lecturer on Medical Jurisprudence—all in Edinburgh. At the same meeting, Mr. J. Allan Gray, M.A., M.B., was appointed assistant to Professor Douglas Maclagan, in succession to Dr. J. Affleck, now lecturing on Practice of Physic; and R. M. Morrison, D.S.C., and John Gibson, Ph.D., were appointed assistants to the Professor of of Chemistry.

ST. ANDREW'S UNIVERSITY.

THE half-yearly meeting of the General Council of St. Andrew's University was held on November 28th. There was a discussion on the report of the Committee which had been appointed to consider the recommendations of the University Commissioners. At the same meeting, Dr. Richardson and Dr. W. B. Carpenter were proposed as candidates for the office of assessor.

MATRICULATION IN EDINBURGH UNIVERSITY.

THE number of students who have matriculated in Edinburgh University this session is 2,510. The Faculty of Medicine contributes the largest number, there being 1,138 students of medicine; viz., first year, 337; second year, 277; third year, 257; and fourth year, 267; Arts comes next, with 935; then law, 363; and, lastly, divinity, 74.

There is an increase in all the faculties, that in Medicine being 96 as compared with the corresponding day of last year. The total increase for the year is 178.

HEALTH OF EDINBURGH, GLASGOW, AND LEITH.

In Edinburgh, the mortality last week was 20 per 1,000; there were 8 deaths from zymotic diseases, of which scarlet fever caused one-half, and of which 7 occurred in the Old Town. In Glasgow, the mortality was 17 per 1,000; and, in Leith, it was 14 per 1,000.

CASE OF CÆSAREAN SECTION IN GLASGOW.

This operation was performed, on November 29th, by Professor George Buchanan, at the Glasgow Maternity Hospital. The subject of it was a primipara, aged 28; and the operation was necessitated by an extremely contracted state of the pelvis. We regret to say that the mother died within forty-eight hours of the operation. The child has survived, and is doing well.

AMBULANCE CLASSES IN GLASGOW.

In addition to the instruction which is at present being given to the Glasgow Volunteers as to the management of the wounded in time of war, the movement has taken in Glasgow a wider range; and, on the 1st instant, there was commenced a series of lectures in connection with the Glasgow Branch of the St. John's Ambulance Association. Like the branch societies formed in other parts of the country, the object of the promoters of the Glasgow classes is to instruct the general public in the rudimentary treatment of injuries, and in the management of cases of sickness until such time as a medical man can be called. The classes are under the direction of Professor George Buchanan, who explained at the opening lecture the nature of the course of instruction and the origin of the movement. The lectures are to be delivered by Dr. Renton, Assistant-Surgeon to the Western Infirmary.

PROFESSOR M'KENDRICK ON THE ACTION OF ALCOHOL.

On the evening of November 27th, Professor McKendrick delivered the inaugural lecture of the Glasgow University Total Abstinence Society in the Physiology Class Room. The subject of the lecture was the action of alcohol, which Dr. McKendrick considered in its physiological as well as its moral aspects. There was a large attendance of students, and a hearty vote of thanks was given to Dr. McKendrick for his able and interesting address.

THE GLASGOW MATERNITY HOSPITAL.

The annual meeting of the subscribers and contributors to the above institution was held on November 25th. From the report, it appears that, during the past year, there had been 170 cases in the hospital, and 1,118 in connection with the out-door midwifery department. The directors also state that, in August last, it was deemed advisable to close the old hospital, and that, at present, temporary premises were being occupied until the new building is complete. During the past year, 102 students received instruction at the hospital. The income amounted to £1,282, including last year's balance, and the expenditure to £904, showing a surplus of £378.

THE WESTERN INFIRMARY OF GLASGOW.

The fifth annual general meeting of the contributors to the above institution was held on November 27th, when the report of the directors was read and approved of. This report shows that, from November 1st, 1878, to October 31st, 1879, 11,051 out-door, and 2,115 in-door, patients were treated at the hospital. Of the patients resident in the infirmary, 1,005 were dismissed cured, 568 relieved, 197 were sent away as not likely to be benefited by any longer residence in the hospital, 152 died, and 193 remained in the institution at the end of October. The mortality last year, which was 6.9 per cent., is the lowest on record in connection with the institution. The state of the income is not so satisfactory; for while the receipts for the year, including last year's balance, were £9,521, the expenditure was £11,461, showing a deficiency of £1,940. A perusal of the report brings out the following facts: that the number of patients treated during the twelve months was greater than in any preceding year, and that the accommodation had not been sufficient for the number of suitable patients. This latter defect is, however, being remedied, for funds have been provided by the will of the late Mr. Freeland of Nice for the completion of the hospital, in accordance with the original intention of the promoters of it.

IRELAND.

Fifty deaths from scarlet fever have taken place in Cork during the past eight weeks.

PATHOLOGICAL SOCIETY OF DUBLIN.

The first meeting of this Society for the session 1879-80 took place on Saturday last: Dr. William Moore, the outgoing President, in the chair. There were but twenty members and sixteen student-visitors present. Specimens were exhibited by Mr. Thornley Stoker, Mr. Barton, Dr. Finny, and Dr. Nixon. The visitors having withdrawn, the following officers were elected for the ensuing session, and the customary vote of thanks given to the outgoing President. *President:* Dr. Edward H. Bennett. *Vice-Presidents:* Dr. J. T. Banks, Dr. Samuel Gordon, Dr. Thomas Hayden, Dr. H. H. Head, Dr. George Kidd, and Mr. Joliffe Tufnell. *Council:* Drs. John K. Barton, Anthony Corley, George F. Duffey, Arthur W. Foot, Reuben J. Harvey, Edward Hamilton, James Little, Thomas Evelyn Little, Robert M'Donnell, William Moore, John M. Purser, and William Stokes. *Secretary and Treasurer:* Dr. John William Moore. *Secretary for Foreign Correspondence:* Dr. Robert D. Lyons.

JERVIS STREET HOSPITAL.

A surgeoncy to this Hospital has become vacant by the resignation of Dr. Edward Wolfenden Collins, who is leaving Ireland for the purpose, we are informed, of entering into practice at Sydenham. Dr. Collins' departure from Dublin will be regretted by his hospital colleagues and by his large circle of professional friends. They all wish him a speedy attainment in his new home of that success, which their knowledge of his personal qualities and his undoubted ability as a surgeon led them to feel sure he would eventually—if more slowly—have gained had he remained in his native city. The medical staff have, it is stated, decided to recommend the Governors of Jervis Street Hospital to appoint Dr. Cranny to the vacancy caused by Dr. Collins' retirement. Should this arrangement, as it in all probability will, be carried out, Dr. Cranny, who is an ex-Assistant Physician of the Rotunda Lying-in Hospital, will assume charge of an obstetric department in the hospital, which, it will be remembered, is about to be considerably enlarged and rebuilt.

SURGEON-MAJOR REYNOLDS, V.C.

The degree of LL.D. *(honoris causâ)*, which was lately granted *in absentiâ*, to Surgeon-Major Reynolds by the University of Dublin, will be publicly conferred on that gallant officer at the winter commencements to be held in Trinity College on Wednesday week, the 17th instant. After the commencements, a presentation will be made to Surgeon-Major Reynolds by the students of the School of Physic of a revolver and case, bearing the following inscription: "Presented to Surgeon-Major James Henry Reynolds, V.C., LL.D., by his fellow-students and other friends in Trinity College, Dublin, at the Winter Commencements, 17th December, 1879, when the degree of LL.D. *(honoris causâ)* was conferred on him by the University of Dublin."

THE DUBLIN MEDICAL SCHOOLS.

No official information being published as to the number of students entered for each session at any of the six schools of medicine in Dublin, it is difficult to state with exactness the number of those who have commenced or resumed the study of medicine in Dublin this session. Some idea may, however, be formed from the returns given in at the

so-called Anatomical Committee, consisting of a representative from each of the schools, by which the distribution of "subjects" is regulated in proportion to the number of students dissecting at each school. These returns, although presumably *bonâ fide* ones, are, we are informed, by no means reliable, and do not, from their very nature, give an accurate return of all the entries. The total this year, however, shows a falling off of four students as compared with last year; the numbers being 845 and 849 respectively. The Ledwich School, as usual, heads the list with a return of 221, seven more than last year. Next comes the School of the Royal College of Surgeons with 170, one more than that returned by the School of Physic, Trinity College, which latter shows a falling off of thirty students as compared with the previous year, while the Surgeons' School is less by eight only. The return of the New Carmichael College of Medicine and Surgery apparently indicates the wisdom of its directors in moving their school to a central position in the south side of the city. It shows thirty-nine more dissectors than it had last session. The school of the Catholic University has thirteen, and that of Dr. Steevens's Hospital two, fewer students than they had last year; their numbers for the current session, the entries for which closed on the 25th ultimo, being eighty-five and fifty-eight respectively.

HEALTHY RIVALRY!

THE two "Special" Orthopædic Hospitals in Dublin gave a further instance of the spirit of healthy rivalry which we presume should exist between two such doubtless equally "deserving and important" charities, by both having a bazaar on the same day last week for their respective institutions. The results in both cases were, we believe, satisfactory.

THE CAPE CLEAR EPIDEMIC.

NO death took place last week from the epidemic; but four additional cases which occurred were admitted to the temporary hospital. In all probability, the disease will shortly disappear.

HOSPITAL SUNDAY IN BELFAST.

HOSPITAL Sunday last year in Belfast produced a sum of £451 18s. 9½d. towards the funds of the Belfast Royal Hospital; but, as there are one hundred and four churches in that town, the sum appears a very small one indeed for such a wealthy place. Collections took place on the last Sunday in December, and a similar arrangement will hold good this year; but it is probable that an earlier Sunday will be fixed in succeeding years for taking up the collections for the fund.

CHAIR OF PRACTICE OF MEDICINE: QUEEN'S COLLEGE, GALWAY.

WE understand that Dr. John Isaac Lynham has been appointed to the vacant Chair of Practice of Medicine in this College. Dr. Lynham was first scholar in Medicine 1871 to 1875, graduated gold medallist in the Queen's University in 1875, and held temporary lectureships in the Queen's College, Galway, in 1876, 1877, and 1878. It will thus be seen that Dr. Lynham's University career was a distinguished one, and the Government, in appointing a graduate of the College to the vacancy and selecting this gentleman from a number of competitors, have made an appointment which it is believed will be considered satisfactory.

DEATH OF DR. SAMUEL COATES OF PORTUMNA.

WE record with regret the death of this gentleman, which took place last week. The deceased was a graduate in Medicine of the University of Glasgow and a member of the Royal College of Surgeons of England. Dr. Coates had a very extensive practice in the locality in which he resided; and was the author of various contributions to medical literature, which included some cases of lithotomy and fracture of the skull, with observations on trephining. He was the medical officer of the workhouse and dispensary district, but resigned the latter in September last from ill-health. Dr. Coates was about fifty-five years of age, and succumbed, we understand, from some affection of the stomach.

DINNER TO SURGEON-MAJOR REYNOLDS, V.C.

A LARGE number of members of the British Medical Association assembled at Willis's Rooms, St. James's, on November 26th, in response to the proposal of the Committee of Council, in honour of Surgeon-Major Reynolds, V.C., to whom the gold medal of the Association had been awarded, in recognition of his bravery at the defence of Rorke's Drift in the Zulu war. The chair was taken by Dr. Alfred Carpenter, President of the Council of the Association. On the Chairman's right, at the chief table, were Surgeon-Major Reynolds (who wore the Gold medal); Surgeon-General T. Longmore, C.B. (Netley); Surgeon-General Sir Joseph Fayrer, K.C.S.I.; Prescott Hewett, Esq., F.R.S.; Surgeon-Major F. S. B. De Chaumont, F.R.S. (Netley); Joseph Lister, Esq., F.R.S.; Surgeon-General J. Mouat, V.C.; Dr. Aitken, F.R.S. (Netley); H. T. Sylvester, M.D., V.C.; and on his left, Sir William Jenner, K.C.B., F.R.S.; Dr. C. Chadwick; Walter Dickson, M.D., R.N.; J. E. Erichsen, Esq., F.R.S.; Dr. R. L. Bowles (Dover, President of the South-Eastern Branch); Ernest Hart, Esq.; John Gay, Esq.; Spencer Wells, Esq.; and H. N. Davies, Esq. (Cymer, Association Gold Medallist). The vice-chairs were occupied by John Wood, Esq., F.R.S. (President of the Metropolitan Counties Branch); Dr. E. H. Sieveking; Dr. J. S. Lavies; Dr. A. Henry (Senior Secretary of the Metropolitan Counties Branch); and Francis Fowke, Esq. (General Secretary of the Association). There were also present: J. O. Adams, Esq.; W. Adams, Esq. (Henrietta Street); W. Adams, Esq. (Harrington Square); W. Allingham, Esq.; Dr. H. M. Allen; J. Wickham Barnes, Esq.; Dr. Barrett; Dr. Begley (Hammersmith); G. Benson, Esq.; Dr. Bernard; — Binnie, Esq.; J. Blake, Esq.; Surgeon-Major J. P. H. Boileau, M.D. (Netley); Dr. W. H. Brace; Dr. Bristowe; W. E. S. Burnett, Esq. (Mottram-in-Longendale); J. M. Burton, Esq. (Lee); J. S. Burton, Esq. (Lee); A. B. Carpenter, Esq.; J. H. Casson, Esq.; O. E. P. Chard, Esq.; O. Clayton, Esq.; T. Cobham, Esq.; Surgeon-Major Collis; Alfred Cooper, Esq.; Dr. W. H. Corfield; J. Crawford, Esq.; G. A. Critchett, Esq.; Dr. R. T. Daniell; — Davey, Esq.; W. Davies, Esq.; Dr. W. H. Day; H. W. Diamond, Esq. (Twickenham); T. M. Dolan, Esq. (Halifax); J. A. Eames, M.D. (Cork); George Eastes, Esq.; J. Flack, Esq.; C. Franklin, Esq. (Putney); R. F. Frazer, Esq.; Dr. J. H. Galton (Upper Norwood); Dr. G. G. Gardiner; E. Garraway, Esq. (Faversham); S. L. Gill, Esq.; W. J. Harris, Esq. (Worthing); Dr. T. C. Hayes; J. S. Hodson, Esq.; Jabez Hogg, Esq.; Dr. C. Holman (Reigate); W. H. Holman, Esq.; J. R. Humphreys, Esq. (Shrewsbury); T. Cayley Hutchinson, Esq.; Dr. J. H. Jackson, F.R.S.; Dr. H. Jeaffreson (Wandsworth); A. Cooper Key, Esq.; Dr. H. Lanchester (Croydon); Ivor A. Lewis, Esq. (Cymer); Dr. Ligertwood; Surgeon-Major R. T. Lyons; W. Mac Cormac, Esq.; J. A. Mac Donagh, Esq.; A. C. Maclaren, Esq.; M. D. Makuna, Esq.; E. R. Mansell, Esq.; R. Mansell-Jones, Esq.; W. Meehan, Esq.; Rev. G. F. Merrick; J. T. Mitchell, Esq.; Dr. W. W. Moore (Brighton); W. G. Morris, Esq.; A. Napper, Esq. (Cranleigh); G. Neale, Esq.; Surgeon-Major Newland; Dr. W. M. Ord; Dr. C. Parsons (Dover); Dr. J. H. Paul (Camberwell); W. H. Platt, Esq. (Kilburn); F. E. Pocock, Esq.; F. J. Reilly, Esq.; Dr. G. Rice (Manchester); Surgeon-Major Roberts; G. A. Rogers, Esq.; Dr. H. Cooper Rose; H. S. Shaw, Esq. (Louth); J. Shuter, Esq.; Herbert Sieveking, Esq.; Dr. Spencer T. Smyth (Forest Hill); J. V. Solomon, Esq. (Birmingham); J. Startin, Esq.; W. Stirling, Esq.; N. Stowers, Esq.; Dr. S. Sutro; R. Thomas, Esq.; Dr. H. G. Thompson (Croydon); Dr. J. Thompson (Leamington); Dr. W. Travers; W. J. Vance, Esq. (Woolwich); C. Vasey, Esq.; M. J. Verdon, Esq.; F. Wallace, Esq.; J. W. Ward, Esq.; Surgeon-Major C. White; Dr. W. Wood.

Grace before and after meat was chanted by Dr. Lavies, Dr. Barrett, Mr. Casson, and Mr. Anderson Critchett.

The CHAIRMAN, who, on rising, was greeted with warm cheers, said the first toast he had the honour to propose was that of "The Queen" —[*cheers*] — the source of all dignity and honour in the empire, the upholder of all that was good and honourable, virtuous and brave; the sympathiser with suffering, sorrow, and misfortune, wherever it might be—[*cheers*]—and, as such, the friend of the medical profession. [*Cheers.*] If Her Majesty were not a constitutional sovereign, she would, they might feel assured, shower down upon the profession those honours to which many eminent members of it were entitled. [*Cheers.*] "The Queen, and long life to her." [*Cheers.*]

The National Anthem was chanted with excellent effect.

The CHAIRMAN, in proposing the toast of "The Prince and Princess of Wales, and the rest of the Royal Family", said the toast he then had to submit was one which would be cordially accepted. If there

were two persons in this kingdom who were able to judge of the qualifications of the medical profession, those two were the Prince and Princess of Wales. [*Hear, hear.*] Both their Royal Highnesses had had great reason to feel thankful that there was in this country a medical profession, possessing members capable of exercising its most delicate functions with the highest judgment and skill. [*Cheers.*] Both the Prince and Princess had suffered from attacks of most serious illness, and both were ever ready and willing to give the meed of praise to the work of the profession which was its due. All would hope the day to be long distant before His Royal Highness the Prince of Wales would be called upon to wear the crown of England; but the members of the profession knew that, when the Prince attained to his birthright, he would not be slow to recognise the claims of the profession, so far as it was in his power to do so. [*Cheers.*] With regard to the other members of the Royal Family, they too always recognised the status of the profession; and therefore, whenever there was an assembly of medical men such as that before him, they would accept the toast in the most loyal manner. [*Cheers.*]

The toast having been drunk with all honours, a selection was given from *H.M.S. Pinafore*, and was encored.

The CHAIRMAN, in proposing "The Army, Navy, and Reserve Forces", said he must ask the company on this occasion to permit him to depart somewhat from the usual manner in which the toast was put. All were medical men there that night—even to the very able and efficient body of *artistes* who by their harmony were contributing to the pleasure of the assemblage; they were medical men who had taken a new position in order to assist in the work of welcoming Surgeon-Major Reynolds. [*Cheers.*] There was no fighting officer amongst them in that assembly—no "combatant". He begged pardon; he forgot that there was one fighting medical man there—Surgeon-Major Reynolds. [*Cheers.*] But, as there was present no fighting man by profession—no commissioned "combatant"—he should not have to call upon any such to return thanks for the services of Her Majesty. This prefatory explanation to the toast was necessary, because he was about to dwell upon some matters connected with the services which might be interesting to the assemblage as members of the profession and as members of the British Medical Association. [*Cheers.*] The men composing the army and navy were of the same *matériel* as those who fought at Cressy, at Agincourt, and at Waterloo. At all British battles, it was to be seen that the soldiers, from first to last, in ancient and in modern days, had the same "stuff" in them; and so it would be, he had no doubt, so long as Great Britain should stand a power in the world. [*Cheers.*] But a great change had come over war. The Army Medical Department was a thing of modern growth. The Greeks and Romans knew nothing of an Army Medical Department, and it was only at the capture of Badajoz, he believed, in 1812, that the services of the medical profession were first mentioned by a commanding officer. These services were first mentioned by Wellington in his despatches on the capture of that fortress, and from that time the services rendered by the profession in the army and navy have been generally and gratefully recognised. [*Cheers.*] Another step was taken in the recognition given by the State to the profession when the war in Ashantee was undertaken. At that time, a wise commander thought fit to have at his right hand to advise him a well-organised medical staff; and the result was a war in which the loss on our side was almost *nil*. In fact, it was an almost bloodless war and free from disease; and this result was achieved because the army medical officers' advice was asked and followed. [*Cheers.*] The same general who had command in the Ashantee war, and took this wise course, had to go to Cyprus. He had to go in time of peace, and did not deem it necessary to consult to the same extent with medical officers as to the courses which should be adopted for the prevention of disease. We saw the result of this neglect in the great sickness and mortality which followed the visit of our unacclimatised troops to Cyprus. From this result it was to be hoped that the heads of departments would learn the lesson that it was always necessary for a general to consult with medical men, and to have always at his right hand a skilled medical officer, capable of giving advice upon points which it was requisite for the "combatant" staff of a commander to know. [*Cheers.*] Now, if a general took into his confidence a skilled medical officer, his army would have fewer dangers to encounter, and was a greater force than it would otherwise be; but, if the general neglected to take this precaution, his troops would suffer more losses from disease than the enemy could inflict upon them. [*Cheers.*] Then, with respect to the distinction drawn between "combatant" and "non-combatant", this title, as applied to the army medical officers, was an entire misnomer. [*Cheers.*] Was Surgeon-Major Reynolds a "non-combatant" at Rorke's Drift? [*Cheers.*] Was Surgeon-Major Shepherd a "non-combatant" when he descended from his horse to assist and defend the drummer-boy, and lost his life in consequence of his heroic action? [*Cheers.*] Were those other army surgeons, who laid down their lives side by side with their "combatant" comrades, to be classed as "non-combatants" only? [*Cheers.*] Then, if we turned our eyes to Afghanistan, we might ask if Kelly—[*cheers*]—when he fell, by the side of the noble Cavagnari, was a "non-combatant"? [*Cheers.*] Was Townsend a "non-combatant" when he was wounded in the face? And were those numerous army medical officers who fell from disease in form of cholera and fever merely "non-combatants"? [*Cheers.*] They did not spare themselves under the plea of their being "non-combatants"; the enemy did not spare them; nor did disease spare them. And, when we considered the great mortality which attacked the army medical officers, when we looked at the deeds they performed, we could only come to the conclusion that in name only were the army medical officers "non-combatants", but that in effect they were as much combatants as any others, and very often more so. [*Cheers.*] Then, too, the army medical officer, besides being subject to the same dangers which surrounded "combatant" officers, had to go out and fight a hidden enemy, an enemy who gave no quarter, who was ever on the alert. [*Hear, hear.*] The army medical officer had to take care that his troops were not attacked by cholera, by fever, by plague, which were ever in the rear of an advancing army, and always in the camps of a defeated one. [*Hear.*] Was it right, then, or fair, or just, that men who carried their lives in their hands in this way should be classed as "non-combatants"? They should not. [*Cheers.*] They should have their well-won honours at once, when the battle was over and the deeds had been proved, instead of having to wait until public opinion, as in the case of Surgeon-Major Reynolds, demanded that fitting rewards should be given to honour brave deeds. [*Cheers.*] The army medical officer would in future have to be asked his opinion; for no general should be allowed to risk the decimation of his army by fever and cholera and plague; and, as this enlarged responsibility would be thrown upon the army medical officer, and increased importance given to his special functions, it was absolutely necessary that the right of the profession to fitting rewards and honours should be cordially recognised by the powers that be. [*Cheers.*] Had that been the case in the past? ["*No.*"] This answer to his question was true; for there had not been that recognition which was the right of the army medical officer after arduous service, although the Victoria Cross—an honour only won by personal bravery of an exceptional character—had been won by and conferred upon a considerable number of army medical officers besides their friend and brother professional in whose honour that assemblage had met. [*Cheers.*] There were, in fact, many of those Victoria Cross wearers present on that occasion—[*cheers*]—and therefore it was proved beyond all doubt, by those who had died, by those who had received wounds, and by those who had won, by acts of personal bravery, the Victoria Cross, that the so-called "non-combatant" medical officers in Her Majesty's services were as willing and ready to lay down their lives as the "combatant" officers, at the call of duty to their country. [*Cheers.*] Having thus protested against the term "non-combatant" being applied to the army medical officers, especially when the application of the term had the effect of dissociating them from the honours due to them as officers in the army, he had no doubt the company would agree with him that the sooner the distinctions now drawn between "combatants" and "non-combatants", so far as they applied to the medical officers, were abolished, the better it would be for the services and for the medical profession. [*Cheers.*] He thought that he should on this occasion have had to congratulate the profession upon the publication of the new Warrant on the Army Medical Service. So long ago as eighteen months, it was considered apparent that such a Warrant would be forthcoming. Its publication at that time—a year and a half ago—was looked upon as certain; but it was withheld, and it was only lately that some of the points affecting the Army Medical Service had come to the knowledge of those interested in the questions. Thanks to the repeated representations and untiring efforts of the Parliamentary Bills Committee of the British Medical Association, and to the energetic chairman of that committee, the editor of the Association's organ the BRITISH MEDICAL JOURNAL, Mr. Ernest Hart—[*Cheers*]—many improvements would be found in that Warrant to the advantage of the present and future army medical officers. [*Cheers.*] It was known now that the new Warrant would abolish the short-time service introduced by Lord Cardwell—a measure which had tended, as much as anything, to disgust the profession with the service of arms. [*Hear, hear.*] This short-time service compelled an army medical officer, after ten years' service with the colours, to seek another sphere of action, as if a medical man, after giving ten years of his life to one service, could swiftly fall into another course. [*Hear.*] How hard such a regulation would appear if applied to any other profession, and what a cry of injustice would have been raised if it had been ap-

plied; yet it was actually carried out in spite of the opposition of our Association. [*Hear.*] Well, now that was abolished. [*Cheers.*] It had been proposed to abolish the open competition to candidates at entrance; and the reason was that, the service being unpopular, there were no candidates capable of passing an open competition. [*Hear.*] Moreover, it was proposed, with this measure, by the War Office, to revive the nomination system, and these two actions together would have tended very greatly to have lowered the standard of professional education of the army medical officers, as, in the majority of cases, nepotism would have come into play; the candidates nominated under this system would mostly have been quite unknown to those who nominated them. [*Hear, hear.*] This attempt on the part of the War Office to get restored nominations to appointments, without entrance examinations, in the Army Medical Department, was supported by a spokesman of one or two of the medical schools. [*Hear, hear.*] The schools had this reason for supporting the proposal: they thought that some of the nominations would fall into their own hands, and would add to their position, which led to their being caught with the sop thus thrown out to them. [*Hear, hear.*] Fortunately for the service and the profession, the medical schools had not obtained that privilege. [*Cheers.*] The abolition of open competition on entrance had not been secured in new Warrant, and open competition would remain, to the continued advantage of the profession and the service, the status of both would be maintained by the position, and to the advantage of medical education. [*Cheers.*] Then, with regard to the Medical School at Netley, there was a strong attempt made by the War Office Committee to put down this school, and there was no greater matter for congratulation than the fact that this medical school would be continued, the new Warrant having conceded this; and he would add that nothing had more tended to raise the status of the profession in the army than the course of education at Netley. [*Cheers.*] All would acknowledge that the Medical School at Netley had had this effect; and the reason was that there had been there, not only the instruction in medicine, but in the prevention of disease, a teaching which had been raised to the status of a science by the late Dr. Parkes, whose successor, Professor De Chaumont, the company would gladly welcome there that evening. [*Cheers.*] All that the Warrant would contain, of course, he could not say; but he could say that it should give back to the army medical officers that forage allowance which was granted by Sidney Herbert, when Minister of War, the withdrawal of which grant was a distinct breach of faith, if not a breach of contract. [*Cheers.*] And it was to be hoped that, when the Warrant came out, it would be seen that this forage allowance was restored. [*Hear, hear.*] Then he understood that there would be a considerable increase of pay, and better rates than hitherto for those who retired from the service. These points were, however, of secondary importance, as compared with the right which the active army medical officer had to consideration in the distribution of honours for distinguished conduct. [*Cheers.*] How was it that any medical officer, who had double risks to those of "combatant" officers of laying down their lives—whose work was not bounded by any safeguards at all—never attained to honours such as those which fell to the share of successful generals? [*Hear.*] Some successful generals reached the House of Lords; but when was such an honour given to a surgeon-general, whose watchful care, perhaps, had saved an army from disease, and maintained its health so as to enable it to be a conquering power? [*Cheers.*] The profession, he thought, were entitled to an equal distribution of honours for eminent services; the members of the medical service, on duty in the field, should share in the honours awarded with the fighting men. [*Cheers.*] The toast was "The Army, Navy, and Reserve Forces", and, as he had already said, the only representatives of the services present were those members of a profession who were always ready to fight against disease. [*Cheers.*] He called upon Surgeon-General Longmore, C.B., to respond for the Army, and Dr. Dickson, R.N., for the Navy. [*Cheers.*]

A part song, "St. George and Merrie England", was sung by Dr. LAVIES and his colleagues with great applause.

Surgeon-General LONGMORE, C.B., who was received with loud cheers, said he understood from the remarks of the President of Council that he was expected to return thanks for the Army Medical Department rather than for the Army. On behalf of the Service, he could only thank that large and influential company for the manner in which they had received the toast so ably proposed by the eloquent chairman. [*Cheers.*] He (Surgeon-General Longmore) had been informed, since he had entered the room, that, in a communication which the Director-General of the Army Medical Department, Sir William Muir, had made to the chairman in answer to an invitation to be present, he had said that the Director-General "would be represented by Surgeon-General Longmore". He had not, however, been informed beforehand from head-quarters that he was to have that honour; but he accepted it with the greatest pleasure. [*Cheers.*] The Director-General, he knew, was not in a state of health which admitted of his attending an assembly such as that, or he would have been present to do honour to one of the members of his own department who had so distinguished himself in Zululand. [*Cheers.*] The President of the Council, in proposing this toast, had alluded to the coming warrant, and in remarking upon that the speaker could say that the department knew that the warrant was a settled matter, only awaiting the final signature. [*Loud cheers.*] The staff of the Army Medical Department knew that the warrant would confer great advantages and great improvements in the positions of the officers of the Army Medical Department; and with regard to the particular point which the President of the Council spoke of as uncertain—the question of allowance for forage—their minds might be at rest upon this point, for he personally knew that it was settled, and that the forage allowance formerly given would be restored, the same allowance being made which a former warrant allowed; in that a surgeon-major who kept a horse would have the means afforded of keeping that horse in the service. [*Cheers.*] In speaking of the "advantages" and "improvements" in the service to be given by the forthcoming warrant, he was not speaking of any advantages or improvements which he himself would receive, for he had retired from active service, but of those which would accrue to those in the service as well as to those who would come after. It would be unjust if he were not to state for general information that for a very long period past, the Director-General had worked with immense energy, suffering now greatly from the anxiety and strain to which he had been exposed—[*hear*]—in the work of obtaining for the officers of the Army Medical Department those advantages which he hoped would very shortly be in the possession of the service. [*Cheers.*] Enormous credit was due to the Director-General, Sir William Muir, for his services in this matter. [*Loud cheers.*] There was no doubt about that—[*cheers*]—and it would be unjust if the service were not acknowledged, for, though the action of the Director-General, as one officer, might seem a small matter, no one could tell, unless the details were entered into, the great number of changes necessary to be effected if one change were made; and it would only be by a narrative of these details—now unnecessary to be given—that anyone outside the official circle could judge of the great perseverance and persistence necessary in a chief of a department to obtain particular advantages for the officers of his branch. [*Cheers.*] While he said this much in respect to the appreciation they would all have for the services of Sir William Muir, he would add that he was sure that all the officers of the Army Medical Department would be glad to acknowledge the great exertions made on their behalf by the British Medical Association. [*Cheers.*] When the officers of the Army Medical Department possessed the advantages in store for them in the forthcoming warrant, they would not be lacking in gratitude to the British Medical Association for the great weight of its powerful support in obtaining these advantages for the army medical officers of the present and future. [*Cheers.*] He knew, too, that in speaking of the services of the British Medical Association as a body, it would be ungrateful not to specially acknowledge the services of the chairman of the Parliamentary Bills Committee, Mr. Ernest Hart—[*cheers*]—also the editor of the JOURNAL, whom he was glad to see present that evening. [*Cheers.*] Before finally thanking the company for the manner in which they had received the toast of the Army Medical Department, he begged, as an old officer of that Department, to thank them for assembling there in such numbers to do honour to one member of that Department to which he himself had the honour of belonging for very many years. [*Cheers.*] He thanked them both for the way in which they had received the toast, and for being present to do honour to one of his colleagues in the Department. [*Cheers.*]

Dr. DICKSON, R.N., on behalf of the Navy, said the honour of returning thanks for the service which he had now left for many years had unexpectedly devolved upon him, and his regret was that it had not fallen into the hands of one able to do justice to it. He served many years in the Royal Navy, but he had been many years disassociated from it, and therefore could not speak with an equal authority respecting the Naval Medical Service with that which the gallant officer who had last spoken had addressed them upon the sister service. He trusted that improvements and advantages in the position of the naval medical officers would follow in the wake of those granted to their military brethren. [*Cheers.*] The naval medical officers had many of them devoted their observations on board ship to preventive medicine, and had been instrumental in affording valuable information on the subject of diseases which generally come under attention on board-ship. He thanked most warmly the British Medical Association for the wise and the consistent manner in which it had advocated the rights of the profession in the army and navy, and the assemblage for the manner in which the toast of the Navy had been received.

The company were again entertained by the amateur crew of H.M.S.

Pinafore; and loud cheers followed the spirited performance of some songs.

The CHAIRMAN, on rising to propose the toast of the evening, was greeted with warm cheers. He said: I now propose the name of the gentleman in whose honour we have assembled here to-night, our guest Surgeon-Major Reynolds, Victoria Cross. (The company at once accepted the toast by giving rounds of cheers, which were again and again renewed.) The cheering with which our guest's name has been greeted places the final seal of approval upon the act of the British Medical Association, and is a grand repetition of the applause which was given at the meeting in Cork. [*Cheers.*] These cheers are the counterpart of the expressions which I heard when I announced to the general meeting, in Queen's College at Cork, that the Committee of Council had resolved to confer the gold medal of the Association upon our distinguished professional colleague, Surgeon-Major Reynolds, whose conduct in Zululand, under the most trying circumstances, had aroused the warmest feelings of his countrymen. When, in order that all the actions of the Committee of Council should be in accordance with the laws of the Association, Dr. Sieveking drew attention to the terms under which the medal was granted—those terms requiring that the recipient of the medal should be present to receive it—he suggested that the distinguished officer to whom it was voted by his professional brethren should be invited by the Association, on his return from active service, to a dinner in London. [*Cheers.*] Hence this distinguished assemblage which I have now the honour of addressing; and this great meeting of the members of the profession assembled here to give a welcome to Surgeon-Major Reynolds will give an answer to any, if any there be, who thought we were stepping out of our sphere in undertaking, as a medical association, as a duty, the recognition of the services of a medical officer on the field of battle. [*Cheers.*] This answer, too, is not only given by those present, but by hundreds who are absent. [*Cheers.*] I hold in my hand at least a hundred letters from the most eminent members of the profession who are unable, from circumstances over which they have had no control, to be present; and at the office of the Association in the Strand are upwards of three hundred others from members expressing a like regret. I have a letter from Sir William Muir, the Director-General of the Army Medical Department, in which, after expressing regret that he cannot be present, he says distinctly that the Department will be ably represented by Professor Longmore. The chief of the Naval Medical Department, Sir A. Armstrong, expresses regret that he cannot be present. Sir William Jenner, who came in for a short time this evening, to shake our distinguished guest by the hand—[*cheers*]—expressed his regret that important duties prevented him from staying. Dr. Paget, Sir George Burrows, and other eminent physicians and surgeons are amongst shose who have written, and they all speak in the highest terms of our guest of to-night, and give him cordial welcome home and to our Association. [*Cheers.*] Therefore, it is unnecessary for me to offer any excuse or apology for inviting Surgeon-Major Reynolds here in the name of our profession, and in the name of his professional brethren. [*Cheers.*] Now, in proposing the toast of Surgeon-Major Reynolds, I am not going to bespatter him with a great amount of praise, or to lead it to be inferred that he has achieved that which few other professional men would have done under similar circumstances. [*Cheers.*] I am not going into ecstasies of "hero-worship"; nor shall I hold him forth as an example of doing what other men would not have done. [*Cheers.*] I take it, knowing something of my professional brethren's feelings and actions, that in our ranks there are many who, placed in the same circumstances, would have done as well as he did. [*Cheers.*] We feel that he did his duty, and did it nobly—[*cheers*]—and when a man does his duty nobly, all classes of Britons are ready to give him his meed of praise. [*Cheers.*] We medical men now offer ours to our professional brother. [*Cheers.*] Our army medical officers have frequently to do their most arduous duty under the most trying circumstances — circumstances which may well try the calmest nerves. [*Hear.*] Their duties, in fact, often fall where the rage of battle was greatest; and we find that medical officers at Ulundi had their horses shot by their sides while attending to the wounded. Assegais, bullets, and cannon-balls take no notice of the official difference drawn between "combatants" and "non-combatants". [*A laugh, and cheers.*] The army medical officers did not shrink from their duties because danger surrounded them, even though shielded by the name of "non-combatants". [*Cheers.*] I need not tell you more, for you know full well Surgeon-Major Reynolds's achievements. [*Cheers.*] I know that you are ready to do all honour to him in recognition of the way in which he did his duty, even though you know that it is not to be supposed that other men in the same position would not have done exactly the same. [*Cheers.*] But great as have been the merits of Surgeon-Major Reynolds in action at Rorke's Drift, it has needed the pressure of public opinion to force those merits upon the attention of the Government; and now he has received, at the hands of Her Majesty's Government, the reward which was eminently his due, for he has been called upon to join that noble band of men who have the distinguished honour of wearing the Victoria Cross. [*Cheers.*] He has, too, received honour at the hands of the Senate of the University of Dublin — for Surgeon-Major Reynolds belongs by birth to the "Green Isle"—[*cheers*]—and now he has joined the small but noble band of medallists of the British Medical Association. [*Loud cheers.*] The foundation of this medal, which is now worn by Surgeon-Major Reynolds, will, I trust, mark an epoch in the history of our Association; and, if anything will bring out the powers of members of our profession under great and difficult circumstances of life, where ready thought and valorous hearts are ready to conquer or die, I trust it will be the knowledge that they have behind them an Association ready to recognise merit wherever it may be found among their ranks, and ready to assist them under the trying circumstances of life in which they may stand. [*Cheers, which were long continued.*]

Surgeon-Major REYNOLDS, V.C., who wore the gold medal of the Association, and was most warmly greeted, said, in response: I thank you most heartily and gratefully for the cordial way in which you have received the toast of my health, and you, Mr. President, I thank for the kind manner in which you spoke of me. In the most ambitious dreams of my life, it never occurred to me in the most remote manner that I should ever attain to the honour of becoming the gold medallist of the great Association, composed of the members of our profession in all parts of the empire. When I heard that, at the meeting in Cork, the Association had voted that this medal should find its way to me, I could scarcely credit it; but when it was corroborated in the newspapers, I grew prouder of myself, for I felt that it was the finest feather in my cap. [*Cheers.*] I trust that, in the future of my life, I may succeed in making myself more worthy of this honour; and I can at least promise that I shall do all in my power to protect the honour of this Association, and that no stain of discredit shall fall upon the career of one of its gold medallists in myself. [*Cheers.*] It is not right that I should take this honour exclusively to myself, and I feel that I can be certain that the Army Medical Department, to which I have the honour to belong, looks upon the distinction I have received from this Association as one of the proudest recognitions which could be paid to the Department. [*Cheers.*] My Director-General, Sir William Muir, said that I might justly feel proud of it; and this being the feeling of my brother officers, I value the honour and distinction the more for bringing honour and distinction upon the service to which I am proud to belong. [*Cheers.*] I thus hold a doubly proud position, not only as a member of this Association and of the profession which it represents in civil life, but as an officer of the Army Medical Department. [*Cheers.*] I am rejoiced that, in some slight way, through me the two branches of the profession have been drawn closer together in respect of affection. [*Cheers.*] I can assure you that the interest which you have taken so frequently of late years in our Army Medical Department has established, if possible, a higher sense of professional self-respect than was ever before held, and has done more than anything else to popularise, among the Army Medical Reserve, that unification scheme so much to be advocated. I look forward to the carrying out of this unification scheme with all my heart. [*Cheers.*] If it comes in any complete form, and is thoroughly carried out, it will bring with it a thorough good spirit, and will give us adequate means of practising our skill, of looking after our own wants and comfort, and of maintaining our independence, the absence of which means has been more or less a grievance. [*Hear, hear.*] Under such a *régime* as is foreshadowed for the Army Medical Department, I can imagine the doctor in the army assuming a higher social grade than he otherwise has held. He would find himself, instead of being a half outsider of a regiment, able to take his position as a real outsider, and able to take the position appertaining to a doctor and a gentleman. [*Cheers.*] In mentioning just now the word "independence", I did not mean, of course, that the army doctor, under the unification scheme, would be independent of discipline, nor did I mean that he should be in any position which would be subversive of discipline; but that his professional position should be an independent one. [*Cheers.*] I fear that I am giving opinions and entering on points which may yet have to be decided, and I prefer to conclude my remarks. I can only do so by thanking you for the great compliment you have paid me in making me to-night your honoured guest, and for the high position you have given me as a gold medallist of the British Medical Association. [*Loud cheers.*]

"St. George and Merrie England" was then sung.

Sir JOSEPH FAYRER, K.C.S.I., who rose amid loud cheers, said that the toast with which he had been intrusted, and which he had now the honour to propose, was one which would require very little preface, for he should enlist all their sympathies when he asked them to do

honour to the British Medical Association. No more fitting occasion could have occurred for the profession to see its value than when it added to the many good things it had done—and they were many—[*cheers*]—by thus conferring its gold medal, and so stamping with its approval the actions of its distinguished guest of that evening. [*Cheers.*] Amongst the many signs of progress to be seen in connection with the profession, nothing was more remarkable than the fact of the position achieved by this Association, which now numbered upwards of eight thousand members, and was increasing at the rate of four or five hundred yearly. This progress of the Association in numbers and strength marked the spirit of union, which was as certain a sign of strength as its absence was a positive sign of weakness. It was an union which, he thought, promised much for the future. [*Cheers.*] He would, however, not detain them by enumerating all that the British Medical Association had done; but he would take the opportunity of referring to one or two things to which it had lent the weight of its great influence. [*Hear, hear.*] Its influence had been powerfully lent to the improvement and advancement of medical education, and it had insisted, with great practical effect, upon the need of tests being given before persons were admitted to discharge the duties of medical men. [*Cheers.*] Then, on matters connected with legislation, it had greatly influenced the power of the legislature to the advantage and honour of the medical profession, and the moral and physical advancement of the people. [*Cheers.*] But where an assembly had met to do honour to one of their profession, it would not be well of the one who was called upon to toast the hosts of the evening to omit to thank them for the unwearied attention they, in association, had paid, and the efforts they had made to obtain just recognition for the military and naval medical officers; and it was due to the Association to say that the great sum of those advantages which had already been conceded, as well as those with which it was hoped they would be followed, were due to the influence of the body whom he had now the honour of addressing. [*Cheers.*] This was a small portion of the work which the Association had done; and he particularly wished to refer to the influence exercised by the BRITISH MEDICAL JOURNAL, the organ of the Association, which, with a circulation of upwards of nine thousand a week, held a peculiarly fitting position as a medium of communication between, not only the profession in England, Scotland, and Ireland, but throughout the whole world. [*Cheers.*] The Association was founded, about forty-seven years ago, by Sir Charles Hastings; and if the founder could return and see the result of his former labours, he would be delighted to see how the little seed he had planted had grown to a great and stately tree. [*Cheers.*] Sir Joseph concluded by giving the toast of "The British Medical Association", coupling with it the name of the President of the Council, Dr. Alfred Carpenter.

The toast was honoured with musical accompaniment, and the choir gave "Come, if you dare", by Purcell.

The PRESIDENT of the COUNCIL, in responding to the toast, said that the Committee of Council, when arranging for this meeting, through their Subcommittee, had desired to abstract all personalities from it, except so far as they referred to their distinguished guest. He, therefore, had endeavoured to avoid all kinds of personal compliment; and the programme showed the same absence. He now rose to acknowledge this toast, not in his personal capacity, but from the fact of his holding the position of President of the Council. He never rose to return thanks for this toast without wishing it was replied to by someone more distinguished in the profession than a suburban family doctor. But, after all, there was a certain fitness of things in the position being held by a worker in the ranks, because the Association was of that character that it did not depend upon the personal position or great influence of the President of Council, so much as upon that unity with which, if its members were wise, they would ever be found bound, for they should be as a bundle of sticks in all dealings with political parties. The British Medical Association had striven to make the profession in its conjoint action as a bundle of sticks; and it was in consequence of its action that it had heightened the position of its members and benefited the interests of the public. It guarded those interests of the public and of the profession which could not be guarded by the venerable institutions in Pall Mall and Lincoln's Inn Fields—[*cheers*]—and it was the taking account of those things which should have been taken account of by the colleges that had brought this Association into its present position. [*Cheers.*] And when its members looked back upon what it had done in Parliament and in legislation, and to what it had done in regard to the medical services in the departments of the State, as well as in other ways, it would be seen that there was a wide scope for the work of such a body. [*Cheers.*] It was, as Sir Joseph had said, more in consequence of the efforts of this Association than in consequence of any other efforts, that the education of the general practitioner had received attention. It was those efforts which brought the General Medical Council into being, and though the general practitioner was excluded from direct representation on that body which had to do with the education of medical practitioners, still it was the determination of the Association to press the subject until the profession was thoroughly and directly represented in that Council. [*Cheers.*] There was one point which the Association had before it, and that was, to procure for medicine, especially preventive medicine, its proper appreciation in the councils of the State; and so long as its members were excluded from the councils of the State, it would be the great principle of this Association to obtain that recognition for which it was the right of this branch of science to look, and without which it was impossible to get the advantage which the public ought to have from the science of prevention. [*Cheers.*] The Association, in its conjoint character, had some amount of political influence, and when that was shown distinctly to the political parties, then would the members of the medical profession obtain those public recognitions to which they were entitled. [*Cheers.*] He could give, from his own experience as a magistrate, many instances of the peculiar position which the profession held. If a medical man gave evidence in a police-court with regard to personal injuries, the magistrates could not give him a fee; but if a veterinary surgeon gave evidence with regard to the ill-treatment of an animal, he was paid his guinea; cattle and property were better cared for than human beings. These facts showed that the profession had not used its political influence, and as a consequence it went to the wall. [*Hear, hear.*] It was one of the objects of the British Medical Association to obtain justice in every way for the members of the profession, and to prevent scandals such as had been frequently seen, from being perpetrated. [*Cheers.*] That there had been scandals they all knew, such cases as that of Dr. Cornelius Fox, who, for simply doing his duty, was dismissed by his Board without aid by the Local Government Board, who thought, evidently, that Dr. Fox might be sacrificed because his profession appeared to be without political influence. [*Hear, hear.*] On one occasion, he (Dr. Carpenter) remembered, when waiting upon Mr. Stansfeld, the then President of the Local Government Board, that that member of the Cabinet scouted the idea of the medical profession having any political influence, and he did not think it necessary to consider their views, an expression of opinion which probably led to nine-tenths of the profession voting, at the then next election, for the Conservatives. [*Cheers.*] Of course, there was no knowing what the new warrant would do; but unless it turned out to be something for which the profession might be very thankful, a great number of the profession at the next election might vote on the other side. [*Cheers.*] He took it that it was the way in which the profession had shown its political inertness, which had influenced even the minds of judges, for the Lord Chief Justice, in his late summing up in a case in which numbers of the profession had appeared, laid down the *dictum* — which he only applied to the medical profession, and to no others—that it was the duty of the medical man not only to think himself right but to be right; that is to say, that a medical man was not only to act to the best of his judgment, but to prove that he had acted with certainty. Now that was a condition of things which should not be placed upon any body of men; for no man, though doing that which he thought was right, could always be convinced that he was so in every particular. [*Cheers.*] He trusted to see the political power of the British Medical Association grow, for its increased numbers would aid it in obtaining all its rights, as well as those honours and privileges to which the members of the profession were fairly entitled. [*Cheers.*] He thanked the members present for their attendance in support of the President of Council in making that noble demonstration, which proved that the members of the Association were ever ready to do honour wherever honour was due—as it was due to the distinguished guest of the evening. [*Cheers.*] There was now an end of the toast list; but still there remained a duty to perform in thanking that kindly body of the profession who had undertaken the task they had so well achieved, of pleasing their professional brethren with their music. [*Cheers.*]

Dr. LANCHESTER, in a few well chosen remarks, proposed the toast of the "Crew of Her Majesty's ship *Pinafore*."

Dr. LAVIES, in responding to the toast, said his professional brethren and himself had considered it a great privilege to assist on that occasion, and they were proud of the opportunity which had been afforded them of showing their admiration for British pluck and their recognition of what he would venture to call professional heroism.

The body of medical amateurs gave another proof of their musical kill, and the party broke up.

THE rank of Knight of the order of the Lion of the Netherlands has been conferred on Professor Virchow of Berlin.

ANTISEPTIC SURGERY.

A LARGELY attended and influential meeting of the South London District of the Metropolitan Counties Branch was held at St. Thomas's Hospital on Wednesday night, for the discussion of the subject of Antiseptic Surgery.

Mr. JOHN WOOD, F.R.S., the President of the Branch, occupied the chair; and, in opening the proceedings, said the subject they were invited to discuss was one which he thought fell especially within the scope of the Metropolitan Counties Branch of the Association, embracing, as it did, all the chief centres of medical and surgical thought in the metropolis. It seemed to him peculiarly appropriate that they should have the united opinions of the different schools upon a subject of such paramount importance as that of antiseptic surgery—a question so momentous that it would be difficult to exaggerate its pressing importance, not only to the profession, but even still more to the public.

Mr. WILLIAM MAC CORMAC addressed the meeting to the following effect:

I suppose that it may be assumed that all surgeons, in some form or other, employ antiseptics; and I think their general employment, which, during the last fifteen years, has become more and more apparent, is very largely due to the attention drawn to the subject by the particular method of employing antiseptics with which the name of Professor Lister is associated. It would be impossible within the limits of a short paper to discuss the different ways in which antiseptics are used in the treatment of wounds. I therefore propose to confine myself to Lister's particular plan of employing antiseptics, including any modifications which act on the same theory and principles. Other methods I would term inexact; the Listerian method is, in contradistinction, an exact method, founded on a special theory, and carried out in all its details in almost precisely the same manner in each case. The theory is simple. Pasteur's beautiful experiments, which, so far as I know, have never been controverted, prove that it is not the air, but something contained in it, which excites decomposition. The active agent concerned is believed to be certain minute vegetable organisms, and their germs, which seem to be all present, which exist in many varieties, and probably act in many different ways, but which are capable of being developed *ad infinitum* wherever they discover suitable nidus. Whether micrococci and bactèria are the essence of disease, or mere agents in producing changes in the animal fluids, which become capable when thus changed of producing poisonous influences upon the organism, need not now be discussed. One great fact is certainly known—that the access of ordinary air to a wound is very generally the cause of inflammatory or putrefactive changes in that wound; while experiment has proved, and clinical experience corroborates the experiment, that air which has been filtered, or overheated, or subjected to the effects of certain germicides, like carbolic acid, is not capable of exciting inflammation or putrefaction in animal tissues, or wound-exudations, and is harmless in its action upon wounds. Both observation and experiment prove, I think, that, in the overwhelming proportion of cases, the disorders included under the comprehensive term of blood-poisoning depend upon putrefying or septic fluids in a wound gaining entrance to the general circulation. In short, that, if wound-putrefaction can be prevented, we may eliminate from the deaths occurring after surgical operation or injury those which are produced by blood-poisoning in its various forms—pyæmia, septicæmia, and erysipelas. That blood-poisoning occurs independently of external wound may be conceded, but this is exceptional; and, as a broad clinical fact, I think it has been established that, in surgical practice, blood-poisoning, arising from altered secretions in the wound, has hitherto been the ever-present dread in the minds of those who are dealing with wounds, whether created by the knife or by accidental violence. This is the main and all-important difference between subcutaneous injury and an open wound. A simple fracture unites easily and quickly, if kept properly adjusted, with scarcely any pain or fever, and almost no risk; whereas a quite similar amount of injury of bone, if associated with external wound, excites fever; there is pain—possibly extensive suppuration and necrosis; the limb may be eventually sacrificed, or, in no small proportion of the cases, the sufferer will lose his life. Now, if it be true that these formidable consequences depend for their origin on putrefaction of the wound-secretions; that putrefaction depends upon the free access to the wound of minute living particles in the atmosphere; and that, further, by a certain methodic use of germicide agents, these putrefactive changes in wounds and their consequences may be absolutely prevented; then the various forms of blood-poisoning may be erased from the list of surgical diseases.

In addition to this, the advocates of the method allege that the duration of treatment in cases of injury or operation is, in the main, curtailed; that safe and painless healing of wounds is promoted, and the general comfort and well-being of the patient increased; that many operations, too dangerous to be performed, except of absolute necessity, may, with the safeguards now at our disposal, be done without risk; that operations of expediency—that is, operations for the removal of deformity, or desirable for other reasons, hitherto unjustifiable on account of the risk, may now be performed with so much safety that they become matters of routine occurrence. It is not denied that, under what may be called the less exact antiseptic methods of treatment, inflammation and putrefaction may be slight or altogether absent; that wounds unite by the first intention, patients recover well, and operations of various kinds prove successful—the human body is capable of resisting evil influences within certain limits; but what is contended is, that this result is not to be counted upon beforehand as a matter of course; while, with the exact antiseptic method, wound-putrefaction and all its consequences can be prevented with a certainty unknown in any other way. That cases of failure have from time to time occurred is undoubted; but those who are convinced of the efficacy of Lister's method believe these failures arise from some imperfection in the manner of using it; some unconscious neglect of those details, the punctilious attention to which is so essential.

Professor Lister's method has, in his own hands, been from time to time variously modified and improved, and has now reached so high a degree of perfection, that it is one generally employed, and has not, I think, been thus far improved upon by others in any essential feature.

It may now be convenient to state what are the materials used, and the manner of using them. If an ordinary operation is to be performed, the adjacent surface, if covered with hair, must be shaved, then thoroughly washed with a five-per-cent. solution of carbolic acid. The actual steps of the operation are conducted in a carbolised atmosphere, produced by a jet of steam mingling with a five-per-cent. solution of the acid. The sponges employed, the hands of the operator and his assistants, are thoroughly purified in a five-per-cent. solution, used again and again, during the operation. The instruments are kept ready for use in a solution of two-and-a-half or three-per-cent., which may be also used for washing the wound and the sponges. All bleeding points must be carefully secured, either by torsion, carbolised gut, or carbolised silk, the ends cut short. Too much time can scarcely be devoted to the complete arrest of hæmorrhage. The sutures should be both deep and superficial; the former of wire, the latter of catgut, and if there be tension, the button-suture is useful—a simple form consisting of leaden plates, through which the wire passes. The entire surface of the wound should, if possible, be brought into apposition. In order that the bloody serum which exudes may easily escape externally, produce no tension, or separate the wound-surfaces, as well as because of its proneness to decompose, drainage-tubes should be inserted. The principle on which these should act is, to carry the secretion from the deeper parts of the wound, or from any irregularity or recess, by the straightest shortest road to the surface; therefore, they should be of sufficiently large calibre. Many short drains, rather than few long ones, should be inserted. They should be removed so soon as their function is at an end—in many cases, at the end of three or four days, and always before they can set up irritation, or act as foreign bodies. Thus used, drainage is of the first importance; it is primary and preventive. The drainage-tubes of Chassaignac served a different purpose—they were intended to provide for the escape of matter already formed, and might be called secondary drains. A sufficient number of tubes having been inserted, the projecting portions are cut off level with the surface, and a layer of protective silk applied to the wound. Over this are placed several layers of carbolised gauze, wrung as dry as possible out of a five-per-cent. solution of carbolic acid, and fastened to the surface with a carbolised bandage—a detail of some importance. Over this again may be applied a layer of salicylic wool; it exercises an elastic equable compression, and fills up any irregularities of the surface, besides forming an aseptic filter at the margins of the dry gauze, which is now applied as an eight-fold layer over all, and secured by a bandage—a piece of mackintosh being interposed between the last layers of the gauze. The dressing should extend two or three, or several hands' breadth, according to circumstances, beyond the extremities of the wound; and in places where there is much body movement, it is convenient to keep the margins of the dressing closely applied to the surface by a turn of an elastic web bandage. Many parts of the body present special difficulties, as the neck or groin. In all cases the first dressing is the most important one; too much time and care cannot be devoted to it, for on its success depends the whole future of the case. At a first dressing, too much carbolic acid cannot well be used, while at subsequent dressings, the less the carbolic acid comes into contact with the wound the better. The ideal wound-dressing, in short, is that which affords perfect rest, free exit for secretions, no tension, and anti-

septic protection. In contused or lacerated wounds, the stage of "cleaning" with the accompanying discharges is reduced by this treatment to a minimum, or does not take place at all. Incised wounds or amputations heal more frequently and readily by first intention, without redness, swelling, or pain; blood-clots, if undisturbed, remain dark coloured and without change, until granulation-tissue enters into and occupies them. Septic suppuration and necrosial cellulitis do not occur. Early union in amputation tends to avert disadvantages which may follow a protracted healing, the retraction of soft parts, or the adhesion of the cicatrix to the bone. Pain, fever, and duration of treatment, are diminished.

A simple plan for the manufacture of carbolic gauze, devised by Professor Bruns, of Tübingen, seems worthy of trial. To prepare one kilogramme of this gauze, four hundred parts of resin and two litres of spirit are required. After completely dissolving, one hundred parts of carbolic acid are added, and eighty of castor-oil, or one hundred of stearine. After soaking, the gauze is hung up to allow the spirit to escape. A few minutes suffice to dry it, and then it is packed in air-tight cases. It can be freshly made with great ease. It contains eight or nine per cent. of carbolic acid, while the ordinary gauze contains six or seven. It is stated to be more pliable, less irritating, and cheaper than the ordinary kind. Bruns has prepared an extract, two litres of which suffice for one hundred *metres* of gauze. It is thus portable and applicable for use in military surgery or in country practice.

Recently Dr. Neuber of Kiel has used drains made of decalcified bone, with these advantages:—that, after having served their temporary purpose, the drains melt away, the dressings do not require to be changed for their removal, and very often it happens that a dressing would not be disturbed except to see after the drainage tubes. They are less likely to irritate than India-rubber tubes, are easily prepared by soaking tubes, prepared from healthy ox or horse bone, in a mixture of one part of hydrochloric acid in two of water, for ten hours, and preserving the tubes for use in ten per cent. carbolic oil, after first washing them in a five-per-cent. carbolic solution. Thus treated, wounds may remain, Dr. Neuber finds, without change of dressing from two to four weeks. In large operations, or those where any bleeding may be expected, Neuber applies a second dressing twenty-four hours after the first. He states that the cases in Kiel recover without pain, fever, or suppuration, and that the wound-surfaces immediately glue together in the greater number of cases.

Recently Professor Maas, chiefly on account of the poisonous effects of carbolic acid, and its volatile properties, has employed a solution of the acetate of alumina, which may be prepared in a strength of 15 per cent. by adding dilute acetic acid to the hydrated alumina. A three per cent. solution arrests the development of bacteria, while four or five per cent. of carbolic acid is required for the purpose. Compresses soaked in a two-and-a-half per cent. solution of the alumina are applied, under a spray of the same strength, and a number of amputations, resections, washings out of the larger joints, treated in this way, succeeded admirably in the Klinik at Freiburg. There was very little secretion from the wounds. As an antiseptic, it is perfectly safe, and the cost is inconsiderable. It can, however, only be used in a moist form.

After a long trial of thymol, I found it too feeble an antiseptic to be safely used in any but quite small operations, or when but little secretion was anticipated, while it possesses no particular advantage over carbol. I place but little reliance upon thymol spray, which is only one part in 2000 of thymol. It gave me the impression that it differed but little from simple steam. The rough, disagreeable condition of the skin of the hands, which first becomes very dirty in appearance, and then peels off, caused by immersion in carbolic solution or spray, may be considerably abated by protecting the surface with carbolic vaseline—one part in 10; but it has the disadvantage of making the grasp slippery.

The employment of Lister's method is not at once or very easily acquired; it requires practice, a capacity and patience for detail. It requires, also, that those concerned in the management of a case shall, without reserve, believe in the germ-theory, or act as if they believed in it. The surgeon in charge of the case must either himself examine into and verify everything belonging to the dressing of that case, or must have some one in whom he can thoroughly trust to do it for him. Less than this will not be putting Lister's method fairly to the test. This is a difficulty in hospital practice, where it is impossible to superintend all the details yourself, and where your house-surgeons or dressers may not be sufficiently impressed with the necessity of a minute attention to details. In this respect the German professors have an advantage over us. In every German hospital there are one chief surgeon, and three assistants who hold office for three years, and who are generally much senior men to our house-surgeons, and the management of the whole surgical practice of the hospital is under the control of one man.

Statistical Results.—When, for the purpose of this discussion, I began to seek for subject-matter in the shape of statistical facts, I experienced some difficulty in obtaining what I wanted. In our own country, the published record consists chiefly of isolated cases, or of groups of a few cases, and of individual impressions; but one important deduction may be arrived at, that, with few exceptions, those who have practised Lister's method find it a good method, and admit in a greater or less degree, the justice of the claims put forth on its behalf. This and not mere statistics, which vary enormously in value, seems to me an important point. I come myself to a conclusion—and others do the same—that a certain method of treatment is the best, because I find my results are better than those I previously had; because cases, about which I should have before had the greatest anxiety, occasion me none; because I can perform operations on which I should not otherwise have ventured, and with a complete confidence beforehand in the result, and because my patients appear to recover more quickly, more easily, more safely. There is another important factor, which is, that the class of cases now submitted to surgical treatment has, to some extent, changed. Operations are now daily and in large numbers practised, which were never, or only rarely, before attempted. With these qualifications, let us examine some statistics. They are only meant as a contribution, and one far from being so complete as I could have wished.

In private practice, the cases are too few to afford means of obtaining a statistical comparison, but (in cases of amputation, or removal of tumours), where I have been able to apply the antiseptic method thoroughly, the result has equalled my most sanguine expectations. I have been able to form a strong impression of the value of this method from seeing wounds heal under it, by immediate union, without a trace of local redness, swelling, or even pain, without suppuration generally, and often without constitutional reaction in the slightest degree. These are isolated cases, but they acquire a legitimate value when, in considering the merits of this question, one may predict beforehand that under such conditions, such result will follow.

With regard to hospital statistics, I shall not be able to place before you perhaps a large array; but I may be able to present some which, so far as they extend, appear not wanting in importance. In the first place, we have had, during the last eighteen months, forty-five operations for the division of various bones in order to remove deformity. This division has been accomplished in some cases with the chisel, and in some with the saw. In the majority—thirty in number—the knee-joint was engaged in the operation; in some, the shafts of the long bones were chiselled through; and in others, a wedge-shaped piece of bone was removed. The wound in the soft parts was comparatively small, yet large enough in many instances to allow serious inflammatory and putrefactive changes to take place in it; yet not only in no single instance, among all these cases, did a serious result of any kind follow, but every one made a complete and speedy recovery, without more inconvenience than is entailed by keeping a limb in plaster-of-Paris splints for simple fracture. The point is, that every one of this considerable series recovered in the speediest, easiest, and safest manner possible; and in every one in which the knee-joint was opened into—some thirty joints—a freely movable articulation resulted.

I may mention one of the cases in illustration—a boy with extreme genu valgum. The left limb I straightened by means of Ogston's division of the condyle. In the right, the deformity was greater, and this operation only succeeded in very partially removing it. I then divided in succession, on the outer side of the limb, the biceps tendon, the ilio-tibial band, and the external lateral ligament. Air freely entered the joint, already filled with blood and bone-dust. I used a great deal of force in my efforts to straighten the limb, but, so great was the previous deformity, without much avail. However, after all this violence done to the greatest articulation in the body, the patient recovered without any ill result, even in the most trifling degree. I subsequently divided the femur just above the condyles, and he now possesses two straight limbs and two good movable knee-joints.

In regard to *compound fractures* our hospital practice is not very extensive; but it has proved, I think, eminently satisfactory. Sixteen cases of compound fracture—the whole number, excluding those complicated with wound of joint, or requiring immediate amputation, or dying immediately—have been treated strictly antiseptically during the last eighteen months. Two of the femur, three of the upper extremity, and eleven of the tibia—all recovered. In one case, the dressings became offensive, and amputation was performed. For some reason, they were daily changed in this case; while now a change is made twice or thrice altogether. In one case of fracture of the femur, union has not yet taken place, without assignable cause for the delay. All the other cases of fracture of the leg recovered almost as if they had been

simple fractures. On examination of the reports for the last six years, Mr. Pitts, who has been good enough to make these inquiries, finds there have been fifty-four cases of compound fracture of the lower extremity not treated antiseptically; from this list, also, have been excluded cases involving injury to the joints, and those requiring immediate amputation. Amongst these fifty-four cases were twelve deaths, four of them being from pyæmia and four from erysipelas. Thus, eight deaths are due to preventable causes. Of the 42 cases that recovered, in one, secondary amputation was performed for gangrene of foot. In 25 cases, recovery took place without any complication or delay. Of the remaining 16 cases, 4 had erysipelas, but recovered after a long illness of from 77 to 211 days; in 3, there was delayed union on account of necrosed bone, recovery taking place after 144, 105, and 209 days respectively. In the remaining 9 cases, there was suppuration and a more protracted recovery than in any of the antiseptic cases. On examination, we find that the antiseptic cases, on an average, remained under treatment in hospital for a period of a little more than half the length of time of the others. Most of the cases which recovered quickly and were not treated antiseptically were cases treated by sealing. The wound was small, and the fracture caused by indirect violence—the wound being occasioned by the sharp end of an oblique fracture coming through the skin. In nearly every instance of compound fracture with much laceration of soft parts—whether treated by sealing the wound, or by covering with oiled lint, or application of wet lint, etc.—recovery has only taken place after a long stay in hospital. Protracted suppuration, necessitating frequent counteropenings, being the rule, the patient not unfrequently was attacked by erysipelas, consequent perhaps, in most cases, on the frequent handling of the wound.

In the last volume of *St. George's Hospital Reports*, Mr. Holmes has published a paper on compound fractures of the leg which has much of interest in it. One-fourth of the cases died which were treated without antiseptics, and one-half of the fatal cases died from pyæmia.

The total number of antiseptic cases of *ovariotomy* performed in the hospital has been nineteen, amongst which seven deaths occurred. The fatal cases were very severe; in one, the bladder was adherent to the abdominal wall and opened into; one operation could not be finished; in one, the base of the uterus had to be cut away; in none, however, the surgical registrar informs me, did death occur from septic poisoning. In the preceding three years, it happened that the same number of cases were operated on—nineteen, and amongst these thirteen proved fatal.

The way in which ordinary cases recover seems much easier under this method. For instance, in an amputation at the hip-joint in a young man, for a large sarcoma of the thigh, the patient recovered without giving a moment's anxiety. There was immediate union of the flaps of this large wound, save where the drains emerged. The deep catgut stitches, inserted to draw the surfaces together, disappeared; the dried-up knots were picked off the surface of the stump after a few days; in a fortnight, the patient was sitting in a chair, quite convalescent.

Three weeks ago, I performed *Syme's amputation* in a feeble lady aged 63, who had suffered for ten years from ankle-disease—*tumor albus*. I first scraped away the granulation-tissue from the sinuses, disinfecting the neighbouring parts beforehand by soaking them in five per cent. solution of carbolic acid. The os calcis was much atrophied; it broke in two during the removal of the foot. I most carefully scraped or dissected away all diseased structures. The patient recovered without an atom of fever, pain, suppuration, or even discomfort. In fact, her well-being improved from the operation-day. The external wound united by first intention, without a trace of local inflammation. Five dressings were made, the last two at intervals of a week. At the end of three weeks, a small superficial granulating surface is to be seen at the point of emergence of the drains, and at one of the larger of the old sinuses; the others have closed. The patient can bear any amount of pressure on the end of the stump. This was an absolutely good result under what appeared to be unfavourable circumstances.

In a case of *movable body in the knee-joint* in a young man, I lately cut down and removed a body, the size of a broad bean, through a corresponding opening in the soft parts, at the same time allowing a considerable quantity of synovial fluid to escape, the result of a preceding attack of acute synovitis. The man was relieved of his loose cartilage and the synovitis at once, without a trace of local or general disturbance. The wound into the joint was quite an inch long, and I was in no hurry to close it on account of some bleeding; yet I had no anxiety about the result. A free incision into the knee-joint without antiseptic precautions cannot be made without causing great anxiety. I have seen a strong, healthy man lose first his limb, and afterwards his life, from acute septic suppuration attacking the joint after such an operation. Larrey collected 135 cases of the direct operation, with thirty deaths, or 22 per cent. The indirect operation is comparatively quite safe, but is attended by a large number of failures. I might cite other cases, but these sufficiently illustrate what I wish to convey.

I thought, too, it would be interesting to collect the experience of *ovariotomy*, performed before and after antiseptic treatment, and as a sort of test-operation. Mr. Spencer Wells has been good enough to tell me that he has operated in eighty-three cases antiseptically, with but six deaths, the last thirty-eight in succession recovering. On one occasion, before the use of antiseptics, he had a run of twenty-seven successful cases, and twice of twenty-one. Of the six cases which died under antiseptic treatment, there was only one case in which there was any doubt as to the asepticity, the others were certainly aseptic. It has been said the practice of ovariotomy has been so successful without antiseptics, that the percentage of improvement proves little. But this is not so. Mr. Wells and others have had runs of unsuccessful cases of seven and nine in number in succession, and the question is, how many of those deaths, nearly all of which were probably septic, might have been averted. Mr. Knowsley Thornton writes, October 23rd, "Antiseptic treatment has exactly reduced my ovariotomy mortality by half, and would have done much more than this had I not lost cases through their coming to me with putrid cysts, the result of tapping without antiseptics. My mortality would have been lower also, had I not considered it a duty to give every case the chance of life afforded by operation, however hopeless it might appear. Since I began ovariotomy, I have only refused two cases, both clearly malignant. Freedom from fever and other discomforts, and more rapid convalescence, are the benefits derived by the patients who recover; immense difference in after anxiety, dressings, etc., for the surgeon." Dr. Keith of Edinburgh writes to me under date of November 9th, that he has had altogether over 305 ovariotomies, which, arranged in fifties, show the following mortality: first fifty, eleven deaths; second fifty, eight deaths; third fifty, eight deaths; fourth fifty, six deaths; fifth fifty, four deaths; sixth fifty, no deaths. The last seventy-six of these cases were done antiseptically, with only two deaths. The last sixty-eight cases in succession all recovered. "I would give something to know", Dr. Keith says, "what the mortality of the last fifty would have been in the old way." To compare the cautery cases: there were fifty-two without antiseptics, and four deaths; these were the worst cases, where, from the shortness or thickness of the pedicle, or other causes, the clamp could not be used. Fifty-five cautery cases done antiseptically showed no death. Professor Nussbaum writes to me, November 11th, 1879, giving his experience of ovariotomy from February 1861 to October 1879. "My first five cases were all fatal; of the first thirty-four, sixteen died; of the first seventy-eight, thirty-five died. Then I employed drainage, and of eighty-four cases treated in this way, thirty-four, or about one-half, died. Up to October 12th, 1879, I operated according to Lister's method in 135 cases, of which twenty-nine died; and in the last nineteen cases there were two deaths. In my whole life, I have operated on 219 cases, with sixty-seven deaths. I have never left a single operation, even in the worst cases, incompleted. These cases usually die in the hands of others, while some cases of this kind recovered in my hands." The general wards in the Munich Clinic, from being rife with pyæmia and gangrene, now never contain a case, either of the one or the other. The mortality is reduced to one-half, and the only cases brought to the *post mortem* "room" are those of death by suicide, severe mechanical injury in old people, cancer, and tubercle. Nussbaum fairly asserts that Professor von Buhl, the pathologist, his assistants, and the students of the hospital, would scarcely become partners in a wilful deception, when he says he now never sees a case of pyæmia.

Professor Esmarch of Kiel writes to me, November 10th, 1879, that "the practice of antiseptics is now so perfected, especially by the introduction of decalcified bone-drains, that most of our large operation-wounds, such as amputation of the thigh, extirpation of the mammæ, with clearing out of the axilla, the extirpation of glandular masses from the neck, heal by the first intention, with a single dressing, without a trace of suppuration or wound-fever. Since antiseptics, our ovariotomies are incomparably better. In the previous year, I lost one case in eight operations, and have once had nine recoveries in succession—most of them very severe cases. My assistants have now very little to do during the visit, but the first dressing takes much time and requires great care." Esmarch, in his Hospital Report for 1878, states that the antiseptic treatment is conducted in Kiel with increasing precision and increasing security. In five hundred and twenty-four operations, large and small kinds, the mortality was in all twenty-five. Of these twenty-five deaths, one was from exhaustion in an habitual drunkard, admitted for gangrene of the leg; two died on the day of admission; one died from pyæmia, after lithotomy; and five cases were in a septic condition on admission; two deaths occurred from cancerous cachexia; three from tubercle; one from delirium tremens; one from pyelo-nephritis; one

hernia case died from peritonitis arising before admission; one died from secondary hæmorrhage after amputation at the shoulder-joint. Three only appear to have died from blood-poisoning arising within the hospital, viz., two after amputation of the breast, and then lithotomy; and one ovariotomy case died from peritonitis. There were four avoidable deaths, therefore, amongst five hundred and twenty-four operation cases of all kinds. Amongst the operations were forty amputations, twenty-seven resections of capital importance, eighty-four cases of removal of tumours, and thirty-five operations for necrosis.

In 1871, Volkmann's clinic was so full, and the deaths from pyæmia and erysipelas so numerous, that he was on the point of closing it altogether. Some time after this, the antiseptic method was introduced. Volkmann states that the mortality from excision of the knee by German surgeons was not less than half the number of cases operated on before the employment of antiseptics. During the last three years, he has excised twenty-one knees, with a single fatal result from tuberculous meningitis, three weeks after operation. Two recovered after subsequent amputation. Recovery took place in the other cases very like that after simple osteotomy, generally with primary union, while formerly the process of healing took months to complete. Before the use of antiseptics, Volkmann lost twelve out of sixteen compound fractures. He has since published, in the *Proceedings of the Sixth Congress of German Surgeons*, a list of the cases treated antiseptically in the Klinik at Hallé during three years. Amongst these, but extending over a period of four and a half years, are seventy-five cases of compound fracture treated conservatively, including forty-two of the leg, six of the arm, five of the elbow, and seventeen of the forearm; all recovered *quoad vitam*. Eight required secondary amputation, from which they too recovered: four in the thigh, one in the leg, two in the arm, one in the forearm. In the whole period of three years, there were one hundred and eighty-three amputations or disarticulations in one hundred and seventy-two persons, with twenty-three deaths; but, on analysing these cases, we find that in one hundred and thirty-nine uncomplicated cases of amputation or disarticulation, there were but four deaths: two in four hours after operation, and one in twenty-four hours. There were, amongst these, forty-two amputations of the thigh, with but one death, and that with severe injury of the buttock; it took place within twenty-four hours. There were twenty-five amputations of the leg, with one death from habitual erysipelas. There were, besides, cases classed as complicated; viz., nine cases of double amputation, with two deaths; both thighs being amputated in each of the fatal cases. Fifteen cases were admitted in a septic condition, with eight deaths. In three other fatal cases, the wound was aseptic; one of these died from delirium tremens, one from pneumonia, and one from puerperal pyæmia. Fifty osteotomies, besides nine resections for false joint, took place, with one death occurring from hæmophilia within twenty-four hours. Among the osteotomies were ten cuneiform resections of the femur, and ten of the tibia.

I understand Professor Volkmann is soon about to publish another report, and Professor Esmarch says his triennial statement will show even better results than those I have quoted.

Professor Socin of Bale (Langenbeck's *Archiv für Klin. Chirurgie*, vol. xxiv) has performed the radical cure of hernia in seventeen cases. All were with antiseptic precautions and successful. Ten were inguinal, seven crural. The neck of the hernial sac was isolated and divided, after tying it with catgut as high up as possible, usually sewing together the pillars of the ring, the sac being afterwards removed. In some cases, the excision of a circular strip of sac proves sufficient. In no case was there any serious symptom, and so far not the slightest reappearance of the hernia, although, in some, a year or sixteen months had elapsed. In three of the inguinal operations, there was previous strangulation; all the femoral herniæ were strangulated. I have myself performed a similar operation. The result was quite successful; but whether the cure be really radical a longer interval of time will show. In every case of strangulated hernia, such an operation as this would seem indicated, or in cases of irreducible hernia, or those which cannot be kept up with a truss, or in young persons, the operation is likely to be more successful in femoral than in inguinal, for in this the spermatic cord prevents the complete closure of the channel.

No more remarkable results have been published than those that have followed the treatment of gunshot wounds. Kraske, in Langenbeck's *Archiv*, vol. xxiv, 2nd part, gives the results of twenty-three gunshot wounds, treated in Hallé. Five, of the soft parts, speedily healed. Two others, also, which involved the ligature of the femoral artery; and two cases of gunshot fracture of the humerus, recovered. Four gunshot fractures of the knee recovered, three having a movable joint—one a most remarkable case. Of three perforating gunshot fractures of the skull, two recovered and one died. Six penetrating gunshot wounds of the thorax all recovered. An abdominal gunshot wound, injuring the liver, kidney, and pleura, proved fatal. These results were achieved by primary disinfection of the wound, with enlargement of one or both openings, sufficient drainage, and complete antisepsis; in the thorax cases by antiseptic occlusion.

Some remarkable observations made during the late Russo-Turkish war, in the army of the Caucasus, are published by Dr. Carl Reyher, Consulting Surgeon to that division of the Russian army, in Volkmann's *Sammlung Klinischer Vorträge*. He found it absolutely necessary, in order to obtain antiseptic results, to place the wounded under treatment immediately after injury; and that it made but little difference whether the antiseptic treatment was adopted at a subsequent period, or the wound not treated antiseptically at all. From an elaborate number of tables which he publishes, I can only make a few selections. The following are two illustrative cases.

A man shot through the internal condyle of the femur, on October 3rd, on the heights of Awlijar, sustained a fracture with effusion of blood into the knee-joint. The ball was lodged in the condyle. Complete recovery with a movable joint took place under antiseptic treatment from the first. Five dressings were made. The patient was thrice transported distances of 15, 40, and 210 *kilomètres*. A second case was that of a man wounded before Kars. The patella was comminuted, and the ball felt with the finger introduced into the joint, lodged in the tibial joint-surface. A much deformed Martini-Henry ball was extracted; the wound was washed out with 5 per cent. carbolic acid solution, and a large drain introduced. The wound remained aseptic throughout. Only once there occurred a slight rise of temperature, otherwise the temperature was normal. Complete recovery took place with a movable joint. This patient was also transported long distances—20, 40, and 210 *kilomètres*. Of wounds of the larger joints there were 124 cases; 46 were treated antiseptically from the beginning, with 6 deaths, or 13 per cent.; in 78, the antiseptic treatment was secondary; 48 died, or 61.5 per cent. Of 62 joint-injuries treated without antiseptics, 48 died, or 77.4 per cent. Of 19 cases of primary antiseptic resection, 17 recovered and 2 died, one from tetanus, the other from septic abscess. Of 22 fractures treated antiseptically, 4 died, or 18.1 per cent. Of 65 not so treated, 23 died, or 35.3 per cent. Of 81 antiseptic cases of gun-shot injuries, including resections, amputations, fractures, and joint-injuries, 5 only died of pyæmia and septic abscess, or 6.1 per cent. Of 143 similar injuries to the bone not so treated, 46, or 32 per cent., died of pyæmia and septic abscess—five times as many; and a similar proportionate amount of pyæmia and septic abscess occurred in wounds of soft parts treated in the two ways. Of 18 primary antiseptic cases of gun-shot wound of the knee, in 15 cases the limb was preserved with a movable joint, and none required amputation; whereas 60 per cent. of the cases of injuries of this joint treated in the ordinary way, or by secondary antiseptics, required amputation, and 84.5 per cent. of the persons amputated, died.

	Primary Antiseptic.	Secondary or Non-antiseptic.
Cases	18	63
Deaths	3	52
Mortality per cent.	16.6	83.1
Limb preserved	15	3
Mobility preserved	15	1
Without movement	0	2

Antiseptic dressings have been employed in burns with the effect of limiting the destruction of tissue to that actually involved in the injury, diminishing the pain and fever, reducing the amount of suppuration to a minimum, the cicatrix afterwards formed being unusually smooth and stretchable. I cannot now allude to the more extended employment of laparotomy in abdominal diseases in the hands of Czerny, Billroth, and others, nor the striking results of Professor Estlander of Helsingfors, in the treatment of head injuries, as related in the *Nordiskt Mediciniskt Archiv*, 1879, and other admirable results of Professor Rossander of Stockholm, in cataract operations under carbolic spray.

Conclusion.—It is open to us to believe, without being accused of prejudice, that Lister's method has shown itself to be, up to the present time, the best available antiseptic method; that it prevents more perfectly than any other method that chief danger of wounds, putrefaction, and the diseases which arise from it.

In a brilliant and eloquent address, to which I had the privilege and great pleasure of listening, Mr. Savory denies that Lister's method is better than other methods, asserts that it delays the healing of wounds, and that it fails in a certain number of cases. From my own experience, I believe it to be better; and I have made an effort to show that the results are superior, but it is no easy task to traverse the positions of the persuasive orator of the last meeting of our Association. It is true the method has failed, but it is fair matter for argument whether the failure be due to the weakness of the method or the faulty manner

of its application. The protracted employment of carbolic acid will interfere with the cicatrisation of a granulating surface; but when the surface is granulating is just the period in the history of a wound when, as a rule, a strict antiseptic occlusion may be safely dispensed with. That operations have been done with the aid of Lister's method which, in Mr. Savory's opinion, had better have been left undone, is a high compliment paid to that method at the expense of the surgical discretion of the operator. The wound is shut up from view, no doubt, but in a manner which secures it complete and desirable rest, while it may be inspected with ease and safety at any time, if for any reason this be required.

Those who adopt this method do so, I suppose, because they find it produces for them the best results. They have been accused of losing sight of the principles of wound-treatment in the pursuit of frivolous details; whereas the carrying out of this method is pervaded by the presence of a great principle, the prevention of wound-putrefaction and its consequences, and this it is which animates details otherwise repulsive and meaningless. I should like to put these questions. What is the cause of wound-putrefaction and wound-diseases? Are the results of Lister's method obtainable by other methods? or, in other words, is Lister's method superior to other methods?

In conclusion, I wish to say that I recognise in the fullest manner that the care and dressing of a wound is but one part of a surgeon's duty; that he has many other important functions which to neglect is to invite failure. In this paper, I have only considered what are the means best calculated to obtain that surgical cleanliness which is the equivalent of surgical safety; and I have tried to show cause for believing that this is only to be achieved when the wound—be it large or small—is maintained throughout free from decomposition, and especially is so maintained during the earlier periods of its existence, when it is suffering from the depressing effects of the recently inflicted injury; its surface prone to decompose from the violence inflicted on it, and the vital reaction which produces a protecting shield of living cells able, to a certain extent, to resist noxious influences from without still incomplete. Surgical safety, and all the great consequences which follow from it, is the claim which is put forth for Lister's method of dressing wounds. Is there any other method, even that with the "simplest, safest, best of antiseptics", clean water, which will permit the surgeon to view a mass of dead blood lying in an open wound being transformed day by day before his eyes into living tissue? I do not mean the blood is vivified, but amœboid cells invade it, eat it up, as it were, and flourish in its stead. If this be true, and I suppose its truth will not be denied; if the great joints may be opened with absolute impunity by the surgeon's knife; if such formerly fatal injuries as gunshot-wounds of the knee may be saved amidst the difficulties of an army in the field; if ovariotomy be made more successful in the hands of experts, who operate on such cases by hundreds, and what is, to my thinking, more important, the operation is rendered safer and more successful in the hands of other surgeons; if, in injuries to the head, in ordinary amputations and excisions, and operations of various kinds, in compound fracture, the risk to life be not only diminished, but the recovery of the patient is marked by a minimum of fever, pain, and suppuration, then a gain has been accomplished for surgery which it is scarcely possible to characterise; and I do not know which to admire the more—the scientific mind which has grasped a great principle and applied it, or the character of the man who has unswervingly pursued the object of his life, patiently perfecting one by one the means adapted to procure the end in view. To John Hunter we owe our idea of the harmlessness of subcutaneous injuries and all the great advantages to surgery that are derived from the application of this knowledge; and if in time our ordinary surgery shall become as safe as subcutaneous surgery, this we shall owe to Lister.

Mr. Bryant said they were all very much indebted to Professor Lister for his untiring and able advocacy of the antiseptic treatment, and for being taught the importance of attending to matters which previously they were disposed, perhaps, to regard as trivial; and they must feel that it was due to him in a very great measure that great improvement in surgery had taken place. But admitting that great improvement in surgery had been gradually going on during the last twenty-five years, still the fact must be recognised that that improvement was found and seen in hospitals and wards where antiseptic surgery as illustrated by Lister was not practised. He would ask whether there was any other form of surgery—any other form of dressing a wound than that adopted by Lister—that could possibly be brought under the term antiseptic surgery. He claimed to be an antiseptic surgeon; but he considered that any surgery based on theories to neutralise the results of putrefaction must be looked upon as antiseptic. From a paper published in the British Medical Journal last week, he was inclined to think that the followers of Lister were disposed to look with favour upon another avenue leading to the same goal; that there were other modes of development and practice of what they might reasonably call antiseptic surgery. The speaker then referred to the abstract of cases compiled by Mr. Watson Cheyne which appeared in last week's Journal, and submitted that, whilst there was a paper brought before them as a crucial test of the value of antiseptic surgery, yet they might get equally good cases out of the ordinary book of the hospital surgeon.

Mr. Macnamara said that it seemed to him that they must, in the first place, recognise the fact that septicæmia and pyæmia differed from one another as much as typhus did from typhoid fever. Septicæmia depended on changes in the blood, which sometimes occurred independently of the atmosphere. For instance, a person might receive a blow on the head with no external wound; but, in consequence of the injury, a portion of the dura mater was separated from the skull, and matter formed between that membrane and the bone. In a case of that kind, he had seen rapid and fatal septicæmia follow, the heart's action becoming extremely feeble, and the respiratory muscles almost paralysed, the patient dying within twelve hours of the commencement of those symptoms. After death, patches of plugging of the capillary vessels, with spots of effused blood round them, were noticed scattered extensively beneath the various serous and mucous membranes of the body, the plug being formed of organic matter, probably derived from dead white corpuscles. Pyæmia, on the other hand, depended upon impure air passing into the open vessels of a wound, and exciting putrefaction in the organic matter. Portions of the decomposing material were carried into the circulation; they became lodged in the smaller vessels, and there existed similar action to that which they were undergoing, thus producing what were called necrotic abscesses. Fresh putrefying matter was carried from those abscesses to other parts of the body, and so the blood became poisoned, and it was extremely difficult for a patient suffering in that way to recover. Mr. Lister had been challenged to produce statistics; but it was impossible to do so, as no two cases were exactly alike; the age, constitution, habits, season of the year, and many other circumstances exercising their influence upon the condition of the patients. There was probably no operation in surgery which might be more safely referred to figures than that of the extraction of cataract; and although there were numerous reports from various foreign surgeons of eminence regarding the number of cases on which they had successfully operated for the cure of cataract, many of such statistics were of little value.

Mr. Barwell was extremely glad to hear Mr. Mac Cormac's testimony to the value of antiseptic surgery in places where there were not all the hygienic facilities that they had in London. There were many hospitals in Germany, for instance, in which some years ago it was a rule for patients operated upon to suffer from pyæmia and erysipelas; they now, however, hardly knew what it was to have pyæmia, and erysipelas was very much reduced. After such operations as excisions of the knee or operations of the thigh, he had, previously to adopting antiseptic surgery, always looked for, and generally found, a temperature over 100 Fahr.; and now he rarely, if ever, got so high a temperature over, and if he did, he invariably found it on the third day after giving an anæsthetic. If a patient, having taken ether, was constipated, the temperature was sure to rise, as the temperature was not a matter of wound, but of intestine, and a mere enema would do away with the rise of temperature at once.

Mr. Spencer Wells said that for twenty years past he had been most anxious by every possible means to obtain as good results of surgical operations as could be obtained by all the ordinary care which one followed in hospital practice and private practice also, carefully excluding every source of poisoning one could possibly exclude, keeping the patient under the very best hygienic conditions that could be obtained by the separation of ward or the wide division of beds, and all the other means which sanitary knowledge had placed at their disposal; and he believed that care had led gradually to a considerable improvement in surgical statistics, and he certainly thought that, from the introduction of antiseptic treatment, they had had very much more rapid progress of late years than they would otherwise have had. Perhaps his own experience of ovariotomy might assist in inducing others to believe that statement was correct, and to follow his example not only in taking the greatest possible ordinary care, but also in gaining for patients the advantages which antiseptic surgery gave them. Year after year, in a series of one hundred cases of ovariotomy, the results had been gradually improving, first from a mortality of thirty-four per cent., to that of twenty-eight per cent., then twenty-two, afterwards fourteen, and finally ten per cent. The mortality had, in fact, been steadily and gradually diminishing year after year with increasing experience and care. In the last eighty-four cases he had adopted antiseptic precautions, and he found his success was increasing in a much greater and more rapid proportion than previously. In the very last series of cases

which had been going on under his care, he had thirty-eight cases of ovariotomy running without a single death. During that run there had been five cases of hysterectomy. That made forty-three cases of large operations for the removal of abdominal tumours without one single death in that long series of cases. Before adopting antiseptic precautions, he did once have a run of twenty-seven cases, and twice a running of twenty-one cases, and that was the reason why he hesitated and feared that he might not do well to change, and why, therefore, he delayed longer than he should otherwise have done in adopting that method; but when he came to compare the results of the antiseptic with the other method of treatment, he found they were even more favourable to the former then he stated the other day at the Royal Medical and Chirurgical Society. He had gone over the eighty-four cases in private practice which he had before commencing antiseptic surgery by the use of carbolic acid, and compared them with the eighty-four cases which had followed since, and he had to confess that the results were startling to himself. The statistical result was, that of the eighty-four cases since adopting carbolic acid in ovariotomy there had been only six deaths, making seventy-eight recoveries; whereas of the previous eighty-four cases in private practice, with all the care he could give to them, there were twenty-one deaths, leaving only sixty-three recoveries. And as one went on and became still more accustomed to the method and details of antiseptic treatment, and avoiding mistakes, then one got the long run of thirty-eight cases without a single death; and, adding to that five more of other important operations, he got forty-three without a death, and that, he thought, spoke volumes in favour of Professor Lister's system.

Mr. Thomas Smith supposed that if they wanted to test the value of teetotalism they would not go to a company of temperate men and recommend it to them in order to see its results, but that they would go to a company of drunkards. So they should take hospital pyæmia, hospital gangrene, erysipelas, and other maladies in hospital air. It was shown that in a foreign hospital, for ten years hospital gangrene, erysipelas, and hospital gastritis were rife, operation after operation took those various diseases, and the compound fracture patients invariably died. Nevertheless, without any alteration in the wards or in the character of the cases, or in the food of the patients, or in their number, medical and surgical cases being mixed together, at a certain date in every ward Lister's antiseptic treatment was adopted, and from that date there was an end to hospital gangrene, pyæmia, erysipelas, and gastritis. He did not, however, think that such a comparison could be instituted in English hospitals. With regard to what had fallen from Mr. Bryant, he would not say that Mr. Lister introduced the drainage of wounds; but he insisted on it as a necessity for the proper carrying out of his method, and unconsciously many of them had fallen into the drainage of wounds whether they were or were not antiseptic surgeons. Lister introduced carbolised catgut ligatures and carbolic acid. Of course they were known before, but he succeeded in popularising them.

Mr. Timothy Holmes said that circumstances might or might not be useful, but the nature of the cases must be stated first. A simple statement of gross results of the number of cases was utterly useless. On the other hand, statistics such as might be gathered from a hospital like St. Thomas's, where two or three surgeons practised two or three different methods under similar circumstances, and in cases in the long run similar, were, or might be, of very great value if they were accompanied by the leading details of the case; and he could not understand why such statistics were not published, or, at any rate, in course of preparation. They would do more, he thought, to convince hospital surgeons generally than anything else could do. It was quite true that, since Mr. Lister began to publish and insist upon antiseptic treatment, all of them were to a certain extent antisepticists; and they all recognised the inestimable blessings which Mr. Lister had conferred on the practice of surgery and upon themselves as practitioners. But when they were told that, in order to practise antiseptic surgery, they must believe in the germ-theory, then he could not but say that belief was not a voluntary act; it must follow upon proof, and no proof of the germ-theory that he had ever heard had ever been perfect. What might happen in tropical climates and in India he could not tell. There might be reasons connected with the climate or the habits of the natives which might prevent hospitals from being made healthy; and there it might, perhaps, be unavoidable to submit to such a state of things as Mr. Smith had described to be characteristic of a continental hospital; but in France, Germany, and other temperate climates, could there be any reason why a hospital should be allowed to remain in such a state? The surgeon who presided over it seemed to calmly submit to that state of things, and thanked the world such a man as Lister had been born, in order that he might preserve the small minority of patients and ovariotomies, and allowing those hospital diseases to go on killing the large majority of his patients because he either allowed himself to remain ignorant of the common principles of hospital hygiene, or would not remedy things which, at any rate in this temperate climate, were perfectly remediable. Mr. Lister had introduced antiseptics among us, and that he hoped would never be neutralised. Surgeons owed to him a debt of gratitude which they could never repay, which it was a comfort and a pleasure always to acknowledge; and the practice would last as long as surgery would last, and so long should they thank him.

Professor Lister: I cannot allow the remarks which my friend Mr. Holmes has just made with reference to my friend Professor Nussbaum to pass without a word of remonstrance. I understood Mr. Holmes to say that Professor Nussbaum had been content with the fearful condition in which the hospital was before the introduction of strict antiseptic treatment. Such is very far from being the case. He suffered mental agonies from the condition of his hospital. He has two hospitals under his charge; the one is the great Allgemeine Krankenhaus; the other is a large private hospital situate a little distance from Munich itself. In the latter, the private hospital, he was almost free from hospital disease; in the great Allgemeine Krankenhaus, he states, in the work referred to by Mr. Smith, he tried various different applications of carbolic acid and various other antiseptics, and tried the open treatment; he displayed the utmost zeal and energy in endeavouring to get rid of the pestiferous condition of the hospital. What the explanation of the failure may be, it is not necessary to go into; but what I wish to say about Professor Nussbaum is, that he was not indifferent to the condition under which he laboured, and that he earnestly, as far as his power went, strove to get rid of that condition. But then, further, I must protest against regarding with absolute indifference Professor Nussbaum's present results. Professor Nussbaum does not only say he has made an immense improvement on the previous condition of the hospital, but he tells us he has got a present condition which is superior to that of, I venture to say, any hospital into which strict antiseptic treatment has not been introduced. He tells us that, since he introduced strict antiseptic treatment, he has not had one case of pyæmia, he has not had one case of hospital gangrene, although he previously had 80 per cent. of his wounds affected with it. He has abolished erysipelas altogether. Then, do you believe those statements? Professor Nussbaum indignantly denies the possibility of falsehood on his part in this matter. He has been charged with exaggeration. He points out how such exaggeration or misrepresentation on his part would be not only criminal, but impossible, seeing that the Professor of Pathology could not conceal a case of pyæmia; this Professor of Pathology having to perform the duty of *post mortem* examination. You must not say this immunity is a fact of no consequence, because the same hospital was previously a pest-house, and that, in order to accept these great facts as of importance, you must compare them with the condition of a previously healthy hospital. That seems to me a most astounding mode of argumentation. Surely, the fact that you have for five years been absolutely free from these hospital diseases is a matter which would be of enormous moment in any hospital in this country. I do not hesitate to say that; and it is a still stronger argument because the hospital had been a pest-house.

Well, sir, I have been often reproached for not having produced statistics, and it has been hinted, and the hint has been lately pretty strongly reproduced, that I have suppressed statistics because I have none of which I should not be ashamed if I produced them. The truth is, that life is short, and when every day begins, one has to consider what is the occupation which is most likely to be valuable; and that, feeling as I do very much as Mr. Macnamara does with regard to statistics, I have felt there was something more congenial and profitable to do than to compile statistics; but, recently, my friend Mr. Watson Cheyne, who has had my hospital-books from 1871 open to him, has looked over the cases and has drawn out a statistical compilation, and I propose to-night to make some reference to what he has done. I may say, if I may be permitted to do so, that I do not think I am fairly open to the charge of having withheld statistics with regard to the great question of hospital diseases. When I left Glasgow, I published a statistical account with reference to hospital diseases, and showed, as far as I could judge, that there had been an altogether wonderful change since the introduction of antiseptic treatment in my wards, while in other wards in that same hospital the old condition prevailed. Then, at the time of the British Medical Association meeting in 1875, in Edinburgh, in an address I delivered in opening the Section for Surgery, I gave a further account to the same effect, showing that in Edinburgh, although I had been working under most unfavourable hygienic conditions, a still further progress had been made in hospital salubrity.

Therefore it is not fair to state that I have never given statistics. But it seems that something more in detail is desired; that it is not sufficient to say I have only had one case of pyæmia in five years in a great hospital with an average of sixty patients under my charge;

but you want me to say I have had so many amputations, so many removals of the breast, so many excisions, and no pyæmia. But I do not see the force of that argument. Nevertheless, if I could be supposed guilty of making a false statement of only having one case of pyæmia in five years, with sixty beds under my charge, I should be equally capable of making out a false statement of statistics. We have had lately presented to us by Mr. Savory a sample of statistics which I suppose may be regarded as a very good class of statistics, ranging over a large area from the great St. Bartholomew's Hospital, where, in 1876, 1877, and 1878, 2,862 cases of injury, and 1,235 major operations were referred to, a large mass certainly to deal with; and he tells us that the deaths from injuries had been 7.47 per cent.; deaths after operations, 5.82 per cent.; deaths from blood-poisoning, including pyæmia, septicæmia, and erysipelas, had been, after injury, 0.42 per cent.; after operation, 1.44 per cent. If so, I do not hesitate to say that this affords a noble example of surgical success, and, not many years ago, it would have been considered an almost incredible amount of success. Now, I would remark in the first place, that Mr. Savory gives results *en masse*, and the practice of four surgeons. Now Mr. Savory himself, as Mr. Smith has remarked, uses some antiseptic means; he uses catgut ligature for instance. By means of the catgut ligature, certainly death from hæmorrhage and also death from blood-poisoning is made much less frequent than it was previously, when septic threads were used, and he also uses other antiseptic means. But Mr. Savory also includes the practice of the late lamented Mr. Callender. I once went through the wards of Mr. Callender, and found he was practising a very careful antiseptic treatment; he did not use the spray, it is true, and for many years I did not use the spray myself. He was, however, using antiseptic treatment. Mr. Callender's cases of compound fracture were treated by pieces of lint steeped in carbolic oil, and painted every day with carbolic oil, and they reminded me exactly of my own early practice. I do not mean to say that Mr. Callender's good results were all due to this antiseptic element. I admired the pains and ingenuity with which he avoided movement in the wound, and so forth, but I do not hesitate to say Mr. Callender's success was largely due to antiseptic treatment. Then Mr. Smith's practice was included in Mr. Savory's statistics. Mr. Smith in many cases adopts the very practice I have recommended, and therefore I cannot regard those statistics, excellent as they are, as statistics of a hospital where no antiseptic treatment is adopted; and I may add, if Mr. Savory had used no antiseptic element whatever in his treatment, still he would have benefited by the antiseptic practice of his colleagues. I was informed lately by a surgeon of the great Lyons Hospital, which used to be almost a pest-house, that one of the Lyons surgeons still refuses to use antiseptic treatment; but, as this surgeon told me, he had the benefits of our antiseptic treatment. And it is natural it should be so, because the practice of antiseptic treatment by three surgeons, and non-antiseptic treatment by the fourth, is sufficient to convert a huge hospital into a hospital of one-fourth the size, with reference to the question of hospital disease. Having said that much, I will refer to my own statistics for November 1871 to August 1877, when I left Edinburgh. The great Royal Infirmary of Edinburgh, while it is the metropolitan hospital for Scotland for surgical disease, is not a hospital to which very many injuries come, and the great majority of injuries are treated as out-patients, and hence I have only seventy-two cases of injuries to speak of in those five years and three-quarters. Nevertheless, they were somewhat severe injuries; thirty-three compound fractures, seven wounded joints, thirty-five other severe wounds. In seventy-two cases of injuries, there were four deaths, which gives 5.7 per cent.; whereas the St. Bartholomew's statistics are, in cases of injuries, 7.7 per cent.; and none of those seventy-two cases of injury died of blood-poisoning. Then we come to operations. All the operations that I had that have been recorded in the case-book are 845; of these, thirty-seven died, or 4.4 per cent. Now Mr. Savory includes in his operations only the major operations. It is a very vague matter what we are to call the major operations and what are minor operations. I thought it would be better, therefore, to put down all my cases of operations, without excluding, as Mr. Savory has done, any group for any reason whatsoever. But, going over the operations as Mr. Cheyne has done, there were 120 that can be fairly called minor operations. A great multitude of minor operations have been treated as out-patients. I may remark that, with antiseptic management, you are justified in treating as out-patients a large number of cases which, without antiseptic treatment, I consider you would be bound to take into a hospital. Now, subtracting these 120 minor operations, I have 725 major operations. Of the 120 minor operations, not one died. I, therefore, by subtracting the minor operations, increase my death-rate. There were thirty-seven deaths in the 725 major operations, and these give 5.1 per cent. The St. Bartholomew's statistics give 5.82 per cent., somewhat greater, not very much greater, I confess. I cannot help remarking how easy it would have been for me to manipulate the statistics a little, to make the thing look much better for myself. For example, I have had several operations, which I have included among the major operations, which have been very minor. There were three cases of spina bifida treated antiseptically. The operation consisted of introducing with a needle two or three, as the case might be, horsehairs; and one case of hydrocephalus was treated in the same manner; most minor operations, certainly; but each one of these was followed by death. And, considering the consequences and the greatness of the interests involved, it was only right to regard these as major operations; and every case in which I have had a death I have included in my major operations. If I had chosen to say those were minor operations, although they were fatal, the result would have looked different; and I could have reduced very much the percentage. But I prefer to do as I have done; and my mortality is 5.1 per cent. of major operations, against 5.8 on St. Bartholomew's statistics. Now, as to the deaths, we come to the great question of blood-poisoning. I had six deaths from blood-poisoning in my 725 operations, or 4.82 per cent. The St. Bartholomew's percentage was 1.44 per cent. of blood-poisoning. The cases of blood-poisoning were two of pyæmia in those five years and three-quarters, two of septicæmia, and two of erysipelas. The cases of blood-poisoning require to be weighed. There is a very weighty statement attributed to Morgagni to the effect—"Perpendendæ non numerandæ observationes". That is to say, as we may render it, "cases should be pondered, not numbered"; and, if we are to derive any benefit from these statistics at all, we must look into the details of them. Out of the various operations I have performed, some were, from the condition of the cases, capable of being performed antiseptically; in others this was from the condition of the cases, impossible: as in cases where sinus had existed in the vicinity of the joints which were excised, the removal of the tongue and so forth, where we operated in situations where septic materials must of necessity be present. Now, if I divide my operations into two groups—antiseptic and septic—I find that the antiseptic operations were 553; and of these 553, only two died, and those of blood-poisoning. And then, when we look into these, we find there was one a case where the mamma had been removed, and the whole axilla had been cleared out to the collar-bone. I knew that the spray was altogether away from the wound, when the tube was removed from the axilla. The other was a case of erysipelas: the only death from erysipelas in antiseptic cases during what I cannot help regarding as an epidemic of erysipelas during that year, or one from erysipelas. Of the septic cases, though they were much fewer—292 operations—we have four deaths from blood-poisoning*: that is to say, the deaths were eight times as numerous in proportion. That seems to me very instructive. Then, further, if I divide the time into two periods—before the meeting of the Association in 1875 and the time after, I find, as might be expected, that matters had improved since that period: 1871 was the date of introduction of the spray, and at first we were working comparatively under difficulties. But since 1875, the antiseptic treatment has been carried out more perfectly; and accordingly I find that, whereas between 1871 and 1875 the percentage of deaths was 4.7, from 1875 to 1877 it was only 3.8; that is to say, out of two hundred and ninety-five operations, I had only eleven deaths. Then, if I look at the question of blood-poisoning in the last two years, I find that out of those 295 operations, to which must be added a certain number of accidental wounds, I had only one death from blood-poisoning; and that one case from blood-poisoning was a case of pyæmia, where I performed a plastic operation to make a new nose. I endeavoured to turn one side of the ascending process of the superior maxillary bone to make a support for the flap, and I split the bone; and I was conscious at the time I had made a mistake. That was a case in which antiseptic treatment was impossible, in consequence of communication with the nasal cavity. The patient died; and, although I carefully searched and dissected the bone and the veins in the vicinity, there was no pus in the cancelli of the bone or in the vein leading from it; nevertheless, there were abscesses both of the lungs and liver. That is the only case of blood-poisoning in two years with 295 operations. Then let us take amputations; that is to say, major amputations. During the period referred to—five years and three-quarters—I had eighty major amputations. Of these, I had nine deaths, 11.25 per cent. That, compared with what Mr. Erichsen says in his book on *Hospitalism*, is, where he says we must expect from thirty-five to fifty per cent. of mortality, may seem very good. I confess I should not be at all satisfied with nine deaths out of

* Of these four, two died from pyæmia (one an amputation of the penis, the other a plastic operation on the nose), one from septicæmia (a case of excision of the tongue), and one from erysipelas (a case of small abscess of the neck, opened by the house-surgeon without antiseptic precautions).

eighty patients without something more to explain them; but if we look more into details, I had, first of all, three amputations of the hip-joint. One was a primary amputation. I did the operation practically without any hope of saving him; but I have seen a patient come round after being perfectly pulseless, and I thought it my duty to try it. Of the other two amputation cases, one was an enormous fibroma. The operation was one of extreme difficulty, and the patient sank as the immediate result of the operation. Such a case as that has no bearing whatever on the question at issue. The third case was one upon which I operated for myeloid disease of the thigh-bone. The bone looked sound when I divided it at the time; but afterwards, on making a careful section and microscopic examination, there appeared to be disease, and I amputated the next day at the hip-joint. The patient died in twenty-four hours. Now, with respect to the question of preventable mortality after operations, you may eliminate these hip-joint amputations. I have had four primary amputations of the shoulder-joint. One of these died. The case was one of railway injury. The bones were shattered, and he was in a state of collapse when he was admitted, and never rallied; and that comes very much in the same category. The question was whether I was prudent in amputating at all. Then I had one death after amputation of the shoulder from disease. It was a case of malignant tumour of the arm. The amputation was doing perfectly well; but, after some days, the patient died from hæmorrhage from a tumour of the femur, of the existence of which I was not aware, and that had nothing whatever to do with the amputation of the shoulder-joint. Some vessel gave way in the thigh, and the patient died of internal hæmorrhage; and these cases to which I have referred should be eliminated from my list with reference to the question of hospital mortality. Then we come to the two others. I had twenty-five amputations of the thigh for disease. Of these, one died; but this patient died of diphtheria nine months after the operation, when the cicatrix was almost complete. I had eighteen amputations of the ankle, of which one died. This one was a boy, who, three months after the operation, when the wound was almost absolutely healed, died of cerebral hæmorrhage. This, therefore, was also a case of recovery; and therefore I submit that, when we look into these cases of amputation, no patient died from a preventable disease. Every patient recovered who had the chance of recovery. Then, if you take another class—cases of ununited fracture; we used to operate on some of these cases in the upper limb, but in the lower limb the risk of pyæmia was considered to be too great. In the five and three-quarters years to which I have referred, I have operated eight times in ununited fracture of the thigh, nine times in the leg, four times in the humerus, and five times in the forearm, giving twenty-six cases, and in every one of these the patient is alive and well; not one died. Then I would allude for a moment to that piece of statistics to which Mr. Bryant so disparagingly referred, which has been published by my friend Mr. Cheyne. I will not dwell on the cases of injury, because confessedly cases of injury are uncertain; but I do say, when you have a series of twenty cases where healthy joints have been opened and kept open without one single failure as regards the septic element, it is a fact of great importance. Here I come to another order of statistics, where, as far as I am able to judge, we have evidence of a new principle coming into play. I may be wrong, but it seems to me that if you were to open a healthy joint, and to keep the wound open, and to put a drainage-tube into it, take it out every day, wash it, and put it in again, if you did not use antiseptic means of some sort or other, you would have more or less of inflammatory disturbance, and it would be impossible to have a condition of things which we look upon as normal, absolutely no tenderness, no redness, and no increase of temperature. I say, as far as I am able to judge, this is a kind of fact of a new order, which shows that we have a new principle at work. It has therefore seemed to me more important to publish cases of this kind, even though they be only individual cases which have been somewhat hardly reflected upon. When a new principle is propounded, I cannot regard these statistics of individual cases as unimportant. I say, if a case show new pathological facts, one individual such case is worth as much as a million. I have published numerous cases, for instance, to show that a great abscess connected with disease of the vertebræ may be opened by free excisions, a drainage-tube introduced, and strict antiseptic treatment used; and that from that hour, I never had another drop of pus. I say that fact is as beautiful in pathology as it is useful to practice. I have shown, over and over again, that you may have exposed in an open wound a blood-clot, and that this blood-clot, no matter how large, may remain not only free from putrefaction, but may remain indefinitely without suppuration, so that when you, in the course of time, peel away its upper surface, you find a scar without a single drop of pus having been formed. That, I say, is a fact new in the history of surgery, and indicating that we have a new principle. Then I have given evidence that dead tissues, if protected from putrefaction and from the stimulus of the antiseptic used, may be absorbed in a way never before supposed possible; that a large piece of dead bone may have granulations grow over it, and these overlapping granulations may eat it away until it is reduced to a small piece. That, I say, as far as I am able to judge, is an indication of a new principle. Then, as regards the catgut ligature; this falls into the same category. Here we have a piece of dead tissue absorbed. I have described how this takes place by the substitution of living tissues for the dead and absorption by the living tissue in the process of formation. If these matters have not received attention, I venture to say it is not because they are not important, but I presume because I have not had sufficient capacity to bring them before my professional brethren with sufficient force to be able to impress them upon them. It is not that these things are unimportant, but because they are not believed. Then as regards the abscesses; one of the best of our provincial surgeons was at King's College Hospital a short time ago. When I saw him, he was perfectly astonished at the success of antiseptic treatment, and he seemed to speak of it as a thing which had only been lately made out, instead of a fact published years ago. As regards the organisation of the blood-clot, I know that this has been simply discredited. I will not trouble this great meeting by giving evidence as to that. I will not dwell upon the absorption of dead bone, but I should like to say a word or two about the catgut ligature. It has been said the organisation of the catgut ligature is all nonsense, that the catgut ligature is merely dissolved. I confess I do not understand how some gentlemen are more disposed to believe an unlikely thing than they are to believe the natural and probable one. Is it a probable thing that a piece of catgut will be dissolved, even if it be put into pure cold water, without putrefaction? Any chemist will tell you that catgut is an insoluble substance; it may remain in cold or in warm water for a considerable time without being dissolved. Still less is it soluble in serum. It is not a matter of solution, but of absorption by the living tissue. As the living tissues grow, they feed on the dead; the wandering cells infiltrate the fibres of the catgut, and grow at their expense. I have had a pamphlet lately sent to me by a surgeon who had made experiments to determine whether the absorption of the dead piece of tissue is performed chiefly by the wandering leucocytes or by other elements of the tissue; and, after steeping a piece of liver for some time in spirits of wine so as to make sure that it was perfectly dead, he gave it to a rabbit, and after a time he killed the rabbit to look at what was going on. His object was not to demonstrate that the piece of dead tissue was absorbed by the living tissue, but to see which of the living elements was concerned in the process; and, therefore, it seems to me that better far than statistics, however important they may be said to be, is the consideration of these great pathological conclusions, which I believe to be correct. Professor Maas of Freiburg lately sent me an introductory lecture which he gave to his students, in which he dwelt at some length on statistics with regard to the antiseptic treatment, and he said, that he should like anybody who wished to be convinced of the value of antiseptic treatment to try the following experiment. In a certain number of rabbits tie an ureter with silk thread, and in another series of rabbits tie it with catgut. In those rabbits where you have tied with silk threads without antiseptic treatment, suppurative pyelitis follows; while, where the catgut ligature and antiseptic treatment have been employed, hpdronephrosis alone follows. When I was in Amsterdam, statements illustrating the value of antiseptic treatment, were made to me by two different physiologists. One of these was the celebrated Virchow, who told me what antiseptic treatment had done for vivisection. He said that, without antiseptic treatment, if we take away an organ, the fever so complicates the matter that we cannot judge of results; but with antiseptic treatment, if we take away an organ, we can judge of the results, and in that way we have a very beautiful illustration of the effect of antiseptic treatment. I may mention one other. Two different ophthalmic surgeons told me that, using the antiseptic treatment in cases of extraction of cataract, they found, instead of it being a question how much discharge there would be, there was absolutely none.

I feel that I owe this large meeting an apology for having detained them so long, and I owe them a debt of thanks for having listened to me so patiently; but, gentlemen, when I have such a gathering of medical men before me, I cannot avoid speaking on a matter which is so near my heart. I have been charged with enthusiasm. I regard enthusiasm with reference to the avoidance of death, and pain, and calamity to our fellow-creatures as a thing not at all to be ashamed of. I feel that this is a subject of which I may say, in the words of Horace,

"Æqué pauperibus prodest, locupletibus æqué,
Æqué neglectum pueris senibusque nocebit."

On the motion of Mr. JONATHAN HUTCHINSON, the debate was adjourned.

ANALYSIS OF THE NEW WARRANT FOR THE ARMY MEDICAL DEPARTMENT.

THE new Army Medical Warrant, which received the Royal signature on November 27th, and was promulgated as an army circular on the 2nd instant, is a somewhat long document. It comprises fifty-two separately numbered articles or paragraphs, and these are arranged under twelve headings in so many sections. We proceed to indicate the matters contained in these sections.

SECTION 1.—There is no set heading to this section; but the new constitution of the department is contained in it. After cancelling certain articles in previous warrants, it is announced that, in future, army medical officers are to be divided into two classes; viz., Class A and Class B. Class A is to consist of those medical officers who entered before April 28th, 1876—that is, before the ten years' system was introduced; and of those who may in future enter the department. Class B is to consist of those who entered under the warrant of 1876, or, in other words, for a limited period of ten years' service. It is mentioned in the second article of this section, that a medical officer of Class B may be transferred to Class A, if the transfer be recommended by the Director-General, and if the application for the transfer be made within two years from the date of the present warrant.

SECTION 2. *Rank and Pay.*—In this section, the rates of pay of the various ranks of medical officers who may belong to Class A or Class B are shown in separate columns. The allowances, or charge pay, of principal medical officers, whether belonging to Class A or to Class B, with armies in the field and with bodies of troops in colonies, are shown in a third column.

We need not repeat here the rates of pay named in this section. The rates for the medical officers of Class A were recently printed in the JOURNAL (November 15th, p. 781), they being contained in the schedules issued to applicants for service in the Army Medical Department, which were then under review. The rates of pay for medical officers of Class B are the same as were contained in the warrant of April 1876, so that they continue in force for those who remain under the ten years' system embodied in that warrant. The only addition in the new warrant is the enumeration of special rates of pay for officers of both classes who may be employed at the head-quarters of the department in London. These special rates are: Surgeon-General, £1,300; Deputy Surgeon-General, £900; Brigade-Surgeon, £750; and Surgeon-Major, £650, *per annum*.

The relative ranks of the medical officers given in this section have also been printed at page 781 of the JOURNAL.

SECTION 3. *Appointment, Promotion, and Retirement.*—The provisions of previous warrants under these heads have been greatly changed in this section. Admission into the department, which by the warrant of 1876 was solely by public competition, is in future to be obtained by two portals; the one being that of "public and open competition", the other that of "nomination". The first portal is to be open twice yearly; and it is laid down that the number of appointments to be competed for shall be "not less than half of the number of vacancies which shall have arisen in the last completed half-year ending on the 30th of June or 31st of December". The second portal is apparently to be open at all times, for no limitation of time is mentioned in the warrant. The relative order of precedence of candidates appointed by competition and those appointed on nomination is fixed in the following way. Both sets of candidates on appointment become "surgeons on probation". On passing out of the Army Medical School, the probationers who entered by competition are to take precedence in the ranks of the department according to the date of the last day of the public competitive examination, and in the order of merit at that examination; while those who entered by nomination are to take precedence according to their date of joining the department after their appointment to it. Surgeons on probation who enter by nomination are to be proposed "by the governing bodies of public schools of medicine", and are to be certified as being "duly qualified according to a standard to be laid down by our Secretary of State, and shall be approved by the Director-General". It is further laid down that "our Secretary of State shall from time to time fix the order of precedence and the proportion in which the several schools of medicine shall be offered the nomination of candidates". As it is presumable that the Secretary of State for War can personally be but little acquainted with schools of medicine, this patronage will apparently fall to the share of the Director-General of the Army Medical Department. After passing through such a course of study at the Army Medical School as the Secretary of State shall decide, and undergoing a qualifying examination, the "surgeons on probation" are to be commissioned as "surgeons". The limit of age for candidates for appointments in the Army Medical Service is now fixed at twenty-eight years.

SECTION 4. *Promotion.*—The following are the chief regulations of this section. Surgeons of Class A become surgeons-major after twelve years' full pay service, provided at least three years have been passed abroad and their promotion is recommended by the Director-General. Six surgeons of Class B may annually be promoted to the rank of surgeon-major on the Director-General's recommendation. In cases of distinguished service, surgeons may be promoted to the rank of surgeon-major without reference to seniority.

Brigade-surgeons are to be selected for ability and merit from the surgeons-major; but they must have served abroad for at least eight years in the rank of surgeon-major and surgeon.

Deputy surgeons-general are to be selected from the brigade-surgeons, and surgeons-general from the deputy surrgeons-general, for ability and merit; the grounds of the selection being stated in writing. But a brigade-surgeon shall not be eligible for promotion to the rank of deputy surgeon-general unless he has served at least ten years abroad, including three years in India.

If a medical officer below the rank of deputy surgeon-general be appointed an honorary physician or an honorary surgeon to the Queen, and he be qualified as regards foreign service, he is to be promoted to that rank, but to remain supernumerary of the rank until he would have attained it in ordinary course.

SECTION 5. *Retirement.*—The regulations on this head appear under "voluntary retirement" and "compulsory retirement".

The articles under voluntary retirement qualify to a certain extent the "gratuitous and retired pay" which were shown in the schedules recently issued to intending candidates for commissions. In the schedules, the bare amounts of the gratuities and of the rates of retired pay according to length of service and rank were shown, and it appeared as if it were a voluntary matter whether they were taken by the officers concerned. This is so far modified in the warrant, that medical officers are only permitted to retire on the gratuities or pensions which were laid down in the schedules, and which are repeated in Article 47 of the warrant itself, "when it shall be deemed expedient by our Secretary of State. Before such voluntary retirement be permitted, it shall be specially recommended by our Commander-in-chief and approved by our Secretary of State." All officers of Class A who are permitted to take voluntary retirement before the age of fifty-five years are rendered liable to serve in case of national emergency until that age is completed.

The regulations for compulsory retirement chiefly refer to surgeons of Class B, or those who entered the department under the ten years' system of service. The ages of forced retirement for other medical officers remain the same as were laid down in the warrant of 1876; viz., for surgeons under the rank of deputy-surgeon-general, fifty-five years; and for deputy surgeons-general and surgeons-general, sixty years.

SECTION 6. *Exchanges.*—There is not much that is specific laid down under this head. It is simply ruled that "an officer of the Army Medical Department shall be permitted to exchange with another officer of the same Department under such conditions and regulations as shall from time to time be approved by us". Nor does anything further on the subject appear in the "Secretary of State's Instructions", which are appended to the warrant.

SECTION 7. *Rewards and Honours.*—The articles under this heading are precisely the same as Articles 19 and 20 of the Warrant of 1876.

SECTION 8. *Service on the West Coast of Africa.*—Special regulations are contained in this section for the transfer of medical officers of the African service to general service. The regulations for actual service upon the West Coast of Africa are not changed in any material respects from the regulations contained in previous warrants.

SECTION 9. *Sick Leave.*—The article under this heading rules that, in special cases, where sick leave of absence on full pay has been allowed on the recommendation of a medical board for six months, this period may be extended to another six months on the recommendation of the Director-General.

SECTION 10. *Temporary Half-pay.*—The clauses of this section refer to medical officers who become unfitted for service from wounds received in action, or from ill-health certified by a medical board to have been contracted in and by the performance of military duty. Such disabled officers may be granted temporary half-pay, until recovery takes place and an opportunity occurs for their employment. But if, after remaining on half-pay for a period of not less than one year, they shall be reported by a medical board to be permanently unfit for service, such

disabled officers may be placed upon permanent half-pay, provided they had previously served on full pay for a total period of five years at least.

SECTION 11. *Non-Effective Pay.*—In this section, the rates of gratuity, retired pay, and half-pay are stated. They are shown in two columns: one for medical officers of Class A; the other for those of Class B, according to rank; in the same manner as the rates of full pay in the second section of the warrant. We have already published the rates of gratuity and retired pay, and of temporary half-pay, for army surgeons of Class A, at page 781 of the JOURNAL for November 15th. The corresponding rates for surgeons of Class B are the same as those laid down in the warrant of 1876.

SECTION 12. *General Regulations.*—The clauses of this section refer to the employment of retired medical officers and medical officers of the militia, in special situations, according to conditions which are to be determined from time to time by the Secretary of State. Retired medical officers, when so employed, are to cease to draw their retired pay, but are to get a consolidated salary, exceeding the amount of the retired pay by a sum of £150 a year, all allowances included. Militia medical officers who hold such appointments are to receive £150 a year in addition to the pay and allowances which their militia rank would entitle them to while their regiments were under preliminary drill or training. Militia medical officers do not, however, gain any title to half-pay, pension, or retired allowance, from employment in such special situations.

The above is a description of the principal provisions made in the warrant itself for the future government and administration of the Army Medical Department. There are appended to the warrant, however, twelve paragraphs containing what are described as the "Secretary of State's Instructions on the foregoing Warrant". Some of these are of special importance to the army medical officers who are now serving in the ranks of the department.

The first paragraph states that the warrant is not applicable to army medical officers while serving in India, and that no additional emolument will accrue to medical officers in India under its provisions. This will probably be a source of much disappointment to the large body of officers serving in that country.

By another paragraph, brigade-surgeons (a grade which now appears for the first time in the Army Medical Service) are defined to be "Executive officers", "though available for administrative charge".

In Par. 7, principal medical officers of stations are ordered "to make the best arrangements the service will admit of to avoid throwing mere routine duties on the senior executive officers".

Par. 8 lays down that medical officers doing duty with regiments or corps are permitted to draw staff allowances. No mention is made in the warrant of "regimental medical officers", nor of medical officers being attached to regiments for fixed periods, as was anticipated in some quarters.

The three concluding paragraphs of the Secretary of State's instructions regulate the servants, forage, and horse allowances of medical officers. The money allowance for a servant is not increased by the warrant, but medical officers will in future have the option of employing a private of the Army Hospital Corps as a servant under certain conditions, instead of drawing the allowance. This will relieve medical officers of some of the difficulties of which they have complained, especially when on active service in time of war. In regard to the question of forage, the restriction which was laid on officers of the Army Medical Department by one of the clauses of the "Regulations relating to Forage Allowance" issued in 1878 is now formally cancelled. By the clause referred to, it was ordered that medical officers could only draw forage for a horse when the horse was shown to be necessary for the efficient performance of their duties. According to the present instructions, medical officers are empowered to draw forage, or an allowance in lieu of it, on the same terms as all other officers, whether staff, regimental, or departmental, according to rank. The scale laid down is —For a Surgeon-General, three horses; for a Deputy-Surgeon-General, two horses; and for a Surgeon-Major, one horse. With an army in the field, an additional horse is allowed to the officer of each rank.

AMERICAN GYNÆCOLOGICAL SOCIETY.—At its fourth annual meeting, held at Baltimore, September 17th to 19th inclusive, the American Gynæcological Society elected as President Dr. J. Marion Sims; Vice-Presidents: Dr. Robert Battey and Dr. W. T. Howard of Baltimore; Members of the Council: Dr. W. Goodell, Dr. E. W. Jenks, Dr. A. D. Sinclair, and Dr. A. J. C. Skene; as Secretary: Dr. James R. Chadwick; and as Treasurer: Dr. Paul F. Mundé. The next annual meeting will be held at Cincinnati, beginning the first Wednesday in September 1880.

A GREAT DEED IN SURGERY.

THE *Scotsman* of November 20th contains a just and faithful tribute, under this title, to the great services of Dr. Thomas Keith, whose grand successes in ovariotomy have been the admiration of the surgical world, and whose work has been carried on with a modesty, an anxious care, and a brilliant result such as have deserved this public recognition. As a rule, any such notice in public papers is to be deprecated. In this instance, however, the singular services rendered to mankind by Keith and Spencer Wells are such as to afford reason for satisfaction that the great organs of public opinion should take a suitable opportunity for expressing the public gratitude to rare benefactors of their race, and to the labours of both, ample and discriminating justice is done in this excellent article. We would willingly quote it entire, for it is accurate, discriminating, and truthful. Dr. Keith has performed ovariotomy seventy times in succession without a death, and the operation has, in his hands and those of Spencer Wells, become less fatal than amputations of the leg or arm, though it involves the removal from the abdominal cavity of tumours which vary in weight from ten to one hundred pounds. The article says truly that—

"Five-and-thirty years ago, and less, this operation—now so safe—was derided and denounced by the medical profession, and those who performed it were called dangerous men and murderers. Even the sagacious Syme, when writing of the operation in 1837, says that, 'though one or two fortunate patients may have escaped, after being freed from part, or even the whole, of the disease, it would be very unjustifiable to repeat such dangerous experiments, since it is evident that for every life prolonged by them many must be sacrificed'. Syme never performed the operation himself; but he lived to change his opinion, and to acknowledge the triumphs of Thomas Keith."

After giving a brief history of the origin of ovariotomy in the hands of Macdowell, Clay, Lizars, and Washington Atlee, it continues as follows.

"It was not till after 1858 that ovariotomy began to be accepted as one of the legitimate operations in surgery. So late as 1850, Mr. Lawrence, perhaps the greatest surgeon of his day, asked whether it could be encouraged or continued without danger to the character of the profession, and it was alleged by a distinguished reviewer that a fundamental principle of medical morality was outraged when an operation, so fearful in its nature and often so immediately fatal in its results, was performed. It was in the year referred to—namely, 1858—that Mr. Spencer Wells of London began to operate, and since that time he has performed the operation nearly one thousand times, with most gratifying results. Four years later, in 1862, Dr. Thomas Keith performed his first operation, and down to the present date he has operated upwards of three hundred times—Dr. James Sidey having been usually his chief assistant. These two men, Spencer Wells and Thomas Keith, are now the foremost ovariotomists in the world. They are not rivals, but fast friends, who have taken lessons from each other. A very remarkable success has attended Mr. Wells, but a success still more remarkable has fallen to Dr. Keith. In the practice of both of them, fatal results —never so high as with other surgeons—have steadily diminished. From the outset, however, Dr. Keith took the first place, and he has done more than keep it. He now shows results which have never been approached, for it appears that, of his last hundred operations, only three have ended fatally; while, of his last seventy, not one has ended fatally. In attaining these wonderful results, both Keith and Wells have lately been aided by the employment of antiseptics, as recommended by Lister, whose niche in the Temple of Fame will be one *on the line*. Something, perhaps, is also due to those aids in diagnosis, by which malignancy in these tumours is more certainly disclosed, and with the discovery of which the name of Dr. Foulis of Edinburgh has acquired great distinction. It is possible, too, that one cause of the great success of these two operators is revealed by Dr. Keith when he says: 'No one knows the anxiety that ovariotomy has given me, nor the time and thought and care I have bestowed on the patients.' It is not true that all are ignorant of this, though Dr. Keith may think so, for it is well-known to some that a devoted attention to their patients, involving great self-sacrifice, has characterised both him and Mr. Wells. To secure favourable conditions, Keith established a little hospital, at his own charge, and not far from his own residence; and many a poor woman has received in it an unceasing attention from himself and his trained nurses, without any expectation of payment. No doubt he has had wealthy patients, and has been summoned to Italy and other distant countries to operate, but nearly all his care and time have been generously expended on the very poor, who could only pay him with gratitude."

We are grateful to our influential contemporary for finding room in its columns for this just tribute, in a quite exceptional case, to the merits

and achievements of two surgeons who have not only added laurels to British surgery, but have established one more claim for medicine on the gratitude of mankind by increasing its beneficent achievements and adding to them that of having furnished a new resource in saving life, of which the results will continue while the world lasts.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

The New Method of Anæsthesia during Surgical Operations.—Winter Courses and Clinics.—Death of Dr. Chenu.

ONE of the most remarkable discoveries of the age is that attributed to Dr. Paul Bert, the Professor of Physiology at the Sorbonne, which consists of producing anæsthesia by a mixture composed of nitrous oxide or laughing gas and oxygen, which has already rendered signal service in the practice of surgery. Pure nitrous oxide has for a long time been employed for the minor operations in surgery, particularly for the extraction of teeth; but the period of anæsthesia is extremely short; and the asphyxia, though momentary, has sometimes been attended with fatal results. M. Paul Bert conceived the idea of preventing the asphyxia thus induced, preserving at the same time the anæsthetic properties of the nitrous oxide, by mixing it with oxygen, which he afterwards verified by experiment. He then came to the conclusion that, if anæsthesia were not produced in this case, it was owing to the gas not having its normal tension, and to its not being absorbed in sufficient quantity. This led him to try the mixture in a chamber of compressed air, which he extemporised for the purpose; and the success of the experiment far exceeded his expectations. The following is the process, which was lately communicated to the Therapeutical Society of Paris by M. Limousin, a very enterprising *pharmacien*. The gaseous mixture is effected in the proportion of 85 parts of nitrous oxide and 15 of oxygen; and generally it is administered under a pressure of 17 *centimètres* of mercury, which would represent, at the normal atmospheric pressure of 76, a total pressure of 93 *centimètres*. The tension of the nitrous oxide is, therefore, $\frac{85\times93}{75}=105.4$; that of the oxygen is $\frac{15\times93}{75}=18.6$: a proportion a little too strong for the former and a little too weak for the latter. Nevertheless, anæsthesia was produced without asphyxia. The nitrous oxide is prepared from the nitrate of ammonia; and the oxygen is produced by decomposing, by the aid of heat, a mixture of chlorate of potash and the peroxide of manganese. The two gases are introduced into balloons of caoutchouc or vulcanised India-rubber, in the proportions indicated above; and the dose is regulated by a small gasometer similar to that employed by the Gas Company of Paris. The balloons are united by means of India-rubber and glass tubes, in such a manner that the gas enters a small intermediate balloon, which serves as a regulator and is provided with two tubes. The mixture is then administered by means of the well-known apparatus invented by Clover. The quantity of gas expended amounts to about ten *litres* per minute; hence it would require a large supply for a long operation, which is a great drawback, as it involves the necessity of using balloons of some size, which would encumber the chamber of compressed air, the space in the interior of which is already rather limited. This drawback would render the application of the process most difficult in the great operations, as it would take up a great deal of space and necessitate the employment of a certain number of assistants. Yet, notwithstanding these inconveniences, the new anæsthetic process will doubtless be used when and wherever practicable; and Drs. Léon Labbé and Péan, the former of the Lariboisière Hospital and the latter of St. Louis, have resumed their experiments at their respective hospitals, which were interrupted by the summer holidays. During the last half of October, M. Labbé performed eight operations under the new process, and with perfect success. The operations, which were varied in their character, were performed in the movable bell or chamber of compressed air organised by Dr. Fontaine for medical as well as for surgical purposes. One operation—removal of a cancerous breast—lasted sixty-four minutes, without any injurious influence on the patient; and this would lead to the hope that the larger operations—even ovariotomy—may also be performed without any danger. The following are the advantages of the new process: uniform dosage of the anæsthetic agent; suppression of the stage of excitement during the operation, and of vomiting after it; rapid return of sensibility; etc. MM. Labbé and Péan have arranged to avail themselves of Dr. Fontaine's movable *cloche;* the former on Tuesdays at the Lariboisière, and the latter on Thursdays at the St. Louis Hospital. Dr. Fontaine is the founder of the Aërotherapic Establishment in the Rue Chateaudun, which is worth a visit.

The winter course of lectures was opened on November 4th, and the following is a list of the professors who are to lecture during the session: M. Gavaret, on Medical Physics; M. Jaccoud, on Medical Pathology; M. Sappey, on Anatomy; M. Bouchard, on General Pathology and Therapeutics; M. Wurtz, on Medical Chemistry; M. Trélat, on Surgical Pathology; M. Lefort, on Operative Surgery; M. Robin, on Histology; M. Laboulbène, on History of Medicine and Surgery; Clinical Medicine, by M. G. Sée, at the Hôtel Dieu; M. Lasègue, La Pitié; M. Hardy, at La Charité; M. Potain, at the Necker Hospital; M. Ball, at the Sainte-Anne Lunatic Asylum, on Mental Affections; M. Parrot, at the Hospice des Enfants Assistés, on Diseases of Children; Clinical Surgery, by M. Gosselin, at La Charité; M. Richer, at the Hôtel Dieu; M. Broca, at the Necker Hospital; M. Verneuil, at La Pitié; Ophthalmology, by M. Panas, at the Hôtel Dieu; Obstetrics, by M. Depaul, at the Hôpital des Cliniques. In addition to the above, there are a number of private clinics held by *ex officio* professors, and kept up entirely at the expense of the latter. They are, for the most part, devoted to diseases of the eye and diseases of the urinary organs, and are much resorted to by the poorer classes. There are several oculists in Paris, all of whom seem to be overwhelmed with work; and, in order to give an idea of the great prevalence of ophthalmic affections, I may mention that at one clinic alone—that kept up by Dr. Landolt—two hundred to three hundred patients present themselves daily; and, according to this gentleman's printed report, which I have before me, no fewer than three thousand and thirty-nine patients presented themselves during the year 1878. Besides Dr. Landolt's ophthalmic clinic, there are at least half a dozen more in Paris, all of which are frequented in about the same proportion. Dr. Landolt's report is very interesting in many respects. In cases of chronic iritis, besides the instillation of atropin and general treatment, he resorts to paracentesis of the anterior chamber, which he repeats according to circumstances, and from which he has generally obtained good results. In cases where the atropin is not well borne, he employs eserin instead. His mode of operation for cataract differs somewhat from that generally adopted. The eyelids of the patient are separated by the *fingers* of an assistant, and the eye is fixed with forceps without claws. The incision and counterincision are made with a linear knife at the inferior half of the junction of the sclerotic and the cornea, along the edge of the latter, and of dimensions according to the size of the cataract. After the section is effected, the forceps is removed and the eyelids are left to themselves. The operator then separates them with the left hand, and performs cystotomy without fixing the globe of the eye. This is followed by gentle pressure with the lids, and the cataract is pushed out entire. Dr. Landolt rarely practises iridectomy, and does so only where the extrusion of the cataract is difficult. The advantages claimed for this method are these: it renders the operation as painless as possible, and the form and physiological function of the iris are preserved. Dr. Landolt thinks that this operation is better borne than by the other methods, owing to the suppression of iridectomy, which causes great pain, and of the disuse of the fixing forceps. Dr. Landolt avoids the fixing forceps even for other operations on the eye; but, when it is indispensable, he employs one depicted in his work. The chapter on the influence of general maladies on affections of the eye is a very good one; and it is gratifying to find that oculists, and indeed most specialists, are now beginning to find out that it is impossible to treat any one organ or part of the body as an entity independent of the other parts. Hence a more rational treatment is adopted, which is directed towards the general affection on the one hand and the local affection on the other.

I regret to have to report the death of Dr. Chenu, which took place on November 13th, in the seventy-second year of his age. Dr. Chenu was for many years Principal Medical Officer of the French Army, from which he had retired just before the last Franco-Prussian war; but his capacity as an organisor was so great that he was charged, in conjunction with the lamented Nélaton, with the organisation of the ambulances destined for the wounded during the war, for which service, and for the services he rendered to the wounded during the Commune, he was promoted to the dignity of Commander of the Legion of Honour. After the settlement of peace in Paris, the various ambulances were amalgamated into one and placed under his superintendence; and he had just completed its organisation when he was stricken with paralysis, which confined him to his bed. A little more than a year ago, he was induced to enter the Hôtel des Invalides, where he died, and whence his funeral took place with the honours due to his rank. He was the author of several works; but his principal is one of three large volumes on the medico-chirurgical statistics of the campaigns of the Crimea and Italy, which may be usefully consulted by military surgeons.

ASSOCIATION INTELLIGENCE.

METROPOLITAN COUNTIES BRANCH.

AN adjourned general meeting of this Branch will be held at the house of the Medical Society of London, 11, Chandos Street, Cavendish Square, on Saturday, December 6th, to receive and discuss the Report of the Committee appointed to consider the subject of the Education of the General Practitioner of Medicine.

The Chair will be taken by the President, JOHN WOOD, Esq., F.R.S., at 8 o'clock precisely.

ALEXANDER HENRY, M.D.
W. CHAPMAN GRIGG, M.D. } *Hon. Secs.*

57, Doughty Street, W.C., November 19th, 1879.

SOUTH OF IRELAND BRANCH.

THE next meeting will be held at the Royal Cork Institution on Tuesday, December 9th, at 8 P.M.

The following papers and pathological specimens have been promised.

1. Curious Case of Wound of Eyeball : Dr. H. M. Jones.
2. Case of Poisoning by Laburnum Seeds : Dr. Corby.
3. Case of Puerperal Convulsions : Dr. C. A. Harvey.
4. Treatment of Lupus by Caustics : Dr. P. J. Cremen.
5. Removal of the entire Tarsus : Dr. H. M. Jones.
6. Case of Syphilitic Rupia resulting in Salivary Fistula : Dr. H. M. Jones.
7. Case of Radical Cure of Strangulated Femoral Hernia after Reduction by Taxis : Dr. P. J. Cremen.
8. Case of Convulsions in Typhoid Fever recurring for eight days; Recovery : Dr. P. J. Cremen.
9. Case of Compound Dislocation of the Ankle-Joint, with Fracture of the Internal Malleolus : Dr. C. A. Harvey.
10. Case of Epilepsy, complicated with Phthisis and Dysmenorrhœa (specimen) : Dr. T. Riordan.
11. Case of Bright's Disease, with Pericarditis (specimen) : Dr. T. Riordan.

P. J. CREMEN, M.D.,
T. G. ATKINS, M.D., } *Honorary Secretaries.*

Cork, December 4th, 1879.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH.

THE third meeting of the Session will be held in the Examination Hall of the Queen's College on Thursday, the 11th instant. The Chair will be taken by the President, Dr. JOHNSTON, at three o'clock P.M.

The following papers are promised.

1. Mr. J. F. West : Sayre's Treatment of Spinal Affections.
2. Dr. Warden : Case of Talipes Equino-Varus, Contraction of Hand, Webbed Fingers, and Strabismus in the same subject. Operation and After-Treatment by a new Apparatus.
3. Dr. Saundby : Cardiac Hypertrophy in Renal Disease.

Members are invited to exhibit Patients, Pathological Specimens, New Drugs, Instruments or Appliances, at the commencement of the meeting.

E. MALINS, M.D.,
E. RICKARDS, M.B., } *Honorary Secretaries.*

December 3rd, 1879.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the Branch will be held at the Bristol Museum and Library, on Wednesday evening, December 17th, at half-past seven o'clock; J. BEDDOE, M.D., President, in the Chair.

EDMUND C. BOARD, *Honorary Secretary.*

7, Caledonian Place, Clifton, November 26th, 1879.

THAMES VALLEY BRANCH.

THE next meeting of this Branch will be held at the Greyhound Hotel, Richmond, on Thursday, December 18th, at 5.30 P.M.

The following papers will be read.

1. Dr. Herman : On the Use of Vaginal Anteversion Pessaries.
2. Dr. Langdon Down : On Some of the Causes of Idiocy.
3. Dr. Fenn : On Myxœdema; and will exhibit a Patient.

The dinner will take place after the meeting, at 7 P.M.

FREDERICK J. WADD, *Honorary Secretary.*

Richmond, Surrey, December 3rd, 1879.

SOUTH-EASTERN BRANCH: EAST SURREY DISTRICT.

THE next meeting will be held on Thursday, December 11th, at the Greyhound Hotel, Croydon, at 4 P.M.; Dr. PARSONS SMITH in the Chair. The following papers are promised.

1. Dr. Coles : On Aids during Lingering Labour.
2. Dr. Roper : On Suppuration of the Knee-Joint following an attack of Gout.
3. Dr. H. G. Thompson: On Acute Albuminuria.
4. Mr. Bryant will demonstrate the advantages of his Double Splint in Disease and Injury of the Hip-Joint.
5. Dr. Semon : On the Treatment of Acute and Chronic Laryngitis in Adults.

Dinner will be served at 6 P.M. precisely; charge 6s., exclusive of wine.

JOHN H. GALTON, M.D.Lond., *Honorary Secretary.*

Woodside, Anerley Road, S.E., November 25th, 1879.

GLASGOW AND WEST OF SCOTLAND BRANCH.

A MEETING will be held in the Faculty Hall, on Friday, December 19th, at 3 P.M.

There will be some references made as to the question of Fees in Medico-legal Cases; and a discussion on the Relation of Croup and Diphtheria, introduced by Dr. J. B. Russell, from the statistical point of view.

SOUTH-EASTERN BRANCH: WEST KENT DISTRICT.

A MEETING of this District was held at the West Kent General Hospital, Maidstone, on Friday, November 28th, at 3 P.M.: WM. HOAR, Esq., in the chair.

Paper.—An interesting paper was read by Dr. MONCKTON on some of the Epiphenomena of Albuminuria. This led to a long and animated discussion. Several beautifully prepared microscopical specimens were shown and much admired.

Dinner.—The members and visitors afterwards dined together at the Star Hotel.

GLOUCESTERSHIRE BRANCH: ANNUAL MEETING.

THE annual meeting was held on Tuesday, November 18th, in the board room of the General Infirmary, Gloucester, under the presidency of Dr. WILSON of Cheltenham.

Previously to the meeting, the members of the Association inspected the new offices of the Hospital, by which the entire system of drainage has been carried outside the building, and every communication with a drain has been separated from the wards by passages with free air-currents.

Election of Officers.—Dr. BOND called attention to the difficulties attending the present mode of election of officers; and the council was instructed to take the matter into consideration and to report upon it.

President-elect.—Mr. T. S. ELLIS of Gloucester was elected president for the ensuing year.

Communications.—The following communications were read.

1. Dr. WILSON read a report of an interesting case of Nervous Disease of a Hystero-Epileptiform Character, occurring in a young student, without any traceable cause.
2. Mr. CRIPPS (Cirencester) brought before the meeting a case of Disease of the Testicle.
3. Mr. ELLIS called attention to the benefit to be derived in cases of Paralysis, even of long standing, from the Injection of Strychnia, and the use of the Continuous Current.
4. Mr. ELLIS also exhibited an Arm-Splint, which he had found of great service, and to the comfort of which the members present were all able to testify.
5. Dr. BATTEN gave the report of a case of Tumour of the Medulla Oblongata, occurring in a foreign sailor in his wards in the Infirmary, with the various symptoms present during the time.
6. Dr. BATTEN brought forward the subject of Hypermetropia as a very common cause of Nerve-disturbance, pointing out the mode of its diagnosis, and illustrating, by many cases, how excessively common these cases were, and how readily, when once recognised, these cases, of long-standing headaches, and giddiness, and upper dorsal spinal curvature, etc., were cured by the use of properly selected spectacles. In fact, so much had he been impressed with the frequency of this cause, that he had for a long time never neglected to examine the condition of the eye in any case of brain-disturbance.

Dinner.—The members afterwards supped together at the Bell Hotel.

CORRESPONDENCE.

THE NURSING QUESTION AT GUY'S HOSPITAL.

SIR,—In reference to the paragraph upon this subject in your last week's issue, I beg to state that you are in error in supposing that this is a students' question. The fact is, that the medical and surgical staff are at present unanimously protesting against arrangements introduced by the new matron. They believe that they will have the support of the whole profession in resisting any attempt to make the matron and her nurses the predominant power in the hospital.—I am, sir, yours obediently,

December 3rd, 1879. A MEMBER OF THE STAFF.

REGISTRATION OF INFECTIOUS DISEASE IN EDINBURGH.

SIR,—Your article on the registration of infectious disease in Edinburgh will commend itself to the profession here. It is astonishing and reprehensible that the Council of the two Colleges, one of whose functions is to examine and report on all Acts of municipal legislation connected with health, have not prevented this section of the Act passing into law. I venture to say that it will be found as unworkable as it is insulting and injudicious. The best that can be wished for it is that (as you so well say) it may "lapse into desuetude" until it is amended. That Dr. Littlejohn has sanctioned it is simply inconceivable. It would be interesting to learn from its author what is the distinction between scarlet fever and scarlatina.

Thanking you for your well-timed remarks,—I am your obedient servant, F.R.C.P.E.

Edinburgh, November 29th, 1879.

THE DISCOVERY OF THE DIFFERENCE BETWEEN TYPHUS AND TYPHOID FEVERS.

SIR,—In a letter headed "The Discovery of the Difference between Typhus and Typhoid Fevers", written by Dr. A. P. Stewart, and published in your JOURNAL of November 15th, that gentleman says he will yield to no one in this country the claim of priority.

It is generally admitted by a large number of medical practitioners in Glasgow, as well as by many others throughout both England and Scotland who are cognisant of the facts in connection with the matter under discussion, that but scanty justice has been done by most writers on the question to the claims of the late Dr. Perry of Glasgow. In proof of this, I will shortly mention one or two facts which, although known to many practitioners here, are not known to the medical profession generally.

In January 1831, fever became so prevalent in Glasgow, that the usual accommodation in the Royal Infirmary was found to be quite insufficient, and an auxiliary fever-hospital was opened under the charge of Dr. Perry, in which, during seven months, 1,145 cases were treated.

In August 1833, Dr. Perry was appointed one of the physicians of the Glasgow Royal Infirmary, and continued to act as such for many years, during which time a very large number of fever patients were under his care, as well as very numerous cases of small-pox. Shortly after his appointment, he appears to have been led to the conclusion that typhus was a disease quite distinct from dothinenteritis or gastro-enteritis, as typhoid fever at that time was usually termed. He frequently brought forward his new views at the fortnightly meetings of the Glasgow Medical Society, but failed, however, for a considerable time to convert any of the members of that Society.

I find, however, that, at the meeting of the Society of date May 19th, 1835, the following minute was made. "Dr. Perry having, on various occasions, stated to the Medical Society a number of propositions as the result of his observations in typhus fever in the Fever Hospital of Glasgow, which were not considered to be in accordance with the experience of the generality of the members of the Society, and, at the same time, their great importance, if made out, being fully admitted, on the motion of Mr. Watt, seconded by Dr. Macfarlane, it was agreed that five members of the Society should be appointed as a commission to visit the wards of the Fever Hospital along with Dr. Perry, who readily undertook to point out the facts upon which his opinions had been formed. The following gentlemen were appointed a Commission by ballot: Dr. William Weir; Dr. W. Young; Dr. John Pagan (late Professor of Midwifery in Glasgow University); Dr. John Macfarlane (late Professor of Practice of Medicine in Glasgow University); Mr. George Watt (Convener)."

The following is an excerpt from the minutes of a meeting held on October 6th, 1835.

"Mr. Watt, as convener of the Fever Commission, stated that the members of the Commission had repeatedly visited the Fever Hospital during the recess; but that, although their observations were nearly matured, their report was not in such a state of forwardness as to admit of its being laid before the Society at the present meeting. At the suggestion of the President, it was agreed that the report should be received on any conversation night during the session."

At a meeting on May 17th, 1836, "Mr. Watt, convener of the Committee, read the report of the Fever Commission. In accordance with a recommendation made in the report, a Commission, consisting of the undermentioned gentlemen, was appointed to continue the investigations during the present summer, and report to the Society next session: Drs. Cowan (Physician to the Hospital), Perry, Weir, Pagan, Lawrie, and Messrs. Watt and Ritchie."

I have in my possession a copy of this report, which homologates to a great extent the views at that time entertained by Dr. Perry respecting the distinct nature of typhus fever. The discussions that took place in Glasgow at this date excited a great deal of interest among the members of our profession; and the investigations which took place by the Commission under the guidance of Dr. Perry, as well as the instruction received at that time by Dr. A. P. Stewart, then a student of medicine and resident physician's clerk in the Glasgow Royal Infirmary, did, there is no doubt, direct his attention to a further personal study of fever. The result of this was the admirable paper published by him upwards of four years later, in October 1840, first in Paris, then in Edinburgh.

The only reference which he makes to this, however, in his paper is, when speaking of the eruptions observed: "Dr. Perry of Glasgow was the first whom I heard maintain the complete difference of the two eruptions, and I am now fully satisfied of the accuracy of that opinion".

In the *Edinburgh Medical and Surgical Journal* (vol. xiv, 1836) will be found the observations upon which the Glasgow Medical Society appointed a Commission to investigate and report. It has been objected that Dr. Perry's observations have not been sufficiently accurate and discriminating to aid much in the settlement of the question of non-identity of typhus and typhoid fevers, especially from the fact of his admitting that the intestinal lesions now held to be characteristic of enteric fever may be found in a proportion of the cases of typhus and small-pox.

With our extended knowledge, we know this admission to be incorrect; but it must be borne in mind that those observations were made at a time when none of the profession recognised the distinction between the fevers, and in the face of a considerable amount of opposition. Moreover, anyone who has had much experience in the treatment of fevers knows how difficult it is in cases met with every now and again to decide as to the exact type of fever, when the symptoms are somewhat indefinite.

Even Dr. A. P. Stewart, who claims the credit of the discovery of the difference between typhus and typhoid fevers, states that, out of twenty-two cases of typhus, Peyer's glands were distinctly elevated in two. Although aware that Dr. Perry's opinions upon this particular point became afterwards more in accordance with the facts, I admit that it is unfortunate that he did not publish the result of his subsequent experience.

While this inaccuracy in Dr. Perry's observations (if such it were) has been seized upon and made an argument for refusing to give any credit to the claims I now advocate, the other points of distinction embodied in the observations are altogether ignored. While ready and willing to accord all due praise to Drs. Stewart, Jenner, Murchison, and every other labourer in the field of science who extends our knowledge of fevers and who assists in spreading abroad important truths, I will conclude my remarks by a short quotation from the observations published by my late father, Dr. Perry, in January 1836, and leave the question to every unprejudiced reader to decide for himself who has the best claim to priority. "Inflammation of the membranes of the brain, of the bronchi, and of the mucous membrane of the stomach and intestines, and various febrile affections arising from cold, fatigue, improper ingesta, etc., more particularly disease of the aggregated glands of the ileum and the mucous follicles, often termed dothinenteritis or gastro-enteritis, have been too often confounded by medical practitioners with typhus fever, though they are characterised by dissimilar symptoms, and require a very different mode of treatment."—I am, yours, etc., ROBERT PERRY, M.D.

11, Queen's Terrace, Glasgow, November 18th, 1879.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted members of the College at a meeting of the Court of Examiners on November 20th.

Allen, T. W. J., Louth, Lincolnshire (University College)
Bulteel, Marcus H., Stonehouse, Plymouth (St. George's)
Cock, John, South Molton, Devon (Guy's)
Jones, Arthur L., L.S.A., Llandilo, Carmarthen (London)
King, David A., Finsbury Circus (St. Bartholomew's)
Lukis, Charles P., Southampton (St. Bartholomew's)
Maclean, Caird R., M.D.Kingston, Ontario (New York School)
Marsh, Charles J., Yeovil, Somerset (St. George's)
Morse, Thomas H., Lound, near Lowestoft (Guy's)
Pepler, W. H. O. C., West Kensington Park (St. Bartholomew's)
Pilkington, Francis S., Leyland, Lancashire (Guy's)
Rake, Beaven N., Fordingbridge, Hants (Guy's)
Rice, Edward, Stratford-on-Avon (St. Bartholomew's)
Rolston, John R., Stoke, Devonport (Guy's)
Thomas, Walter D., Llanelly, Carmarthen (St. Bartholomew's)
Townsend, Knowlson, L.R.C.P.L., Wellington Road, N.W. (St. Bartholomew's)
Webster, Ridley M., Colebrook Road, N. (Middlesex)
Wooldridge, Leonard C., Bernard Street (Guy's)

Of the ninety-nine candidates examined, six were approved in Surgery, and, when qualified in Medicine, will be admitted members of the College; and twenty-seven candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. With this meeting of the Court, the examinations for membership for the present year were brought to a close.

At the half-yearly primary examination for the Fellowship of the College on November 25th, the following gentlemen were reported to have acquitted themselves to the satisfaction of the Board of Examiners; and, when eligible, will be admitted to the pass-examination.

Barlow, John, M.D.Edin., diploma of membership of the College dated November 17th, 1874, of the Glasgow School
Brown, James, L.S.A., May 8th, 1867, Birmingham School
Dale, Frederic, B.A.Cantab. and L.R.C.P.Lond., May 22nd, 1879, St. George's Hospital
Duncan, William Archdeckne, L.S.A., April 22nd, 1879, St. Thomas's Hospital
Finch, Henry, M.D.St. Andrew's and L.S.A., April 11th, 1861, University College
Haig, Alexander, B.A.Oxon., July 28th, 1879, St. Bartholomew's Hospital
Taylor, James, L.R.C.P.Lond., January 24th, 1865, Glasgow School
Tidswell, Herbert Henry, April 25th, 1877, St. George's Hospital

The following gentlemen passed on November 26th.

Collins, William J., St. Bartholomew's Hospital
Cutfield, Arthur, Cambridge School
Hardie, James, M.D.Edin., Manchester School
Lewis, William H. P., St. George's Hospital
Lilley, James H., B.A.Cantab., University College
Maitland, Alfred D., University College
Norvill, Frederick H., King's College
Sharples, William H., Manchester School
Turton, James, Charing Cross Hospital
Willis, Arthur K., B.A.Oxon., St. George's Hospital

Fourteen candidates out of the thirty-two examined, having failed to acquit themselves to the satisfaction of the Board of Examiners, were referred to their anatomical and physiological studies for six months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, November 27th, 1879.

Myers, Arthur Thomas, 3, Bolton Row, W.
Shirreff, William Henry, Edinburgh
Thompson, Charles Emelius, 10, Delamere Street, W.
Wallace, James Robert, Bengal

The following gentlemen also on the same day passed their primary professional examination.

English, Edgar, London Hospital
Talbot, Edward, St. Thomas's Hospital
Trevor, Henry Octavius, St. Thomas's Hospital

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences in Medicine and Midwifery of the College, held on Monday, Tuesday, Wednesday, and Thursday, November 10th, 11th, 12th, and 13th, 1879, the following candidates were successful.

For the Licence to Practise Medicine.—Robert Jonathan Baylor, William Henry Bourke, Winthrop Benjamin Browning, Valentine Plunket Dillon, Francis Joseph Doyle, Joseph Langan, Lucas Alfred Middleton, Arthur Patrick O'Connor, Daniel Ryan, Frederick Thomas Skerrett, John Christopher George Staley, and Richard Henry Symes.

For the Licence to Practise Midwifery.—Robert Jonathan Baylor, William Henry Bourke, Abraham Cohen, Valentine Plunket Dillon, Francis Joseph Doyle, Joseph Langan, Lucas Alfred Middleton, Arthur Patrick O'Connor, John Dominic Quin, Daniel Ryan, and Richard Henry Symes.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880

BALROTHERY UNION—Medical Officer for Workhouse, at a salary of £90 per annum, and £10 yearly as Consulting Sanitary Officer. Residence within five miles of Workhouse. Election on the 15th instant.

CENTRAL LONDON OPHTHALMIC HOSPITAL—Assistant Surgeon. Applications on or before December 10th.

DUNFANAGHY UNION—Medical Officer of the Cross Roads (Falcaragh) Dispensary District, Gweedore portion. Salary, £100 per annum, with £10 per annum as Medical Officer of Health. Registration and Vaccination Fees. Election on the 17th instant.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

*HAMPSTEAD PROVIDENT DISPENSARY—Medical Officer. Applications on or before the 27th instant.

*LONDON LOCK HOSPITAL—House-Surgeon. Applications on or before December 10th.

*LONDON HOSPITAL—Medical and Surgical Registrars for 1880. Salary, £100 per annum. Applications on or before the 22nd instant.

*MIDDLESEX HOSPITAL—Medical Registrar and Surgical Registrar. Applications on or before the 20th instant.

NEW BOROUGH ASYLUM, Nottingham—Medical Superintendent. Salary, £450 per annum, with furnished apartments, gas, coals, vegetables, and washing. Applications on or before December 16th.

SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon. Salary, £80 per annum, with board. Applications on or before December 22nd.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence] Applications on or before January 7th.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTHS.

BURMAN.—At Bamburgh, on November 21st, the wife of C. Clark Burmar, L.R.C.P.Ed., of a daughter.

GILMOUR.—On November 28th, at Hurstbourne Tarrant, Andover, Hants, the wife of John Henry Gilmour, M.R.C.S.E., L.S.A., of a daughter.

PUBLIC HEALTH.—During last week, 4,029 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 25 deaths annually in every 1,000 persons living. The annual death-rate was 20 per 1,000 in Edinburgh, 17 in Glasgow, and 31 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Portsmouth 15, Bradford 17, Sunderland 20, Newcastle-upon-Tyne 21, Oldham 22, Brighton 22, Norwich 22, Sheffield 22, Leicester 22, Salford 24, Birmingham 25, Manchester 25, Wolverhampton 26, London 26, Bristol 26, Leeds 27, Nottingham 27, Hull 28, Liverpool 29, and the highest rate 34 in Plymouth. The annual death-rate from the seven principal zymotic diseases averaged 3.9 per 1,000 in the twenty towns, and ranged from 0.5 and 0.7 in Oldham and Wolverhampton, to 5.5 and 5.8 in Leeds and Liverpool, and 7.0 in Plymouth. Scarlet fever showed the largest proportional fatality in Leicester, Nottingham, Bristol, and Newcastle-upon-Tyne; measles in Liverpool, Plymouth, and Leeds. Diphtheria caused 8 deaths in London and 2 in Birmingham. Four fatal cases of small-pox were recorded in London and its outer ring of suburban districts, but not one in any of the nineteen large provincial towns. In London, 1,802 deaths were registered, being 45 above the average, and giving an annual death-rate of 26.0. The 1,802 deaths included 3 from small-pox, 78 from measles, 102 from scarlet fever, 8 from diphtheria, 49 from whooping-cough, 28 from different forms of fever, and 13 from diarrhœa—in all, 281 deaths, which were one above the average, and equal to an annual rate of 4.1 per 1,000. The deaths referred to diseases of the respiratory organs, which in the seven preceding weeks had ranged from 190 to 499, further rose last week to 576, and exceeded the corrected weekly average by 89; 373 resulted from bronchitis, and 153 from pneumonia. Different forms of violence caused 38 deaths; 35 were the result of negligence or accident, including 14 from fractures and contusions, 7 from burns and scalds, 2 from poison, and 7 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 33.2°, and 7.7° below the average. The general direction of the wind was north-easterly, and the horizontal movement of the air averaged 7.8 miles per hour, which was 4.5 below the average. Rain or melted snow was measured on four days of the week, to the aggregate amount of 0.19 of an inch. The duration of registered bright sunshine in the week was equal to 20 per cent. of its possible duration.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu , 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London—Dr. Gowers will read a paper on, and give Microscopical Demonstrations of, "The Diseases of the Spinal Cord". The Specimens will be on view at the Society's Rooms at eight o'clock P.M.

TUESDAY.—Royal Medical and Chirurgical Society. 8 P.M.: Ballot. 8.30 P.M.: Mr. H. Morris, "On Two Cases of Carcinoma of the Breast preceded by so-called Eczema of the Nipple and Areola"; Dr. Thin, "On Eczema of the Nipple and Cancer of the Breast, the Nature and Mutual Relations of their Morbid Conditions".

WEDNESDAY.—Hunterian Society. 7.30 P.M.: Council Meeting. 8 P.M.: Dr. Herman will exhibit a specimen of "Missed Abortion", and relate a case of "Concealed Accidental Hæmorrhage"; Mr. Rivington, "On Two Cases of Aneurism treated by Esmarch's Bandage".

THURSDAY.—Harveian Society of London, 8.30 P.M. Harveian Lecture. Mr. Edmund Owen, "On Certain Practical Points in connection with the Surgery of Childhood".

FRIDAY.—Clinical Society of London, 8.30 P.M. Mr. Croft, "Analysis of Forty-five Cases of Excision of the Hip-joint"; Mr. R. W. Parker, "On a New Method of Excising the Hip-joint"; Mr. Pick, "A Case of Subastragaloid Dislocation"; Dr. Lediard will show a Case of Excision of the Hip-joint in an Adult Two Years after Operation.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

MR. PEARCE (Plymouth) informs us that his paper "On the Treatment of Consumption", on the appearance of which in a local paper we recently commented unfavourably, was forwarded without his knowledge by the publisher of the *Medical Press* to the *Plymouth Mercury*. We observe, in fact, that the publisher makes in his last number that discreditable avowal, pretending, apparently, that he sees no difference between news paragraphs, which may be harmlessly copied by political daily papers, and communications of a technical character communicated by medical men on the treatment of disease to a medical paper for discussion by their medical brethren.

CABS FOR COUNTRY PRACTITIONERS.

SIR,—In your impression of the 29th ultimo, a "General Practitioner" asks about a two-wheeled cab for country practice. When I was in general practice in the East Riding of Yorkshire, I had a covered cab to seat four people. Nothing I have had since has been so satisfactory; and although this is a very hilly country, I am now having one built for me. My horse is 14.3 high, a strong cob. It has the advantage of having the driver under cover, driving through the open window in front; and when the rain beats in, the windows can be closed and the reins put through a slit over them, in which they work on a roller. The top takes off and makes a comfortable open car. The only requirement is, that you should have a horse which does not need much whip, as it is necessary to open the window to use the whip when the rain necessitates driving with it closed. The car is built and finished like a circular fronted brougham, but the door is behind. The maker is William Roberts, coachbuilder, of Great Driffield; the price is fifty guineas.—Yours truly,

Halifax, Dec. 1st, 1879. THOS. BRITTON, M.D.

SIR,—I should be greatly obliged if any of your correspondents would kindly give me any suggestions in the following case. A young lady, aged 19, has suffered several years from what appears a chronic congestion of the Schneiderian membrane. The membrane looks abraded, but there is no discharge, but fibrinous casts occasionally come away, with a slight staining of blood. In cold weather, and frequently after meals, the end of the nose on the affected side gets very red; there is a dry burning sensation in the nose, and occasionally intense itching. The general health is very good, with the exception of dyspeptic troubles.—Yours obediently, OZÆNA.

POISONING OF INFANTS BY OPIATES.

SIR,—Mr. Good having wisely brought before your notice the report of an inquest held here on the 31st ultimo, and whose communication appears in the JOURNAL for November 22nd, I should like to give a few more details of the case, and when these other facts are known it will still be more plainly apparent that the jury returned a wrong and misleading verdict. It is very uncertain what dose of the Godfrey's cordial was given to the infant. A pennyworth was obtained from the druggist for the mother, who took most of it, leaving a little in the bottom of the glass, which she poured into a spoon and gave to the baby. The nurse who gave evidence at the inquest said there would not be more than four drops in the spoon; but four drops were not actually measured by dropping. The nurse is aged, and by the meagre light of a lamp it is very likely she could not have formed a very correct idea as to how much there really was in the spoon, and I should think it most probable that the child had considerably more than four drops.

You will be surprised to learn the strength of this Godfrey's cordial. The druggist in his evidence stated that he made it in the proportion of one ounce of gum opium to the gallon of water and syrup, etc. Now, if all the properties of the opium were abstracted, there would be equal to three grains of opium in one ounce of the cordial; but even supposing only two-thirds were abstracted, there would be two grains of opium in an ounce—an extremely dangerous compound to give to infants.

The coroner summed up in a very clear manner, putting the nature of the evidence plainly before the jury; and if they had only received the enlightenment and instruction from the coroner's summing up which they might have done, they would have returned a different verdict, and not one opposed to his advice. But to show the extraordinary intelligence of the "twelve countrymen", they, after a consultation in private, at first gave their verdict as "Death from natural causes, accelerated by diarrhœa". And upon the coroner explaining that diarrhœa was a natural cause, and that therefore the last three words of this verdict were unnecessary, they agreed to withdraw the words "accelerated by diarrhœa", and let their verdict be recorded as "Death from natural causes". I think that any one knowing the facts of the case will agree with me that there is little doubt the child died from the effects of the narcotic.—I am, sir, yours obediently,

WM. R. SERGEANT, L.R.C.P. & L.R.C.S.Ed.

Croyland, November 24th, 1879.

ERRATUM.—The names of the agents of the American Breakfast Cereals were given incorrectly last week, in reply to Dr. John Ogilvy. We are informed that the names are E. S. Hyett and Co., 210, Upper Thames Street, wholesale agents for London; F. W. Gedge for Bristol; and White, Son, and Stratton for Hull.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

DR. FOTHERGILL ON "SOCIAL PARIAHS" OF THE MEDICAL PROFESSION.

SIR,—In your issue of the 29th ultimo, you censure me in your Notes of the Week for penning a certain sentence in my letter to the *Philadelphia Medical Times* of October 11th. Taken alone, the sentence is offensive, unjust, and deserving of censure; but for my letter as a whole, I venture to say it requires no apology. Probably your eye fell on an extract from it in another American journal. The letter is devoted to "rural practitioners" exclusively. After pointing out different types of men, I wrote: "There are general practitioners who can handle a knife and a stethoscope, or a pair of midwifery forceps, equally well; clear-sighted, shrewd, given to reading; indeed, the most thorough practitioners and safest guides in disease we possess. Such men are a perfect Godsend to the district in which they happen to be located." I then describe the position of men who, for reasons of their own, settle in small towns or in unopposed village practices.

The offending sentence is preceded as follows. "Of course, there are intermediate types in plenty, and the man in a small town differs from the man who is alone in some villages. The town man, if successful, is somebody; he is on good terms with the gentry and clergy, and even has some prospect of being made a magistrate, a dignity to which a number attain. The man in the village holds a lower social status; he is at everybody's beck and call; he is patronised, or more often bullied, by the clergyman, especially if the parson is a 'swell'; and his existence is embittered by the pertinaceous impertinence of the relieving officer, unless he enter into a league with that worthy, in which case the paupers are apt to have a bad time of it. But, however irksome the doctor's life, it is comparative paradise to that of his wife. A doctor's wife in the country is a woman for whom I am deeply sorry; and how country doctors ever manage to get wives is a deep mystery to me. Of course, it goes without saying that the clergyman's wife does not treat her as an equal, while the resident squire's wife knows her distantly. She may be invited to lunch at the squire's on some particular event, but at no other time does she cross his threshold, though her husband may be invited to dinner now and again when some local event necessitates a dinner-party. The doctor's wife may be allowed to take a part in the Sunday-school teaching, if she chooses to be patronised by the rector's wife. The poor woman is isolated socially, unless there be a retired tradesman in the neighbourhood, or a well-to-do farmer or two. To be sure, the smaller farming folk like to see the doctor's wife and have a chat with her, while her husband is inside seeing the patient. If she knows anything about butter, or has any information of a practical character to give on the subject of the rearing and management of babies, she can do much to increase her husband's reputation. Here and there, moreover, there is a doctor's wife who can do much to further her husband's interests, especially if she have some money of her own. She visits a good deal, talks well, and listens well; never misses the opportunity to give her husband a boost (a lift), and skilfully explains away anything that may not redound to his credit. In fact, she protects him wonderfully from the abuse which otherwise might be showered upon him, and stops any scandal that would otherwise be circulated. And where a doctor has not such a wife, lies are told about him to a very injurious extent. Of course, a country doctor must be married; there is not a ghost of a chance of his succeeding without a wife; the clergyman's wife could not possibly be attended by a doctor who was single. Indeed, to my mind, ladies must have very little confidence in their own virtue when they make such a fuss as they do about married doctors; sometimes the outcry is scarcely decent. So the poor man has got to have a wife; and some innocent, trusting maiden gives herself up to a life which, at best, has very little in it that is attractive; and if she prove a fertile vine, and the progeny get ahead of the income, then the life of a toad under a harrow is bliss compared to her existence. In the United States of America, a doctor holds at least a respectable social status; in this country, with few exceptions, his position is anomalous, and his wife is a social pariah."

From an extensive acquaintance with American doctors and their wives, though I have not yet visited the United States, I am led to the conclusion that the medical man there holds a better social position than he does with us. As to the expression of my views as given above, these views determined me to remain a bachelor at a time when circumstances compelled me to be a village doctor.

J. MILNER FOTHERGILL, M.D.

23, Somerset Street, W., November 29th, 1879.

MR. JAMES DONALDSON'S letter had perhaps better be addressed to the Committee of Council.

SIR,—A patient of mine, aged eighty-four, has lately surprised his friends as well as myself by throwing his spectacles aside, and reading his Bible and newspaper without their aid. Will any skilful person tell me how this can be (and fact it is) after twenty years of aided vision?—Yours, etc., OPTIC.

P.S.—The eyes are normal in every respect, but were not examined during his spectacle-using period.

*** Before any answer can be given to such a question, it is necessary to know—1. Has his acuteness of vision for distance decreased since his acuteness of vision for near objects increased? 2. Is there any change in the size of the pupil? 3. Is there any increase of the antero-posterior axis? Our correspondent should, in fact, consult an ophthalmic surgeon for his patient.

DR. HENRY BENNET.—The paper shall have early attention.

M.D., who on the 22nd ultimo asked for information concerning habitual drunkards' retreats, is requested to communicate with Mr. Charles Marshall, of Stamford, who is proposing to establish such a retreat under the new Act.

PROLAPSUS ANI.

SIR,—Would any of your readers kindly suggest a form of treatment likely to benefit me? I have suffered more or less from prolapsus ani for nearly three years, which necessarily is a great hindrance to my carrying on my profession. I have taken strychnine, and used cold water and astringent injections, with but little relief. I need scarcely state that the prolapsus becomes aggravated after walking exercise; indeed, a good night's rest does not appear to improve matters materially.—Yours obediently, L. F. P. S.

DR. TAYLOR (Bayswater).—Documents only just received: too late, therefore, for insertion before the meeting.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

OBSTINATE CONSTIPATION IN AN INFANT.

SIR,—I should be much obliged if any of the readers of the JOURNAL would advise me what treatment to adopt in the case of a fine, otherwise healthy, child, sixteen months old, who is troubled with obstinate constipation, and has so suffered since her birth. I have tried every mode of treatment I can think of, and now I am resorting to the use of enemas every alternate day, which always brings away large scybalous masses. Is there any article of diet that could be used with advantage?—Yours very truly, L.R.C.P.

Sheerness, November 20th, 1879.

SIR,—May I, through the medium of the JOURNAL, ask if any of our members can inform me of an institution, public or private, where a patient of mine can send a little girl, of feeble intellect, to be maintained and educated at a cost not exceeding £25 *per annum*?—Yours obediently, THOS. JAS. WALKER, M.D.

18, Westgate, Peterborough, December 1879.

EXCESS OF SUICIDES IN LOCAL PRISONS.

SIR,—In last week's JOURNAL, attention is drawn to the second report of the Commissioners of Prisons, in which a comparison is made between the number of suicides committed in local prisons and that in convict establishments. As surgeon to one of our largest local prisons, I would, with your permission, make a few remarks upon this subject. Any comparisons made between local prisons and convict establishments must be, to a very great extent, misleading in the deductions drawn from them, for the following reasons. The inmates of the two places are, for the most part, very different from each other. Those in our local prisons consist not only of "convicted" prisoners, whose sentences range from three days to two years, but of "remanded" prisoners", "trial" prisoners, "bail" prisoners, and "debtors"—in fact, a very heterogenous mass, many of them still more or less under the influence of alcohol, and many who have never previously been inside a prison, and who, consequently, feel their position most acutely. On the other hand, the inmates of our convict establishments are, with very few exceptions, old and hardened criminals, to whom the inside of a prison is anything but a *terra incognita*. They have long since passed through their apprenticeship, are well versed in the ways of prison life, have received their sentence of penal servitude with perfect equanimity, and, after a short sojourn in a local prison, have been drafted off to a convict establishment, and may be regarded as "educated criminals". In the next place, the calculation, which has been based upon the average population, is not fair as regards the local prisons, which have a much larger fluctuating population than the convict establishments. In the local prisons, the sentences range, as a rule, from three days to two years, whilst five years is the shortest term of penal servitude; consequently the convict population of 10,000 will not represent anything like as large a number of prisoners actually received during the period named in the report as a similar population in the local prisons would. Take, for instance, this prison at Salford (known now as Her Majesty's Prison, Strangeways, Manchester), which is credited with the largest number (thirteen) of suicides during the five years and a half ending March 31st, 1879. The daily average population during that period was in round numbers 900, but the actual number of prisoners received was 50,000. Now, there is no convict establishment in which the committals bear a like proportion to the daily population.

The writer of the article in the JOURNAL has come to the conclusion that the "excess of suicides in local prisons" over those in convict establishments is due either to "excess of harshness" in prison discipline, or "to some defects in administration, which are not creditable to the local authorities". A careful examination of the thirteen cases which occurred in this prison will, I think, scarcely justify such a conclusion: and here, I would remark, that the local authorities are not responsible for the "separate system" which is adopted, and, no doubt, very properly so, in most, if not all, local prisons. Of the thirteen cases, five were "unconvicted" prisoners, either "remanded" or "sent for trial", and committed suicide either immediately after their admission or within a few days of it; eight had been sentenced to terms varying from seven days to eighteen months, and committed suicide—two the day after being sentenced, one two days afterwards, one four days, one five days, one a month, one six months, one two months and nine days. Of the whole number, only the last three can fairly be said to have had any real experience of prison discipline, harsh or otherwise. The large proportion which is here seen as occurring in the "unconvicted" class, coupled with the fact that during the same period seven cases occurred in a similar class at Clerkenwell, points, I think, very significantly to a most important factor in the excess of suicides in local prisons over the number reported in convict establishments. Dr. Gover is evidently of the same opinion, although he merely uses the word "perhaps", where I should feel inclined to say "undoubtedly".—I remain, yours, etc.,

CHAS. HITCHMAN BRADDON, M.D., Surgeon to
Nov. 25, 1879. H. M. Prison, Strangeways, Manchester.

A. D. HAMILTON.—We are inclined to believe, from the contradictory notices in the German papers, that the whole affair is a mare's nest. Dr. Cordwent appears to confound "pure alcohol" with absolute alcohol—two different things.

WANTED, A DIAGNOSIS.

SIR,—I have at present a patient whose case seems to me a somewhat interesting as well as an obstinate one, and I therefore submit it for the consideration of the profession, so that those who have had experience of similar cases may kindly give me the benefit thereof. The case has been running for about eighteen months, during a considerable portion of which time I have been in attendance, so that I have had ample opportunity of making myself acquainted with all its details. The family history is good, with the exception of the father, who died at middle-age with some chest-affection. The personal history is very good. So far as my patient remembers, he has never been a day off duty with ill health. By profession he is a schoolmaster, aged 48, of tolerably good *physique*, sedentary habits, and given to literature. The patient himself is inclined to attribute the affection to a terrible fright which he received about the middle of July 1878, on being suddenly surrounded by the sea in a dense fog. Shortly after this, he began to experience a difficulty in swallowing: potatoes were the great article of diet he failed to master. Subsequently he failed with butcher-meat; and gradually a like difficulty was felt with the most common articles of food. Latterly, the principal (in fact, almost sole) sustenance has been liquids and semi-liquid food. In March 1879, I first prescribed for this gentleman. In April and May, there was little or no attendance; in June and July he was worse, and in the last week of August he was so bad on one occasion that he swallowed absolutely nothing for twenty-four hours. I was sent for,

and passed a bougie, and thereafter insisted on seeing my patient try to eat. He first had beef-tea with bread, and then minced collops. Shortly afterwards he went on vacation, during about three weeks of which he was able to swallow mince, and even roast, meat fairly well. He was at a party, became heated and fatigued, and suddenly thereafter lost the power of deglutition. There is occasionally a dull heavy pain over the lower part of the chest; also a sensation in the œsophagus, as if mucus were constantly gathering in it. The patient himself thinks that this mucus accumulating prevents the passage of food into the stomach. Objective symptoms are almost entirely wanting. The patient is certainly thinner, but not so much so as one would expect. There is no malignant cachexia; no sweating; no thirst. The bowels are regular. At times, and more particularly of late, there is a profuse secretion of white frothy viscid mucus, which causes a good deal of expectoration and occasional retching, so that at times considerable quantities of what food is taken is ejected from the stomach. Neither the laryngoscope, œsophageal bougie, nor test-tube reveals anything. There is absolutely no difficulty in passing a large-sized bougie; yet even a small bit of bread sticks. There is no sign of tumour externally; no increase of cardiac dulness, or irregular or interrupted pulsation in the carotids or radials. The heart-sounds are natural, with perhaps slight accumulation of the first sound at the base. The ophthalmoscope has not yet been used, but vision is in no way interfered with. The patient is of a sensitive nature, and has certainly had worry lately, but his teaching has never been discontinued.

The treatment has consisted of as much rest and quiet as possible; passing of bougie at least once a week latterly; and as good nourishment in the shape of eggs, milk, etc., as he can swallow. The epigastrium and upwards has been blistered. As to drugs, amongst others, bromide and iodide of potassium, bromide of ammonium, mineral acids, chloral, charcoal, nitrate of silver, creasote, hydrocyanic acid, etc., have been used. Latterly I have used the tinctura valerianæ ammoniata in drachm-doses twice daily; but though it has now been employed upwards of six weeks, has effected no improvement. In addition, many other drugs have been used from time to time, but with no better result.

If a diagnosis, or even a likely treatment, can be suggested, I will be very glad to accept it, and chronicle the future history.—Yours, etc., A. D. L. W.

Patients and Fees.

SIR,—The judge's decision in the case "Prosser v. Roe", reported at page 835 of the JOURNAL, is in many respects satisfactory, but exception may reasonably be taken to his remark: "The other visits were made during the daytime, and there was no doubt that on those occasions Mr. Prosser also visited other patients, and therefore he was not entitled to a special fee for these visits, but would be allowed ten shillings for each." This implies that when a doctor has unfortunately to sue for his fees, all the defendant has to prove or declare is, that the doctor was attending somebody else, and therefore could not claim a full (or special) fee. It would be curious to know by what process of reasoning this is arrived at: certainly there is no parallel in law. Thus a solicitor who sits in his chambers is entitled, and in most instances takes, his full legal fee, whether the number of his clients visiting him in one day is two or two hundred. Again, a barrister accepts briefs from as many solicitors as choose to retain him at assizes, both on the civil and criminal sides. The solicitor may say that many days he never sees a client, and the barrister that assizes come only once in three or six months, and that therefore both have to "make hay when the sun shines". But is this not equally true of every doctor? Are there not districts and streets which he does not visit for months? If the solicitor's and barrister's services are not diminished in value by being rendered to many on the same day, why should the doctor's be ruled to be less valuable on these very grounds?

It would occupy too much space to detail all the fallacies which the assumption that a doctor always has "other patients" implies; but it seems especially hard that a doctor—it may be after years of waiting—is not to reap the reward of his services being much in request, simply because they are much in request. Logic, this, which the lawyers do not apply to themselves.—I am, sir, yours truly, NOBILIS.

The Health of Watering Places.

DURING the third quarter of this year, the death-rate of Hastings was exceedingly low, being only 12.97 per 1000, against 14.23, 16.23, 13.26, 18.0, and 17.0 in the corresponding quarters of previous years. Ten deaths occurred during the quarter from zymotic diseases, five of these being from diarrhœa. The death-rate of Scarborough during the same period was 19.58, against 19.85 in the third quarter of 1878. Forty-nine out of the 152 deaths were those of persons aged 60 and upwards, two persons dying between the age of 90 and 100 years, and one at the age of 100. Enteric fever caused four deaths (one being an imported case), and diarrhœa five, these being all the deaths from zymotic diseases. At Whitby, the rate was a little less than 20 per 1000; but, after making due allowance for visitors and for the great influx of persons employed in the herring fishery, the corrected rate would probably be about 15.3. Typhus fever caused one, measles three, whooping-cough one, and diarrhœa one death. The number of deaths from violence and accident was unusually large.

Solid India-rubber Bandages.

AN OLD PRACTITIONER.—1. The following practical directions, which are given by Dr. F. Stuart, in the proceedings of the Medical Society of the county of King's, United States, are very useful.

The mode of application is important. It should be applied so as to make gentle, even pressure. It should not give the sensation of squeezing. It is only necessary to put it on tight enough to keep its place. It does not readily slip. Each fold should overlap the previous one about half an inch. It is not necessary to make any reverse turns—only to wrap it round continuously. Its elasticity makes it fit everywhere with equal smoothness and comfort. It should always be begun at the toes. It is applied directly to the surface, no protective being anywhere necessary. I always direct the patient to take it off after getting into bed, having previously made ready two basins of water by the bed—one to sponge the leg, and the other to wash off the bandage. Then simply cover the ulcer or eczematous patch with muslin, so as not to soil the bed-clothing. The bandage is hung over a chair till morning. It is to be reapplied before rising. No ointment or grease of any kind should ever be used, as it soon destroys the rubber.

2. The great points in selecting an India-rubber bandage are, according to the first introducer, that it should be of satiny smoothness, and made of pure well-aired Para rubber. Those bandages which we have seen made by Maw, Son, and Thompson, Hooper and Co., and those imported by Krohne and Sesemann, all answer well to these tests. We have examined the material and process of manufacture of the English manufactories just named, which are faultless; on the other hand, we have had samples submitted to us by other manufacturers, English and American, which do not respond to these requirements; they are rough, irregular in surface, and bear the marks of a pressure from a textile fabric. These are unsuited for use for the cure of ulcers, varicose veins, and skin-diseases, in the way recommended by Dr. Martin, who has the great credit of having introduced this most valuable and effective treatment.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

Royal College of Surgeons of England.

THE following were the questions on Anatomy and Physiology submitted to the candidates at the half-yearly examination for the Fellowship of the College of Surgeons on November 21st, when they were required to answer all the four questions. 1. What do you understand by the term "arterial tension"? How is its amount estimated? By what circumstances is it modified? 2. Describe the minute anatomy of the grey matter of the cerebral hemispheres in man. What functions have been assigned to it? and upon what evidence? 3. How would you expose in an entire subject the arch of the aorta, as far as the fourth dorsal vertebra? What are the relations of each part of the arch? Give also the topographical indications on the chest-surface. 4. The brain having been removed, how would you trace out the course, connections, and distribution of the second division of the fifth nerve?

The following clinical cases, some of them of great interest, were submitted to the candidates at the pass-examination for the diploma of Membership of the Royal College of Surgeons just concluded:—Retained testicle, with hernia; syphilitic ulceration of the tongue; psoas abscess; enlarged testicle; syphilitic sore-throat and eruption; enlarged inguinal glands; cheloid tumours; enlarged cervical glands; orchitis; retained testicle; paralysis of musculo-spinal nerve from fractured humerus; genu valgum, and amputated forearm in the same patient (a boy); popliteal aneurism; wound of the eye, with prolapsus of the iris; inflammation of the external tunics of the eye; diseased and perforated palate from syphilis in a boy; enlarged testicle, with hydrocele; inflamed and enlarged varicose veins; divided ulnar nerve; etc. The cases were selected from St. Bartholomew's, St. George's, Guy's, and University College hospitals.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Mr. John Marshall, London; Dr. Palfrey, London; Mr. G. Lawson, London; Dr. S. Fenwick, London; Mr. Clover, London; Dr. Graily Hewitt, London; Dr. Wadham, London; Dr. Boulton, London; Mr. F. R. Fisher, London; Mr. G. Cowell, London; Dr. J. P. Irvine, London; Dr. Althaus, London; Mr. W. S. Savory, London; Dr. W. M. Campbell, Liverpool; Dr. C. Handfield Jones, London; Dr. E. B. Baxter, London; Dr. Rayner, Hanwell; Dr. Morell Mackenzie, London; Dr. Joseph Bell, Edinburgh; Dr. W. H. Day, London; Mr. J. H. Morgan, London; Dr. G. M. Bacon, Fulbourn; Mr. E. Owen, London; Dr. R. E. Thompson, London; Mr. Bevan Lewis, Wakefield; Mr. H. Page, London; Dr. W. Carter, Liverpool; Mr. Annandale, Edinburgh; Dr. Hilton Fagge, London; Dr. V. Harris, London; Dr. J. B. Potter, London; Dr. Morgan, Manchester; Mr. Wheelhouse, Leeds; Dr. Greenhow, London; Mr. W. M. Baker, London; Dr. Sawyer, Birmingham; Dr. W. G. Smith, Dublin; Mr. Lund, Manchester; Dr. F. Warner, London; Mr. A. Clark, London; Dr. J. P. Cassells, Glasgow; Dr. Rutherford, Edinburgh; Dr. Russell, Birmingham; Mr. T. P. Teale, Leeds; Dr. A. W. Foot, Dublin; Sir G. Burrows, London; Dr. Playfair, London; Dr. De Bartolomé, Sheffield; M.D.; Sir. W. Gull, London; Dr. Major, Wakefield; L.K.Q.C.P.I.; The Secretary of the Faculty of Physicians and Surgeons of Glasgow; Mr. G. W. Wigner, London; The Director-General of the Army Medical Department; Mr. A. D. Hamilton, Shanklin; Mr. C. Farmer, Hexham; Dr. Walker, Peterborough; M.A.; Dr. Cordwent, Milverton; Dr. R. Beveridge, Aberdeen; Dr. Hill, London; Dr. Fergusson, Peebles; Dr. W. Campbell, Dunse; Dr. T. F. Blake, London; Messrs. J. G. Ingram and Son, London; Mr. R. Park, Glasgow; M.B., M.A.; Dr. Ballard, London; Dr. J. P. Lewis, Dalbeattie; Mr. H. Thomas, Birmingham; Kerriensis; Mr. J. Quirke, Birmingham; Mr. S. J. A. Salter, London; Mr. J. Allan Grey, Leith; Mr. J. W. Wilson, Plymouth; Mr. A. H. Robinson, Hull; Dr. J. Wheeler, London; Dr. John H. Galton, Anerley; Mr. Morris, London; Dr. C. H. Braddon, Manchester; Dr. Minderap, Amsterdam; Dr. Ogilvy, Southsea; Cosmopolite; Mr. R. P. Oglesby, Leeds; Mr. Smith, Oswestry; Mr. P. Miall, Bradford; Dr. G. Roper, London; Scotus; Mr. Henry Greenway, Plymouth; Mr. P. Farrar, Morecambe; Mr. J. P. Bartlett, Southampton; Mr. W. Skinner, Edinburgh; Mr. J. R. Lunn, London; Mr. S. Alford, London; Dr. C. Parsons, Dover; Mr. G. C. Coles, London; Our Edinburgh Correspondent; Mr. Churchill, London; Mr. Edmund Johnson, London; The Secretary of Apothecaries' Hall; Dr. Ord, London; The Secretary of the Medical Society of London; Mr. Mac Cormac, London; Our Dublin Correspondent; Dr. McKendrick, Glasgow; The Registrar-General of England; Mr. Noble Smith, London; The Registrar-General of Ireland; Dr. Lombe Atthill, Dublin; The Secretary of the Harveian Society; Dr. Ransome, Manchester; Dr. Laidlaw Purves, London; Dr. Gosset Brown, London; Mr. R. Jeffries, Chesterfield; The Under-Secretary, War Office; Dr. Greenfield, London; Mr. P. Smith, Canterbury; Mr. Nairn, Plymouth; Mr. C. Marshall, Stamford; Dr. S. Sutro, London; Dr. Cumming, Edinburgh; Mr. J. T. Mitchell, London; Dr. H. Bennet, Paris; Mr. T. Collins, Ripon; Mr. J. Pollard, Torquay; Mr. D. Collie, London; Dr. G. Taylor, London; Mr. Hallowes, Maidstone; Mr. J. Donaldson, London; Dr. R. Clement Lucas, London; Dr. Trollope, St. Leonard's-on-Sea; Dr. A. T. Wear, Newcastle-upon-Tyne; Dr. Ramskill, London; etc.

AN ESSAY
ON
CONTAGION: ITS NATURE AND MODE OF ACTION.

By JOHN SIMON, C.B., F.R.S.

[This paper was written in April 1878, as an article for Dr. Quain's forthcoming *Dictionary of Medicine*, and, from the intention with which it was written, has the form and references of a dictionary article. By way of postscript, two notes bearing present date, have been added.—November, 1879, J. S.]

The word "contagion" is applied in pathology to the property and process by which, in certain sorts of disease, the affected body or part causes a disease like its own to arise in other bodies or other parts; and the Latin word *contagium* (pl. *contagia*) is conveniently used to denote in each such case the specific material, shown or presumed, in which the infective power ultimately resides.

The property of contagiousness belongs to a very large number of the diseases which affect the human body. And in more than this direct way the property is of great interest to mankind. Contagiousness of disease is a fact not only for man, but apparently for all living nature; and the influence of contagion in spreading destructive diseases among domestic animals, and among those parts of the vegetable kingdom which contribute to the nourishment of man, is such as to make it of immense social importance that the laws of contagion should be well studied and understood. Further, just as contagion in the case of living bodies and their parts spreads disease from one to another, so, to an immense extent, in the case of certain matters which, though of organic origin, are not living, it spreads various processes of decay. The so-called fermentations which yield alcohol and vinegar, as well as that in which putrefaction consists, are contagious affections of the respective matters in which they occur: every cheesemonger knows that moulds of different kinds spread by inoculation, each in its own kind, from cheese to cheese; and if the Greek proverb "grape mellows to grape" be true of the living fruit, the apple-loft gives analogous experiences of contagion among the fruit which is garnered.

The rationale of the word "contagion", as now used, is that the property is understood to attach itself essentially to a material contact; not necessarily that, when infection is spread from individual to individual, the contact of the individuals must have been immediate; but that in all cases there must have been such passage of material from the one to the other as was in itself at least a mediate contact between them. And similarly, in those very instructive illustrations of the process of contagion which are furnished within the limits of a single diseased body by the propagations of disease from part to part of it, we can in general easily see that infection advances from part to part, either in proportion as part touches part, or in proportion as the one receives from the other the outflow of lymph or blood or secretion.

The various specific matters which effect contagion in the living body, the respective "contagia" of the given diseases, seem all to have in common this one characteristic: that in appropriate media (among which must evidently be counted any living bodily texture or fluid which they can infect) they show themselves capable of self-multiplication; and it is in virtue of this property that, although at the moment of their entering the body they in general do not attract notice, either as objects of sense or as causes of bodily change, they gradually get to be recognisable in both of these respects. Now, the faculty of self-multiplication is eminently one of the characters which we call vital; and when it is said that all contagia are self-multiplying things, this is at least very strongly to suggest that perhaps all contagia are things endowed with life.

In order to any general consideration of the question thus suggested, contagia may conveniently (even if but provisionally) be distinguished as of two main classes, differing, or at present seeming to differ, from each other in their mode of action on the organisms which they infect: one class, namely, that of Parasites; and the other class, that of the true or Metabolic Contagia. Of this separation, so far as present knowledge seems to justify it, the assumed grounds are: that each true contagium, in proportion as it multiplies in the body, transforms, in a way which is specific to itself and is different from the ways of other contagia, the bodily material with which it has contact; while, on the contrary, the parasite, however much it may grow or multiply in the body, produces no qualitative effects specific to itself, but only such effects as are of common kind to it and all other parasites—indications, namely, of its mechanical intrusiveness in the parts which it occupies, and sometimes of the drain which it makes on its host's general nutritive resources.

A.—Of Parasites, in relation to processes of contagion, little needs be said in the present article. When an organism or part of it is, in greater or less amount, inhabited by other organisms, animal or vegetable, which subsist on it, or its food or refuse, it of course may be a centre of infection to other (if susceptible) bodies or parts, to which it can transmit live parasites or their germs or seeds; for, when this transmission takes place, growth and self-multiplication, as in a colony, are the natural results which have to be expected; and in proportion as these occur, the newly-infected body or part gradually gets to suffer, like the old, from these particular derangements which make the type of parasitic disease. Some parasitic diseases, especially some of those of the skin, spread actively by direct contagion in ordinary intercourse; as, for instance, scabies by the migration of its acari, and porrigo (among children) by the spores of its microphyte; and the spreading of such diseases where they exist may, of course, be to any extent facilitated by aggregation of persons and uncleanliness of personal habits. There are cases in which parasitic disease spreads from animal to animal only in proportion as the one feeds on the other, and eats it with parasites still living in it; or in proportion as live parasite eggs or larvæ, discharged from the body of one animal, get conveyed with food (especially on raw herbage and in water) into the bowels of another. Considerable epidemics of trichiniasis in the human subject have been traced, chiefly in Germany, to infection from the pig, in cases where pork, abounding with trichinæ has been eaten, as sausage-meat or otherwise, in a raw or imperfectly cooked state; and in Iceland the very great sufferings of the human subject and the cattle from echinococcus have been traced to the influence of the dogs in spreading contagion from the slaughter-house, where they eat hydatidised offal, to the kitchen-gardens and water-sources and pastures, where they discharge tapeworm eggs from their bowels. (*See* articles on Porrigo, Scabies, Trichina, Hydatid, etc.)

The diseased states which consist in being colonised by parasites are diseases of indefinite duration, tending in some cases to indefinite increase. In cases where the disease consists in the presence of swarms of blood-sucking or otherwise exhausting animal parasites, symptoms of the blood-drain will of course gradually arise; but otherwise the parasite, whether animal or vegetable, operates only as a mechanical presence. Skin and mucous membrane will be irritated in their superficial layers, and in some cases more deeply, by the animal or vegetable parasites which breed on or in them, just as they might be by dead mechanical irritants: solid organs having cystic entozoa in them will in like manner show evidence of irritation by encapsulating the colonists; and the surrounding tissue will of course suffer compression and displacement in proportion as the colonisation (*e.g.*, in case of echinococcus) is compact and massive. In the case of trichiniasis—but, in our ordinary experience, in no other—the multiplication of the parasites, the burrowing of their young, and the general diffusion of these in the body, are processes of such extreme activity that, if the quantity of contagium taken into the stomach have been large, the innumerable local irritations suffice to make a very acute fever; but, even in this extreme case, the merely irritative type, though exaggerated, is essentially preserved.

As different sorts of animals are notoriously liable to different sorts of parasites, so, even among animals of one sort, as, for instance, in the human kind, the liability of different bodies to receive particular parasite-infections does not seem to be quite equal for all. Especially, the vegetable parasites seem to have their affinities determined or modified by the general state of health of the recipient; and there are cases in which it looks as if there ran in particular family-lines (perhaps with some slight chemical idiosyncrasy) a special liability to particular intestinal worms. There, however, is no reason to believe that in regard of the more important animal parasites, as particularly of trichina and the tæniadæ, the susceptibility of individuals to attacks is other than universal and practically equal.

B.—The true or Metabolic Contagia (to which the rest of the present article will exclusively refer)—the contagia which, in their respective and specific ways, operate transformingly on the live bodily material which they affect, are, perhaps, the most important of all the incidental physical influences which concern mankind. Whether they may all, at some time hereafter, admit of being named, like the parasitic contagia, in terms of biological classification, is a question which needs not in the first instance be raised; for meanwhile the identity of each separate true contagium is settled in experimental and clinical observation by the uniformity of the operation of each on any given animal body which it affects. Each of the diseases propagates itself in its own form in as exact identity as if it were a species in zoology or botany; and in each such repetition of the disease there is a multiplication—always a large, and sometimes an inconceivably immense multiplication—of material which has the same infective property. Evidences innumerable to that

effect are under daily clinical observation in this climate in instances of small-pox, measles, scarlatina, whooping-cough, enteric fever, mumps, typhus, syphilis, cow-pox, diphtheria, erysipelas, hospital gangrene, purulent ophthalmia and gonorrhœa, venereal soft chancre and phagedæna, etc.: for, barring fallacies, no man ever sees any one of those diseases produced by the contagium of any other of them; and any man who has before him a case of any of them can see that, however minute may have been the quantity of contagium by which the disease was started, the patient's diseased body (part or whole) yields for the time an indefinitely large supply of the specific agent. It is more or less habitual to some of the diseases that the infectedness of the patient is first made known to the observer by such general pyrexia as tells of change already far advanced in the circulating mass of blood; and it is only after this has shown itself that other symptoms, adding themselves to the fever, complete the more or less complex type which establishes the identity of the disease. But in many of the diseases it may be the case (either naturally or as result of experimental infection) that the first, and in some diseases the main or even the only, effects of the contagion are local changes, passing where we can from the first observe them; and the broad facts of metabolic infection, as regards waste of bodily material with concurrent increase of contagium, are, in many such cases, among our most familiar experiences. Most instructive, too, are the facts of contagion which are to be learnt in the study of tubercle: the contagium, introducible either by tubercular and certain septic inoculations through the skin, or internally by the infective action of the milk or diseased organs of tubercular animals if taken as food; and the contagium, when introduced, gradually spreading as it multiplies, and as lymph and blood carry it from the first infection-spot to other organs which now will repeat the process. And similarly in cancer (though the primary disease is at present of unknown origin and cannot be created by experiment) the repetition of the primary disease in secondary and tertiary propagations in the body of the sufferer is one of the most striking of all evidences of contagion; because of the great number of structural types which pass under the name of cancer, and the fidelity with which each of them is reproduced in the organ to which the contagion extends. A further fact of contagion, deserving notice in the present context, is the local spread of certain of these processes by continuity of tissue; as, for instance, in the continuous extension of phagedæna or hospital-gangrene from any centre of first inoculation, or of tubercular softening or cancer at the place where it begins: a mode of extension which indicates successive infective actions of matter on matter in spheres of ever-widening circumference;* and the like of which, but in rudimentary degree, may be traced in the areola of any acute inflammation.

In the physiology of the metabolic contagia, no facts are more characteristic or more important than those which show the relativeness of particular contagia to particular receptivities of body. First, and in intimate connection, as would seem, with a chemical electiveness of action which will presently be imputed to contagia, there is the preference which some particular contagia (however introduced into the system) show for particular organs of the body; so that, by the exercise of this preference, there is given to each of the diseases its own set of clinical and anatomical characters. Compare, as instances in this point of view, the respective local affinities of small-pox, enteric fever, mumps, syphilis, hydrophobia, etc.—Secondly, it may be noted that, in regard to some of the contagia, different persons, and particularly persons of different family-stocks, show original differences of susceptibility; original, namely, as distinguished from others, hereafter to be mentioned, which are acquired; so that, for instance, the severity with which scarlatina or diphtheria will strike in particular families contrasts with a comparative mildness of the same disease in other families or perhaps even with cases of apparently complete personal immunity under exposure to the particular danger: and recent researches have seemed to suggest as possible that, in the very wide differences of degree with which tubercular disease prevails in different families, an essential condition may be, that the families have widely different degrees of original predisposition towards some of the septic contagia.—Thirdly, there is the extremely suggestive fact with regard to many of our best-known febrilising contagia, that they run a course of definite duration, and that in this course, provided the patient do not die, all present, perhaps all future, susceptibility to the particular contagium is utterly exhausted from the patient; so that reintroduction of the same contagium will no more renew that patient's disease than yeast will excite a new alcoholic fermentation in any previously well-fermented bread or wine. The inference from this fact seems unavoidable, that each such contagium operates with a chemical distinctiveness of elective affinity on some special ingredient or ingredients of the body; and that exhausting this particular material in febrile process, which necessarily ends when the exhaustion is complete, is the bodily change which the contagium "specifically" performs.—Of not all metabolic contagia, however, can it be said that their operation runs so definite and self-completing a course. For, first, there are particular acute infections which, as a rule, kill; either (as appears to be the case in splenic fever when affecting man) because of the extreme magnitude of the transforming process which the contagium sets up, or else (as appears to be the case in hydrophobia) because the elective incidence of the contagium is on an organ indispensable to life; so that in such cases there is in fact hardly such an event as passing alive through the whole process of the disease.* And, secondly, there are the contagious dyscrasies, which are clearly characterised by their tendency to indefinite duration: syphilis, which oftener than not relapses in successive outbreaks, and often as years pass invades the body more and more deeply, and may after all never during life be ended; and tubercle and cancer, which, with almost invariable persistence, will in general steadily advance month by month to infect more and more of the body till the process eventuates in death.

The transmission of various contagious diseases in communities is of course greatly influenced, both in detail and in aggregate, by such differences of individual receptivity as were mentioned in the last section. Notably, as regards communities through which particular acute infections have had full run, fresh sparks of the contagium may find little or no fuel on which to act; and much new diffusion of the disease may not again be possible, till immigration, or births, or lapse of time operating in other ways, shall have reconstituted a susceptible population. And, given the susceptible population, circumstances of time and place are infinitely various (especially as regards quantity and quickness of personal or quasi-personal intercourse) in determining how far this population shall have particular contagia thrown in its way.

Also there are conditions, not primarily of a personal kind, which operate on a very large scale in determining the spread of some of the metabolic infections: giving to them respectively at certain times, in ways not hitherto understood, a special increment of spreading power, and in some instances also special malignity: and thus enabling them respectively from time to time to come into comparative prominence in national life, and perhaps at once or successively in many different countries, in the form of so-called Epidemics. Thus, it is matter of familiar knowledge that the fevers which are most habitual to this country, scarlatina, measles, small-pox, enteric fever, are of nothing like uniform prevalence,—that scarlatina, for instance, will be three times as fatal in one year as in another, and that small-pox is liable to even greater exacerbations: and it is known that temporary differences of this kind are not exclusively local,—that, for instance (to quote a late official report) "the epidemic of small-pox which began in England towards the close of 1870, and terminated in the second quarter of 1873, was part of a general epidemic outbreak of that disease, of world-wide diffusion, marked wherever it occurred by an intensity and malignity unequalled by any previous epidemic of the disease within living memory". The wider the survey which we take of epidemiology, the more certain it becomes to us that, outside the conditions which are independently personal or local, there are cosmical conditions which have to be considered. Doubtless, there are great epidemiological facts —such, for instance, as the first spreading of small-pox to America, or in our own times the increasing frequency of Asiatic cholera in Europe, which may be ascribed to novel conditions of international intercourse: but there are others, equally great, to which apparently no such explanation can be applied. For what reason it is that cholera every few years has its definite fit of extension in India,—or why diphtheria, which scarcely had a place in history till it overran Europe in the sixteenth century, and which since then had been rarely spoken of, began again some twenty-odd years ago to be comparatively important in England, —or why the plague of the Levant has for the last two centuries been so unfamiliar to us,—or why the yellow fever of the Mississippi has in particular years raged furiously in parts of Europe,—or why our black-death of the fourteenth century, though apparently still surviving in India, has never but that once been in Europe,—or whither has gone our sweating-sickness of three centuries ago—or whence have come the modern epidemics of cerebro-spinal meningitis:—these, and many like questions, which cannot at present be answered, seem to be evidence enough that, in the making of epidemics, contagion and personal susceptibility may be factors in a partly conditional sense. Influences which are called "atmospheric"—the various direct and indirect influences which attach to the normal succession and occasional abnor-

* Compare Tennyson's

"Little pitted speck in garnered fruit,
Which, rotting inward, slowly moulders all."

* Since the above was written there has been published by Dr. Ad. Offenberg of Wickrath in Rhenish Prussia, an apparently not incredible case of recovery under use of curare. *See* his pamphlet, *Geheilte Hundswuth beim Menschen*, Bonn, 1879. —November, 1879.—J. S.

mality of seasons, in respect of the insolation of our planet, and of the temperature and humidity of air and earth, are in general far too vaguely regarded as elements of interest in the present question, but are possible factors which no epidemiologist should omit from scientific consideration. For any definite knowledge which exists on the relation of particular conditions of season to the prevalence of particular epidemics, the reader is referred to the article "Epidemics", and to articles on the respective diseases.

In the passage of the metabolic contagia from person to person, various agencies may be instrumental,—bedding or clothing or towels which have been used by the sick, dirty hands, dirty instruments or other utensils, the washerwoman's basket, foul water-supply, stinking house-drains, contaminated milk or other food, the common atmosphere, etc.; but differences of that sort are only differences as to the means by which such communication is established with a diseased body as brings its products into relation with healthy persons; and the disengagement of infectious products from the bodies of the sick is pathologically the one influential fact. As regards the products which ought to be deemed infectious, the specially-diseased surfaces and organs of the patient, and the discharges and exhalations which they respectively yield, must always be regarded with chief suspicion; but suspicion, however much it may insist on them, must never disregard other sources of danger. Of some of the metabolic contagia we practically know, and of many of the others we may by analogy feel sure, that, when a given body is possessed by one of them, no product of that body can be warranted as safe not to convey the infection. Presumption against every part and product of the diseased body is by everyone readily admitted where there are vehement general symptoms of disease; but it is important to know that not only in such febrile states, but even in states of chronic dyscrasy, and even at times when the dyscrasy may be giving no outward sign, the infected body may be variously infective. Thus, in regard to constitutional syphilis, it is certain that the mere utero-catarrhal discharge of the syphilitic woman, or the sperm of the syphilitic man, or the vaccine lymph of the syphilitic infant, may possibly contain the syphilitic contagium in full vigour, even at moments when the patient, who thus shows himself infective, has not on his own person any outward activity of syphilis. Similarly, in regard to tubercular disease, experiment has proved beyond question that the milk of animals suffering from tubercle will, if taken as food by other animals, infect them through the intestinal mucous membrane; and there are independent reasons for believing that the tubercular contagium (like the syphilitic) will at times during the dyscrasy be contained in the seminal fluid, and that men, tubercular perhaps only in some degree which is not immediately important to themselves, may by that secretion convey fatal infection to women with whom they have conjugal relations.* Regarding many of the metabolic contagia, conclusive evidence exists that, when they are in operation in pregnant women, the fœtus will in general be infected by them; and this though the diseases (*e.g.*, small-pox, cholera, syphilis) be of the most different pathological types; but, with regard to pregnant animals affected with splenic fever, it is noticeable that Brauell, in his extensive researches, found the blood of the fœtus not to be infective.

In general, each contagium has its own favourite way or ways of entering the body; and these preferences are not only of speculative interest, as attaching to varieties of nature and natural habits among the contagia, but are of obvious practical importance as measures of the widely different degrees in which the different contagia are qualified to spread in communities. Thus, inoculation at broken surfaces of skin or mucous membrane has long been known as the ordinary mode by which the infections of syphilis, hydrophobia, splenic fever, cow-pox, and farcy or glanders, get admission to the body; and our best knowledge of some other infectious diseases (notably of tubercle) has been derived from inoculations intentionally made with their contagia for purposes of study. While probably all infections which tend to be of general action on the body can be brought into action in that way, and while some infections are not known to pass by any other mode of transmission, there are many infections which spread freely from subject to subject by atmospheric and dietetic communication; and the meaning of these preferences is hitherto not fully known. It seems that some contagia are so acted upon by air and water that they seldom or never reach the body in an effective state by those common means of communication,—some hardly, if at all, by water, and some not by air except with very close intercourse; and further, that, of contagia which reach the body in an effective state, some require, while others do not require, that an abnormal breach of surface shall give them special opportunity for taking hold. In some of the cases where a disease can be propagated in both ways—*i.e.*, certainly in small-pox, and apparently also in bovine pleuropneumonia, the artificially inoculated disease tends to be much milder than the disease otherwise contracted; but pathologically it is difficult to conceive any essential difference between those different modes of contagion. It may be presumed that, in the modes which are not by true inoculation, acts which are comparable to inoculation take place on internal surfaces; that, for instance, when particles of scarlatina-contagium are caught in the tonsils, and inhaled into the bronchi, and swallowed into the stomach, they begin by penetrating the texture of the mucous membrane, and by thus effecting as real an inoculation, with regard to the blood, as that which art or accident provides in other cases through the punctured skin. That previous abnormal breach of surface by artificial puncture or otherwise is not necessary to allow the infection of mucous surfaces is illustrated in ophthalmia and gonorrhœa; where apparently no other condition has to be fulfilled than that a particle of the blennorrhagic contagium shall be deposited on the natural surface of the mucous membrane. It deserves notice that, while a considerable number of the worst diseases of the domestic animals admit of being communicated to man by artificial inoculation, atmospheric communication seems to be very inapt, if not absolutely unable, to infect man with any one of them; and in this connection it may be of interest to remember that syphilis, one of the most familiar of human infections, but hitherto not traced to any brute ancestry, differs from our other current infections in requiring inoculation to transmit it.

When any metabolic contagium enters the animal body, it requires an interval of time, and in most cases a considerable interval, before its morbific effects can become manifest even to skilled observation. The period of latency or so-called incubation varies greatly in different cases. In hydrophobia, it is very rarely less than of one month, is certainly often of several months, and is said to be sometimes of years. In syphilis, the inoculated spot remains generally for at least a fortnight, and may remain even as much as five weeks, without any ostensible change; and the roseola of the general infection will not be seen till some weeks later, when generally at least three months will have elapsed since the first inoculation. In the acute eruptive fevers, when their contagium is transmitted by air, the first changes which ensue on infection are not external, and we cannot be sure what early internal changes may take place; but in small-pox, the fever (which is the first overt sign) does not attract notice till about the twelfth day after infection, nor the eruption till two days later; and in measles the incubation time, though perhaps less uniform, seems to be little (if any) shorter than that of small-pox. The septic contagia and the contagium of splenic fever seem to be of particularly quick operation; but even the most virulent septic contagium, when without admixtures which tend to complicate its action, will not begin sensibly to derange the infected animal till at least several hours after it has been inoculated. As regards the contagia last referred to, it is conceivable that the self-multiplication of the contagium in the form in which it proves fatal to life is a process which goes on continuously and uniformly from the moment of inoculation to the moment of death, and that the moment when signs of general derangement become manifest is the moment when this uniformly advancing process has accumulated in the system a certain quantity of result; but it does not seem easy to apply this explanation to the diseases of long incubatory period; and we can hardly conjecture what may be the latent processes—for instance, of small-pox, during the first ten or more days after contagium has been received.

[*To be continued.*]

* See Dr. Weber, in *Clinical Society's Transactions*, 1874.

POPULATION STATISTICS IN RUSSIA.—The official Board of Statistics at St. Petersburg has published some population figures, from which it appears that, in European Russia, there are annually born 1,619,108 males and 1,544,297 females, or an average total of 3,163,405 children of both sexes. On the other hand, the average annual deaths are 1,214,467 males and 1,167,929 females, or a total of 2,382,396 persons of both sexes. The population, therefore, shows an average increase of 781,000 a year—a percentage which, supposing the inhabitants always to multiply at the same rate, would double the population in fifty-eight years; whereas in Sweden, according to a similar method of calculation, this result would only be attained in sixty-two years; in Germany in sixty-eight; in Belgium in seventy-nine; in Austria in ninety-five; in Switzerland in ninety-nine; and in France in one hundred and sixty-five years. The high percentage of mortality in Russia is chiefly caused by the numerous deaths among children, more than the fourth part of whom perish before they are a year old; whereas in Prussia, of 1,000 infants only 165, and in England 140, die before that age. Measles, scarlatina, and diphtheria (says the *Novoye Vremya*) are making great ravages among the juvenile population of the capital; and, in certain districts of the Empire, the danger is so great that several colleges and infant schools have been closed.

REMARKS
ON
ANIMAL VACCINATION.

A Paper read at the Conference of the Parliamentary Bills Committee of the British Medical Association, on Animal Vaccination, December 4th, 1879.

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GENTLEMEN,—In rising to speak before this assembly, I feel that my temerity is great in discoursing to you on vaccination in the country of its birth, under the sky which has seen the growth of that to which we owe the most stupendous benefit with which the genius of man has ever endowed mankind. Permit me, before commencing my subject, to fulfil a religious duty in at once saluting the great name of Jenner. Jenner was struck with an idea which doubtless would have passed through a commonplace mind, but which was destined to fructify in his intellect. What were, in fact, the elements of this discovery which was to protect the world from the most frightful of scourges? They were of the simplest. It was known that an attack of small-pox generally preserved from an attack of the same disease; that, in short, it only once invaded the same person. Now, Jenner had by chance discovered another malady having in its fundamental external characteristic the closest analogy to the small-pox pustule. The distinctions between this affection and that of which it was the type, and which it so strikingly resembled in its outward aspect, were the almost complete absence of general reaction, and its entire powerlessness to spread the infection itself. To give intentionally this mild disease, which in the animal economy was equal to an attack of true small-pox, and thus to create in it an immunity during a certain duration of this specific processus—such was the idea which inspired Jenner, and from which he evolved the marvellous fact of vaccination. The history of this discovery is too well known to need to be here related. I only wish to point out—and this will not at all diminish the honour which will eternally attach to a venerated name—that Jenner was only able, notwithstanding the trials made during his lifetime, to lay down the bases of his method, and to form hypotheses as to the extent of its application, the duration of the acquired immunity, and the necessity of renewing the inoculation after a certain interval; in a word, he was not able to lay down the conditions of revaccination. This task was left for future generations. To enlarge the application of the method, to make it benefit the greatest possible number of persons, to create a legislation for the purpose of procuring this extension, to multiply the sources able to furnish the preservative matter—such were the duties left to us. In accomplishing this task, in completing the work, the successors of Jenner do nothing for their own glory; the little that they add to the edifice with which this commanding genius has enriched the world will only serve to still further increase his renown. For myself, in coming here to speak of vaccination, I have no other ambition.

Primary vaccinia is the product of an affection capable of being developed spontaneously in the horse or in the cow (in both, perhaps, but this point is not quite settled), whence the name of horse- or cow-pox which has been given to it. Transferred to the human subject, it developes in a regular fashion; and after a lapse of time, varying between six and seven times twenty-four hours, the vesicle which it has caused furnishes in its turn inoculable lymph. The exceptions to this rule are very rare; few subjects are insusceptible to a first inoculation, if the lymph be of good quality and of proper age. The rule, on the contrary, is that the power of the lymph is weakened the further we get from the moment that the vesicle begins to enclose it. If it be inserted from a vesicle of more than eight days from the date of vaccination, failure is to be feared. Thus, by proceeding with care (and Jenner had already given some instructions with regard to this which have never been altered) each subject can be made a factory of the material for protecting others as it has just been itself protected. Thus the process maintains itself, following a course which carelessness alone can arrest. This is, in fact, what is known as vaccination from arm to arm.

In speaking of this for the first time, I wish to make a profession of faith, which will be sincere, as will be everything that I shall have the honour of saying to you. Although I have come to speak to you on the method of so-called animal vaccination, I am anxious, above all things, to tell you the whole of my ideas as to the part which it is expedient to assign to each of the two methods. In my view, animal vaccination should have no tendency to forcibly supplant vaccination from arm to arm. The latter ought, on account especially of the facilities afforded by it, principally in the countries where the population is much scattered, to be scrupulously observed. They are, in fact, two sisters, which must not be separated.

This proposition is based upon a fact without which it could not be maintained—the perfect identity between the lymph of the child and of the calf, so far as regards their active principle. The vaccine matter is composed of two principal elements, a vehicle, serum, and some special granulations which represent the vaccinal power. This last fact has been quite recently placed beyond doubt by the experiments made at the vaccination establishment of Amsterdam by MM. Carsten and Coert, with the assistance of M. A. H. Pareau. These gentlemen report as follows.

"Some animal lymph" "was filtered through filter-paper, and through some small plates of porous porcelain, by the help of the pneumatic machine. Microscopical examination showed us that the filter-paper retained the epithelium-cells, the fibrinous clots and other solid particles, but that it allowed to pass globular molecules, which are found in great quantities in animal lymph, and which are supposed to be schizomycetes. The porcelain plate does not allow either these molecules or any other morphological particle to pass. We repeated these filtrations in different ways, and we were able to ascertain on each occasion that the inoculations practised on calves with the serum, deprived by filtration of its globular molecules, only gave negative results. When, on the contrary, these molecules had been preserved in their vehicle, the inoculations were constantly successful. We have mixed and washed the lymph with plenty of water, to separate these molecules from other solid constituents that might adhere to them, and which might have been considered as equally endowed with some virulent property; and we have then passed through the porcelain all that the latter allowed to pass through. Inoculation with the matter remaining on the filter was again followed by positive results. Thus it is evident that the virulence is inherent in the globular molecules."*

These results fully confirm those which M. Chauveau had already obtained by other means with regard to human lymph.

The identity is therefore perfect as to the nature of the active principle of the lymph, whether it is derived from the calf or the child. It is in both cases a figurate granulation, perhaps a microbium, suspended in serum. This serum, however, differs a little; it is more plastic in the calf, perhaps because the lymph yielded by the latter has had to be expressed by a force which expels more fibrine; hence a tendency to coagulation, which renders more difficult its keeping in the liquid state, or rather its expulsion from the capillary tubes into which it has been put.

This identity is established, if possible still more completely, by my own personal experience. During six months, I successively transmitted the same lymph from the calf to the child, from the child to the calf; and, after twenty-five transmissions thus crossed, I found the lymph still to possess all its original qualities. This fact, well established in the way that I have just related, enables us to formulate the proposition that human lymph and calf-lymph can render each other mutual aid and assistance.

But, it will be asked, if the two lymphs are of equal value, why call to the aid of humanised lymph, the supply of which never fails, the assistance of animal lymph? The answer is that this help is especially necessary to satisfy doubts, fears, imputations, and perhaps prejudices. It has been said that lymph degenerates by passing through the human organism; so that what was introduced by Jenner has now lost a part of its power. This is only a simple assertion, and its truth has not been proved. There is perhaps some merit in my acknowledging it, but I myself, rashly I fear, but honestly, brought forward this idea some years ago. At the present time, nothing proves to me, nothing tells me, that lymph can degenerate. As long as its globular molecule—its microbium (?)—is preserved and is healthy, there is no ground for asserting that it has degenerated. Have small-pox and syphilis lost their vigour by lapse of time? However this may be, the feeling exists, many physicians share it, and I think it must be respected. If to their mind animal lymph promises to those vaccinated with it a more certain and more durable immunity, what right have we to refuse it to them? Again, it has been said, and this is much more serious, that human lymph taken from a syphilitic subject can transmit syphilis to the vaccinee. The fact is only too true, and certainly it is not in England that it is necessary to strive to establish it. Vainly is it maintained

* *Animal Vaccination in Holland: Some Provisional Experiments made at the Vaccinating Station at the Hague on the particular qualities of Vaccine Virus.* By Carsten and Coert (Medical Congress at Amsterdam, 1879).

that lymph from a syphilitic subject is innocuous, if it be taken with the necessary care, and without the admixture of blood. But who of us, gentlemen, would like to expose his children or his grandchildren to such a danger?

The physician ought, then, to guard himself against such a possibility; and he can indeed only do this by imposing upon himself the obligation only to make use of the lymph from infants he has under his own eyes, and of the state of whose health, as well as that of their parents, he can be positively assured. We will not insist too strongly upon the necessities in this direction; but we believe that the practitioner can in no other way ensure complete security. This being so, he ought not to be allowed on his own responsibility to make use of any human lymph collected by any other person than himself; and he should impose upon himself as a line of conduct that, when a family requests him to perform vaccinations or revaccinations, the family should itself provide him with the inoculating matter. In this way, and in this way alone, can the physician protect himself from future responsibilities and claims. I am fully aware that this method of procedure faithfully followed would have the result of increasing and exaggerating the mistrust already existing in the public mind. But what is to be done? Physicians are by no means anxious to offer themselves as a holocaust to the ill-feeling of families, always disposed to attribute to the lymph employed all the maladies which may subsequently attack their children; and the prudent course which I recommend to them is the only one which can at once really cover their responsibility, and at the same time screen them from unjust reproaches.

I know full well that I shall be accused of an excess of precaution. At vaccination establishments, I shall be told, the collection of lymph from the arms of infants is done under conditions calculated to offer every security; the persons charged with this office quite appreciate the importance of the duty confided to them, and not a tube of lymph escapes their hands which has been taken from a doubtful source. What a mistake is this assertion! Does not the moment always arrive when the most attentive, the most scrupulous of men, relaxes his vigilance? So, when the question is of human lymph, this rule must always be rigorously observed: Do not vaccinate any subject unless you can take lymph for its vaccination from the arm of a child present, whom you have yourself carefully examined. Now, this condition cannot be always observed. Too often stocks can only be kept up by means of preserved lymph collected from subjects intended to serve as vaccinifers. These conditions apply indiscriminately to all countries in which vaccination is voluntary, but there recourse to it can be dispensed with until opportunity serves. In those countries in which vaccination is compulsory, it is not the same; it is necessary to submit within a fixed period to the lancet of the vaccinator, one's children or grandchildren, without, in the majority of cases, having the time—we are speaking especially of the poor—the power, or the means to inquire if the matter to be used for vaccinating fulfils all the conditions of harmlessness which one has the right to demand of it. I do not hesitate to repeat—I say repeat, because I have already said and written many times—that this is not right. In the countries where vaccination is compulsory by law, the duty of the State is to put in the hands of the public a lymph which should be free—I will not say from all adulteration—but from all suspicion of diathetic adulteration. Like Cæsar's wife, it ought always to be above suspicion. I know that nothing is so blind as the prejudices of the public; but, here, are these prejudices inconsiderate? We see a little pink and white baby, the idol of all who surround it; it is radiant with health and beauty. You take its arm and instil into it a strange principle, of which you, the physician, are doubtless certain, but of which the family knows neither the source nor the purity. And you do not like that the family should ask for every possible guarantee; and that, not obtaining such, it should rebel and resist. But it is in human nature; and you all know it well—you who have witnessed for some years a rising tide of opposition to the Vaccination Acts, which you either disregard or despise. If these prejudices be not unreasonable, then give to the public the satisfaction which it demands. Give it the calf and its lymph; give it, at the same time, that confidence, that security which it has the right to exact from you, and you will see, from day to day, this opposition give place to the most perfect submission; for confidence in vaccination is a matter of conscience for every mother.

But are we, then, in the right in saying to families, "Come to the calf, it will not betray you"? The reply cannot be for a moment doubtful. We answer with the most entire confidence: "No, the calf will not betray you; you can go to it *citò, tutò, et jucundè*." It is not, however, that contrary opinions have not been expressed. It has been d, amongst other enormities—and the allegation has come from those ven who scout the possibility of vaccino-syphilis, which makes the matter more absurd still—it has been said by those who do not believe it themselves, that lymph taken from a tuberculous calf can transmit tuberculosis. They did not take the trouble to ascertain whether there had ever been found a microscope powerful enough to reveal the presence of a tuberculous element in the vaccine vesicle; and, in default of such an authentication, whether tuberculosis could be transmitted otherwise than by the engrafting of that disease itself. All this mattered little; it was necessary to cast a doubt on the new method. They did not stop to think that this suspicion, if it had any foundation, must fall with all its weight upon humanised lymph itself. Let us say at once that the argument was not long maintained, and that those who had put it forward now practise animal vaccination.

Vaccinal glanders has also been talked of. The following article appeared recently in the *Lyon Médical*, June 22nd, 1879, and was written by an author otherwise sensible, but sufficiently careless and thoughtless to publish it, without the least proof in support of its assertions.

"EPIDEMIC OF VACCINE-GLANDERS.

"The following fact has seemed to us too serious not to be brought immediately under the notice of our readers, for it is of a nature to singularly damp the zeal of the apostles of animal vaccination. On April 22nd last, the authorities of San Quirico d'Orceia asked a semi-official vaccination committee at Rome for some tubes of lymph, which arrived on the 24th. On the 26th and 28th, the local doctors vaccinated with this lymph thirty-eight children, all aged less than twenty months. Whilst they wereawaiting the incubation of the vaccine pustules, they soon perceived that they had inoculated one of the most horrible of maladies, and that they were the involuntary authors of a real massacre of the innocents. The gentleman who sent these particulars to the *Gazzetta d'Italia*, betook himself to San Quirico. He saw the victims. He observed vast phlegmons, laying bare the muscles and penetrating into the joints, accompanied by eclamptic symptoms. To him it appeared to be very probably an epidemic of glanders. If this really was the case, all the responsibility must rest upon the Roman committee. One cannot excuse men of skill who use a glandered calf as a vaccinifer. If it were a question of another malady, which it was not possible to diagnose, animal vaccination does not appear less compromised." This is what it was wanted to bring out. The article ends thus: "In any case, we shall endeavour to make known to our readers the results of the inquiry, which is being actively pursued."

This inquiry has, in fact, been made, and it has resulted—so runs a letter, dated June 15th, addressed to Senator Professor Palasciano by Commander Constanzo Mazzoni, member of the Board of Health sitting at Rome—that the facts above reported have been audaciously misrepresented: the inquiry having established the perfect state of health of the calf that had furnished the inculpated lymph. This is what happened. Certain institutes in Italy still deliver—(though it is a detestable practice, against which we have always protested), pustules cut off the calf, and send these scraps of skin to larger or smaller distances without any care about the state in which the pustules may arrive, trusting no doubt to the sense of smell of their correspondents. In the case of San Quirico, such pustules, and not tubes, as stated in the *Lyon Médical*, were sent to the local doctors, who did not use them for five or six days after they had been cut off the animal. And this in the height of summer! The vaccinators, indeed, admitted that from the pustule was exhaled a musty smell (mucedo), but this did not deter them from using it. As a matter of fact, if they had wished to purposely propagate septicæmia, would they have proceeded otherwise? The practice, we repeat, is deplorable, and it is inconceivable that responsible persons still consent to adopt it. We know that those who practised it were indeed the first promoters of animal vaccination, and as such, claim indulgence at our hands; but we are amongst those who think that, from however exalted a source an idea springs, it is not on that account infallible. If the method of Negri had not been freed by us from its original conditions, it would never have been able to acclimatise itself far from its place of origin. It is in reducing it little by little to its most simple elements, and in approaching in its operations to the traditional method, vaccination from arm to arm, that we have made it a simple proceeding by a logical and easy application. The cutting off of the pustules, which has a long time encumbered it, has never troubled us. We have never put the method in practice. The occurrences at San Quirico d'Orceia prove sufficiently well that we are right in prohibiting it. A great thinker and justly celebrated author, Alexandre Dumas *fils*, has said that, to spare himself illusions, he had taken the part of considering men as being naturally bad. If he met a good man, it was an agreeable emotion that he felt. This emotion the *Lyon Médical* has not given us. We still await, as we have done since June 29th last, its publication of the result of the inquiry.

But may we not ourselves be ranked amongst the mischievous persons

of whom we have just spoken, and have we not perhaps sometimes given proof of it, in admitting too readily, and spreading abroad without sufficient proofs the statements as to vaccino-syphilis, of which we ourselves believe only half? We are not quite sure of our perfect innocence in this respect, and we ask ourselves if, in echoing the stories —often untrue and nearly always exaggerated, we have not made ourselves culpable accessories to this discredit. If we have been attacked by such a mania, let us cure ourselves of it as soon as possible.

The possibility of the transmission of anthracoid affections by animal vaccination has also been spoken of; but, besides that nothing is rarer than these affections in very young bovine animals (and it is these only that our method makes use of), besides that such an affection could not escape the supervision of the experts who inspect the markets, it has been perfectly proved to us that proper vaccine pustules cannot be developed upon animals suffering from this generalised disease. This is, in fact, one of the most characteristic features of the question. In the vaccination of cows, the appearance of the pustules alone shows the state of health of the vaccinifer calf. From the moment that the animal suffers, the vaccine pustule suffers, and it is doubtful whether a vesicle could ever prosper upon an anthracoid subject. As a general rule then, one ought to be able to utilise without fear lymph taken from good pustules, because proper pustules never rise on sick animals. We know that it is not the same with regard to the infant; a subject highly syphilised can show vaccine vesicles perfectly irreproachable in appearance. Let us add that, less favoured than the advocates of septicæmia, the champions of anthrax have yet to find a single fact to bring against us, and that their objection is up to the present time purely speculative.

Syphilis remains, and of that, and all the world is in accord on this point, we have no fear. Civilisation has not yet penetrated so far into stables as to leave there its most characteristic mark; and to the humble and pure calf may equally be applied the old adage: "*La plus jolie fille du monde ne peut donner que ce qu'elle a.*" But the objectors to animal vaccination are not content with this adage. They have wanted to prove that the innocent calf can give syphilis, although not having it, and to do that they have only to delicately pervert facts. We have read somewhere an article entitled "Transmission of Syphilis by Animal Lymph". It was a sensational title. Now, nothing can be more easily explained than this transmission. It is sufficient for the contamination of the lymph that the vaccinator, inoculating a series of children, transfers blood from a syphilitic subject by means of his instrument to the animal pustule into which he plunges it to get a fresh charge. But the poor animal is perfectly innocent of the mishap; the author of the mischief is the vaccinator, who has not taken the needful care with his instrument, and who has not cleansed it, as he ought, after each vaccination.

[*To be concluded.*]

INTRA-UTERINE VACCINATION AND SMALL-POX.—In a note on this subject in the JOURNAL for November 22nd (page 824), reference was made to the case of intra-uterine vaccination quoted by Dr. Bollinger as recorded by Dr. A. S. Underhill of Great Bridge. It may be of interest to state that this case was one in which a lady, revaccinated when eight months pregnant, the resulting pocks being very large and full of lymph, was delivered of a child which was vaccinated at the age of three months with fresh carefully taken lymph. No effect whatever was produced on the arm; and, about a month afterwards, the child was again vaccinated, particular care being taken to well rub in the lymph; but the result was again unsatisfactory. Dr. Underhill's explanation was that the vaccine virus, thoroughly pervading the system of the mother, had directly influenced the child, and made it not susceptible of taking again the virus. To this view Mr. Burton of Birmingham objected (JOURNAL, vol. i, 1875, p. 44), observing that, when he had charge of the Birmingham Small-pox Hospital, he practised vaccination in several instances upon women at various stages of pregnancy, and he had not a single case of unsuccessful vaccination amongst the children.

An analogous case of a somewhat striking kind, though relating to variola instead of vaccinia, is recorded by Dr. Cory in the last volume of *St. Thomas's Hospital Reports*. A woman gave birth, on December 14th, 1877, to a child at full time. On June 13th previously, and consequently when about four months pregnant, she had been admitted into the Small-pox Hospital at Hampstead, suffering from an unmodified attack of small-pox. On May 21st, 1878, she brought her child to the Surrey Chapel station for vaccination. She was then deeply pitted, and had lost most of her hair. The child showed no evidence of having had the disease. It was vaccinated, with the result of having five good characteristic vesicles, which went through a regular course, except that the areola on the eighth day was well developed.

LATENT ALBUMINURIA: ITS ETIOLOGY AND PATHOLOGY.

By GEORGE JOHNSON, M.D., F.R.S.,
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IT is a matter of common and in fact every-day observation, that the urine of persons apparently in perfect health is often found to contain more or less albumen. The discovery of what had been a latent and unsuspected albuminuria is often made by accident. Within the last twenty years, at least half a dozen members of our profession have come to me with essentially the same statement, which was to this effect: "I was testing some albuminous urine, when it occurred to me to compare the action of the tests upon a presumed healthy specimen. I therefore tested my own urine; and, to my dismay, I found it highly albuminous." During the last few months, I have been consulted by three men, each of whom, believing himself to be in good health, and having proposed an insurance on his life, ha l been found to have albuminuria by the medical adviser of the insurance-office. Quite recently, an apparently healthy young man told me that, seeing his medical brother testing some albuminous urine, he said to him jokingly, "You may as well test mine"; and the result was that it was found to contain an abundance of albumen. About the same time, a surgeon called on me and said that he had been made very anxious by the accidental discovery that one of his children had albuminuria. The eldest son, who was studying practical chemistry, had busied himself in testing the urine of every inmate of the house, when he discovered that a younger brother, apparently in good health and attending a day-school, had albuminuria.

These are a few instances out of a large number that have come under my observation in which the existence of albuminuria, heretofore latent and unsuspected, has been discovered as it were by accident.

The attention of the profession has recently been especially directed to the subject, of what I propose to call latent albuminuria by several physicians, especially by Dr. Moxon (*Guy's Hospital Reports*, 3rd series, vol. xxviii), by Dr. Clement Dukes (BRITISH MEDICAL JOURNAL, November 30th, 1878) and by Dr. Saundby (BRITISH MEDICAL JOURNAL, May 10th, 1879; also *Birmingham Medical Review*, July and October 1879). My main object in this communication is to maintain, first, that this latent albuminuria—albuminuria, that is, unassociated with any other evidence of functional disorder or structural disease—may, by a careful inquiry, be traced back, in a very large proportion of cases, to some probable exciting cause; secondly, that the presence of even the smallest trace of albumen in the urine is always pathological, never physiological, as I have somewhere seen it suggested that it may be; and that the neglect of this indication of a pathological condition and tendency, especially such negligence as involves repeated exposure to the exciting cause, may convert a temporary and occasional into a persistent albuminuria, which sooner or later, though it may be after many years, will result in a fatal disorganisation of the kidney.

In prosecuting the important practical inquiry into the probable cause of a recently discovered albuminuria, we shall not unfrequently come upon a history more or less clear and definite of an acute nephritis, either with or without dropsy, dating back for a period varying from a few months to several years. The acute renal disease may have been the result of exposure to cold and wet, or it may have occurred in connection with one or other of the following diseases: scarlet fever, measles, diphtheria, erysipelas, typhus or typhoid, pyæmia, rheumatic fever, etc.; or it may have been associated with the puerperal state, either before or after parturition. The acute symptoms having passed away, convalescence has appeared to be established; but, in some cases, the patient having been kept under careful observation, the albuminuria has been found to continue for months and years. In other cases, there has been a less careful and prolonged observation, and the history, therefore, is less complete. Convalescence having been apparently established, no further examination of the urine had been made until after an interval of months or years, when albuminuria is found to be present, and there is great reason to believe that it has continued from the time of the previous illness. The practical lessons to be deduced from facts such as these, which are matters of every-day observation, are: 1. To test the urine for albumen repeatedly during the progress of all febrile and inflammatory diseases until convalescence has been completely established; 2. When, in the circumstances referred to, albuminuria has been found to exist, to keep the patient under

observation, and to test the urine until it has been found continuously free from albumen; care being taken to test for albumen not only after rest in bed and before breakfast, but after food and exercise. As a general rule, it will be found that, whatever may be the cause of the albuminuria, the albumen is twice as abundant after food and exercise as before breakfast; and I have met with a considerable number of cases in which the urine, before breakfast having been free from albumen, is found to be more or less copiously albuminous after food has been taken. In all cases, therefore, of actual or suspected albuminuria, I ask to be supplied with two specimens of urine: one passed on rising in the morning, the other secreted two or three hours after a meal. In some exceptional cases, food has less influence than exercise on the production of albuminuria. A distinguished London physician, whose successful career was cut short by degeneration of the kidneys, found that, at the onset of his malady, albumen appeared only occasionally after walking exercise, when it was present in large amount. Food at the commencement appeared to have no influence on the production of albuminuria; but after a time there was persistent albuminuria, and ultimately death from uræmia.

In another class of cases of latent albuminuria, there is no history of any previous illness to explain the renal disorder. Dr. Dukes, in the paper before referred to, speaks of the common occurrence of such cases amongst the boys at a public school. From a careful inquiry into cases of this kind amongst boys and young men, I am convinced that one of the most frequent causes of this form of albuminuria is the reckless manner in which they often expose themselves to cold and wet, especially after being overheated and fatigued by prolonged or violent exercise. A boy plays at cricket or football, or runs a long race, and then, while tired and perspiring, and while the products of disintegrated tissues are abundantly present in the circulation, he stands about until he is chilled, or he lies down upon the damp ground; and if, as sometimes happens, an attack of acute pneumonia or renal dropsy quickly follow, the illness is at once recognised and traced to its obvious exciting cause; but if the only result be albuminuria, without obvious disturbance of the general health, the mischief may remain latent for an indefinite period, and when at length it is discovered, it may with difficulty be traced back to its originating cause.

Another not uncommon cause of albuminuria in young men and boys is imprudently prolonged cold bathing. In the *Transactions* of the Clinical Society, vol. vii, p. 42, I have given some particulars of four cases of temporary albuminuria excited by cold bathing. Since the publication of that paper, I have met with several cases of confirmed degeneration of the kidney clearly traceable to repeated and prolonged cold bathing. The last case of this kind I saw lately with my friend and former pupil Mr. Alfred J. Bell of St. John's Wood. A young man aged 19, in the summer of 1878, after bathing repeatedly in Teddington Lock, noticed that his urine became "almost as black as ink". This was probably hæmaturic; but no chemical examination of the urine was made. The dark colour passed away after a few days, and he had no symptoms of illness. He continued to take active exercise—fishing, shooting, and bicycling; and seemed to be in good health until near the end of October 1879, when considerable dropsical swelling of the legs occurred. The urine was then found of normal colour, of specific gravity 1020, albuminous to the extent of one-half, and deposited a sediment in which were found numerous hyaline and oily casts. In tracing back the history of this case, we found good reason to believe that the renal disease commenced eighteen months ago with congestion of the kidneys and hæmaturia excited by the cold bathing, and that the albuminuria has continued from that time until the present. This case is a type and illustration of many others that have come under my observation. Thus, in one case, albuminuria in a previously healthy young man was a result of wading through a river up to the shoulders at the end of a twenty-mile walk; and in another it was excited by swimming his horse through a river in fox-hunting, and allowing his wet clothes to dry upon him and to chill him. From what I have seen of the effects of cold bathing, I have arrived at the conclusion that more people are injured than are benefited by the practice; and I am confident that, if the urine of all the men, women, and children who paddle about in the sea until they are blue and cold were tested within a few hours after their immersion, it would be found to be more or less albuminous in a large proportion of cases.

Amongst the common causes of albuminuria, more or less copious and persistent, but for a time unattended with local uneasiness or serious disorder of the general health, and therefore often latent, is an excessive consumption of animal food and of alcoholic stimulants, either separately or combined, as not unfrequently happens. The kidney is the channel by which a large amount of excrementitious nitrogenous material, whether the product of disintegration of tissue or of imperfectly digested and unassimilated food, is eliminated. The chain of events which connects albuminuria with overfeeding and dyspepsia is probably this. Imperfectly digested food passes into the blood and loads it with impurities. The gland-cells of the kidney excrete these ill-digested products, and, in doing so, undergo structural changes; while the imperfectly assimilated albuminous materials pass more readily by exosmosis through the Malpighian capillaries. Further, the malnutrition resulting from chronic dyspepsia causes a general nervous exhaustion, with loss of vaso-motor nerve-force, and consequent diminution of tone and contractile power in the muscular walls of the arterioles generally, including those of the kidney; while the walls of the capillaries are probably weakened by depraved nutrition. Thus the filter and the fluid to be filtered are both materially changed; while the increasing impurity of the blood throws more work upon the kidneys, and favours the escape of the altered albumen, which is often much increased after food.

Alcoholic intoxication may alone be a cause of temporary albuminuria. In my *Lectures on Bright's Disease* (p. 41), I have described the case of a man whose urine during a fit of alcoholic narcotism (dead-drunkenness) was loaded with albumen, which in a few hours had entirely passed away; and quite recently a similar case was under my care in the hospital. In my private practice, I have seen a number of cases in which albuminuria associated with habitual alcoholic excess has passed away more or less speedily when the patient has been for a time frightened or persuaded into total abstinence, and has again returned under the influence of an immoderate consumption of alcohol.

There is yet another class of cases in which albuminuria is a result of inveterate dyspepsia in persons of strictly temperate habits. In these cases, we often find that for months, and even for years, there have been symptoms of impaired digestion, such as pain or uneasiness after food, flatulent distension of the stomach and bowels, occasional nausea and vomiting, habitual looseness or irregularity of the bowels, constipation and diarrhœa sometimes alternating. With this, there is often turbidity of the urine, which is high-coloured, excessively acid, and deposits urates or oxalates abundantly. After a time, the urine, which had been scanty, becomes more copious, of pale colour, of low specific gravity, and is found to contain albumen, and to deposit a cloudy sediment, in which are found small hyaline and granular casts. In such cases, renal congestion and albuminuria, and ultimately structural degeneration, result from the long-continued elimination of some products of faulty digestion through the kidneys. Analogous to this is the not infrequent occurrence of albuminuria and renal degeneration as a consequence of the persistent excretion of large quantities of sugar in cases of diabetes. It appears, then, that imperfect digestion, the result of functional disorder of the stomach or the liver, may lead to overstimulation of the kidney, resulting in albuminuria, and ultimately in serious degeneration of the gland.

We have another illustration of the influence of a primary disorder of the liver resulting in a secondary disturbance of the kidney in the appearance of renal epithelium and tube-casts, with sometimes more or less albumen in the urine, excited by the copious excretion of bile-products of the kidney in cases of jaundice. This fact, which was, I believe, first pointed out by me in my book on *Diseases of the Kidney* (p. 108), published in 1852, I have somewhere seen referred to as a recent German discovery.

As the dyspepsia which is associated with albuminuria, is often excited or greatly aggravated by the abuse of alcoholic stimulants, so I have no doubt that excessive tobacco-smoking is an occasional, though probably a much less frequent, cause of a primary hepatic and gastric disorder, with inveterate dyspepsia, leading on, in the manner before described, to renal irritation and congestion with albuminuria, and finally, in some instances, to irremediable degeneration of the kidneys.

Dr. Clifford Allbutt has directed attention (BRITISH MEDICAL JOURNAL, February 1877) to the influence of mental anxiety in causing granular degeneration of the kidney. I do not agree in opinion with Dr. Allbutt that "mental anxiety is one of the chief, if not the chief, cause of granular kidney"; but I believe that there is a real etiological relation between mental anxiety and some cases of albuminuria; and I have often seen, in cases of chronic renal disease, a great increase of albumen under the disturbing influence of mental emotion. In my own experience, however, saccharine diabetes has much more frequently than albuminuria been traceable to mental and emotional influences; and it has appeared to me that as, in the diabetic cases, the saccharine urine, whether in the rabbit whose medulla oblongata has been mechanically irritated by the operator's needle or in the human subject whose brain has been tortured by mental anxiety, the primary influence of the nerve-disorder is upon the sugar-forming liver, so, in an analogous manner, the albuminuria which results from mental anxiety is a secondary result of a nervous influence acting primarily on the liver

and the stomach, the so-called chylopoietic viscera. In fact, it seems to me that the albuminuria which appears to have resulted from mental and emotional influence is a form of albuminuria from dyspepsia, and the immediate cause of the renal disorder is the excretion of some abnormal products of imperfect digestion. In many of these cases, too, it is obvious that more than one etiological agency has been operative. The man or the woman depressed by mental anxiety, with a failing appetite and disturbed sleep, often seeks temporary relief from misery in an alcoholic stimulant; and so it is often found that the noxious influence of alcohol as a substitute for wholesome food has to be taken into account in explaining the albuminuria and the renal degeneration which had their starting-point in mental worry.

We now come to our second proposition, which is that the presence of albumen in the urine, although small in amount, and appearing only occasionally in the urine of persons otherwise apparently in good health, is abnormal and pathological. The main point of practice, therefore, is to make diligent inquiry for the probable cause of this abnormal condition; and then, having ascertained it, we can instruct our patient how both to avoid the exciting cause and to counteract its effects. It is sometimes difficult to convince a man or a boy, who, but for his doctor's statement that his urine misbehaves itself under the influence of heat and nitric acid, would believe himself in perfect health, that it is necessary for him to submit to any restraint in his diet or general mode of living. It therefore becomes necessary to explain to him what may be the result of negligence in this matter. The result of my experience is, that the occasional appearance of even a small amount of albumen after food and exercise or exposure to cold, if not traced to its exciting cause, and if the cause be not such as can be avoided or counteracted, will almost certainly, at no distant period, become a persistent albuminuria; and persistent albuminuria leads on sooner or later to fatal degeneration of the kidney. It is true that many years may pass before the renal disease begins to react upon the general health. The most protracted case of the kind that has come under my own observation occurred in a hard-working general practitioner, who, when fifteen years of age, had dropsy after scarlet fever. He recovered from the dropsy, and believed himself to be well. Five years later, he was a medical student; and while he and some of his fellow-students were engaged in testing each other's urine, his was found to be albuminous. The albuminuria continued until his death from uræmia, at the age of forty-five; yet, until within a few months of his death, he was in fairly good health and actively engaged in a large practice. Here, then, was an interval of thirty years between the beginning and the end of the fatal malady, yet during the whole of that period, it might have been said of him, "hæret lateri lethalis arundo". In another case, an interval of nine years elapsed between recovery from acute renal dropsy, but with persistent albuminuria and oily casts, during which the general health appeared to be quite unaffected. Then came an attack of hemiplegia and a series of uræmic symptoms, ending in fatal coma, ten years after the commencement of the disease. A considerable number of cases have come under my observation at a late period of a chronic disease, in which there has been reason to believe that, albuminuria having persisted after an acute attack long before, there has been an interval of from ten to fifteen years between the commencement and the fatal termination of the malady. Since, then, the only probable result of a neglected and persistent albuminuria is a fatal degeneration of the kidney, with the multifarious miseries resulting from uræmic poisoning, it is obviously of the highest importance to impress upon the patient the necessity for a continuous systematic treatment, dietetic, hygienic, and medicinal, adapted to the circumstances of each case. As a general rule, it will be found that, *cæteris paribus*, the earlier the patient is subjected to treatment after the onset of the symptoms, the more speedy and complete is the success; but we sometimes have the satisfaction of witnessing a complete recovery after a very long continued albuminuria. One of the most satisfactory cases of recovery after a long duration of threatening symptoms was that of a very distinguished medical graduate of London, who, when he consulted me in November 1877, was twenty-six years of age. His urine had been continuously albuminous after food since an attack of scarlet fever in June 1871. In spite of the anxiety which this symptom had occasioned, his general health had been good, and he had worked hard and obtained the highest honours at the university. I advised him to place his main reliance upon a carefully regulated diet. Under the influence of an exclusive milk-diet for five or six weeks, the albumen had much diminished. He then took a small quantity of solid food; and, after a time, a two-ounce glass of Hunyadi water every morning, which, acting rather freely on the bowels, relieved him of a dull pain before felt in the region of the liver, and still further reduced the amount of albumen. During the month of July 1878, the albumen disappeared; and for the last eighteen months there has been no recurrence of the symptom. In this case, then, albuminuria of seven years' duration has been completely removed, and I have lately seen the former patient in perfect health. The complete recovery of health after so long a continuance of the symptoms may afford encouragement to those who are engaged in the treatment of these troublesome and anxious cases. On the subject of treatment, I shall have something to say on a future occasion.

ON INTRA-UTERINE MEDICATION.*

By LOMBE ATTHILL, M.D.,
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THE principles which should guide our treatment in many forms of uterine disease are still but imperfectly understood; nor is this to be wondered at, seeing that but a few years have elapsed since the diseases of the reproductive organs in the female began to be the subject of special study, and then for a long time the cervix was looked upon as being the chief seat of uterine disease, the body and fundus being supposed to be nearly exempt from it; and if any more accurate observer suspected that these portions of the organ were implicated, he did not venture to apply any remedy directly to the diseased parts, looking on the interior of the uterus as at once inaccessible and dangerous to be interfered with. All this has changed; few, if any, of those who have carefully investigated the diseases to which women are peculiarly liable will deny that the body of the uterus, and specially its intra-uterine surface, is often the seat of disease; while the majority, I believe, are convinced that this portion of the organ is, in many cases, alone implicated, and that frequently the cervix, when also engaged, is secondarily affected. I am satisfied of the correctness of this view; and consequently, when dealing with cases exhibiting symptoms of intra-uterine disease, I invariably direct my treatment to the diseased surface. It is necessary, then, to consider what are the symptoms indicating the necessity of intra-uterine treatment. They are threefold: 1. Derangements of the menstrual functions—namely, menorrhagia, amenorrhœa, and dysmenorrhœa; 2. Uterine catarrh; 3. Pain, specially if caused by the passage of the uterine sound.

It would be impossible in a brief review of the subject to dwell at any length on the important points connected with the right interpretation of these symptoms. I shall therefore only allude to one or two, excluding altogether from consideration those depending on the presence of any form of uterine tumours or polypus, or those resulting from anæmia.

Menorrhagia, as the result of intra-uterine disease, is most commonly, but not by any means necessarily, met with in women who have borne children, and in whom the uterus has been imperfectly involuted; consequently, it can in them be traced back to a previous confinement or abortion. In such cases, especially if menstruation be also painful, a cure can seldom be effected without having recourse to intra-uterine medication.

Amenorrhœa is comparatively seldom observed as a symptom of intra-uterine disease; and, when it does occur, is generally met with in sterile women. In these patients, the whole structure of the uterus probably is affected: the walls are hypertrophied, and there is hyperæsthesia; while the intra-uterine mucous membrane becomes unhealthy, but, instead of being thickened and studded with vascular papillæ, as is generally the case when involution has been imperfect, it appears to be thinner than normal, and consequently those changes which occur at each menstrual epoch are incompletely performed. It should be borne in mind that, when speaking of amenorrhœa, I do not refer to absolute suppression of menstruation, but to an imperfect and scanty discharge, occurring at somewhat irregular intervals.

Dysmenorrhœa, considered as indicating the necessity of intra-uterine medication, is seldom a solitary symptom, and is generally found in connection with menorrhagia.

Uterine catarrh necessarily indicates the existence of disease, or at least of great irritation, of the intra-uterine mucous membrane; for the discharge from its surface, when in a state of health, is almost imperceptible.

Pain is so commonly an accompaniment of uterine disease that much weight cannot be attached to its presence; but if acute pain follow the introduction of the sound, especially if this be severe when the point of the instrument touches the fundus, intra-uterine treatment is generally called for.

One or more of the symptoms thus briefly sketched are present in the majority of cases of intra-uterine disease; and I am decidedly of opinion that in such cure cannot be effected without having recourse to intra-

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

uterine medication. It remains, then, to consider, in carrying out this practice, what methods and remedies are at the same time the safest and most efficient. None are absolutely safe; for, in certain states of the constitution, the mildest application, sometimes even the mere introduction of the sound, will suffice to excite local inflammation.

My own experience leads me to the conclusion (and on the present occasion, when the subject is being brought before the Association by others, I intend to refer to my own experience alone), that fluids should never be injected into the cavity of the uterus, unless the cervix be first freely dilated, and that that form of intra-uterine medication is unsafe and objectionable, that ointments are difficult of application and inefficient, and that the same remark applies to the insufflation of powders. I use the following agents only, and find them so efficient that I hesitate to change them for others: carbolic acid, tincture of iodine, iodised phenol, nitric acid, solid nitrate of silver, zinc points, crayons of iodoform. The use of carbolic acid for intra-uterine medication was first advocated by Dr. Playfair, and, after an extended trial, I fully endorse his observations; it is the safest of all the agents I have named. For the last five years, I have used it daily, both in private as well as hospital practice. The probe, by means of which the agent is carried to the fundus, must be passed up twice, for much of the acid with which the cotton is charged is neutralised as it passes through the cervical canal the first time. It is, therefore, essential that the probe be withdrawn and dipped again in the solution and reintroduced. This second application is more painful than the first, but the pain dies rapidly away, for the acid is a decided local anæsthetic. The preparation which I in general use is composed of two parts of carbolic acid and one part spirits or glycerine. It will in general be found necessary to apply carbolic acid every three or four days for some weeks. Iodine I use comparatively rarely. It is by no means as satisfactory an agent as carbolic acid, and is, moreover, a dirty application, soiling the patient's clothes, and causing a disagreeable smell. It is, however, sometimes useful, specially as an alternative. Iodised phenol (iodine one part, crystalised carbolic acid two parts; mix, and combine by gentle heat), introduced by Dr. Battey of Georgia, is an escharotic of some power, and if diluted, is a very satisfactory application in many cases of intra-uterine disease, specially in chronic endometritis, occurring in old women, in whom a fœtid discharge frequently occurs; but it is by no means as energetic as nitric acid, and in recent cases is less efficient.

Nitric acid should only be employed in severe cases, and if properly applied, and if due care be used, is at once a most efficient and safe agent. Two precautions should, however, never be omitted. First, the patient should be kept quiet for a day, or even longer, after the application. The acid itself causes little pain; but, nevertheless, I make it a rule always to keep the patient in bed for at least twenty-four hours after applying it. Consequently, it is an agent which should not be made use of for the purpose of intra-uterine medication, except at the patient's house, or with inter-hospital patients. Secondly, it should never be applied to the interior of the uterus except through a cannula; those of vulcanite or platinum, made after my pattern, can be had of most instrument makers. The annexed woodcut (fig. 1) shows

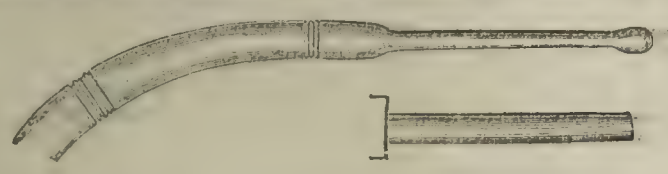


Fig. 1.

the cannula and stylette, which should be employed when dilatation of the uterus has not been practised. It should be introduced into the uterus by means of the stylette, in the same manner as the uterine sound, and the stylette being withdrawn, the acid is to be carried up to the fundus through the cannula by means of a layer of cotton carefully rolled round the rod, and saturated with the acid. Fig. 2 represents



Fig. 2.

the tube, half an inch in diameter, through which the acid is to be passed up to the fundus in cases in which the cervical canal has been dilated.

In a paper I published in the *Obstetrical Journal* for June 1873, I laid it down as a rule that, in all cases of intra-uterine disease in which nitric acid is used, "the cervical canal should be protected" by means of a tube or cannula. It seems to me that this important precaution has been neglected by many practitioners, who then declare that unpleasant results have followed, and blame the agent, whereas they themselves are solely to blame, because they did not use the acid in the proper manner or with due care. I again repeat that, if properly used, there is no danger of unpleasant results following the use of nitric acid in cases of intra-uterine disease, but that, if the cervical canal be not protected, it is very liable to contract subsequently.

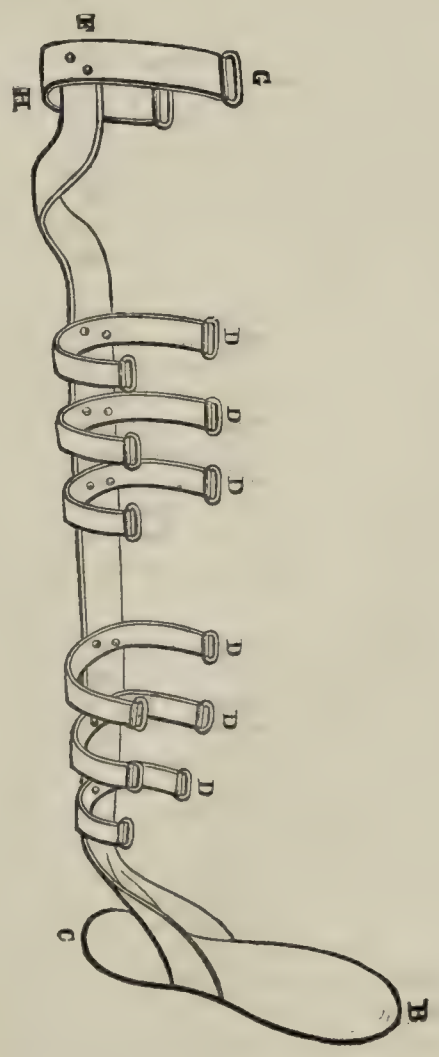
Solid nitrate of silver is very useful in some cases of intra-uterine disease, as are also zinc points; but both sometimes cause considerable pain, and cellulitis is more likely to follow on their use than on that of any of the other agents I have named. They are most useful in those cases in which menorrhagia occurs, the os and cervical canal being patulous, but the uterus not much enlarged, and in which we have reason to think that the hæmorrhage is due to a vascular condition of the intra-uterine mucous membrane, rather than to the existence of a thickened and granular condition of its surface. They should not be used if copious uterine catarrh be present.

As to iodoform, I am disappointed in the results I have obtained from its use; it certainly sometimes allays pain, but is uncertain in its action, and has little, if any, effect as a caustic.

ON THE MANAGEMENT OF CASES OF EXCISION OF THE KNEE-JOINT.

By EBEN WATSON, M.A., M.D.,
Senior Surgeon to the Glasgow Royal Infirmary.

My principal object in the following short paper is to recommend a method of fixing the limb after excision of the knee-joint, which cannot indeed be called new, for I first published an account of it in the *Glasgow Medical Journal* for October 1859, but which I venture to think deserves fuller recognition by surgeons than it has yet obtained; and I therefore wish to bring it under the notice of the members of the British Medical Association, especially of those who attended the meeting at Cork last autumn; for Mr. Hilliard of Glasgow, who has always made the splint for me, at my request, exhibited and explained a model of it on the occasion referred to.



"A B is a firm band of iron on which are fixed D D, etc., bands of flexible tin about three inches apart, and in length about two-thirds

the circumference of the limb at each place. A F is another band of white iron joined to the one formerly described at A, and twisted so as to avoid the hip and come up at the side of the body as far as the waist, round which the flexible band G H passes about halfway, and B C is a foot-piece at the other end. When the splint is applied, it is well padded with cotton sheathed in gutta-percha tissue. The foot of the patient is bandaged to the foot-piece and the flexible bands D D D, etc., and G H are made to fit firmly to the limb and to the waist of the patient by means of broad tapes secured by buckles."

Such is the original description given by me in my paper on Excision of the Knee-Joint, and may be found in the *Glasgow Medical Journal*, vol. vii, p. 279 (the diagram at p. 508).

When I perform excision of the knee-joint, I have the splint prepared as above and exactly made or altered to fit my patient; and, the operation having been finished, of course under carbolic spray, I carefully bring the cut ends of the bones into apposition and lay the naked limb in the padded splint. The spray is maintained during the entire dressing, so that there need be no hurry in this important part of the proceeding. The lateral bands D D, etc., are now pressed up to the sides of the limb, which is protected from their pressure by the interposition of cushions of cotton sheathed in gutta-percha tissue. These cushions should be made of such a length that they shall not encroach upon the wound, but leave it and the skin in the neighbourhood bare for three or four inches. This part is to be sponged clean with carbolic solution and then dressed in the usual manner with protective and gauze. The large dressing with the waterproof jaconet is then made to surround the whole limb, and the splint as well, for several inches above and below the part operated on. It is sustained by a bandage; and the foot, if not previously bandaged, is now fastened to the foot-piece. The patient may then be removed to bed, and, on his recovering from the chloroform, the waistband may be secured by its tape.

One great advantage of this splint is, that no part of it is removed when the dressings are changed; for it ought to be so arranged that the operation-wound comes between two of the lateral bands, and indeed this space is generally made wider than the others, to permit free access to the wound without displacement of the splint. The second and all future dressings are performed under the carbolic spray, as follows. First, the bandage securing the external layers of gauze is removed, and then they are themselves laid open, and the loose gauze and protective are also withdrawn. The splint is then raised at the foot by an assistant, and all the dressings are taken from beneath it. The iron band of the splint and the vicinity of the wound may now be cleaned by sponging with carbolic solution, or by syringing the same solution upon them. The large or external dressings are then placed on the bed beneath the middle of the splint, which is lowered on them. The wound is next packed as before with protective and loose gauze, the external dressing is brought round the whole, and ties of bandage are slid in beneath it to hold it close; or the splint may again be raised at the foot, and a bandage applied.

During all these procedures, there is no movement of the limb permitted, except *en masse*, in and with the splint, and therefore no pain is caused to the patient. Indeed, after one or two dressings have been performed, the natural nervousness of the patient is entirely dissipated, and, instead of dreading a new dressing, he looks forward to it as a refreshment. I need hardly add, to those acquainted with practical surgery, that, during the long period of healing in these cases, parts of the apparatus, especially the cushions, require to be shifted or exchanged for fresh ones. Now this may easily be done with my splint; for all that is required is, to press down one or more of the lateral bands, and then the cushion may be dealt with without any great or painful interference with the limb itself.

I only add, in conclusion, that I have tried several other methods of fixing the limb after excision of the knee-joint, but have always returned to the use of the splint above described. The only fault of it is, the trouble, and perhaps expense, of getting the splint to fit each case. I think, however, every one will concede that this is a small matter compared with the importance of the object in view. I have been told that a *confrère* of mine some time ago proposed to remedy this defect by making a slide on the middle bar of my splint, and that, on the strength of that modification, he exhibited the splint *as his own*, forgetting altogether to mention my part in the matter; but it is quite obvious that this does not get over the difficulty; for there still remain the curved part at the side of the body and the foot-piece with the space for the ankle unchanged, and these are most important for the comfort of the patient and the success of the case. I myself thought that paraffin would be a good way of fixing the limb and of avoiding this difficulty; but on trying it in two cases, I found that it allowed too much play to the limb, and therefore threatened very serious displacement; so that, in both cases, I had to discontinue it and apply the iron splint, in which displacement of the bones is next to impossible, and, if it did occur, can be at once detected and remedied.

I have not the opportunity at present of giving the statistics of my cases of excision, but they have been numerous, and so very successful that I readily undertake the operation, and believe that, if it were permitted early enough and performed with antiseptic precautions, surgeons would seldom have occasion to amputate for disease through the thigh.

ON BLOODLETTING.*

By E. COPEMAN, M.D., F.R.C.P.,
Consulting Physician to the Norfolk and Norwich Hospital.

My attention has recently been called to the subject of bloodletting by letters published in the British Medical Journal; and, having lived in the days when bleeding was the fashion, as well as in those when this mode of treatment has been well-nigh exploded, I have undertaken to express some views of my own respecting it, derived from the experience of half a century of active professional life.

It will be remembered by some present, perhaps, that in 1845 I published a book on *Apoplexy*, in which I endeavoured to prove that indiscriminate bloodletting was much to be deprecated in the treatment of that disease. The observations I then ventured to make, and the line of argument I took, were well received by the profession; and, as has often since been said, were the starting-point in reversing the general practice employed in those days, in leading to the more discriminate and limited employment of venesection in recent times. Perhaps in the present day we have gone too far in this latter direction, and there are cases of apoplexy where bleeding ought to be resorted to. Under some conditions of constitutional disturbance, there may be, and undoubtedly is, a disposition to determination of blood to the head, tending to overfill the vessels of the brain; but when this is the case I believe it will always show itself by visible distension of the external vessels of the head and neck; there is so much difficulty, owing to the incompressible nature of the brain, to the entrance of an additional quantity of blood into it, and there is such free communication between the internal and external blood-vessels of the head that, when there is a disposition to greater fulness within, the external vessels will act as safety-valves, and there will be evident distension without. In my own opinion, the only cases of apoplexy in which bleeding is proper are those which occur in plethoric habits, and where, in addition to the symptoms of what is generally understood by a full habit, there is evident distension of the superficial vessels of the head and neck. Neither do I consider it necessary to carry the bleeding beyond the point of relieving the external visible fulness of vessels, or congestion of the lungs from impeded circulation; beyond this, we weaken the body by abstraction of blood without lessening the quantity circulating in the brain; the vessels of the brain must always be full, and when we have removed the tendency to force an undue quantity of blood into them we have done all we can as a relief from pressure. In cases where the *rupture of a vessel* in the brain has occurred, bleeding is worse than useless; the blood already effused cannot be removed except by gradual absorption, and the system is generally under such a condition of shock that bleeding would have the effect of so reducing the powers of life as to destroy, or at least materially interfere with, any process of reparation that nature might otherwise be enabled to accomplish. I feel sure also that cases of apoplexy connected with disease of some other organ of the body, as of the stomach, intestines, kidneys, etc., which are often marked by a degree of prostration, depression, or insensibility of the nervous system, are seldom attended with much force of circulation, are not benefited, but rendered much less hopeful, by bloodletting. Upon the whole, I am of opinion that, although admissible in a few, it is of no value as a remedy in a large majority of cases of apoplexy and paralytic seizures.

But there is one form of disease which is peculiarly under the influence of bleeding as a remedy, and, if treated in its early stage or onset, is cured by it very speedily and satisfactorily. Nevertheless, it has fallen into disuse in these latter times in this as in almost every other disease. I allude to idiopathic *pleurisy*. I well remember, when I was living in the country many years ago, an epidemic, if so it may be called, of pleurisy; and I was called to many of the cases, and summoned early on account of the severe pain attending the commencement of the attack. I resorted to venesection in almost every case, with the result of immediately relieving the pain and very quickly curing the patient—indeed, it was almost the only treatment required; the blood was allowed to flow until the pain was gone and the breathing free, and then an opiate draught was given to produce sleep, and the patient was well in a few

* Read before the Norwich Medico-Chirurgical Society.

days. The last time I ever myself bled a patient was in a case of pleurisy, and the circumstances were so peculiar and the relief so immediate that I cannot refrain from relating the history of it in order to establish my point, that *bleeding is a valuable resource in the early treatment of this disease.*

On July 4th, 1861, I was requested at night by my late friend and colleague Dr. Ranking of Norwich, to visit a gentleman, who was at the time the High Sheriff of the county. He had travelled from Southampton in the day, and sent for Dr. Ranking when he arrived in Norwich in the evening, on account of his suffering from very acute pain in the left side and great difficulty in breathing. For this, Dr. Ranking applied leeches, followed by opiate fomentations, calomel and opium, antimony, etc., but without relief; and when he came for me he said his patient was literally bellowing with pain, and that he would die unless something else could be done for him. I found him complaining of severe pain in the left side, rendering him unable to move that side of the chest enough to yield any stethoscopic signs; he was feverish and anxious, had a rapid pulse (110), and said the pain would kill him if not soon relieved. It appeared that he had been lately suffering from some kind of fever with congestion of the lungs, in Jersey, from which he had but just recovered; and this, together with the fatigue of his long journey from Southampton, threw a little doubt on the propriety of bleeding; but, as there was no time to be lost, I strongly recommended bleeding from the arm, which, after consulting the wife, was acceded to. I, therefore, at Dr. Ranking's request, at once opened a vein, and allowed the blood to flow until the pain was relieved. He was placed in the sitting position, and the quantity of blood drawn amounted to twelve or fourteen ounces.

Next morning, we found him very much better, pulse below 100, scarcely any pain in the side, only a little dull aching, and we could now distinctly recognise friction-sounds in the seat of pain. He took an aperient draught, and at night had a blister; but he was so much better that I did not see him again. Dr. Ranking told me, a day or two afterwards, that Mr. M. was well enough to go to his own home, a distance little short of twenty miles from Norwich; that the bleeding had acted like a charm; and that his patient had expressed to him that he felt better than he had done for several months. Here was a case in which bleeding was practised under what would generally be thought the very unfavourable circumstances of recent previous illness, and the fatigue of a long journey on the same day; yet it proved eminently successful, and there is every reason to suppose the patient would have died without it. He is still alive and well.

I have also on several occasions known venesection of use in the primary stage of *pneumonia*, and sometimes even at a later period of the disease. For instance, I well remember being called to a case of double pneumonia which Mr. Master was attending at the time. The patient was a very delicate little man (assistant to a dancing master, and fond of music). He was not at all a person whose appearance would lead one to suppose that he could bear loss of blood. He had been ill several days, and was becoming much exhausted by congestion of the lungs, giving rise to very impeded respiration and imperfect oxygenation of the blood. We determined, as other remedies had failed, to bleed him, the effect being a more natural appearance of the countenance, considerable relief to his breathing, and a steady recovery. This was many years ago, and the subject of it is at the present time active and in good health.

I have also known certain forms and stages of *disease of the heart*, accompanied by distress in breathing and discoloration of the countenance, very much relieved by venesection cautiously and judiciously practised, producing relief to respiration, amelioration of dropsical symptoms, and prolongation of life in comparative ease and comfort.

Certain *skin-diseases* are also relieved or cured by bloodletting, when other remedies fail. For instance: an elderly gentleman, formerly a great sportsman, and accustomed to good but not extravagant living, was attacked when near seventy years of age with a most troublesome form of eczema (rubrum), which soon became the torment of his life, allowing him no rest either night or day, and was repulsive to his natural sense of cleanliness and neatness of person. He was treated for some time at home without relief, and then went to London, and was under the care of one or more of the most famous dermatologists then in town for several weeks; and, after incurring considerable expense, he returned home without having received any permanent benefit. He became almost worn out with irritation and disappointment, when it occurred to a neighbouring retired medical man that it might do good to bleed him, and to this he consented; but at first no blood would escape from the wound; afterwards, a little flowed of the consistence of thick treacle; and at last some of a more fluid character was obtained, with the result, in short, of a complete cure. He lived to be eighty-two years of age, and never had any return of his skin-disease.

Another disease for which bloodletting has been much recommended is *dropsy after scarlet fever*, and the success of it is established by the concurrent testimony of various authors; but I have never myself had occasion to resort to this plan of treatment, having, I believe, been invariably enabled to cure such cases without it. Many years ago, I published a short paper on Scarlatina, in the *Medical Gazette* (vol. xxx, page 96), chiefly with reference to the treatment by iodine of the dropsy which often supervenes. The form I used was that of Lugol's solution (afterwards the liquor potassii iodidi compositus of the *London Pharmacopœia*), and with the most favourable results, both at the Lind Infirmary and in private practice. The following is an instance of one of the most severe forms of the disease, in which this remedy was rapidly and entirely successful. A child aged six had a mild attack of scarlet fever three weeks before, and was rapidly recovering; but, after exposure to the cold air, she was seized with anasarca, which soon became general. This was followed by effusion into the cavities, urine scanty and albuminous, and there was so much dyspnœa that the slightest alteration from the upright position almost produced suffocation. The case had been treated with the greatest care and attention, and my favourite remedy had been tried. I found, however, that a much smaller dose than I thought necessary had been ordered; and I strongly urged, almost against hope, another trial of the liquor potassii iodidi compositus, in drachm doses every four hours. There seemed but little chance; but next day, the breathing was less laboured, and the child was actually able to lie down with the head but slightly raised. Suffice it to say that a continuance of this treatment entirely removed the dropsy, and, when I called again in about a week, the child was playing about almost well. She had no return of the disease; grew up to be a very fine handsome young woman; is now married and has children of her own. My late friend and colleague Mr. Firth was very much in favour of bleeding in these cases, but I do not expect myself ever to find it necessary.

Many other diseases might be mentioned in which bloodletting has been of late too much neglected; but I must not occupy your time by referring to them on the present occasion. In my early days, bleeding was very frequently resorted to in this hospital; and people were in the habit of coming to be bled at their own request, just as they now apply to have their teeth drawn, and it was thought to be good practice for the students. Almost every case of fractured ribs and injuries to the head was bled as a preliminary part of treatment, and many operations were followed by venesection as a preventive of inflammation. When I was in practice in the country, my surgery was visited on Sunday mornings, in spring and autumn, by a number of labouring people, who paid their shilling each to be bled; sometimes five or six were going at the same time, and I never knew any of them take harm from the loss of blood—indeed, they considered themselves all the better for it, and would have it done. Certainly the practice of those days did not show that bloodletting was so dangerous a proceeding as most of our profession now consider it; and I cannot help thinking it has fallen into too great disrepute. So much has it been neglected, that it is difficult to find practitioners now-a-days who know even how to perform the operation. The subject is confessedly one of great interest, and ought not to be treated as of little or no importance. I will say no more at present; but may perhaps, on some future occasion, trouble you with a few more remarks on bloodletting as a remedy in disease.

VICTORIA AS A HEALTH-RESORT.

By JAMES JAMIESON, M.D.,

Lecturer on Obstetrics and Diseases of Women and Children at the Melbourne University; Assistant-Physician to the Melbourne Hospital.

A GOOD deal has already been written about the advantages, and some, too, about the disadvantages, of one or other of the Australian colonies as a place of residence for persons suffering from pulmonary affections, and especially from phthisis. Of course, most of the discussions have emanated from mere passing visitors, and, conveying impressions hastily acquired, could scarcely fail to be in some respects superficial, if not incorrect. Enough has perhaps been written about the climatology of various parts of Australia to satisfy those who wish to have some knowledge about the rainfall, the mean and extreme temperatures, and the character of the soil and its productions. Such knowledge, therefore, I will assume to be accessible; though, after all, it is not matter of certainty that, given a large amount of meteorological data with reference to some district or country, we can therefrom alone predict that it will be found suitable in a particular case or class of cases. The inquiries of the medical climatologist, in fact, must be supplemented by some measure of practical experience of the effect of a residence, more

or less prolonged, on the health of patients. Now, I think that no medical man, who has practised for a considerable time in this colony, can have failed to meet with a good many cases of persons who had been compelled to leave Great Britain and who were able to live here in comfort, and even to engage in active employment. Evidence of that sort, however satisfactory it may be to those who have had such cases under observation, cannot easily be presented in such a way as to be demonstrative to others, resolving itself simply into the fact that, in a certain number of instances, improvement has followed the change of residence.

Undoubtedly the long sea voyage, with its expense and possible discomforts, has the effect of deterring many from making trial of the advantages which a visit to, or residence in, one of these colonies offers to persons suffering from chronic pulmonary affections. The question should be put in this more general way, and not confined, as it has too much been, to their suitability in phthisical cases. There is one thing which should go some way to counterbalance the disadvantage of distance, and which may fairly be expected to weigh heavily with those who, feeling that they cannot reside in any part of Great Britain without great risk or discomfort, are casting about for some place where they may hope to be something better than permanent invalids. In no other part of the world can there be found a stretch of territories, extending, as the Australasian colonies do, from a comparatively high latitude in the southern part of New Zealand, with a climate resembling that of Scotland, to tropical Queensland, all under British rule and inhabited by English speaking people, keeping up their English habits and modes of thought. There is frequent and rapid communication between the ports scattered all along the seaboard, and inland travelling is made easy by lines of railway extending in all directions. These are no slight advantages, and might be insisted on more fully than I now propose doing. Victoria, possessing as it does the chief seaport, and occupying a central position, may most conveniently be made the starting-point; and its claims are those which I have specially to advocate, though it may easily happen that some other place of residence may be found preferable.

The method I intend to follow is one which scarcely admits of application to most of the places resorted to by invalids, and especially by those suffering from lung-disease. It is to make an investigation into the comparative number of deaths produced by phthisis, and other pulmonary complaints, among the general body of the population, so as to discover whether these diseases are to any considerable extent prevalent and fatal. For such an inquiry to have any satisfactory issue, it is evident that the primary desideratum is a proper system of registration of deaths, similar to that in Great Britain. It is also clearly necessary that the inhabitants, whose health condition is inquired into, should be either of British birth or descent, or at least of some closely allied people. Only on that condition could the amount of disease prevailing among them be taken as affording any trustworthy indication of the probable effect on actual natives of Great Britain in other parts of Europe. The data needed for such an inquiry are more fully accessible in this than in any of the other colonies—official records, properly arranged, having been in existence for a sufficient length of time to allow of exact information being derived from them. All the necessary conditions above indicated are not to be found in the same measure probably in any other community. I propose, then, to compare the death-rate from phthisis, and the diseases of the respiratory system generally, in England and Wales and in this colony. For the purpose of providing some standard, to which the more special tables may be referred, it is necessary first to present a comparison of the rate of mortality from all causes, and also from phthisis and the whole order of diseases of the respiratory system, which includes bronchitis, pneumonia, etc. The figures are for the five years 1870-74, and are calculated per ten thousand of the population, being uniform in that respect with other lists to follow.

TABLE I.

	Phthisis.	Resp. System.	All Causes.
England and Wales	.. 22.83 ..	.. 36.14 ..	.. 220.53
Victoria	.. 12.60 ..	.. 14.82 ..	.. 144.88

It results from this table that the mortality in Victoria from phthisis, as well as from diseases of the respiratory system, is lower than in England, not only absolutely, but even relatively, to the number of deaths from all causes—the two together making up only 18.9 per cent. of all deaths, against 26.7 per cent. in England. That the death-rate from phthisis, though greatly lower than in the mother country, is less favourable comparatively than in the other class of cases, will at once be remarked, and is capable of at least partial explanation, as will be shown farther on.

Of the deaths from the inflammatory and other affections of the lungs and air-passages, a large proportion are due, here as elsewhere, to bronchitis and pneumonia; and it might scarcely have been worth presenting them separately but for a curious variation in the mortality from these two diseases, as is brought out in the following table.

TABLE II.

	Bronchitis.	Pneumonia.	Total Resp. System.
England and Wales	.. 21.10 ..	.. 10.10 ..	.. 36.14
Victoria	.. 5.01 ..	.. 5.50 ..	.. 14.82

In the present very imperfect state of our knowledge about the exact etiology of these diseases, it may not be possible to explain why, in England, bronchitis causes twice as many deaths as pneumonia; while in Victoria the mortality is about equal, the pneumonia rate indeed preponderating slightly. The difference may in part be owing to the smaller proportion of very old people in this colony; but it may also, I think, be in part accounted for in this way. During our long and dry summer, persons who have suffered from an attack of acute bronchitis have time to get completely clear of the residue of it before the colder weather comes on, a recurrence being thus less likely then to occur. And, besides, the severity of the Victorian winter is insignificant, when compared with that of England or Scotland. Such cases, therefore, have not the same tendency to drag on, and to degenerate into the fixed "winter cough", which sooner or later cuts off so many persons in Great Britain. In the same way, it happens that those who left the mother country suffering from firmly-rooted chronic bronchitis are able here to attain permanently, and in fuller measure, the freedom from it which they formerly enjoyed only during the warmest part of the English summer and autumn. Whether this opinion be accepted or not, it is certain that bronchitis, pneumonia, and the other diseases classed as "of the respiratory system", are comparatively unimportant causes of death in this colony.

I do not think that it is necessary to enter on any fuller analysis of the figures referring to these diseases. If the constitution of the population have any effect in keeping the mortality low, that effect must be an insignificant one, as persons of all ages seem to be almost uniformly liable to attacks of them. This is not the case with phthisis; and so it has been alleged, with more or less emphasis and attempt at proof, that, to a relative preponderance in the population of persons at ages when the liability is slight, the low death-rate from phthisis is in great part due. It will not be difficult, however, to show that this explanation is unsatisfactory, inasmuch as a comparison of the mortality among persons of similar ages, in England and Victoria, shows the rate to be uniformly and greatly lower in this country. The following table shows the mortality per ten thousand persons at different ages, in census years, for which exact figures are attainable.

TABLE III.

Ages.	England.	Victoria.	
	1871.	1861.	1871.
Under 5 years	8.31	3.50	1.71
5 to 10 ,, ...	3.77	1.68	.56
10 to 15 ,, ...	6.88	4.34	.93
15 to 20 ,, ...	23.98	8.15	7.69
20 to 25 ,, ...	33.33	12.64	16.09
25 to 35 ,, ...	41.33	20.41	21.32
35 to 45 ,, ...	39.98	23.84	20.02
45 to 55 ,, ...	33.02	24.98	21.85
Above 55 ,, ...	20.40	23.19	22.23
At all ages	23.50	13.93	11.49

I cannot profess to explain the rather curious fact that, among persons above fifty-five years of age, there seem to be more deaths from consumption than in England. Though that was the case both in 1861 and 1871, it may be accidental, the total number of such persons not being great enough to allow of a proper average being struck. For all other ages, the advantage is greatly on the side of residents of this colony.

Another question, which it is perhaps somewhat premature to raise, but which is of great importance in connection with the present inquiry, is as to the effect of acclimatisation in altering, by increase or diminution, the liability to phthisis among the inhabitants of Victoria. It is only about fifty years since the first settlers landed in Port Phillip, and less than thirty years since the great influx of population began; and there has not been much time, therefore, for great changes to be wrought. The accessible data give results which, if not conclusive, are at least suggestive. For the purpose of checking the figures given in the last table, single years showing considerable fluctuations, the average mortality in two periods of five years is appended, the population in the middle year of each being assumed to give a proper basis of calculation.

It will be noticed that, both in 1871 and in the five years 1869-73, the

average for all ages taken together was rather lower than ten years previously. Young adults, from twenty to thirty-five years of age, however, were fewer in number; the increase of about one hundred and ninety-one thousand in the population, between 1861 and 1871, having been

TABLE IV.

Ages.	1859-63.	1869-73.
Under 5 years	3.67	1.32
5 to 10 ,, ...	1 46	.67
10 to 15 ,, ...	3.18	1.28
15 to 20 ,, ...	10.87	9.38
20 to 25 ,, ...	15.60	18.86
25 to 35 ,, ...	18.26	22.77
Above 35 ,, ...	21.57	21.96
At all ages	13.18	12.12

made up among those older and younger. This may, in part at least, help to explain the general reduction in the death-rate; but, when an attempt is made to account for the variations among persons of similar ages at the two periods, difficulties at once arise, and perhaps no explanation that is more than hypothetical can be given. The first point to be noticed is the very great reduction in the mortality among all those below fifteen; for, if it be allowed that the diagnosis of phthisis is much more difficult in children than in adults, the same difficulties would be met with at both periods, and so comparison may still be admissible. It should also be remarked that the reduction was greatest among those from ten to fifteen years of age, in whom the likelihood of error would be less than among young children. Is it permissible to conclude from these figures that young persons have, for some reason, become less liable to phthisis of late years? And, further: Is this reduced liability due to acclimatisation, *i. e.*, to Victorian-born persons having less proneness than those coming from other countries; since, in 1871, a much larger proportion of children than in 1861 must have been of Australian birth, this holding true especially of those between ten and fifteen? It would not be easy to devise a more feasible explanation of this reduction in the death-rate, which is unmistakable enough.

But there is another peculiarity in these returns which is more difficult to account for, and that is the increased rate among persons between twenty and thirty-five years of age. It cannot be said that, in 1871, any considerable proportion of these young adults were of Victorian origin, and so the argument for acclimatisation is not affected. If the increase is to be accounted for at all, it can only be by the larger number of such persons now following unhealthy occupations in factories and workrooms; and, to a smaller extent, by the arrival of phthisical persons in search of health in greater numbers than formerly. I think that it might be possible also to show that the increase was more apparent than real, and due in some measure to accidental fluctuations in the population. A notable disturbance of that kind was produced by an extensive emigration of men, no doubt mostly young, to the newly discovered gold fields in New Zealand, in the latter part of 1861, after the census was taken; and also in 1862 and 1863; the effect being to make the average population in that class less than the official returns show. The death-rate for 1861 and for 1859-63 being based on the census returns is, I believe, struck too low in these years for the ages twenty to thirty-five. If these attempts at an explanation are not accepted as sufficient to account for the apparent increase in the mortality among young adults, I still insist that the cause or causes must be accidental, as it is impossible to conceive of there having been, in 1871, greater constitutional proneness, or less adaptation to climatic conditions, among young adults (twenty to thirty-five), and exactly the opposite among those both older and younger. [*Vide* Table III.]

I do not think that the figures already given bring out with perfect fulness the case in favour of Victoria as a health-resort. The attempt to foster native industry, by giving protection to articles manufactured here, has had the effect of drawing large numbers of persons to the towns, and especially to Melbourne, which, with its suburbs, now contains nearly one-third of the total population of the colony. With this rapid growth of population in the city, there has not been due attention paid to sanitary improvement, and there is nothing better than surface drainage. With an abundant water-supply, therefore, the soil is constantly wet; and the effect of that condition in keeping up a high death-rate from phthisis has been clearly established. That circumstance, together with the establishment of extensive manufacturing industries, must be held to account in the main for the fact, that the phthisis mortality in Melbourne and its suburbs is excessively high, when compared with other parts of the colony. Other causes may co-operate no doubt, as the influx of consumptives from abroad, as well as from the country districts. The marked difference between town and country is clearly shown in the following table, which gives, as before, the death-rate per ten thousand at different ages in Melbourne and in the rest of the colony, including such large towns as Ballarat, Geelong, and Sandhurst.

TABLE V.

Ages.	Melbourne and Suburbs.		Rest of Victoria.	
	1861.	1871.	1861.	1871.
Under 5 years	5.77	3.97	2.67	.92
5 to 10 ,, ...	2.56	.71	1.32	.50
10 to 15 ,, ...	7.91	2.49	2.59	.32
15 to 20 ,, ...	14.49	13.03	5.26	5.14
20 to 25 ,, ...	28.69	29.18	7.51	10.01
25 to 35 ,, ...	39.76	41.69	15.03	14.38
Above 35 ,, ...	38.02	40.39	19.04	13.60
At all ages	23.79	22.29	10.48	7.24

That there should be a difference between town and country is no more than might have been expected; but that it should be so great as that shown in 1871 cannot be explained by the difference in the density of population, or the other influences of town life, when properly regulated. For Melbourne, with its suburbs, is not as a whole densely populated, straggling as it does over an area about sixty miles in circumference; and, therefore, the true causes of its high death-rate are to be sought for in the conditions referred to above.

The true test of the suitability of this colony, as a health-resort for phthisical persons, is to be found in the death-rate of the extra-metropolitan districts, where it fell from 10.48 to 7.24, or nearly one-third, and that in the face of an increase in their population, between 1861 and 1871, of one hundred and twenty-four thousand. If the influence of acclimatisation in conferring relative immunity be discoverable at all, it should be in the rural districts, where conditions have not greatly altered.

No invalid, proposing to visit or reside in this country, should think, in the first instance at least, of adopting a town life, though in one of the outlying suburbs the sanitary conditions may to a considerable extent resemble those in the country. To persons suffering from obstinately recurring chronic bronchitis, or phthisis in its early stages, there is a prospect afforded of improvement or recovery from a residence here, which could scarcely be hoped for in England; even if circumstances allow of a portion of every year being spent on the south coast, or in France or Italy. So with delicate children, who have a hereditary tendency to pulmonary disease, it is safe to say that there is a better prospect of vigorous health here than in Great Britain. Parents who can see their way to settle in Australia may find a home among people of similar tastes and feelings with themselves, and thus get the advantage of a favourable change of climate without making themselves and their children aliens. It is almost unnecessary to say that, for a young man in delicate health, without friends or sufficient means, to come here is not, as a rule, to be recommended. He may simply have to stay in Melbourne, living in a hotel or boarding-house, and compete with numerous applicants for a clerkship or some similar situation. In any of these colonies, however, there are openings for persons with some capital; and every one will be able to find a suitable climate somewhere within their bounds, if such be at all attainable. With these advantages, they will find themselves socially in another England, with the necessaries of life, and many of its luxuries, cheaper than they are at home.

I have avoided the temptation to draw a fancy sketch, as I believe that the merits of the Australian colonies do not require more than a temperate and truthful statement—a prejudice against their claims having been excited by exaggerated praise, followed by undue depreciation.

TABLE VI.—*Population.*

Ages.	All Victoria.		Melbourne and Suburbs.	
	1861.	1871.	1861.	1871.
Under 5 years	91,514	116,688	24,243	30,204
5 to 10 ,, ...	53,265	106,503	15,592	27,849
10 to 15 ,, ...	34,535	85,585	11,370	24,060
15 to 20 ,, ...	33,117	54,556	10,345	17,650
20 to 25 ,, ...	56,147	49,422	13,590	17,476
25 to 35 ,, ...	150,381	111,627	32,688	33,098
35 to 45 ,, ...	76,316	114,851	32,088	56,440
45 to 55 ,, ...	30,820	58,559		
Above 55 ,, ...	14,227	33,737		
All ages	540,322	731,528	139,916	206,780

For the sake of those who may wish to see the data on which the figures given in the preceding tables are based, I append others, showing the population and number of deaths from phthisis for the whole colony, and for Melbourne separately, in 1861 and 1871.

TABLE VII.—*Deaths from Phthisis.*

Ages.	All Victoria.		Melbourne and Suburbs.	
	1861.	1871.	1861.	1871.
Under 5 years	32	20	14	12
5 to 10 ,, ...	9	6	4	2
10 to 15 ,, ...	15	8	9	6
15 to 20 ,, ...	27	42	15	23
20 to 25 ,, ...	71	84	39	52
25 to 35 ,, ...	307	248	130	138
35 to 45 ,, ...	182	230		
45 to 55 ,, ...	77	128	122	228
Above 65 ,, ...	33	75		
At all ages	753	841	333	461

If it be asked why I have not made use of returns of later date than those given, the reason is a simple and easy one. For any year we may know exactly the number of deaths; but the further we depart from the census year, the greater becomes the uncertainty about the amount of population; and the numbers living at particular ages cannot be ascertained with any approach to accuracy.

To avoid any possible misconstruction, I may also state that some of the tables contained in this paper are taken, with certain alterations of form and arrangement, from a Report which I had the honour of drawing up at the request of a Committee of the Medical Society of Victoria.

PULMONARY APOPLEXY AND EMPHYSEMA AS A *POST MORTEM* APPEARANCE IN CASES OF DEATH FROM EPILEPSY.

BY J. WILKIE BURMAN, M.D.Edin., Richmond, S.W.

SOME time ago, two female epileptic patients under my care died, about the same time, after a series of fits in rapid succession. The following are some necessary particulars with regard to them.

	Age at Death.	Duration of Epilepsy.	Duration of Series of Fits, resulting in Death.
Case I. ..	.. 17 years. ..	.. 7 years. ..	.. 4 days.
,, II. ..	.. 25 ,, ..	.. 25 ,, (congenital)	5 ,,

I have full and careful notes of the whole *post mortem* appearances, as well as of the treatment adopted during life, in these two cases, which interested me very much, coming so close together and being so very similar. Leaving, however, these full particulars for further publication, I only desire, at the present time, to draw attention to the condition of the lungs, which was exactly similar in the two cases. The apices and anterior margins of the lungs were emphysematous in each case; and, in both, each lung exhibited, on section, many patches of pulmonary apoplexy, varying in size from that of a pea to that of a bean, and being here and there more or less conglomerated. Otherwise, there was nothing abnormal in the lungs in either case; and, indeed, excepting, of course, the brain, the rest of the organs were typically healthy and free from disease, though there were certain cadaveric appearances, such as one would naturally expect to find, considering the mode of death, under such circumstances. In neither case, moreover, was there, during life, any affection of the heart or lungs or other usual symptoms to which the *post mortem* condition of the lungs could be attributed; and I can only, therefore, infer that the occurrence of pulmonary apoplexy and emphysema was in each case the direct result of the violence done to the lungs during the forced and spasmodic action of the respiratory organs caused by the fits themselves. Of course, deaths of epileptics in this way are happily comparatively rare; and I am not prepared to say how far such a condition of the lungs is the rule in such cases. I can only draw attention to the very similar peculiar results in these two exactly similar cases, occurring close together, and ask whether the appearances in the lungs are compatible with any other theory as to their causation under the circumstances. It may be said, as far as the emphysema is concerned, that that is a condition which is sometimes hereditary. Well, just so; but still it is a rather unlikely thing that two cases with such a rare hereditary state of matters should occur close together; and especially can we not lay much stress on such a remote possibility when we have the probability that the similar epileptic symptoms in each case afford a palpable clue as to the direct causation of the condition. Should it be granted, therefore, that the peculiar condition of the lungs, as above referred to, is to be attributed to a series of violent epileptic fits in rapid succession, and of several days' duration, it may fairly, I think, be assumed that such a condition of the lungs may exist in any epileptic to a greater or less extent; and, such being the case, it appears to me that the condition of the lungs in the above cases is worthy of consideration from a medico-legal point of view; for in case of such appearances in a body found dead, the condition might be of positive value in affording a clue as to the cause of death, in the absence of other appearances; and it would certainly, at any rate, afford strong corroborative evidence (and thus be of indirect value) in such cases as those in which there might be frothing at the mouth, bitten tongue, or other evidence of a fit having occurred, and presuming, of course, that there should be no evidence to show that the peculiar lung appearances might be attributable to any other cause.

CALCULUS VESICÆ IN A HERMAPHRODITE: LITHOTOMY: RECOVERY.

BY MATTHEW D. MORIARTY, M.B.,
Civil Surgeon, Muzuffarnagar, N.W.P.

DARMEE, aged 6 years, was brought to the Charitable Dispensary on 11th August last. The mother stated that the child had suffered from irritation of the bladder, pain, etc., for the last fifteen months, and had been very bad for the last fortnight. On examination, the child was found to be a hermaphrodite.* The corpora cavernosa formed a rudimentary penis about an inch or so long. On each side, the ununited halves of the scrotum looked like labia. In each, but best marked in the right, could be felt a rudimentary testis. Three-fourths of an inch below the penis was the urethral orifice, and below this again was a little *cul-de-sac*. Altogether, the parts looked very like those of a girl with a small mons Veneris and a huge clitoris. The *cul-de-sac* showed signs of a recent injury. The mother stated that, a few days previously, she had called in a "jarrah" (native surgeon), who apparently never doubted that the child was a female, and considered that the symptoms were due to want of a vagina; for he forthwith proceeded to manufacture one with his finger. He did not do much harm, but he added considerably to the child's discomfort by leaving a raw surface for the urine to trickle over. The child being in considerable pain, I gave chloroform, and, passing a female catheter into the bladder, at once struck a stone. Removing the catheter, I introduced an ordinary dressing forceps, and, separating the blades, dilated the urethra as much as I thought safe. I then seized the stone, and tried to extract it, but unsuccessfully. Introducing my finger into the rectum, I got the stone down to the neck of the bladder, and, with the finger behind it, again tried to extract. Part of the stone came away in the forceps. I then tried to crush it and remove it piecemeal, but in this was only partially successful. There was much tenesmus, and a tendency to prolapsus ani; there was also slight bleeding from the urethra.

Next morning (12th), having administered chloroform, I performed the usual lateral operation, using a No. 8 staff. I could not get the bladder to retain any water; no sooner did I inject any than it was expelled. The external incision was very limited; for, from the posterior margin of the genital fissure to the anterior margin of the anus, the perinæum only measured two-thirds of an inch. The incision was made with considerable difficulty, owing to the constant straining. The urethra lay much deeper than I expected; it was, moreover, very thick and slippery. Having cautiously made the deep incision, I introduced my finger, and found that the urethra was only divided to a certain extent, that apparently about one-fourth of an inch of it had been pushed in before the knife, and that behind it a little pouch had been made. Working gently, I got my finger into the bladder, and dilated the neck. The stone was then readily removed with the forceps. Having ascertained with my finger that there were no *débris*, I carefully washed out the bladder with tepid water. Very little blood was lost. After recovering consciousness, the child was in great pain; therefore, after half an hour, five minims of tincture of opium were given. There was pretty sharp cystitis for a few days, but this gradually subsided. The constant straining also brought on a sort of dysenteric attack, but a few small doses of Dover's powder and ipecacuan soon removed this. The patient was discharged well on September 5th.

The stone was of uric acid, oval in shape, measuring 1¼" × ⅞" × ½"; it weighed altogether about 150 grains. From one end, the outer layer was gone: this layer was about one-sixth of an inch thick, and was moderately soft; within, the stone was pretty hard.

* During the last eighteen months, I have seen three or four so-called "hermaphrodites".

My attempt at lithectasy was, I fear, a poor one. With a proper tent, or a three-bladed dilator, or both, the urethra might possibly have been sufficiently dilated to permit the removal of the stone. At any rate, if I meet such another case, and the stone is of moderate size, I will give this method a fair trial before proceeding to lithotomy. In attempting to crush the stone as I did, I did more harm than good.

A CASE OF EAR-SNEEZING.

By JAMES RUSSELL, M.D., F.R.C.P.,
Physician to the Birmingham General Hospital.

An explanation of the prominent phenomenon in the following case, viz., the constant attacks of sneezing through two days and nights, occasioned apparently by acute inflammation of the middle ear, will be found in a short paper by Dr. Lockhart Clarke on the Phenomena of Ear-Cough, in the number of this JOURNAL for January 15th, 1870. Were argument needed for transferring the reasoning therein from the process of coughing to that of sneezing, the concluding sentence of that paper would afford it: "With regard to the anatomical connection and the mechanism by which I have shown that impressions made on the vagus and on the incident fibres of the trifacial and spinal nerves may call into action the whole class of respiratory muscles, see my memoir." It appears, also, that some sudden change within the cavity of the tympanum in my patient, a change followed by instant deafness, acted upon the heart, through the inhibitory influence of the vagus, and produced fainting. It is also worth noting that there was no vertigo present, the labyrinth having probably escaped. I have commented on another occasion upon the distinction between vertigo and fainting, in connection with a case of the so-called gastric vertigo.

A man aged 56, of nervous temperament, an out-patient of the Birmingham General Hospital, was in his usual health a fortnight ago, when he was suddenly taken with "a kind of gaping and sneezing"; the gaping seemed to come from his heart. The sneezing was incessant during the next two days and night; "he could not tell the quantity of times he sneezed". At last, in the afternoon of the second day, after a dreadful sneezing fit, he tumbled down, and was unconscious for two or three minutes; on recovering, he was completely deaf, so much so that, not knowing what had happened, and crossing the street soon afterwards, he narrowly escaped being knocked down by a passing vehicle. On the following afternoon, he began to hear on the left side, but the sound seemed "to come the contrary way"; if from the front, it appeared to come from behind; if it started from one side of the street, it appeared to come from the opposite side. Ever since, he has been "in agony" from a thumping through the ears, like a pulse beating very quickly, with a constant whizzing and a flutter in the ears. When the thumping ceased, "it was like a toothache behind his ears". He has not had any cough nor vertigo whatever. Dr. Malet, our house-physician, examined the ears for me, and found the left ear full of wax; this having been removed, it appeared that both tympana were acutely inflamed at the attachment of the ossicles, the right very severely, being almost in a state of suppuration. After syringing, I found that the patient distinguished a faintly ticking watch only within three-quarters of an inch of his left ear; a loudly ticking watch, at eight inches. On the right side, he heard nothing, even when the watch was applied to the ear or to the cranium.

CASE OF "ANGINA LUDOVICI".

By JOHN A. ERSKINE STUART, L.R.C.S.Ed., Dunse, N.B.

On April 29th, 1879, I was called to the country to visit a child six months old, who was troubled with a swelling in the neck. On examining the little sufferer, a state of things presented itself which to me was totally unfamiliar. I found a hard brawny swelling extending over the whole front of the neck, from the lower jaw to the sternum. To look at, there was something of the appearance of emphysema; but, on putting the fingers on the swelling, the hard brawny feeling at once made itself plain. The skin over the greater part of the tumour was natural in colour; but, immediately below the symphysis of the lower jaw, a black spot, of the size of a shilling, presented itself, surrounded by a bluish congested margin, the whole discoloration amounting to about the size of a florin piece at most. The face was also much swollen, and pitted on pressure, evidently due to pressure on the cervical veins preventing return of blood. On palpating the swelling, there was no indication of fluctuation at any point, with the exception of the discoloured circle, where indistinct fluctuation could be detected. The parotid and submaxillary glands were much enlarged and hard. The child's tongue was foul. Nothing could be discovered amiss with the throat on examination, conducted with difficulty, on account of the stiffness of the jaws. The pulse was exceedingly weak, and the skin very hot. The pupils were enormously dilated. The infant was evidently *in articulo mortis*, having been ill for two days previous to my only visit.

I ordered poultices to the swelling, to be repeated frequently, gave a few grains of hydrargyrum cum cretâ, and ordered the child to be kept on milk diet entirely. The patient had been brought up on the bottle; but, when this disease developed itself, the mother had to resort to feeding by hand. I gave a very gloomy prognosis, and was not much surprised when the father called next morning to say that the child had died early on that day.

Remarks.—In no work on practice of medicine have I seen a disease described similar to this. In signing the death-certificate, I assigned the cause of death to cervical abscess of three days' duration. Shortly afterwards, I heard that Professor Grainger Stewart of Edinburgh University had lectured during the winter on a newly discovered disease, called "angina Ludovici"; and, finding that my case presented the exact symptoms detailed to me by one who had heard the lecture, I am convinced that this was a case of that disease. The pathology of the disease is simply an inflammation of the cellular tissue of the neck, going on to suppuration. Another case was seen in this district about the same time by another practitioner, the result being successful, if I remember rightly. Whether I should have opened the tumour at the soft congested spot on that evening now suggests itself to me as a retrospective question. There were certainly no indications for an immediate incision. No doubt an early antiseptic incision might have given the infant relief; but the probability is that it would have sunk, as it had always been a puny weakly creature.

ATRESIA VAGINÆ.

By JOHN HUSBAND, F.R.C.S.E., Ajmere, South India.

On April 17th, 1878, Naràyani, a young woman aged 22, was admitted into the Female Mission Hospital, Ajmere, anxious to see whether anything could be done to relieve her condition of occluded vagina. She began to menstruate when she was twelve years of age; the menstrual flow had appeared at regular monthly intervals ever since; she passed her monthly periods with the minimum amount of suffering; and the fluid was normal in quantity. She stated, moreover, that her parents had married her to her present husband without indicating the condition of affairs, the consequence of which was that he treated her with great contempt, refused to give her jewels to wear, or even decent clothes to put on; and that she was known in the neighbourhood as a "hinjri" (hermaphrodite), and despised of all her neighbours. On making a physical examination, I found that there was not the slightest trace of a vagina. At the upper part of what should have been the vaginal orifice, there was a small pouch-like projection, which turned out to be the urethra greatly dilated, which only admitted the tip of my little finger. With the finger in the rectum, there was no difficulty in making out the existence of the uterus, the mouth of which, opening into the urethral canal, accounted for the ease with which the menstrual function had been performed. The woman had an additional finger for each hand and toe for each foot.

Next day, with the advice and co-operation of the late Dr. Murray, civil surgeon, Ajmere, I proceeded to operate. The patient having been anæsthetised, and placed in the usual lithotomy position, Dr. Murray took charge of the staff introduced through the urethra into the bladder, while I proceeded to make a channel through the tissues between the urethra and rectum up to the uterus. I first made a transverse incision in front of the anus; and then, with a little gentle cutting and a good deal of tearing up of tissue with the fingers, a canal to the uterus was soon opened up, through which the os uteri could be distinctly felt. With the urethra held well up under the pubic arch, and the index finger of the left hand in the rectum, there was no difficulty in knowing where to go, and the operation was soon over. A certain amount of contraction of the tissues occurred, but the canal remained useful for all purposes. A plug of lint, smeared with carbolic oil, was inserted into the wound, and the patient kept in the recumbent position for a number of days. To keep the canal patent, glass plugs were not available; but one made of lac was found the best substitute. The woman herself being extremely anxious that the operation should be successful, did her best to carry out instructions. The wound was progressing so satisfactorily that she left the hospital on May 3rd. A few months after her return home, the woman returned in great glee to tell me she was pregnant. At intervals during her pregnancy, she came to have the canal examined. Fortunately, the child was a small one. The labour passed off with the

minimum of suffering, and without the rupture, apparently, of a single fibre. I saw mother and child this morning, two and a half months after her confinement, both looking vigorous. The woman is not only a happy mother, but has been restored to her friends and to all the enjoyments of the married state.

CLINICAL MEMORANDA.

THE TREATMENT OF MUCOUS POLYPUS OF THE NOSE.

I WAS much interested in Mr. Reginald Harrison's "Note on the Treatment of Mucous Polypus of the Nose", which appeared in the JOURNAL of the 15th November, as I have lately employed with considerable success a somewhat similar method. I have applied rectified spirit in the form of spray to the polypi. The immediate effect of this is to produce diminution in the size of the growths. In some instances, the polypi have shrivelled up and disappeared altogether. This method of treatment was suggested to me by seeing two large polypi which I had put into spirit for preservation reduced in a few hours to half their original size. Mr. Harrison's method of puncture seems to me admirable; and I shall in future employ it as a preliminary to the spirit spray in aggravated cases.

A. G. MILLER, F.R.C.S.Edin.,
Lecturer on Surgery, and Senior Assistant Surgeon to the Royal Infirmary, Edinburgh.

SLOW PULSE.

III.

MR. NOBLE, in reporting an interesting case of slow pulse (36) in an old gentleman of ninety-six, asks if such is rare. An old woman here recently passed quietly away at eighty-three, whose normal pulse, when she was in perfect health some months before her decease, was 25. I am attending a young lady whose lungs I believe to be studded with tubercles throughout. She is emaciated; has cough, night-sweats, and a temperature of 101. She is, and has long been, engaged in teaching at her own house; continually asserts herself as well, and deprecates my "making a fuss" about her. The pulse is 180 on entering the room, but, after a quarter of an hour's quiet converse, settles down to 168, and so permanently remains. Her condition has not varied for many months.

EDWARD GARRAWAY, Faversham.

IV.

I HAVE met with several cases of remarkably slow pulse. One was that of a parish minister in Ayrshire, whose pulse, very carefully counted by me on one occasion during the summer of 1875, and in the afternoon only, numbered 32; and on various other occasions was only 36. So far as I could elicit, his pulse had always been slow; both radials were alike. The retardation, so far as I could determine by unaided sense, was shared in equally by all the elements of the cardiac revolution. If anything, there was a slight comparative prolongation of the "pause". The sounds were clear, deliberate, and prolonged. When the pulse was counted at 32, there was a condition of general nervous prostration. At other times, he had ordinary health. The patient is ordinarily vivacious, and not by any means of a morose habit.

R. PARK, Glasgow.

V.

MR. NOBLE'S case of slow pulse reminds me of a similar one which recently came under my own observation. A gentleman aged 38 consulted me for constipation depending on a torpid liver. On feeling his pulse, I was surprised to find it barely 40 in the minute and rather weak. The heart's sounds were somewhat "muffled", but not markedly so. There was no valvular disease. The patient had never experienced any tendency to syncope. He had no breathlessness on exertion, nor did he feel much inconvenience from cold extremities. On several subsequent occasions, I found the pulse varied from 40 to 60; but when at the higher rates it was intermittent. It is noteworthy, that a brother of the patient was found dead in bed, and that some near relatives were of the hæmorrhagic diathesis.

JOSEPH QUIRKE, M.R.C.P.E., etc., Birmingham.

VI.

IN 1875, I was sent for to see a gentleman, aged 67, living near York, whom I had previously attended in attacks of faintness and dyspepsia. He was suffering from his usual ailment, and had also symptoms of cerebral softening. His pulse was 32, regular, soft, and moderately full; and at subsequent visits I found that it ranged from 30 to 36, never exceeding the latter. A year later, he came to live nearer to me, and I had frequent opportunities of seeing him. On three occasions, his pulse was 28. He died suddenly one afternoon while sitting at the table. In the other case, that of a woman aged 69, whose chief symptoms were faintness, dizziness, and general languor, the pulse ranged from 30 to 36; its usual rate was 32. She is still living, and in tolerable health, saving the occasional faintness.

JAMES CROCKER, M.R.C.S.E., L.S.A., Bingley.

THE CAUSE OF LATERAL CURVATURE OF THE SPINE.

DR. DRUMMOND'S report of his case of lateral curvature of the spine following unilateral pleuropneumonia, published in the JOURNAL of November 22nd, calls for some remarks.

With regard to the cause of lateral curvature, Dr. Drummond states with regret that a purely mechanical explanation is "at all events to a great extent" now substituted for the "muscular theory". It seems to me an unfortunate circumstance when any one adopts one exclusive theory for a subject sufficiently broad to admit of several, for in doing so he will run the risk of thrusting aside "general principles". Delpech promulgated a theory that the erect position of the spine depended upon muscular antagonism, and that scoliosis was caused by a one-sided increase or decrease of muscular power. Werner, in 1851, attempted to prove that Delpech's theory was a gross error; he maintained that muscular antagonism had no existence. Jules Guérin, whose theory Dr. Drummond refers to as one to be upheld, considered "muscular retraction" the invariable cause of scoliosis, and, according to Bauer, he treated all cases by employing tenotomy or myotomy. He was opposed by Dieffenbach and by Malgaigne. At an inquiry instituted by the Academy, "Guérin could not be persuaded to submit more than one case to the inspection of the Committee; but the latter succeeded in collecting twenty-four of his cases. Most of them were not only aggravated by the operation, but some completely disqualified to labour." I quote from Bauer. Dr. Drummond probably refers to Guérin's theory, and not to his treatment.

There are other muscular theories; and Dr. Drummond considers that in his case pain in the lung and pleura gave rise to the distortion. He explains it thus. "The side being fixed to avoid as much as possible the friction of the inflamed pleura"....."an opportunity is consequently afforded the muscles attached to the vertebræ to rotate the same." But the opinion almost universally prevails that rotation is absent in lateral curvature consequent upon pulmonary and pleural diseases; and if Dr. Drummond is sure that in his case the depression of the ribs, etc., was really owing to rotation of the vertebræ, and not simply to consolidation of the lung, it will form an interesting exception to the general rule.

Dr. Judson's rotation theory (in opposition to the serratus magnus muscle theory) admits an apparently good reason for the absence of rotation in lung and pleura cases.

As to the "mechanical explanations" of scoliosis, does Dr. Drummond doubt that obliquity of the pelvis, from whatever cause occurring, may give rise to spinal curvature?

19, Savile Row. E. NOBLE SMITH.

OBSTETRIC MEMORANDA.

TURPENTINE IN *POST PARTUM* HÆMORRHAGE.

SOME three years since, I published a case of *post partum* hæmorrhage treated successfully by a large dose of turpentine. I still have great cause to be thankful for such a valuable remedy, and since that time have had six or eight severe cases treated in the same way, and with the same result. I attended this week a patient who always floods severely. Her last confinement was of a very serious nature, and I had great difficulty in arresting the hæmorrhage. This time it commenced again immediately after the expulsion of the placenta, which was within five minutes of the birth of the child. I had previously given ergot, and had grasped the uterus firmly, but the hæmorrhage increased. I then gave the turpentine draught; and, within a few minutes, she said she felt better and warmer. Her pulse improved in volume, the uterus contracted firmly, and the hæmorrhage stopped. There was no sickness, and from that time she did well. I have tried many other remedies in these severe cases, and in none have I found such quick and satisfactory results as with the turpentine.

JAMES POLLARD, Torquay.

REVIEWS AND NOTICES.

THE FUNCTIONAL DERANGEMENTS OF THE LIVER. By the late CHARLES MURCHISON, M.D., LL.D., F.R.S. Second Edition. Revised by the Author. Pp. 193. London: Smith, Elder, and Co. 1879.

WE welcome the appearance of a second edition of Dr. Murchison's very useful little volume; and we are especially pleased to find that it had been revised, and evidently with his usual care and industry, by its late lamented author. We have been at the pains to compare the two editions page by page; and, although the bulk of the volume has been increased only to the extent of eleven pages, we find in every part of it conclusive evidence of careful revision. One of the most interesting, as it is the largest of the additions to the present volume, is a fuller statement than appeared in the previous edition of the relation between functional derangements of the liver and albuminuria. After quoting and confirming by the results of his own experience Dr. George Johnson's statement that renal degeneration is sometimes a consequence of the long continued elimination of products of faulty digestion through the kidneys, Dr. Murchison goes on to state that there are reasons for believing that albuminuria may be induced by hepatic derangement, independently of structural disease of the kidneys. In these cases, the albuminuria is intermittent, sometimes appearing only after food, and especially after particular kinds of food. He says: "The pathology of albuminuria in these cases may be similar to that of certain cases of diabetes, the liver having too much work to do, and permitting some albumen to pass through in a form which cannot be assimilated; or possibly there may be some defect in the destructive functions of the liver, in consequence of which the albuminous matter, instead of being converted into urea, does not even reach the stage of uric acid. It is possible that in many of the cases now referred to the albuminuria may indicate an early stage of the contracted or gouty kidney; yet it is certain that the symptoms may persist or recur during many years without any other symptom of renal disease, and with but little impairment of the general health."

In several parts, we find a fuller description than in the previous edition of the symptoms which result from functional disorder of the liver. Thus, he refers at page 147 to cystitis and urethritis resulting from the lithic acid diathesis, and he quotes Sir James Paget's statement, that he has seen acute inflammation of the urethra with the usual symptoms of gonorrhœa as a direct consequence of gout, occurring without infection, and not being infectious.

We cannot do better than advise all clinical students and practitioners, who have not hitherto made themselves acquainted with this valuable little book, to avail themselves of the opportunity afforded them by the issue of the new and revised edition. They will find it a most instructive and a trustworthy guide to the important subject of which it treats.

ON COLOUR-BLINDNESS: ITS DANGERS AND DETECTION. By B. JOY JEFFRIES, M.D. Boston: Houghton, Osgood, and Co. 1879.

THIS is an interesting contribution to this important subject. The author has been successful by his unremitting zeal and perseverance, in arousing public attention in America to the danger of employing colour-blind railway officials, so that the railway administration of Lowell, Massachusetts, instituted an examination of their staff, and found the state of matters in that respect unsatisfactory. The Boston Steam Company has also, at his suggestion, made obligatory an examination of their sailors and officials, so that there is a fair prospect of the author seeing his efforts lead to some practical result. The list of treatises on the subject, quoted by Dr. JEFFRIES, is complete. The work is dedicated to Professor Holmgren, whose views he follows very closely. We must, however, remark that the test which he employs is not considered to go far enough by some authorities, among others Dr. Stilling of Cassel, Dr. Hirschberg, and Dr. Wolfe. The Glasgow Commission, it should be noted, met with colour-blind persons who could name and match the colours when near, but not at a distance; so, after having examined one thousand children by this test, they were obliged to put it aside and use the spectroscope test, supplementing it with the matching of colours at a distance, which is considered perfectly reliable.

We incline to think that the difference of opinion among these investigators may be reconciled by the fact that, with congenitally colour-blind school children, this test may go further than with adults, who have to some extent supplied their natural defect by practice. This distinction should be borne in mind by investigators of this subject; and the readers of Dr. Jeffries's book will do well not to accept absolutely either his methods or his conclusions, without bearing in mind the modifying criticisms which we have thus briefly suggested. The subject is one for speciality as to research, but its conclusions belong to everyday practice, and affect daily life and the public safety.

DIE GELENK-RESECTIONEN NACH SCHUSSVERLETZUNGEN, IHRE GESCHICHTE, STATISTIK, END-RESULTATE. Von Dr. E. GURLT, Professor in the University of Berlin, etc. Mit 26 in den Text gedruckten Holtzschnitten. Pp. 1333. Berlin, 1879. (Resections of Joints for Gunshot-Injuries; their History, Statistics, and Final Results. By Dr. E. GURLT. With 26 woodcuts printed in the text.)

THE title of this very important and voluminous work, the result of five years' labour by the eminent Professor of Surgery in the Royal Friedrich-Wilhelm University at Berlin, sufficiently expresses the object which its author has had in view in its composition. As we learn from the preface, Professor GURLT was led to direct his attention specially to the subject of resection of joints for gunshot-injuries, on the one hand, on account of the increased proportions in which the operation has been performed in recent wars, and on the other, on account of the very disparaging statements regarding its results published by Professor Hannover of Copenhagen with regard to the Danish soldiers in whom it had been performed at the time of the German-Danish war of 1864. The controversy between Professor Hannover and the eminent German surgeons Baron Langenbeck, Surgeon-General Lœffler, and others, on this subject, was noticed in the columns of the JOURNAL at the time of its occurrence. Subsequently it appeared, from accounts written by surgeons on the German side also, that the results of the resections which had been performed on Prussian soldiers in the war of 1864 had not, in many instances, answered the expectations which had been formed regarding them. Again, in 1872, statements were published much to the same effect regarding the effects of the operation in a number of German soldiers who had been wounded during the Franco-German war of 1870-71. These statements were chiefly derived from official certificates regarding the condition of the men who, as invalids, were claiming pensions for the disabilities to which their injuries had subjected them. As all these commentaries on the results of the resections of joints, however, had been derived from observations of the subjects of them within comparatively brief periods after they had undergone the operation, Dr. Gurlt was led to doubt whether the reported conditions of these patients might not become materially improved at subsequent dates. He accordingly determined to institute a re-examination of all the men who had undergone resection of joints for gunshot-wounds in the war of 1864; and in 1874, when ten years had elapsed, he began to put this intention into effect. When he had accomplished this task, he carried on his inquiries into the condition of the German survivors in whom resection had been performed during the earlier Schleswig-Holstein campaigns between 1848 and 1851. He then extended his investigations so as to include all living German soldiers in whom joints had been excised for gunshot-injuries; and ultimately, with the assistance of the authorities of the War Department, who placed all official documents bearing on the subject at his disposal, Dr. Gurlt has succeeded in determining the present condition of no fewer than 668 invalids of this class who have survived from the various wars in which German armies have taken part between the years 1848 and 1871. A detailed description of these invalids, and of the state of the limbs to which in each case the resected joint belonged, as well as the capacity of the patient for performing necessary work, forms a considerable part of the volume before us, and, indeed, so far as they show the true final results of the operations concerned, constitutes the task which Dr. Gurlt chiefly undertook to accomplish.

But to make the monograph as complete as possible, Dr. Gurlt has entered very fully into the history of the operation of resection for gunshot-injuries, from its first introduction into surgical practice down to the present date. This is the most voluminous part of the work. The whole of the published material available for the purpose has been collected by the author. More than 3,600 recorded instances of excision of joints have been traced out, and of all these cases either short abstracts are given, or their leading features are shown in statistical tables. It is on this mass of material, so brought together, that Professor Gurlt has based not only the history, but also the statistics and final results of the operation of resection for gunshot-injuries of joints, these constituting the three principal sections into which the work is divided.

This general description of the plan of Dr. Gurlt's work, and of the nature of its contents, will suffice to show that, so far as the past history and results of resection of joints for gunshot-wounds is concerned, it must remain the standard book of reference for information on the subject. The high professional reputation of its author, and his well known character for painstaking and thorough research, give assurance

that no recorded case of the category under consideration of any importance will have escaped his attention and critical analysis. We have looked through the lists of cases collected from English records, and, as far as we have been able to observe, no published case that has resulted from the wars in which British troops have been engaged—from the Peninsular period down to the present time—or that has occurred accidentally in civil practice from gunshot-wounds, has been omitted from notice. There is no reason to doubt that the same accuracy has been obtained as regards the records of similar operations published in other countries. The work appears to be replete with information that may be turned to useful account, not merely by army practitioners, but by every surgeon who has to deal with the subject of joint-resections in his practice. We regret that want of space will not permit us to give a digest of some of the conclusions which have been worked out by Dr. Gurlt in this elaborate treatise.

NOTES ON BOOKS.

On the Value of Human Life, or the Present History and Possible Future of our Hospitals. By the Rev. J. DODD, M.A.Oxford. (Pp. 207. Parker and Co. 1879.) The leading title of this book is not well chosen. It is not an essay on the value of human life: it is an historical account of the past and present administration of medical relief in this country. The author starts from the religious houses of the fifteenth century, touches upon the institution of the Poor-law, indicates the rise and progress of the modern hospital, reviews the difficulties of medical relief, and briefly discusses the remedies that have been suggested by the Charity Organisation Society. It is obvious that, when all these subjects are treated within the compass of two hundred small pages, they cannot be considered at any great length. Indeed, the whole character of the work is slight and superficial. It may serve to give general readers an idea of the system of medical relief in this country, and of some of the difficulties connected therewith; but it will not aid the managers of hospitals, or those who are dealing with the problems which the medical charities present. Mr. Dodd seems to be scarcely aware of some of the latest and most important efforts that have been made to adapt our hospitals and dispensaries to the requirements of the present day. Those who take note of the progress of "hospital and dispensary management", as it is recorded in the columns of this JOURNAL, will not find anything very novel in Mr. Dodd's pages.

Bible Hygiene, or Health Hints, by a PHYSICIAN (Hodder and Stoughton), is a well-intentioned but very verbose volume intended to show how accurately the sanitary and dietetic code of the Old Testament anticipated a large part of our modern sanitary knowledge and legislation. "A Physician" appears, however, to have no great knowledge of his subject, and especially to be entirely unacquainted with the Talmud, which throws great additional light upon the subject, and interprets law by tradition and practice. We may be permitted to say that much more information will be found in a little pamphlet containing the report of a lecture on the Mosaic Sanitation (published by Smith, Elder, and Co.).

DR. FENWICK'S *Outlines of Medical Treatment* (Churchill, 1879) is a book of which, as it is evidently laborious, we are sorry to express the opinion that it is dangerous to students, and useless to practitioners. The object of the book is to counteract the tendency to take physical diagnosis as a basis for treatment. The author "need scarcely remark how needful it is that every senior student should know his remedies by heart"; he has "added a number of formulæ which I would advise him to practise himself in copying"; and so on. This sort of thing seems to carry us back to the dark ages.

WE are glad to see a new and enlarged edition of Mr. G. P. FIELD'S *Manual of Diseases of the Ear* (Renshaw); it has been thoroughly revised and recast; the drawings are good. There are a plain shrewd common sense and a John Bullish honesty about the reports and commentaries, which inspire confidence; and in special handbooks that is a great quality.

MR. WILLIAM ADAMS'S *Observations on Dupuytren's Contraction of the Fingers and the Obliteration of Depressed Cicatrices* (Churchill, 1879) is one of the most characteristic and meritorious of this author's many valuable and original contributions to the improvement of his art. Among modern surgeons, there are few in this or any other country who can boast of so many ingenious and permanent additions to the surgical art as Mr. Adams; his studies of the repair of tendon, of the mechanism of the rotation of the spine in lumbar and dorsal curvatures; his subcutaneous division of the neck of the thigh-bone; and the two quite original, ingenious, and successful procedures which are described in these two papers (republished from past numbers of the BRITISH MEDICAL JOURNAL) are lasting and honourable contributions to knowledge and practice, such as it has been in the power of few to make. The memoirs are well worth attentive study.

THE special student of syphilis will be glad to learn that a new edition of Bumstead's *Pathology and Treatment of Venereal Diseases* (Philadelphia, Lea; and London, Kimpton, High Holborn) has been produced, with the assistance of Dr. Robert Taylor. We shall hope to discuss some of the chapters in detail; meantime, however, we may say that the book is one which does not compete successfully with existing European treatises.

DR. LAUDER LINDSAY'S *Mind in the Lower Animals* (Kegan Paul and Co.) is a very curious *omnium gatherum*, which may be useful as materials to serve an author of more discrimination and severer critical capacity: it has some interesting stories, and many which are more than apocryphal. Some chapters are worth reading by the curious; but the book can hardly be said to be in any sense scientific. It is very voluminous.

OUR CONFESSIONAL.

MAGNO INGENIO, MULTAQUE NIHILOMINUS HABITURO, CONVENIT ETIAM SIMPLEX VERI ERRORIS CONFESSIO; PRÆCIPUÈQUE IN EO MINISTERIO, QUOD UTILITATIS CAUSA POSTERIS TRADITUR; NE QUI DECIPIANTUR EADEM RATIONE, QUA QUIS ANTE DECEPTUS EST.—(Celsus *De Medicina*, Liber viii, cap. 4.)

THE long list of successes and of more or less meritorious and brilliant conduct of difficult cases to a satisfactory termination, which is weekly accumulated in our columns, might easily lead the superficial observer to the conclusion either that, as a rule and almost invariably, success is the reward of medical exertion, or that nothing is to be learnt from failures. Now and then, of course, we are enabled, by the wise courage and candour of contributors, to record failures in fact and blunders in act. The fact is, however, that reports of failure, the warning recital of blunders, and the candid confession of faults, would form an element of immense importance and invaluable instruction in medical chronicles. We have opened "a confessional", in which the main element which may attract to it confessors, if not penitents, is the inviolable anonymity which will be preserved in respect to it. In this way, we very earnestly invite the reports of mistakes, errors of omission and commission, and statements of special mortality, in medical, surgical, and obstetrical practice. We are assured that such records will be found to be of singular value; and, as in this manner they can be put forward without undue sacrifice or the possibility of ungenerous abuse of confidence, we may hope that they will become more frequent than heretofore.

BLEEDING IN PUERPERAL CONVULSIONS.

IT would probably be a relief to some of us to hear occasionally of the *failure* of bleeding. Some years ago, I saw a young woman, not very well fed, but not known to be unhealthy, who, about an hour after her first labour, which lasted more than twenty-four hours, had convulsions. Bromide of potassium had no effect; a warm enema checked the fits a little; chloral and bleeding were not tried; perspiration was encouraged, and non-azotised food only was given. Some other means (sinapisms, cold to head, etc.) were used; but the patient, who had not been conscious between the fits, died in about forty hours. The face was dusky throughout; and I have often thought since that the addition of venesection to the treatment adopted (which had, however, succeeded perfectly in two other cases) might have saved this girl's life.

About twenty years ago, when a student, I saw a woman bled largely for convulsions before labour. The effect was *nil*, and the patient died (undelivered) in a very few hours. X.

OVERLOOKED SCARLATINA.

A YEAR ago, I was called to see a woman, aged about 35, who had given birth to a healthy child two months previously. She had made a good recovery after the confinement, and was nursing the child. I found her complaining of slight sore-throat and general *malaise*. There was no eruption on the skin; the fauces and tonsils were but slightly congested; the temperature, as far as I can remember, was 101 deg. Not having met with any case of scarlatina for many months, nor even heard of its being in the town, I neglected to consider the possibility of such a diagnosis, and believed the case to be simple inflammatory sore-throat

with slight fever. I ordered a hot bath and a diaphoretic mixture. On leaving, I said that I did not consider her sufficiently ill to necessitate a second visit, but strictly charged her to let me hear if she did not rapidly improve. I heard no more of the patient till after eleven days, when I was summoned to go to the house with all speed to see the eldest girl, aged eight, who was said to be in fits. I found her unconscious, violent convulsions coming on every few minutes. She had been complaining of colicky pains and diarrhœa the day before, but had been up and going about. At first, I was at a loss to account for such suddenly developed nervous phenomena in a healthy child ; but, on questioning the mother about her own health, and on her remarking that she was better, but that her skin was peeling, the terrible truth flashed into my mind that here was the child dying of scarlatina in all its malignancy—the same disease which, in its simple form, I had failed to recognise in her mother eleven days previously. I at once informed the parents that the case was hopeless, and set about isolation and disinfection. The child died the same night. The baby of two months sickened the next day, had a brilliant rash, but also died. The mother made a perfect recovery ; and of five other children in the house, none took the disease at that time, though six weeks later I was called to see a boy, aged ten, with glandular abscess in the neck, acute rheumatic pains in one leg, and albuminuria. He happily recovered completely.

I deeply regret that I had treated the mother's illness so lightly, as had I visited her even once within a few days of my first visit, I should in all probability have recognised the disease, and such melancholy results might have been averted. MELIORA.

REPORTS AND ANALYSES
AND
DESCRIPTIONS OF NEW INVENTIONS
IN MEDICINE, SURGERY, DIETETICS, AND THE ALLIED SCIENCES.

INGRAM'S PATENT INDIA-RUBBER ENEMA APPARATUS.

WE have had an opportunity of examining this week the new India-rubber enema apparatus made by Messrs. J. C. Ingram and Son, London, India-Rubber Works, Hackney Wick. The advantages which these appear to possess over the India-rubber enema apparatus, which are just now so largely used, are very practical. In the first place, these instruments have no heavy metallic parts, and thus are free from the risk of damage to the rubber from their metallic connections, which are often found to render the ordinary instrument useless from injury received either in transit or while lying in the drawer. Then, too, the wire fastenings, which in the ordinary apparatus frequently break and give rise to leakage and imperfect working, are, in these India-rubber instruments of Messrs. Ingram, entirely dispensed with. The enema instrument is formed by dipping in a solution of India-rubber, and thus the numerous joints in the bulb commonly met with are avoided The ordinary instrument is made of several pieces cemented or fastened together, and they are apt to split, especially if left aside for some length of time and their use recommenced, or in cold weather. Messrs. Ingram's apparatus are very smooth and uniform in surface, and could be packed in a smaller space than the ordinary instrument without damage to the tubes. They are also very light. On the whole, we think they will be found to be very useful, and evidently a practical improvement.

IMPROVED OTOSCOPE.

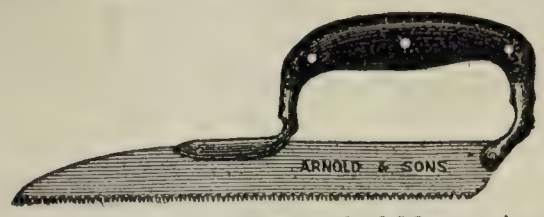
IN using the otoscope in many cases of perforation of the membrana tympani, while inflating the drum with the air-douche, air escaping through the perforation frequently impinges upon the drum-head of the surgeon's auscultating ear with unpleasant force. To obviate such discomfort, Dr. A. Morison has requested Messrs. Arnold and Sons of West Smithfield to make an otoscope (see woodcut) with a lateral per-



foration in one of the ear-pieces, on the same principle as that adopted in the "flexible stethoscope", devised some time ago by Dr. Reid of Canonbury and himself. An otoscope so constructed may be used with comfort under the circumstances referred to, while it may be converted into the instrument usually employed by giving the perforated ear-piece to the patient and directing him to keep his finger on the hole. This may be advisable when it is wished to examine a membrane which is either intact or the perforation of which is doubtful.

A NEW FORM OF SAW FOR DIVISION OF THE LOWER JAW.

IN dividing the lower jaw with the long narrow saw usually employed for this purpose, a difficulty is not unfrequently met with in readily completing the operation, owing to the handle of the instrument coming into contact with the chest or shoulder. In order to obviate this little



difficulty, Mr. Annandale of Edinburgh asked Messrs. Arnold and Sons of Smithfield to make for him the saw illustrated in the accompanying woodcut. Having used the saw and found it convenient and effectual, he brings it under the notice of his professional brethren.

STYLOGRAPHIC PEN.

UNDER this name, we have received from Messrs. Mappin and Co., of London Bridge and Regent Street, a pen which we have for some time seen in use by American and other physicians, and which seems destined to render considerable service in medical practice. Other inventions of the same sort have aimed at the same object, viz., providing a pen which is always full of ink, and which does not require that the person using it should carry an inkstand or should refresh it except at distant intervals. We have, however, never seen any invention at all approaching to this in perfection and usefulness. It has the advantage of being light and cleanly, and that it is impossible either to dirt the fingers or to make a blot on the paper. It writes with a fine point, yet very legibly and without scratching, and as freely as a lead-pencil. Armed with this pen and some slips of paper or a few post-cards, the physician can at any moment carry on his correspondence while driving about, or in the railway-carriage, or on country journeys, or make notes in the ward. In fact, it accurately answers the object for which it is designed, and that object is obviously one of much utility to medical men.

ALLEN AND HANBURY'S PERFÉCTED COD-LIVER OIL.

MESSRS. ALLEN AND HANBURY have approached this subject from a side which will, we suspect, appeal very directly to the reason and sympathies of thoughtful prescribers. Instead of taking an ordinary cod-liver oil, and attempting to disguise its flavour by all sorts of devices and mixtures, they have studied anew the processes of manufacture of cod-liver oil, for which they have always had a great reputation ; and, as a result of this study, they have produced a cod-liver oil which is so delicate in flavour as to be free from all the usual nauseous properties of fish-oil, and has almost the delicacy of salad-oil. Even for the various admixtures and emulsions, the use of such an oil as the basis will be a great advantage; and we congratulate Messrs. Allen and Hanbury on having realised a pharmaceutical progress on the best lines of advance.

WHEELER AND CO.'S PATENT COMPRESSED CITRATE OF MAGNESIA.

MESSRS. WHEELER AND CO., 7, George Yard, Fenchurch Street, have produced a preparation of citrate of magnesia, pressed into the form of cubes under a new cold process. These cubes are intended to take the place hitherto occupied by the well-known effervescing granular compounds, and over these they present certainly some obvious practical advantages. The cubes do not deteriorate by contact with air, as we can answer, having kept them open now for some time; and, when put into the required quantity of cold water, they effervesce much more vigorously and much more continuously, maintaining their effervescence fully until the last drop of the solution is used. They make a very agreeable and very efficient draught, and, the effervescence being permanent, the solution can be swallowed slowly and leisurely, while its freshness of flavour and effervescence are beyond anything which we ever found in any granular preparations brought under our notice. On the whole, therefore, we think these cubes are to be recommended.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 13TH, 1879.

1880.

THE PROGRAMME OF THE ASSOCIATION AND OF THE JOURNAL.

THE programme for 1880, which we publish this week, speaks eloquently for itself, and leaves us under no necessity of adding much.

The next annual meeting will be held at the University of Cambridge, under the presidency of Professor Humphry; the Address in Medicine will be delivered by Dr. Bradbury; the Address in Surgery by Mr. Timothy Holmes; the Address in Physiology by Dr. Michael Foster. The Sections will be presided over by Dr. Paget of Cambridge in Medicine, Mr. Savory in Surgery, Professor Rutherford of Edinburgh in Physiology, Dr. Crichton Browne in Psychology, Mr. Bowman in Ophthalmology, Sir James Paget in Pathology; and each president will deliver an address in opening his section. The University of Cambridge and some of the leading Colleges will take part in the reception, and notably Mr. Trotter of Trinity has promised his active personal co-operation and his influence with the great College which he has so usefully served and so liberally led on in scientific matters. There is no doubt, therefore, of the sufficiency of the local arrangements, which are being organised by a committee with Dr. Bushell Anningson and Mr. A. P. Humphry as secretaries; or of the great scientific interest which this meeting will have. Cambridge has always been known as the great scientific University of this country, and the magnificent physical museum and lecture-room, the fine physiological laboratories, which have been recently completed, will add to its attractions. Cambridge can boast of a medical school which has, in some respects, no equal in the kingdom; of capacities for scientific training which are unrivalled; and of having overcome with splendid energy and success the difficulties as to medical training which Oxford pretends to be insuperable.

It will be a great meeting; full of scientific interest; gaining lustre from, and, we hope, adding to the renown of, the historic University. It will not fail to have a distinct effect in drawing closer the bonds which unite the medical profession to the University, and we hope that it will widen and add strength to the current of opinion in favour of University culture for medical students.

The rest of our programme will suffice to show that the contents of next year's volumes are not likely to fall much below the highest attainable standard at which a medical periodical can hope to arrive.

The Association is spreading its bounds almost day by day. This year has seen a new Branch in Jamaica, and two new Branches in Australia, added to our number. The endeavours which we made some months since, and in which Dr. Andrew Clark gave his aid on the occasion of his visit to Canada with the Princess Louise and the new Governor-General, are likely to lead to the early formation of a Branch within the bounds of the Dominion of Canada, which will, we hope, only be the first of several Branches there. Our Indian Branch, long dormant in organisation, is beginning to stir itself anew, and many of the Indian readers of the JOURNAL, who are now very numerous, have resolved, as we recently mentioned, to take steps to cease to be content with this passive connection with the Association, and to reorganise Branch meetings there.

Already the BRITISH MEDICAL JOURNAL has, within about twelve years, sprung from a circulation of 2,200 to a circulation of 9,000, and been trebled in size without raising the subscription. There are only 20,000 names on the Register, including all the foreign residents, colonial graduates, partners, assistants, retired medical men, and non-effectives. The limits of expansion must therefore be reached before very long if the rapid rate of increase which began at the date named and has steadily continued to this time, should be maintained. It shows, however, at present no sign of falling off. We shall spare no effort to make the JOURNAL worthy of its unexampled success and worthy of the great Association of which it is the organ, by maintaining, to the fullest extent of our power, its independence, its earnestness of purpose, its catholic sympathies with all the highest aims and the interests of every class of the profession and of the public services, and its place as the exponent of all that is new and noteworthy in science, all that is courageous, progressive, and philanthropic in the social and medico-political sphere.

ANTISEPTIC SURGERY.

THE discussion on Antiseptic Surgery, opened by Mr. Mac Cormac at the South London District of the Metropolitan Counties Branch last week, having been fully reported in our pages, our readers have had the opportunity of studying for themselves Mr. Mac Cormac's most admirable and detailed statement not only of his own results, but of those which have been achieved by the great surgeons of the Continent. We may express, in passing, regret that another medical paper, whose reporter was admitted to the meeting, should have pursued the almost insulting and thoroughly unprofessional course of minimising and almost suppressing Mr. Mac Cormac's paper and the first part of the discussion, in order to give prominence to Mr. Lister's speech. Such a course, under such circumstances, is a violation of professional proprieties, which, if any importance could be attached to it, must really be considered insulting to all the previous speakers. The contribution made by Mr. Mac Cormac to the records of antiseptic surgery is the most important that has yet been made in this country by anyone except Mr. Lister himself, and the meeting will remain a historic event in the records of British surgery. Mr. Lister's reply to the various objections which have been urged was also a masterly and characteristic performance, both in its simplicity, in its sincerity, and in its clear, cool, and thorough analysis of facts. We may even say that from this moment the cause of antiseptic surgery is gained.

We have already pointed out more than once that, to those who have raised objections to the successes claimed for antiseptic surgery, the question of figures was very far from being the most critical test. The inherent fallacies of figures, the innumerable deceptions connected with all surgical statistics, the variety of elements entering into them, which it is impossible to reduce to an uniform standard, all contribute to render them untrustworthy. Antiseptic surgery, however, has well stood even the test of statistics; and it is for Mr. Savory, Mr. Bryant, and those who have seriously attempted to dispute the astonishing feats of antisepticism, to reply to the overwhelming evidence brought forward by Mr. Mac Cormac, Mr. Spencer Wells, and Mr. Lister. But the real proofs that antiseptic surgery has introduced into science and into practice a new principle are those on which Mr. Lister has always insisted, and which he once more brought into prominence on this occasion. Let any surgeon under any other system produce cases in which a long series of the most tremendous operations in surgery have been effected almost without raising the clinical thermometer three degrees, without traumatic fever, without septic irritation, without any of the indications of danger which follow ordinarily the surgical invasion of the tissues; let him produce psoas abscesses following the course which they do follow under antiseptic surgery; let him show blood-clots organising dead tissue undergoing reabsorption; let him show a long series of great operations in which the presence of pus in any form is an ex-

ception. This cannot be done. It is the exclusive appanage of antiseptic surgery; and no one can have seen any series of great operations performed under strict antiseptic precautions without frankly admitting that antisepticism is, as Mr. Lister said, not merely an improved dressing, but a new principle, of which the dressing is only a mechanical application.

We heartily congratulate ourselves and the profession that Mr. Lister's coming to London has been so speedily followed by a signal triumph of that great principle in surgery which had been accepted everywhere else almost before it was even listened to in London. It was with the conviction that this necessary triumph would follow, that we strongly urged the authorities at King's College to put aside small traditions and petty jealousies, and to invite the great London surgeon, who had succeeded Syme in Edinburgh, to assume the mantle which had fallen from the shoulders of Fergusson in London. In doing so, the authorities of King's College had to brave much opposition, to have the courage of their opinions in the face of objections and deprecatory communications from persons eminent in professional standing; but they obeyed what we believed then, and are still convinced, to have been a sound law, and set an example which we hope will have a permanent influence in elevating the tone and strengthening the principles of responsibility in public appointments in London hospitals. Mr. Lister has been but two years in London, and already he may say that he "came, saw, and conquered"; for the principle of antisepticism has now so strongly asserted itself in London hospitals, that it is bound to make its way and to establish itself here as firmly as elsewhere throughout the world.

We referred lately to the statistics of antiseptic treatment in Glasgow Infirmary, which were given by Mr. McEwen, the President of that Infirmary, who happened to be in Amsterdam during the period of the International Congress. The document relating to Mr. McEwen's statements has only just come into our hands. From it we learn that the Glasgow Royal Infirmary contained about 600 beds, of which 350 were devoted to the treatment of surgical cases. The total number of surgical cases treated in the four years 1875-6-7-8 was 8,971, with 575 deaths, of whom 180 died within forty-eight hours; leaving for treatment 8,791, with 395 deaths, or an average percentage mortality of 4.49. These were treated by five surgeons, who thus had about 400 annually under their care. Each surgeon had one day in succession, in which he received every patient that came for admission on that day, so that there could be no selection; and this succession was in regular order every year. Strictly antiseptically, in these four years, in three wards, were treated 1,706, with 50 deaths, or a percentage of 2.93. Non-antiseptically, during the same period, in the same number of wards, were treated 1,884, with 110 deaths, or a percentage of 584. Dissecting this period, we find that, under antiseptic treatment, the mortality—eliminating, of course, the number of those who died within forty-eight hours of admission—in 1875 was 3.29 per cent.; in 1876, 3.28 per cent.; in 1877, 3.68 per cent.; in 1878, 1.78 per cent.; making the abovementioned average of 2.93 per cent. Of the cases treated non-antiseptically, the mortality was, in 1875, 7.63 per cent.; in 1876, 6.91 per cent.; in 1877, 5.13 per cent.; in 1878, 3.96 per cent.; making an average of 5.84 per cent. The result, therefore, proves that, under antiseptic treatment, the mortality was, under apparently strictly comparable circumstances, much smaller than under the ordinary mode; and it is noteworthy that, with the increasing adoption of the antiseptic treatment, the mortality steadily declined. This is a case very much to the point, and will meet some of the conditions of comparative statistics rightly insisted on by Mr. Holmes.

THE METRIC SYSTEM.

THIS system was introduced to the notice of the world at the time of the French Revolution at the end of the last century. It is, properly speaking, a decimal system of calculating weights, lengths, measures, etc., and is in use for coinage, as is well known, not only in several of the European states, but also in the United States of America, and in some of the British colonies. The unit of the system, the French *mètre*, (Greek *μέτρον*), is the ten-millionth part of a quarter of a terrestrial meridian, and is equivalent to 39.37079 English inches. Multiples of this unit are obtained by prefixing the Greek numerals; thus *decamètre*, *hectomètre*, *kilomètre*, and *myriamètre* stand for ten, a hundred, a thousand, and ten thousand *mètres*, corresponding in English with 10.9363, 109.363, 1093.63, and 10936.3 yards. On the other hand, fractions of a *mètre* are represented by prefixing the Latin numerals; thus *decimètre*, *centimètre*, and *millimètre* stand respectively for a tenth, a hundredth, and a thousandth of a *mètre*. The facility of calculating on this basis is obvious, when one recollects the multiples of 20, 12, and 4 which have to be carried in the mind when calculating English coinage, and the still more inconvenient figures applicable to measures of length.

The measures of weight and capacity which are important to the medical man are the *gramme* and its multiples, and the *litre* and its divisions. These are obtained from the unit of length in the following way. The *litre* is a cubic *decimètre* (1.76 English imperial pints), and, when filled with water at 39.21° Fahr. (4° centigrade) and 30 inches barometer (834 *millimètres*), weighs 1000 *grammes* or 15432.348 English grains. The *gramme* is the weight of a cubic *centimètre* of water under these conditions, and is equal, therefore, to a *millilitre*, or the thousandth part of a *litre*. From these data, it is easily seen that the *gramme* weighs 15.432348 grains avoirdupois, and therefore that to convert so many *grammes* to the *litre* into the English equivalent of so many grains to the pint, we multiply (roughly) by 9. Thus *grammes* to *litre* equal *grammes* to $\frac{7}{4}$ of a pint (roughly), and *grammes* equal each 15½ grains English (roughly), therefore *grammes* multiplied by 15½, multiplied by $\frac{4}{7}$, or *grammes* multiplied by $\frac{63}{7}$ or 9 (roughly) give the number of grains to the English pint. A similar rough calculation shows that the multiplication of so many *grammes* to the *litre* by 7 gives the number of grains to the sixteen ounces or avoirdupois pound. The avoirdupois pound weighs 453.5925 *grammes*. The ounce weighs 28.3495 *grammes*, and the grain weighs .648 *gramme*. If any one will calculate out the volume in cubic inches, and the weight in the two standards of Troy and avoirdupois pounds of the English gallon and standard bushel, he will have some idea of the unwieldy number of figures involved, and the liability to error from mere exertion. It seems to require no prophet to predict that our clumsy, cumbrous, and variable standard must give place, in course of time, to the easy, graceful, scientific metric system.

Incidentally it may be mentioned, on the authority of H. C. Bolton, Ph.D., quoted by Dr. Hamilton of Pennsylvania, that the ancient Egyptians, about 3,400 years ago, used signs:

Unit or Tenat..... 𓏺
Half-Unit or Tenat ..... 𓎆
Didrachm ..... 𓎇

By placing the didrachm below the half-unit, we get a sign like this 𓎆 𓎇 Dispensing with the front part of the oval, and joining it on to the half-unit symbol, we may easily have the present symbol for an ounce ℥.

When the advantages of the metric system are so great, why should medicine refuse to adopt them? In thermometry, already it is becoming common to have centigrade readings side by side with Fahrenheit. The general adoption of this part of the metric system (zero being the melting-point of ice), would harmonise our British readings with those of our continental brethren, and save us the trouble of converting. The advance to the use of *grammes*, *decigrammes*, and *centigrammes* in prescriptions, and of the *litre*, *decilitre*, *centilitre*, and *millilitre* for volume, would be a step accompanied with little difficulty, but whose advantages are so great as to make it well worth while. Boston has advanced to the use of the metric notation. The New York Medical Society has followed in the train of Boston. The International Medical Congresses have urged its adoption, and British societies, it seems to us, will soon have to follow their example. The only objection to its adoption seems to be the comparatively heavy weight of the

gramme (15.4 grains), fractions of which must frequently be prescribed; but the decimal system enables us to do this with ease, and the other advantages of simplification and adaptability appear far to outweigh this objection.

THE last meeting of the Executive Committee of the General Medical Council, November 28th, was full of business. The official notifications were received of the reappointment as members of the General Medical Council of Dr. Leet (Apothecaries' Hall in Ireland), Dr. Andrew Wood (Royal College of Surgeons of Edinburgh), Dr. Aquilla Smith (King and Queen's College of Physicians in Ireland), Dr. Storrar (University of London), Dr. Rolleston (University of Oxford), Dr. Humphry (University of Cambridge). Dr. Rolleston's term of office is five years; Dr. A. Wood's, three; the rest have annual appointments.

DR. FENWICK of Lower Canada has written to the President of the General Medical Council, announcing that all British qualifications were and are accepted there on payment of fees without further test by examination; and observes that great misapprehension exists in respect to the action of the College of Physicians and Surgeons of Lower Canada towards British graduates.

THE entrance examination of the University of New Zealand has been included in the list of preliminary examinations recognised by the Council.

JAMES PATRICK MURRAY, whose name was struck off the *Medical Register* in consequence of having been removed from the rolls of the College of Physicians and Surgeons in Dublin under circumstances which have already been described, had applied for a rule for writ of *mandamus* commanding the Council to restore his name. He has now abandoned that intention.

THE most undignified registration squabble which lately gave rise to the two contradictory advertisements relating to registration, which might be seen in our columns, issuing from the Registrar of the Medical Council and the Registrar of the Irish Branch Council, came also under consideration. The Irish Registrar seems to consider it his duty to look sharply after the five shilling fines for renewal of names erased from the *Register* through negligence to send changes of address; and alongside of Mr. Miller's statutory notice that communications respecting registration should be addressed to the Medical Council Office, Oxford Street, Dr. Steele says that "attention is called to the fact that notice of change of residence by persons originally registered in Ireland sent to the Registrar of the General Medical Council, instead of the Registrar of the Branch Council, Ireland, will not prevent erasure". Legal opinions on both sides have been taken; the matter is to be "submitted to further counsel for the guidance of the Medical Council"; the solemn question is addressed to the Branch Council for Ireland, "by whose authority the advertisement (*b*) has been issued"—although the Executive Committee know very well, and could have learned formerly at any time by a penny post-letter; the five shilling fine is to be fought out "to the bitter end" in the general sittings (at the rate of a guinea a minute); and there is every probability that the Council will be convulsed by this momentous financial question, as it has never been by any of the many educational questions to which it has not yet had time to attend.

A LITTLE difficulty which has occurred between the Carmichael School of Medicine and Surgery and the Royal College of Surgeons in Ireland came on appeal to the Executive Committee, and incidentally brought to light some peculiarities which are sure to be made much of before the Select Committee next session. The Carmichael School proposes to institute additional evening courses of lectures for "men in business" preparing for the medical profession. This is supported on the ground that "the students in question are desirous of availing themselves of the lecture system; that they could not attend in the day time; that, if we did not establish evening lectures, they would have to go to *a school that did not require attendance;* and that they consider it a great hardship to have to *pay for lectures which they could not possibly attend*". Mr. Wheelhouse, M.P., will be glad to hear further of the schools "which *do not require attendance*", and where the only absolutely necessary formality is that the lectures be paid for, and not that they be attended.

SUBSEQUENTLY to the evidence which was given last session before the Committee of the House of Commons as to the cavalier manner in which Trinity College, Dublin, and other bodies, had treated the applications of the General Medical Council to secure conformity to their recommendations, and information as to the extent of diversity, the Registrar of the General Medical Council was summoned before the Committee; and, being unable to furnish the required information, was directed to obtain returns showing in detail how far the regulations and the practice of each licensing body are in accordance with the recommendations of the General Medical Council. All but three licensing bodies have responded to this potent interrogatory; and as soon as the returns are complete, it is ordered that they be drawn up by the Registrar in a tabular form, and printed and issued with the minutes of the Executive Committee. Mr. Miller has genius for statistics and for tabulation, which has stood the Council in excellent stead in this its hour of trial, and has materially assisted the various witnesses before the Select Committee, and greatly facilitated the labours of that Committee.

THE dental business of the Council, which has been disposed of so ably and promptly thus far, is beginning to show its seamy side. The Dental Association is longing to begin the business of purifying the *Register*, and has got some very strong and litigious opinions as to "*bonâ fide*" practice and "separate" practice from counsel. The Executive Committee, however, are less anxious for hot water; and until the Council have had further opinions and thoroughly digested the bones of contention, "they do not in the meantime consider it necessary that the opinions should be entered on the minutes"; so that a good many "*bonâ fide* dentists" are still registered whose *bona fides* Mr. Charles Bowen considers at least very doubtful.

MR. BADER of Guy's Hospital has recovered by action at law fees for an operation, which his patient, a barrister, contested on the ground of want of skill and want of adequate preliminary information as to the risks of operation. The jury added a rider regretting that Mr. Bader did not more accurately inform the patient on this head. In this the judge concurred; and we must confess to entertaining a similar opinion.

WE are authorised to state that, during the ensuing summer, a students' garden will be thrown open in the Royal Gardens, Kew, when students will be permitted, under certain regulations which will be drawn up hereafter, to procure botanical specimens for scientific study and observation.

THE inhabitants of London are at last becoming alive to the necessity of preserving open spaces. At a meeting of the inhabitants of South London, held last week at Lambeth Baths, Mr. E. Clarke, Q.C., presiding, a memorial to the Surrey magistrates, praying them to convert the site of Horsemonger Lane Gaol into a public recreation ground, was unanimously adopted.

A WEALTHY City parish has decided (according to the *City Press*) to apply to the Charity Commissioners for authority to make the following donations, viz., the London Hospital, £1,000; Metropolitan Free Hospital, £500; King's College Hospital, £250; Victoria Park Hospital, £250; Westminster Hospital, £250; and the City of London College, £250; making a total of £2,500; in addition to advancing the allowances to the qualified recipients of the charity 25 per cent. The London Hospital has before received from the same source a similar gift of £1000.

THE Legislative Council, on November 7th, appointed a Select Committee to consider the Factory Bill recently introduced by Mr. Colvin. It is to be hoped that the Committee may see its way to supply some of the deficiencies in this Bill, to which we lately drew attention.

UNIVERSITY OF LONDON.

THE Senate have appointed a Meeting of Convocation to be held on Tuesday, January 13th, 1880, when a list of three persons is to be nominated, in order that it may be submitted to Her Majesty for selection therefrom of a Fellow of the University. Any members who may wish to bring forward any business at this meeting are required by the standing orders to give to the clerk specific notice in writing, dated and signed, of such business not later than Tuesday, December 23rd, 1879.

MR. SOELBERG WELLS.

WE much regret to hear of the death of Mr. Soelberg Wells, ophthalmic surgeon and lecturer at King's College Hospital. Mr. Soelberg Wells has for some years suffered from hepatic and renal disorders, and has been an annual visitor of late at Carlsbad. On returning to London this year, he found himself still so suffering as to render necessary a refuge in the South of France, and he was wintering at Cannes when overtaken by fatal changes. Mr. Wells made himself favourably known about twenty years since by his careful study of the recent observations and methods of Gräfe, Donders, and Helmholtz, who were then busily reconstructing our knowledge of the optical structure of the eye, and the treatment of its visual aberrations, hypermetropia, myopia, and astigmatism, as well as of the often related conditions of strabismus. Subsequently, Mr. Soelberg Wells's intimate acquaintance with German literature, together with his practice and study at Moorfields, under the guidance of Bowman and Critchett, enabled him to publish a *Treatise on the Diseases of the Eye, and their Treatment*, which had many of the qualities of a standard work. Somewhat feeble health, and the absence of any great energy or originality of mind, prevented Mr. Wells from reaching the higher range of accomplishment and achievement for which he at first seemed destined; but his amiable and sociable character, his love of music, and hospitable tendencies, always secured for him many friends; while his professional attainments enabled him to do justice to his public duties, and to earn the confidence of his patients. He died in middle life, and, till the close of last season, kept his place both in social life and professional work.

SWALLOWS.

THE severe winter which has set in so early is driving to more sunny climates for a holiday or for winter refuge, not only an unusual number of the leaders of society, but many senior medical men. Mr. Liebreich, who works hard all through the spring and summer and autumn, has taken up his usual winter quarters in an *atélier* at Florence, where he will for the next two or three months seek rest and recreation in the use of the brush and the modelling tool, in which he is hardly less distinguished as an amateur than in his own profession as oculist and ophthalmologist. Dr. Hermann Weber is indulging in a Roman holiday, from which he will not return till the beginning of the new year. Dr. Bucknill is off for a month to the sunny climate of Algiers, to refresh for the coming new year's work. Mr. Curling has also this week paid his visits of adieu prior to a long absence from London, which will extend for probably six months. Mr. Curling's adieus, however, are of a more permanent character. He proposes not only to allow himself a six months' sojourn in brighter and warmer climates, but he takes this occasion of formally withdrawing from practice. Upwards of forty years of professional labour, well spent, and honourably crowned by great reputation and enduring professional success, more than entitle Mr. Curling to the well-earned repose which he now seeks. This is not the place in which to appreciate his works or career; but Mr. Curling may be well assured that he takes with him into his retirement the affectionate esteem of troops of friends, whom his constant amiability, open-hearted warmth of friendship, and unvarying integrity, have endeared him; and that the respect and good wishes of the whole profession follow him. Mr. Curling made his appearance for the last time on Thursday, at the Council of the College of Surgeons, from which he now retires, having long been one of its most esteemed members, as he was one of the most popular of presidents.

OPEN SPACES.

THE Open Spaces Committee of the Kyrle Society has communicated with the authorities of St. Bartholomew's Hospital, expressing a hope that they will open the disused burial-ground belonging to them in the City Road, near Windsor Terrace. The Committee will undertake to plant the space and put seats in it. We may venture to express the earnest hope that the Treasurer of St. Bartholomew's, Sir Sydney Waterlow, and the almoners of the hospital, will view this request with favour. They have, we believe, happily decided that it is not to be built upon; and everyone who knows the parish will readily admit that there is in that position a great need for a recreation-ground, as there is no recreation-ground nearer than Old Bunhill Fields. Sir Sydney Waterlow has already shown himself profoundly interested in the physical welfare of the people, especially in their homes and in the surroundings of those homes. There is, therefore, reason to expect that he will use his influence towards securing this space as one available for the purpose of healthful recreation; and we trust that no considerations will be found to interfere seriously with carrying out the proposition which the Open Spaces Committee has generously made.

THE RESIGNATION OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD.

THE statement is current that Dr. Seaton has resigned his position as Medical Officer of the Local Government Board. The announcement is a little premature, but we believe that it is substantially correct. Dr. Seaton's health has for some time been precarious; and he has lately been seized with a long-threatened attack of illness, from which recovery will unfortunately be tedious. Dr. Seaton, who succeeded, in May 1876, to the position long occupied by Mr. Simon, has struggled bravely since his appointment with the ever-increasing and responsible duties of his department; but he had, from failing health, to take six months' leave of absence during last winter in the south of Europe. He returned to his duties at midsummer of the present year, apparently much invigorated by the rest; but it would appear that this improvement was only of a temporary kind. The news of Dr. Seaton's retirement, and especially of the cause of it, will be received with universal regret by the profession. By this resignation, a long and honourable career of twenty years in the service of the State has been brought to an end. Dr. Seaton has been connected with the Medical Department of the Privy Council almost from its foundation. Quite at the beginning of the local inquiries into vaccination that wrought such an immense improvement in the quality of vaccination in this country, Dr. Seaton's services were enlisted by Mr. Simon, and to him, more than to any one else, is due the great measure of completeness which our public vaccination arrangements now present. On the formation of the Local Government Board in 1871, Dr. Seaton became its Senior Assistant Medical Officer, retaining that position until called upon to fill the chair vacated by Mr. Simon in 1876. His clear head and firm judgment will be much missed in the councils of the Local Government Board.

MEDICAL CERTIFICATES OF DEATH.

As the information derived from medical certificates of death forms the basis of our national mortality statistics, no pains taken to ensure their accuracy can be considered as wasted. A marked improvement in this respect has taken place of late years, but, in too many cases, medical certificates of the cause of death are still filled up without proper care. It is with a view to drawing the attention of the profession to the great importance of exactness in this particular that we reproduce the remarks made concerning it by the Medical Officer of Health for the Berkshire combined district in his report for 1878. In commenting on the very minute tabular statements contained in his report, Dr. Woodforde observes: "The number of entries (67) appearing under the heading 'causes not given or ill-defined' is nearly the same as last year, and I much regret that so many *medical* certificates of the presumed cause of death are so vague that it is necessary to relegate them to this class. As illustrations I may give the following: 'disease of throat', 'rupture of blood-vessel internally', 'accidental bursting of blood-vessel', 'abscess of side',

'tumour in side', 'tumour of thigh', 'tumour of abdomen', 'morbid disease of blood', 'bad health from birth', 'not well from birth', and the like—all of which have come under my notice in the returns for the year." As regards inquests—another question intimately concerning the medical profession—Dr. Woodforde reports that the vague verdicts "natural causes" or "visitation of God" again appear to be (especially in some districts) the rule rather than the exception, unless the death has been caused by evident violence. Thus, in one hundred and thirty inquests, of which fifty-two related to deaths as to which no question of external violence was involved, the disease which proved fatal was stated as regards seven only; as regards the remaining forty-five, no *post mortem* examination appears to have been made, nor any attempt to ascertain the cause with a reasonable approach to precision. As a large proportion of these inquests are held on infants and young children, and mainly among the poor, it cannot but be feared that such laxity is likely to afford dangerous facilities for the concealment of culpable negligence, if not for darker deeds, as regards these little unfortunates.

A MEDICAL SCHOOL FOR SIND.

DURING Sir R. Temple's recent visit to Karachi, his Excellency met the municipal commissioners to discuss their proposal. After those present had been introduced to his Excellency, Colonel Wallace briefly alluded to the object of the meeting. Dr. Hewlett, Deputy Surgeon-General, had proposed the establishment of a Medical College in this province, so that it may not be incumbent on Sindee youths to proceed to Bombay to qualify themselves for the profession of medicine and surgery; and he was of opinion that funds for the purpose could be easily raised. His Excellency thought that the establishment of such an institution would be attended with great expense, and that probably not more than three or four students would be found in Sind sufficiently advanced to attend it; but it seemed to him that if a medical school were established, it would not cost much; and he was prepared, after consulting his colleagues, to grant a sum in aid of such a project. Mr. Syud Hussnu el Medini said a few words on the subject, but nobody appeared to back his proposition for the establishment of a medical and surgical college in the province, although the feeling of most of the native gentlemen present was decidedly in its favour.

THE UNIVERSITY IN LONDON.

THE frequent representations which we have made of the inefficiency with which the university which describes itself as the University of London fulfils its duties to the medical students and profession of London have not, we are glad to see, been without effect. The now famous figures given in evidence before the Select Committee of the House of Commons have brought home to the Senate the conviction that an university which only passes five per cent. of the London students and candidates for diplomas is not fulfilling to them the functions of an Alma Mater, or meeting the university requirements of the metropolis of England. Accordingly, a committee has been formed in the Senate, as a first step by which the examination for the M.D. degree at the University is to be brought under consideration with a view to revision. It is certainly anomalous that a subject like mental philosophy should figure in the final examination for a degree in medicine. Its natural place, if it have any proper place at all in a pass examination for a medical degree, is at a much earlier stage of the curriculum; for instance, the matriculation or preliminary scientific examinations. But it would be still better to relegate it to an honours class. There are also other subjects on which the candidates are examined for the M.B., and which certainly do not require to be gone over again for the M.D. A thesis written in the presence of the examiners, with perhaps a few questions on the history of medicine, would, it has been suggested, form a more useful and rational ending to the examination for the M.D. degree of the London University than it now has. There is much to be said for and against theses: the use of a thesis as a test is not advisable, however much it may be recommendable as a formality, and as a dignified means of "proceeding" to an M.D. degree, and as a way of encouraging research. We should favour the introduction of a clinical "conference" on one or two cases, as to which the candidate should be required to write or give *viva voce* and at sight a good half-hour's clinical lecture, describing not only the diagnostic characters and treatment of the case, but its place in medicine; a summary of the varieties related and to be distinguished from it, of the various views held and supported in respect to its etiology, pathogeny, anatomical, histological, and chemical peculiarities, and its *historique*. This would form a good test. We should be glad to see theses restored, not as tests, but as indispensable preliminaries to the M.D.; and gold, silver, and bronze medals awarded to those of merit. They should be required to be printed, as for foreign universities. All this would improve the M.D.; but the preliminary scientific and first M.B. also require modification to bring them more directly into parallelism with the actual curricula of medical study, and requirements in order and date of the Medical Council and medical examining bodies.

THE "LONDON PRACTICE OF MIDWIFERY".

THE author of the *London Practice of Midwifery*, of which we see in the *American Practitioner* some extracts from the sixth edition dated 1826, was evidently a person of strangely *naïf* character, and of a sort of low worldly wisdom which he used to display in advice which now-a-days would be very ill received. He counsels the practitioner to ingratiate himself with the patient thus:

"With this view, it is very easy to remark on her family, that Richard is the picture of his papa, and that little Miss Sally has the countenance of her mamma, observing that the girls are the handsomest, and how natural it is to expect that they should be so; that it rained yesterday, but has a fairer prospect to-day; that the wind was yesterday in the north, but to-day to the east; that the weather is very odd for the time of year, but there is reason to expect it will soon change for the better."

To the talkative old women who tell wonderful stories around the bed, he is to say:

"'Well, you certainly have been very industrious in collecting all these wonderful stories that ever were heard; I have made it my business, but never saw one-half of what you relate'; hinting that he does not believe anything about it."

The author discusses with much humour various old theories of the exciting causes of labour: such as that, at the end of nine months, the temperature of the womb became intolerable to the fœtus, or the meconium so acrid that the child comes into the world to have a stool, or to breathe, because it is weary of nine months of a fish's life, or because it is hungered and desires something more palatable to eat.

"But we know that dead children are brought into the world by the same means and in the same manner as living. If we suppose the navel-string to have become twisted or pressed, or any cause to have been applied by which the child is killed *in utero*, can we believe it likely that that child, being dead, will find itself hungry and come to eat? Will a dead child fancy itself too hot, and come kicking into the world to cool? Will any dead child feel itself seized with a looseness, and come scrambling into the world to have a stool? Or will a dead child find it wants to breathe, and so come into the world in hopes of recovering its life? Or is it probable that a dead child should show a degree of impatience at being in an uneasy posture? And another query may be urged, how is a child, dead or alive, while yet in the womb, to know that it shall be born in the pantry or larder?"

We have never seen this volume; but, judging from the extracts, it must be rather light reading, and might be recommended for discussion at students' societies in search of amusing medical literature.

CENSORSHIP.

THE last number of the *Guy's Hospital Gazette* contains a notice that the Treasurer of the hospital requires that any article or letter criticising the hospital arrangements or general management of school or hospital should be submitted to one of the secretaries before being printed, and, further, that the editors should avoid making the *Gazette* an organ of complaint. The secretaries, on whom this rule would throw a very unpleasant task, are members of the staff, and would probably by no means be willing to accept the ungracious task which it is thus sought to impose upon them. At any rate, we may observe, for the benefit of the editors of the journal, that literary censorship of the

kind is rather out of date and out of place now in this country. Such arrangements, even where they are more suitable to the ideas of a people, have commonly been found to entail an unpleasant and unenviable responsibility on those putting them in force, and by no means to achieve a satisfactory result; and, in the present instance, we should strongly advise the editors either to throw up the journal altogether if such a condition be enforced, or, as a preliminary step, entirely to ignore any such regulation; and with firmness to maintain their duty of judging for themselves of what is and what is not proper matter for insertion, subject to their willingness to defend their responsibility, so long as they continue to hold their office. Any censorship of the kind is utterly out of place now-a-days in respect to the management of any journal. The editor or editors must have at once the power and the responsibility; and, whether the journal be small or great, this rule can never safely be departed from. If the Treasurer choose to attempt to enforce his new rule, he must be left to take his own course. He will inevitably be defeated; for any attempt to carry it out tyrannically will ensure the impossibility of finding suitable editors, and such unpopularity as must weaken his influence and defeat his object. The editors will do well, therefore, wholly to ignore such a condition, guiding themselves exclusively by their own sense of duty.

A FRENCH TRANSLATION OF HARVEY.

M. CHARLES RICHET, Assistant Professor to the Faculty and son of the present eminent President of the Académie de Médecine, has just published a translation of the work of William Harvey on the heart, *Exercitatio Anatomica*. It appears that it had not previously been translated into French; and, in translating this immortal work, which, in the words of M. Béclard in presenting it to the Académie, gloriously opened the eighteenth century, the author has had the excellent object of popularising the history of a great discovery, and putting within the reach of all the opportunity of reading that which had been hitherto reserved for a select number of men of letters which every day becomes less numerous. The author has preceded his translation by an introduction destined to recall to the reader the ideas of Galen on the circulation: a doctrine secular during fourteen ages, but which the experiments of Harvey at length overturned. Charles Richet has added to his translation the two epistles addressed by Harvey to Riolanus, the only one of his numerous critics to whom he did the honour of replying. Finally, at the end of the volume is a part quite personal to M. Richet, in which, under the title of "Notes and Observations", he gives a voluminous demonstration of experimental physiology, treating of the mechanism of the movements of the heart and the rapidity and tension of the blood in the circulatory apparatus: a question of hydrodynamics, which can now be studied with great precision, as M. Béclard pointed out, by the ingenious instruments of M. Marey.

GYNÆCOLOGICAL ABSURDITIES AND STEM PESSARIES.

THE editors of the *Louisville Medical News* have a good eye for the picturesque, and collect some characteristic specimens of criticism, racy of the sort, but often of cosmopolitan applicability. On the subject of "gynæcological absurdities", they quote Dr. Kennard as writing in the *St. Louis Medical and Surgical Journal:* "Twenty years ago, every woman imagined that she had ulceration of the womb, and, of course, every medical aspirant for fame insisted on a peep at that organ through the speculum. Five years later, they imagined that their wombs did not hang right; and, through the influence of the misguided enthusiast Dr. Hodge, who had revived an old and long-forgotten idea, the young practitioner was inclined to make a toy-shop out of every woman's vagina. Our instrument-stores are full of pessaries; and it is very entertaining to see the ingenuity displayed by some of our brethren of a mechanical turn of mind in varying their size and shape. We might well suppose that no two vaginas were constructed upon the same plan if we did not know to the contrary." On "stem pessaries", they note that: "Dr. H. J. Garrigues reports, in the *American Journal of Obstetrics*, another 'case illustrating the danger of stem pessaries'. The patient had pelvic peritonitis, ending in an abscess and cystitis, resulting from the pessary, which had only been worn one day and night. Dr. T. G. Thomas admits its use only in rare cases of flexion. Emmett states that it is a 'most irrational instrument, and its application will sooner or later, in almost every case, result in mischief'. Peaslee objects strongly to its use, except in some very rare forms of anteflexion. Tait uses strong language against its use. Dr. M. A. Pallen relates two cases of death caused by the stem pessary. One case died of perforation of the uterus and resulting metroperitonitis. The other was impaled by the pessary in consequence of a fall. The general verdict is that it is not a safe instrument in the uterine cavity."

OOTACAMUND.

THIS is a hill sanatorium, where art seems to have deteriorated the provisions of nature for the sanitation of its inhabitants. At least, so we infer from the concluding sentence of the last official report of its medical authority; who says (he might be writing of an English watering-place or health-resort)—"A complete system of drainage is a great want, one of the greatest in the station; but want of necessary means will, I fear, prove a bar to any such being introduced for some time to come, or until another epidemic brings it again prominently to notice."

FUCHSINE IN CHRONIC ALBUMINURIA.

DRS. BERGERON, CLOQUET, and FELTZ have highly recommended the use of fuchsine (chloride of rosaniline) in chronic albuminuria with œdema. Dr. Bouchut of Paris has used fuchsine with children ranging from three to fourteen years of age, and is entirely satisfied with its action. The albumen in the urine decreased rapidly, and finally disappeared entirely. The duration of treatment varied between one and six months, and the daily dose between five, ten, and twenty-five *centigrammes*. From two to sixteen *grammes* were used without producing any gastric disturbance. Simultaneously with the fuchsine, the milk-treatment was ordered, and envelopment in cloths which had been saturated with vapours of benzoin. During the entire application of the fuchsine, the urine had a rose-red colour, and the lips and tongue were intensely red. Of disturbing influences, vomiting only was once observed, which, however, did not recur when the medicine was continued. Bouchut ordinarily gave it in a liquid form, to which he added essence of peppermint as a corrigent. Once he gave it in pill form. He considers the drug entirely innocuous, and speaks positively against the view generally.

THE CASE OF DR. PHILLIPS.

IN the Common Pleas Division, on Saturday last, before Mr. Justice Grove and Mr. Justice Lopes, Mr. Serjeant Ballantine moved for a rule for a new trial in this case. Dr. Phillips claimed damages in consequence of very serious injuries suffered in a collision upon the South Western Railway Company's line. The case was first tried before Mr. Justice Field, when the verdict was for the plaintiff, with damages £7,000; but a new trial was ordered upon the ground that these damages were inadequate; and on the second occasion, when Lord Coleridge presided, the verdict was for the plaintiff, damages £16,000. Mr. Serjeant Ballantine (with him Mr. Dugdale) now submitted to the court that the matter was worthy of further discussion upon these points: that the damages were excessive, and that the jury had not been properly directed. The great object of the defendants, he said, was to have, if possible, some definite principle laid down for the guidance of juries in reference to assessing damages in cases of this kind. In this case, the plaintiff had paid about half-a-crown for a railway ticket, and from this fact the law inferred a contract that the defendants should do their best to convey him safely. It was distinctly shown in this case that the company, as a company, were in no way in fault, though no doubt some individual servant of theirs had been negligent. Juries were directed that, in an action of this kind, they should, in assessing damages, take all the consequences of the breach of contract into consideration. The law, however, having inferred the contract should define what the consequences of a breach of it were. Again, they were

told that they should consider the pain and suffering of the plaintiff, the expenses he had incurred, and the loss of income from his business. It was submitted that the loss from business should not be put to them as a distinct and separate head, and that the jury should be told simply to take all the circumstances into consideration. The court held that, though the question of liability of defendants in cases like this might well be considered in Parliament or by some appellate court, still here they had only to consider what the law was. The Lord Chief Justice had directed the jury in accordance with the law as it had been repeatedly laid down; and, therefore, this court could not say that there was any misdirection. On the question of damages, Lord Coleridge was not dissatisfied with the amount. The rule was, therefore, refused, but a stay of execution was granted; and it was intimated that the case would probably go to the House of Lords.

SUPPLY OF SEA-WATER FOR LONDON.

THE project for giving London a direct supply of sea-water from the south coast has been again revived, and the sanction of Parliament will be sought for the new scheme in the ensuing session. The plan now proposed differs considerably in its details from the scheme which received the Royal assent some few years ago. It is now intended to commence an aqueduct in the parish of Lancing, which is situated between Shoreham and Worthing, and to have a pumping station in the same parish. The aqueducts are to be continued on to London through the parishes of Combes, Sompting, Botolphs, Bramber, Steyning, Ashurst, West Grinstead, Shipley, Horsham, Warnham, and Rusper, in the county of Sussex; Capel, Dorking, Mickleham, Leatherhead, Malden, Chessington, Kingston-on-Thames, Norbiton, Wimbledon, and Wandsworth, in the county of Surrey; and Fulham, in the county of Middlesex.

RECENT LUNACY LEGISLATION.

AN Act of the last legislature of Massachusetts provides (*General Laws and Resolves*, 1879, cap. 195) that justices of the supreme, superior, municipal, police, or district court shall have the same power in the commitment of lunatics as the judges of probate; that no insane person shall be detained in any public or private asylum without order of court, and that the judge shall see and examine the person alleged to be insane, or state in his final order the reason of non-compliance; that no person shall be committed unless, in addition to oral testimony, there shall have been filed a certificate of insanity signed by two physicians, graduates of some legally organised college, who shall have practised three years in the State, and who are not connected with any hospital for the insane, and who shall have examined the patient within five days, and shall specify the facts on which their opinion is based; that any counsellor of law, regularly retained for, or by, the patient, shall be admitted to any hospital to visit his client, on consent of the superintendent, or by order of any justice abovenamed in writing.

PATHS OF CONDUCTION IN THE SPINAL CORD.

DRS. OTT and SMITH give the following (*American Journal of the Medical Sciences*, October, 1879) as the results of thirty experiments made on rabbits, with a view to determining the paths of conduction in the spinal cord. 1. The motor and sensory fibres in the cervical segment of the spinal cord run exclusively in the lateral columns; 2. The nerves administering to respiration, vaso-motor nerve, and cilio-spinal nerves also run in the lateral columns; 3. The posterior columns are concerned in co-ordination; 4. Irritation of the cervical cord causes co-ordinated jumping movements; 5. No sensory fibres pass to the brain in the posterior columns.

CORTICAL PARALYSIS OF THE ARM.

AT a recent meeting (November 11th) of the Paris Académie de Médecine, a paper was read by M. Gaston Decaisne, containing the history of thirty-six cases of brachial monoplegia, of which several came under his own observation. His conclusions point to the fact that there exists in each cerebral hemisphere a centre which regulates the motor power of the upper limb of the opposite side; that this centre, which is more extended than has hitherto been generally supposed, comprises not only the ascending frontal and parietal, but also a smaller or greater portion of the adjacent frontal and parietal convolutions. M. Decaisne believes that, in consequence of the large surface of the motor centre, the re-establishment of the motion may be effected by the aid of the cells in the vicinity of the lesion which have remained healthy. He also describes the peculiar characteristics of the paralysis in question very well, and his memoir will help to their being distinguished from those having a central origin, a diagnosis which is often very difficult at the bedside.

LUNACY COMMISSIONERS.

THE rumour which we gave a few weeks since of the probably imminent resignation of Dr. Nairne, and the vacancy thus likely to be created for a medical commissioner, has given rise to some public discussion. We called attention to the fact that it is reported that recent appointments have virtually been made, not by the responsible person, the Lord Chancellor, but by a vote of the commissioners among themselves; the board thus becoming self-elected; and no one is admitted unless he is recognised as "a good fellow", and likely to make things pleasant. Recent appointments have strongly reflected that tinge of colour; and the attitude of optimism which the Commissioners have assumed in public inquiries has been amiably conservative, and according to the most comfortable traditions of sheer officialism. Some recent letters have appeared in the *Times*, signed by Fellows of the College of Physicians, confirming the report to which we referred. Lord Shaftesbury has seen fit to give them a very strong official denial; but in official denials there is much which must be read between the lines. Various candidates are in the field, several of high attainments and excellent antecedents; and it may be hoped that this time the Lord Chancellor will not allow the Commissioners to please themselves only in choosing their comrade, but will himself assume the responsibility of discovering the best out of several good men who are likely to offer themselves. Meantime, however, thus far in accordance with the ancient traditions of Whitehall, not to announce a vacancy until the succession is secured to an eligible and pleasing colleague, the *mot d'ordre* of the moment is that "there is no vacancy".

MEDICAL RELIEF ON LOAN.

AT the recent Poor-law Conference at Brighton, Mr. Wyndham Portal urged the advantages of the loan system of medical relief; and a resolution was unanimously adopted to the effect that, in order to encourage thrift and provident habits, it is desirable that medical relief should more frequently be given in this manner. Speaking of the working of the system in his own union, Mr. Portal said that, out of seventy-one applicants for medical relief, forty-eight were made to pay, and only twenty-three were exempted from payment. Still stronger statistics were adduced by Mr. Garland, the Vice-Chairman of the Bradford Union, where it appears that, during the three years which have elapsed since the system was introduced, there has been a diminution of ninety per cent. in the amount of medical relief. There can be no question that the object which the promoters of this system have in view is a good one; and yet it is a system which will require to be administered with a gentle hand. The hardness of an official might easily turn it into an evil. That there are a few persons who demand the services of the Poor-law medical officer when they ought to pay a doctor in the regular way there can be no doubt. These will be at once detected by the loan system, and that will be an unmixed good. But how will other poor sick persons be affected by it? It must have the effect of either tying a burden of debt round their necks, and thus sinking them lower in their poverty; or else of deterring them altogether from applying for an order, when, in the interests of the community at large, it is desirable they should do so at once. Surely the enormous reduction which has taken place in the number of cases receiving medical relief in the Bradford Union must arise from the fact that the poor are deterred from applying for orders; and, if so, it is a very doubtful advantage. If the system be shown to be a good one, and beneficial to society at large, we have no doubt the

Poor-law medical officers will be willing to accept it, and that special arrangements will be made in order that they may be equitably remunerated for the cases in which relief is given on loan. Though the system would evidently require to be carefully guarded and to be administered with discrimination, yet it is well worthy of the attention of the Local Government Board; and we shall hope to hear that it has received due consideration.

SCARLET FEVER, MEASLES, AND DIPHTHERIA IN LONDON.

THE fatal cases of scarlet fever in London, which had been 113, 106, and 102 in the three preceding weeks, further declined to 90 last week, but exceeded the corrected weekly average by 11; they were proportionally most numerous in East London. The Metropolitan Asylum Hospitals contained 347 scarlet fever patients on Saturday last (against numbers increasing from 259 to 326 at the end of the four previous weeks), and 56 new cases were admitted during the week; the London Fever Hospital contained 108 scarlet fever patients at the end of the week. The deaths from measles, which had been 57 and 78 in the two previous weeks, were 67 last week, and were 15 above the corrected average. Measles again showed the greatest fatality in South London. The deaths referred to diphtheria again rose to 15 last week.

METROPOLITAN WATER-SUPPLY.

DR. FRANKLAND reports, as the result of his analyses of the waters supplied to the metropolis during November, that, taking the average amount of organic impurity in a given volume of the Kent Company's water during the nine years ending December 1876 to represent unity, the proportional amount of such impurity, in an equal volume of water supplied by each of the other Metropolitan Water Companies, and by the Tottenham Local Board, was: Colne Valley 1.2, Tottenham 1.5, Kent 1.6, West Middlesex 1.6, New River 2.9, Southwark 2.9, Grand Junction 3.0, Lambeth 3.8, Chelsea 3.9, and East London 5.0. The Thames waters were of superior quality to those usually supplied at this time of the year; the West Middlesex Company's water was especially free from organic impurity. The quality of the Lea water, distributed by the New River Company, differed but slightly from that of the Thames water, while that supplied by the East London Company was considerably inferior to any supplied from the Thames. All the river waters were efficiently filtered before delivery. The deep-well waters delivered by the Kent and Colne Valley Companies, and by the Tottenham Local Board of Health, were of their usual excellent quality.—Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town was slightly turbid, and exhibited a marked increase of organic impurity.—Dr. Mills reports that the Loch Katrine water supplied to Glasgow was "light brown in colour, and contained but little suspended matter".

SCOTLAND.

AT a meeting of the Royal College of Physicians of Edinburgh on December 4th, the following office-bearers were elected:—*President*, Dr. D. R. Haldane; *Vice-President*, Dr. Alexander Peddie; *Secretary*, Dr. John Wyllie; *Treasurer*, Dr. F. A. Smith.

AT a meeting of the Edinburgh Obstetrical Society, held on Wednesday, November 26th, the following office-bearers were elected:—*President*, Dr. Angus Macdonald; *Vice-Presidents*, Professor Alexander Simpson and Dr. Robert Bruce; *Secretaries*, Dr. James Carmichael and Dr. Berry Hart; *Treasurer*, Dr. Wm. Craig; *Librarian*, Dr. C. E. Underhill; *Members of Council*, Dr. Croom, Dr. Peel Ritchie, and Dr. J. Young.

A DEATH from chloroform occurred on Sunday, November 23rd, in the ophthalmic wards of the Edinburgh Royal Infirmary. The operation was removal of an orbital tumour by Dr. Argyll Robertson. We have no doubt that all the details will be published.

MR. CHIENE operated lately on a case of a comparatively rare affection—perineal tumour involving the urethra, and probably malignant. The urgent symptom was retention of urine. The tumour could not, of course, be removed; and accordingly perineal section by Syme's method was performed.

FORTHCOMING DISCUSSION IN GLASGOW ON CROUP AND DIPHTHERIA.

WE observe that a meeting of the Glasgow and West of Scotland Branch of the British Medical Association is to be held on December 19th, at which the principal business will be a discussion of the relation of croup and diphtheria. The *Glasgow Medical Journal*, referring to this meeting, says that it believes that this is essentially a general practitioner's question, to be decided, if at all, by the careful consideration of large numbers of cases seen under similar circumstances. Dr. Russe will introduce the discussion from the point of view of statistics, and may be safely said that this, too, is the general practitioner's point of view. The statistics furnished by the Registrar-General and his subordinates are supplied by the general practitioner, and may be expected to reflect his views. We anticipate that the discussion will be a very profitable one, and it is surely suitable that croup should be discussed in Scotland, the country from which the name of the disease, at least, s derived.

UNIVERSITY OF ST. ANDREW'S.

THE assessorship of the General Council of the University having become vacant by the expiration of the term of office of Dr. Richardson, he was nominated for re-election by Professor Pettigrew and Mr. Robb, at a recent meeting of the Council. He had been requested to withdraw in favour of a candidate who, by some of the University authorities, was believed to be likely to be of special service to the University; but, acting on the advice of the London Committee of the General Council, as we recently stated, he consented to stand again. For some reason, this candidate, whose name has not been publicly mentioned, was not proposed, and Dr. W. B. Carpenter was nominated in his stead. We understand, however, that it is widely felt that the representative of the General Council in the University Court should be a graduate of the University; and that, as Dr. Carpenter is in no way connected with St. Andrew's, his high personal character and his great attainments cannot override the position, that St. Andrew's graduates should be represented in the University Court of St. Andrew's by a St. Andrew's man.

TRANSFUSION OF BLOOD IN THE NEW INFIRMARY, EDINBURGH.

THE operation of the transfusion of blood, in the case of James Anderson, aged 17, at present under the care of Professor Sanders, in Ward 23 Royal Infirmary, Edinburgh (mentioned in last week's JOURNAL), went on satisfactorily for some days; the patient took food better than before, and, although occasionally delirious, he was at intervals rational, recognised individuals, and wrote in a book. The pulse, however, did not gain in strength appreciably; and, as he was making no decided progress, the operation of transfusion was again performed by Professor Annandale, in his lecture theatre, on Thursday, the 4th, at 1 P.M. The same student again supplied the blood. A simple apparatus, similar in its action to the ordinary India-rubber enema syringe, was used, and between six and seven ounces of blood injected into one of the veins in the arm. Towards the end of the transfusion, the patient's pulse had appreciably increased in volume, while the lips and cheeks were decidedly more vascular. Six hours after the operation, the temperature, which had previously been 98.6°, rose to 102.8°; the pulse rose from 99 to 170 per minute; and the respirations from 20 to 32. Since that date, however, there has been a gradual fall—the temperature now averaging 98°, the pulse 80, and the respirations 7. The complexion of the patient is much improved, and he has taken food regularly and in fair amount; the pulse is now of fair volume and strength. The delirium is much less frequent, and altogether the patient seems much better since his last addition of blood.

EDINBURGH UNIVERSITY COURT.

AT a meeting of the Edinburgh University Court, held on Monday, Dr. J. O. Affleck, F.R.C.P.E., Lecturer on Practice of Medicine, was recognised as a teacher whose course of lectures would qualify for graduation in the University of Edinburgh.—At the same meeting, it was agreed to raise the fees charged for the classes of Operative Surgery and Practical Gynæcology.

DEATH IN A SCOTCH PRISON.

ON November 25th, a woman named Jane Wells was sent to the Edinburgh prison. After admission, she complained of a cough, and was put under medical treatment. On December 3rd, she was found dead. Under the "Prisons (Scotland) Act", Sheriff Hamilton held a public inquiry on Monday as to the cause of death, when the result of the *post mortem* examination showed that an aneurism of the aorta had ruptured and caused her death.

A NEW DOUBLE QUALIFICATION.

THE Parochial Board of Holm, Orkney, animated by a spirit of economy, and also by a desire to provide for the medical and spiritual wants of the poor simultaneously, have appointed the Rev. Daniel McNeill, Free Church minister and who holds a diploma, to be medical officer, in place of Dr. Brice, Kirkwall. Though a member of the board, it was stated that the reverend gentleman would act as such for about half the sum paid to the present medical officer.

EDINBURGH UNIVERSITY CHEMICAL SOCIETY.

ON December 3rd, the session of the Edinburgh University Chemical Society was opened, by Professor Crum Brown, with an address on "Dalton and the Atomic Theory". T. Inglis Clark, D.Sc., occupied the chair, and there were a great many students present. The lecture was well received, and the thanks of the meeting accorded to the lecturer.

MEDICAL STUDENTS' CHRISTIAN ASSOCIATION.

THE annual meeting of the Edinburgh Medical Students' Christian Association was held on Saturday, December 6th. Professor Simpson presided. Professor Spence, President-elect, addressed the meeting at some length. Satisfactory reports were submitted of the various departments of the Association's work. Short addresses were also delivered by Drs. Moir, Balfour, Halliday Douglas, Miller, James Ritchie, and Bishop.

ABERDEEN ROYAL INFIRMARY.

A QUARTERLY meeting of the Managers of the Aberdeen Royal Infirmary was held on Monday. Various gentlemen were admitted as managers of the institution, some of these being in virtue of certain subscriptions given, among these latter was one of £100 and one of £1,380. Numerous other subscriptions were intimated.

HEALTH OF EDINBURGH AND LEITH.

THE mortality in Edinburgh rose to 22 per 1,000 last week; there were four deaths from zymotic diseases, all of which occurred in the Old Town. The mortality in Leith was 16 per 1,000.

THE THOMSON LECTURES IN ABERDEEN.

DR. MCKENDRICK, Professor of Physiology in the University of Glasgow, has been selected to deliver this year's series of Thomson Lectures on Natural History and Theology, in the Free Church College, Aberdeen. The lectures were begun last year, Dr. Lauder Brunton of London being then the lecturer. The subject of Dr. McKendrick's first lecture is "The Brain and the Senses".

GLASGOW PHILOSOPHICAL SOCIETY.

AT a meeting of this Society, held on the evening of the 3rd inst., Dr. Fergus in the chair, a paper was read by Dr. John Dougall of Glasgow on "Disinfection by Acids". After alluding to the great antiquity of the process, the lecturer stated that he regarded it as one of the quickest, easiest, most certain, and cheapest ways of accomplishing disinfection. He had been frequently struck with the summary manner in which an infectious disease had been averted by this method, under circumstances most favourable to its propagation. For disinfection, he advised the use of three acids: hydrochloric, sulphurous, and aromatic glacial acetic acid. As regards carbolic acid, which had come into use so much of late years as a disinfectant, experiments had led him to the conclusion that it was not a disinfectant, not a destroyer of organic matter, but rather an antiseptic, a preserver of organic matter.

THE REGISTRAR-GENERAL'S RETURNS.

FROM the returns issued for the week ending Saturday, November 29th, it appears that the death-rate in the eight principal towns of Scotland was 18.0 per 1,000 of estimated population. This rate is 5.1 under that for the corresponding week of last year. The lowest mortality was recorded in Greenock, viz., 14.2; and the highest in Paisley, viz., 26.6. The mortality from the seven most familiar zymotic diseases was very moderate, being at the rate of 2.2 per 1,000 of estimated population. The number of deaths from scarlet fever was much less than during the previous week. In Edinburgh, there was a considerable increase of deaths from acute diseases of the chest. The mean temperature was 37.1°, being 8.0° below that of the preceding week.

GLASGOW DISTRICT LUNACY BOARD.

A MEETING of this Board was held on the 3rd inst., when it was reported that the Kirkhall Asylum alterations were going on rapidly. There also came up for discussion the question of providing suitable asylum accommodation for the district; and it was stated that counsel's opinion being taken, it was found that there was nothing to prevent the Board making Woodielee Asylum their district asylum. Under these circumstances, it was decided to write to the Barony Parochial Board, and to inquire whether that Board would be prepared to enter into an arrangement with the District Board, under which Woodielee Asylum would be made available for the services of the district.

HEALTH OF GLASGOW.

FROM the report of the Medical Officer of Health just issued, it appears that the anticipated increase in the death-rate has been fully verified, the rate last week being 25 per 1,000, which is four or five higher than it has been for a long time. In the same week last year, the rate was 26 per 1,000. In his report for the fortnight ending November 29th, Dr. Russell makes some interesting remarks on the effects of temperature, as shown by the death-rate. He says: "The present fortnight, like the previous one, is made up of two weeks differing as to mean temperature and death-rate, the first having a higher temperature and a higher death-rate, the second a lower temperature and a lower death-rate—a conjunction to which those who have not had the opportunity of observing the relation of those facts from week to week will appear abnormal. They, however, illustrate the almost invariable rule, that the action of the low ranges of temperature does not develope until the week following the change. The low temperature of the week ending last fortnight tells in the higher rate of the week which begins the present fortnight. We may also safely predict that the death-rate of the current week will be higher, whether the frost continues or not, because last week had a low temperature." From the report, it seems that scarlet fever is still prevalent, chiefly in the two quarters of the city where it began; and that whooping-cough, under the aggravation of the cold, has risen considerable in fatality.

THE RECTORIAL ADDRESS AT THE GLASGOW UNIVERSITY.

ON the 5th inst., Mr. Gladstone was duly installed in the office of Lord Rector of the University of Glasgow, and delivered his rectorial address. There being no room suitable in the University for such an occasion, it was decided by the authorities that the address should be given in the Kibble Palace, situated in the Botanic Gardens. Here a large audience assembled to listen to a speech that had been looked forward to with the greatest interest; and it is but fair to the students to say that all political differences were for the time laid aside to give their Lord Rector a hearty welcome. In the course of an eloquent address, Mr. Gladstone paid a high tribute to the value of the work carried on by the

University of Glasgow, and he urged some practical considerations for the benefit of those preparing for the three great professions: medicine, law, and the ministry of religion. At the close of the proceedings in the Kibble Palace, Mr. Gladstone and party drove to the University, and were entertained to luncheon by the Senatus. Among those on whom the degree of LL.D. was conferred on this occasion were Professor Balfour of Edinburgh and Professor Lister of London.

GLASGOW MEDICAL MISSIONARY SOCIETY.

THE twelfth annual meeting of this Society was held on the 4th inst., and there was a large attendance of the friends and supporters of this mission, which not only treats cases which come to the consulting-rooms, but distributes medicines in the dispensaries belonging to it, and also visits patients at their homes. From the report, it appears that the number of medical consultations during the year amounted to 41,316, being an increase of 2,000 on the previous year. Auxiliary agencies of the Society have been started in Hamilton and Helensburgh. From the financial statement, it seems that there had been a slight falling off in the subscriptions, and there was a balance of £204 10s. against the Society.

IRELAND.

ENTERIC fever has broken out in the children's school, Waterford Union, and fourteen cases have been removed to the Fever Hospital.

CITY OF DUBLIN HOSPITAL.

AN amateur dramatic performance, under the patronage of Her Grace the Duchess of Marlborough, in aid of the funds of this hospital, is announced for Saturday next at the Exhibition Palace.

VICEREGAL VISIT TO LONGFORD.

LAST week, Her Grace the Duchess of Marlborough, after inspecting the Longford Union Workhouse, visited the Longford County Infirmary, where she was received by the resident surgeon, Mr. Mayne, by whom she was conducted over the institution. The building was appropriately decorated for the occasion, and among the mottoes was the word "Waterloo" artistically worked in laurel, and placed over the bed occupied by an old soldier named Moran, one of the few survivors of that battle. On leaving, Her Grace expressed herself as highly pleased with the satisfactory condition of the infirmary, and the ample arrangements existing for the treatment of its inmates.

QUEEN'S COLLEGE, BELFAST: DR. THOMAS ANDREWS, F.R.S.

A MEETING was held last Saturday for the purpose of inaugurating a movement to establish some permanent memorial of the distinguished services rendered to science and education by Dr. Andrews, Vice-President of the Queen's College, Belfast, for many years, in connection with his retirement. Resolutions were adopted that the memorial should consist of a bust or portrait to be placed in the College, and secondly, of a prize or scholarship to be founded. A committee has been appointed, with the President of the College as Chairman, to carry out the necessary steps. Dr. Andrews was formerly Professor of Chemistry to the Queen's College, and as a chemist has been the discoverer of more than one matter of great importance in that branch of science; among others, we may mention that of the true continuity of the condition of matter in its transition stage from the gaseous to the liquid. We may add that the proposed testimonial has our warmest approval.

THE DUBLIN BRANCH.

THE President and Fellows of the King and Queen's College of Physicians in Ireland have again kindly granted the use of their halls for the next annual meeting and dinner of this Branch in January. Although only in the third year of its existence, the Branch numbers over one hundred and fifty members; and, through its influential Council, is recognised as a powerful and useful union between the profession in Leinster and the parent Association. The present President of the Branch, Dr. Gordon, ex-President of the King and Queen's College of Physicians, and physician to the House of Industry Hospitals, will, in accordance with custom, deliver an address at the approaching annual meeting, prior to resigning the chair to the President-Elect, Dr. Robert McDonnell, F.R.S., surgeon to Steevens' Hospital, and Ex-President of the Royal College of Surgeons and of the Irish Medical Association. We trust that any of our members living in Dublin and its neighbourhood who may not as yet have joined the Branch, will do so forthwith. During the coming year, perhaps more than at any other time, the necessity for a firm and unhesitating expression of opinion on the many important points touching the interests of the profession, which must come before the imperial, as well as our medical, Parliament, cannot be overestimated. Our Branch organisation affords the means of bringing such expressions of opinion together in a businesslike and authoritative form; and by the political power which the Association now undoubtedly has, gives a weight to the views of our Associates which individual and unofficial statements would fail to secure. Professor Sinclair, Secretary of the Vaccine Department of the Local Government Board for Ireland, and President of the Dublin Obstetrical Society, attended the conference on animal vaccination last week, as the representative of the Dublin Branch.

PRESENTATION TO DR. CHARLES BENSON.

THIS gentleman, the veteran ex-Professor of Medicine in the School of the Royal College of Surgeons in Ireland, was presented last week with an address by the Directors of the City of Dublin Hospital, on the occasion of a few of his friends presenting his portrait to the Board. The presentation took place in the theatre of the hospital, of which Dr. Benson was one of the original founders, and is now consulting physician, in the presence of a large assemblage. The Chairman of the Board, in opening the proceedings, said the address they were about to present to Dr. Benson was expressive of their great affection, regard, and esteem, and expressive of their gratitude for what he had done for the institution in which they were assembled. He cradled it in its infancy, watched over it in later years, and now instructed the Board in its management by his great experience and wisdom. Dr. Benson has been connected with the hospital ever since its foundation in 1832, and acted as its secretary from the first for many years. To him, as was stated by one of the speakers on the occasion, much of the position and state of efficiency the institution now enjoys is largely due; and during his long career, he has gained the love and respect of all who have gained his acquaintance. The picture having been unveiled and presented to the directors, their address to Mr. Benson was read. That gentleman, in his reply, thanked his friends for the kind words spoken of him, and expressed his pride, in the eventide of his life, at being so favourably identified with an hospital which stands so high in public estimation. We join in the hope expressed in the address, that Dr. Benson may yet be spared for many years. The picture is a copy by Mr. Clarke of the portrait of Dr. Benson, by the President of the Royal Hibernian Academy, in the College of Surgeons.

DEATHS OF DRS. ADAMS AND STEWART.

LAST week proved fatal to the above two highly respected members of our profession, both of whom graduated within a short time of each other half a century ago. William O'Brien Adams was a M.D. and M.A. of the University of Dublin, and a Fellow of the King and Queen's College of Physicians. He became an assistant-physician to the Rotunda Lying-in Hospital, and at an early period of his career settled at Kingstown, now the largely inhabited and fashionable seaport town of Dublin; but then little better than a packet-station. Here Dr. Adams succeeded in establishing, as the population increased, a large *clientèle*, and for many years before his death enjoyed the best practice in the neighbourhood. He was a gentleman of genial and cultivated manners, and enjoyed the esteem of all who knew him. His death, at the age of seventy-five years, was due to an attack of pneumonia, which proved fatal in three days. Henry Hutchinson Stewart was an M.D. of Edinburgh, and a Fellow of the Royal College of

Surgeons in Ireland. His name will always be remembered in connection with the Institution for Imbeciles at Palmerstown, near Dublin, to the erection of which he most liberally contributed during his life, and partially endowed, and hence is called after his name. This institution, which was only inaugurated this year, was previously situated at Lucan, where it was established in 1869 under Dr. Stewart's supervision and fostering care.

BELFAST ROYAL HOSPITAL.

THE annual meeting of the friends of this institution was held on November 27th, presided over by the Mayor of Belfast. From the report of the Board of Management for the year ending August 31st last, we learn that the total income amounted to £5,123, and the total disbursements for the same period to £5,316, showing that the expenditure exceeded the income by £193; while the total amount due on account of the hospital and convalescent home came to £1,340. Among the items of income, was one of £685 contributed by paying patients. The medical and surgical report stated that during the year 1,580 new cases were admitted to the wards, which, with 82 cases remaining from the previous year, made a total of 1,662 persons treated as internal patients; of these, 657 were medical, and 1,005 surgical cases. One hundred and six deaths took place, fifteen being moribund on admission; the average mortality was 6.3 per cent. Two hundred and eight surgical operations were performed, with a mortality of nine, equal to 4.3 per cent. In the extern department, 11,552 were under treatment. Clinical instruction was given in the wards to 215 students during the winter session, and to 142 during the summer. The late Dr. Allan Bryson having bequeathed a sum of nearly £3,000 to the hospital, it was determined to utilise a portion of it to remove some of the outstanding debts, and not to fund it and use the interest, as was the rule with money bequeathed to the charity. During the meeting, a vote of thanks to the medical and surgical staff was adopted, for the great attention they had given to the hospital during the past year.

BELFAST CHARITABLE SOCIETY.

AT the annual meeting of the Corporation of the Belfast Charitable Society, held on November 25th, the propriety of having the institution kept solely for the aged and infirm, and of revoking any laws and regulations having reference to the admission of children, was under consideration. A difference of opinion had arisen among the supporters of the charity as to whether it had been founded solely for the aged and infirm, or whether it also included the training and education of the young. Shortly after its foundation, upwards of a century ago, provision was made for admitting children, and at present the number of inmates amounts to 186, of whom 50 are children. After considerable discussion, the Board of Governors by a large majority passed a resolution that the inmates for the future should consist solely of the aged and infirm, and annulled the rule passed in 1776, authorising the admission of children. We understand that Lady Johnson has promised a third donation of £500 to be expended in the necessary repairs, on the condition that this resolution for keeping the institution exclusively for the aged and infirm, as proposed by the original founders, shall be taken as final and carried into early operation; while Sir Edward Coey has promised a second donation of £500 upon similar terms.

FEES FOR MEDICAL WITNESSES IN SANITARY CASES.

DR. POLLOCK, medical officer of Baronstown dispensary district, recently applied to the Guardians of the Dundalk Union for remuneration for his attendance as a witness at Petty Sessions in certain prosecutions under the Sanitary Acts; but the Guardians declined to pay a fee for his attendance, as they considered it was part of his duties as medical officer of health. The matter having been brought under the notice of the Local Government Board, they last week communicated with the Dundalk Guardians, and informed them that, under the provisions of Section 258 of the Public Health Act, 1878, the medical officer of health s entitled to remuneration for this duty when required to attend by an order of the sanitary authority, unless it was agreed that the duty of affording such attendance should be included in his salary, or that his whole time was occupied in the discharge of the duties of this office. Dr. Pollock was appointed medical officer of health at a yearly salary of £15, a sum which was not specified, we understand, to include attendance at prosecutions; and, therefore, should this be the case, the Guardians must remunerate him for the extra services performed.

CABUL EXPEDITIONARY FORCE.

[FROM A SPECIAL CORRESPONDENT.]

THE force destined for Cabul, under Sir F. Roberts, halted for a few days at Kushi to collect transport. On October 2nd, though indifferently supplied with transport, the force marched for Zarzarshar, and on the following day for Zabidabad. Here there was a halt made on the 4th, to rest the animals and allow the baggage to come up. On the 5th, Char Assay was reached, distant from Cabul about eight miles, but separated by a wall of almost perpendicular hills which closed in the valley of the Logar. It was soon discovered that a rebel army from Cabul held these hills in force, and also commanded the direct road or pass into Cabul. Arrangements were accordingly made to take these hills and pass; and, at 10 A.M. on the 6th, Brigadier-General Baker, C.B., advanced with a gallant little force, which, after climbing and fighting all day, by sundown were in possession of the hills and pass, with some twenty guns and other munitions of war. The contest was not without casualties on our side, the list of killed and wounded being about ninety, including three officers severely wounded. One was Surgeon Duncan, of the 23rd Pioneers, who received a conical bullet-wound in the chest, which fortunately did not penetrate, but passed under the skin for eight or ten inches. The enemy are supposed to have lost about three hundred. The medical arrangements for this enterprise consisted of "first aid" afforded by the regimental medical officers. This was supplemented by a section thrown off from the divisional field hospital, which carried with it tents, bedding, medical comforts, and every requisite. The wounded were collected and brought back to the field hospital by the ambulance corps, consisting of dhoolies and dandies, carried by natives, but thoroughly trained, and in some measure drilled. This ambulance corps is likely to prove a most efficient addition to our medical arrangements for the relief of sick and wounded in India.

On the 8th, General Baker had to clear the hills immediately above Cabul, in which he was again accompanied by the section of the field hospital and ambulance corps.

The coast being clear of all rebels on the 9th, the British force encamped on an elevated position, known as Seeah Sung, east of Cabul, and distant about half a mile. On the 10th, General Roberts, with his staff, rode into the Bala Hissar, and inspected the Residency and some of the positions likely to afford accommodation for the troops during the winter. The Residency itself is simply a heap of ruins, with no trace whatever of its having been occupied by European gentlemen. Some of the outer walls bear extensive marks of bullets, showing how the Embassy must have been fired on from all directions. Two fresh graves were pointed out as the resting-places of Lieutenant Hamilton of the Guides, and Mr. Jenkins of the Civil Service. Nothing was known of the bodies of Sir Louis Cavagnari or Dr. Kelly, but it was said they were under the heaps of ruins.

The Bala Hissar and City are two of the most filthy places on this earth. No description could come up to the extraordinary collection of abominations; and it is surprising how men like the late ruler and Yakoob Khan could have lived in the midst of it. We are now making preparations to occupy the Bala Hissar for the winter, which will require an extensive amount of labour, fumigation, and lime-washing before it is in a proper sanitary condition. The same may be said of Shapore, though in a less degree, where the roofs of the barracks and barrack-rooms themselves have been used as latrines, and are thick with human excrement.

There have been several cases of choleraic diarrhœa among the European troops since arrival at Cabul, due in some measure to the large quantities of fruit in which the men have indulged, the indifferent quality of water, and very cold nights.

It is to be hoped, in the distribution of the troops for the winter, that the cantonment of Shapore may be utilised; it is about two miles from Cabul proper, and is capable of accommodating about five thousand men. It is dirty, as already stated, but is sweet as compared to the Bala Hissar.

ANIMAL VACCINATION.

REPORT OF CONFERENCE HELD ON THURSDAY, DECEMBER 4TH, BY THE PARLIAMENTARY BILLS COMMITTEE, TO CONSIDER DR. CAMERON'S BILL FOR ANIMAL VACCINATION.

Speeches of the Chairman: Dr. Warlomont: Dr. Cameron, M.P.: Sir Thomas Watson, Bart.: Mr. Ceely: Mr. Greene: Dr. Stevens, etc.

ON December 4th, a conference, summoned by the Parliamentary Bills Committee of the British Medical Association, was held at the rooms of the Medical Society of London, to consider Dr. Cameron's Bill to authorise animal vaccination side by side with the arm-to-arm system, and to discuss the advisability of specially recognising vaccination from the calf in Great Britain. The attendance was very large; all the standing room was occupied; many were excluded from want of room. Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee, presided, and was accompanied by Professor Warlomont of Brussels, to whom a hearty recognition was given. There were also present Sir Thomas Watson, Bart., Sir George Burrows, Bart., Professor Harvey of Aberdeen, Professor Sinclair of Dublin, Mr. Ceely of Aylesbury, Mr. Greene of Birmingham, Dr. Braidwood of Birkenhead, Dr. Cameron, M.P., of Glasgow, Dr. Ballard, representing the President of the Local Government Board; Surgeon-General Mouat, C.B.; Dr. Alfred Carpenter, President of the Council of the Association; Dr. Bristowe, President of the Society of Medical Officers of Health; Dr. A. P. Stewart, Dr. R. Liveing, Dr. Wiltshire, Sir Joseph Fayrer, Dr. Joseph Rogers, Dr. A. Collie, Dr. Bucknill, F.R.S., Mr. Sibley, Dr. Walter Dickson, Dr. W. Squire, Dr. Bowles of Folkestone, Mr. J. N. Radcliffe, Dr. Parsons of Dover, Dr. Drage of Hatfield, Dr. Hope, Dr. D. Nicolson, Dr. L. W. Sedgwick, Mr. John Gay, Dr. Hawksley, Dr. Dowse, Dr. Fancourt Barnes, Dr. Cuolahan, Mr. G. D. Brown of Ealing, Mr. Jabez Hogg, Dr. Cory, Dr. A. Grant, Mr. Gramshaw of Gravesend, Dr. J. Macpherson, Dr. Ligertwood, Dr. W. J. Collins, Mr. S. R. Lovett, Mr. N. Stowers, Dr. J. H. Stowers, and nearly two hundred others.

Mr. F. FOWKE, General Secretary of the Association, read part of the minutes of the last meeting held by the Parliamentary Bills Committee, including the resolution summoning this conference.

The CHAIRMAN said that the circumstances under which the meeting had assembled made it unnecessary for him to say more than a few words of explanation, detailing the steps which had brought about that conference. It was within the knowledge of all that, in the last session of Parliament, Dr. Cameron introduced into Parliament a Bill for the promotion of animal vaccination. This Bill, though it did not reach the stage of consideration of the House of Commons, came under the notice of the Parliamentary Bills Committee, and it was his (Mr. Hart's) duty, as Chairman of that Committee, to consider the purposes of the Bill. On thus considering the subject, he found that the actual information to be obtained readily was neither complete nor decisive, and he took two opportunities of visiting Brussels in the summer, and other parts of the continent subsequently in the vacation, in order to investigate on the spot the actual operations of the system. He found many stations, and witnessed the whole means by which the system could be carried on, proving to his own mind conclusively and clearly that the system was one capable of being practically employed up to a certain point in this country. [*Cheers.*] Having ascertained this, he considered that the facts ought to be laid before the Association, and the Committee thought that the information he had had the opportunity of collecting, including a summary of a great mass of documentary evidence, should be presented in the form of a report. The report affording this information had been printed in the JOURNAL of November 29th, and was now laid before the conference in pamphlet form. The printing of that document would render it unnecessary for him to offer any remarks on the details of the system, especially as their *confrère* and associate, Professor Warlomont, in spite of the bitterly inclement weather, had crossed the sea to give the conference the benefit and advantage of his experience—[*cheers*]—and the proofs of the success the system had attained where it had been practised. [*Cheers.*] Dr. Cameron, also, who, with great energy and skill—[*cheers*]—had arrested public attention, was present, and would follow Dr. Warlomont. [*Cheers.*] The assemblage had also the advantage of the presence of Dr. Ballard of the Local Government Board; of Mr. Ceely of Aylesbury, who had devoted many years to the investigation of this subject, and might be considered the greatest English authority on vaccination; of Mr. Greene of Birmingham, whose labours in the same direction were well known; and many others distinguished in this branch of science, that it would be invidious to particularise further. He would now call upon Professor Warlomont to address the meeting.

M. WARLOMONT, who was received with great cheering, speaking in French, said that he desired to express his profound admiration for the great energy and ability which the Chairman had shown in this matter. He had shown his own devotion to the cause by his presence that day, and he asked Mr. Hart to read a translation in abstract of the paper which he had prepared, being assured that it could thus be most readily followed and understood.

The CHAIRMAN remarked that M. Warlomont had added to the devotion he had shown in travelling so far in this terrible weather to meet his brother medical men—a duty he had undertaken in the cause of science and humanity—[*cheers*]—by foregoing the oratorical triumph he would have gained in reading his paper; and though the paper would only be read in abstract, the gentlemen present should have it in their hands printed in the full text, so that all present at the conference would have the advantage of possessing Professor Warlomont's views and words. [*Cheers.*]—[A portion of the paper is printed at page 296.]

Dr. CAMERON, M.P., said that he had been invited to attend the conference for the purpose of explaining the provisions of the Bill regarding animal vaccination which he had introduced last session. His position simply was that, so long as vaccination remained compulsory—and he thoroughly approved of its being so—it was the duty of the State to provide its subjects with the option of a form of vaccination which was at least as efficacious for the prevention of small-pox as that usually practised, every necessary for which could be provided at a very trifling cost, and which was free from certain risks and drawbacks that had raised a strong popular prejudice against vaccination, and had practically proved fatal to the spread of revaccination in this country. The admirable and exhaustive report which the Chairman of the Parliamentary Bills Committee of the British Medical Association had prepared, showed the perfect practicability of animal vaccination—that it could be practised at a very moderate cost, and with a success quite equal to that which attended our present system. It was quite as important for the extinction of small-pox to encourage revaccination as it was to compel primary vaccination, and it was remarkable to how large an extent revaccination took place in countries where animal vaccination was practised. In Brussels, in the years 1865-70, upwards of 5,400 revaccinations with animal lymph took place, against 10,000 primary vaccinations; in Holland, in 1869-75, there had been 10,500 of the former against 42,000 of the latter; and in Italy, according to a statement quoted in Mr. Hart's report, the proportions were 90,000 and 115,000 respectively. The cause which operated to prevent revaccination in this country was the fear of infection with other diseases. Until very recently, this fear has been considered groundless. Direct experiments seemed to show that it was impossible for vaccine lymph, whatever its origin, to communicate any other disease, and isolated cases in which syphilitic complications had been observed, viewed by the light of this preconceived conviction, were regarded simply as cases of constitutional disease which had all along existed, though it might have been excited into increased activity by the operation of the vaccination. In France, long before this theory was exploded in our country, M. Dupaul, the chief of the Vaccination Service of the French Academy of Medicine, became alive to the danger of the spread of syphilitic infection through vaccination. In a paper which he published in 1867, which embraced the record of little over a year's experience, there were enumerated half-a-dozen more or less extensive outbreaks of vaccinal syphilis, in the course of which upwards of 160 children had been infected, and several had lost their lives. It was not until 1871 that a case of wholesale syphilitic invaccination, brought before the Royal Medical and Chirurgical Society by Mr. Jonathan Hutchinson, incontestably proved to the medical profession in this country that the theory on which they had long relied was unsound. The public were naturally inclined to believe that isolated cases of vaccinal syphilis, even in Great Britain, were much more common than was generally supposed, and to attach weight to M. Dupaul's assertion that a child on whom no symptoms of disease were discoverable might be the vehicle for conveying specific infection. Referring to the precautions taken at the National Vaccine Establishment to secure purity of lymph, Dr. Cameron contended that they were at best based upon a very questionable theory, and were altogether inadequate to prevent the collection of lymph from infants in whom disease could only be detected on a close and minute examination, such as those who had proved the source of so much mischief in Mr. Hutchinson's and some of M. Dupaul's cases. He had no wish to magnify the frequency of this unfortunate complication, which he believed to be so rare, that if we had no alternative between the abandonment of compulsory vaccination and the incurrence of the risk now run, he would unhesitatingly advise

the continuance of the present system. But animal vaccination rendered any such mischance absolutely impossible, and he had referred at some length to the matter for the purpose of showing that those who demanded the option of animal vaccination had sound scientific reason on their side. His Bill proposed that the Local Government Board should afford that option, that it should be incumbent on that Board to supply such persons as wished with animal lymph, and a duty of public vaccinators to vaccinate with it such persons as desired. If the department thought proper, there was nothing to prevent them from perpetuating their present arrangements for the cultivation of their existing stock of humanised lymph. The one system could be worked quite well alongside the other. His proposal would in nowise interfere with arm-to-arm vaccination, which would in many cases, especially in the country, be practised with lymph a few removes from the cow; but he would like to see, as in Holland, calf-lymph establishments opened up in all our large towns where those who desired it could be vaccinated direct from the heifer with living lymph. The opponents to vaccination were of two classes; those who considered it a filthy and unholy practice, whom nothing could reconcile to it, and who constituted but a very small minority; and those who regarded it with dislike and suspicion on account of the risks which they believed were attendant on it. The objections of the latter would be completely removed by allowing them the option of vaccination direct from the calf, and the nation would gain by a marked decrease in the number of our unvaccinated population, by an increase in our revaccinations, and by the introduction of a lymph which many acknowledged authorities on the subject considered of much superior protective power to that now in use.

The CHAIRMAN here stated that, when the conference was proposed, and the time of its being held announced, he had the satisfaction of receiving two communications from gentlemen of great authority. One was from Sir Thomas Watson, who had shown his warm interest in this subject in many ways, and who had expressed his great desire to see animal vaccination introduced into this country as part of our national system of vaccination. Sir Thomas Watson, in his letter, referred to a very interesting article in the *Nineteenth Century*, as containing his views. Sir Thomas had honoured the meeting of that day by attending—[*cheers*]—and Sir George Burrows also—[*cheers*]—who had told him that he came after reading the report to show his sympathy with its objects, and to support animal vaccination. Sir Thomas Watson did not feel equal to the exertion of addressing the meeting at length, but had just sent a line to him (the Chairman) to the following effect: "I accord entirely in all that has been said in favour of animal vaccination." The meeting would regret not hearing Sir Thomas Watson. [*Cheers.*]

Sir THOMAS WATSON, who rose amid renewed cheers, said: My feelings upon this subject are very strong, from my being convinced that, by this system of animal vaccination, and by the vaccine lymph being thus cleansed, we may drive small-pox entirely out of this country. [*Cheers.*]

The CHAIRMAN added that Mr. Simon, C.B., would have attended on that day but for the dangerous illness of a near relation; and would have come to express his own sentiments, which were, that a change had to some extent come over his views in this matter. Mr. Simon had stated that, if he had been in power now as the medical adviser of the Local Government Board, he should have considered it part of his duty to introduce, in some form, the principle of this system; and, without, of course, committing himself to the details of the Chairman's report, Mr. Simon had arrived at a conclusion warmly in favour of more recourse to animal vaccination as a central system. [*Cheers.*]

Mr. CEELY here rose, and said that, having been named, he should offer a very few words, having come from Aylesbury expressly to attend this meeting. He had been using animal vaccination for many years. He had had the points from Brussels, and matter from Mr. Greene. He entirely approved of a more direct introduction of animal vaccination.

Mr. GREENE said he should endeavour, though an upholder of animal vaccination, to advance something that might be said from an opposition point of view. But before he did that, there was one part of the question to which he attached most importance, and upon this he had prepared a statement. His experience of animal vaccination had taught him that the method had the approbation and sympathy of a considerable proportion of the medical profession in this country, and that the wish to use this lymph was strong enough for pains and trouble to be taken to obtain it. More significant still, this desire was persistent, after repeated experience of its efficacy. A demand then existing, it became a duty to ascertain to what extent it was right and wise to yield to it. Eighty years ago, when Jenner, having gathered the traditions of the farmyard, proclaimed his discovery to the world, the whole truth concerning cow-pox was not known. It would be strange if later facts and experience did not further induce us by the new light to make some addition to, or modification of, the method of procedure. Certain of these new facts were not fully recognised by continental physicians, therefore the more urgent was it that they should be firmly upheld in this country, and form the basis upon which any alteration or addition was sought. He alluded chiefly to the demonstrations that cow-pox may be produced from variola; which have been succeeded by many confirmatory and independently repeated experiments. He had taken variolous virus from the human body, conveyed it forthwith to the cow, thence through two calves, and from the latter back to the human subject, producing typically perfect cow-pox and nothing more. At this date, in England, there could be no reasonable doubt that cow-pox was the casual variola of the cow, and vaccination a benign modification of the old inoculation of Lady Wortley Montague. Dr. Jenner said that an inoculation from a weakened or imperfect variola would not safeguard the system from a possibly malignant attack. The same thing must apply, but with greater force, to an inoculation of a weakened or imperfect vaccinia. Bearing in mind this connection between the old inoculation and the new, it was essential that this radical bovine modification should not be carried further by the various inimical circumstances that must arise. The greatest enemies of vaccination were those who asserted that no change took place in the course and effect of cow-pox by long continued descent, if judgment and care were exercised. If it were possible for judgment and care to be ubiquitous, there must still be that in the nature of cow-pox, as of small-pox, which, influenced by unknown causes, would lead to fluctuations in value, in coping with which empirical selection would always be a step behindhand. Certainly, a standard of cultivation was rightly aimed at, but it was a conventional standard, and differed in some material points from the descriptions of early vaccinators. The best vaccination was that performed with lymph of the most active kind possible consistent with maintaining its essential and safe bovine modifications; and in aiming to attain a definite notion of this degree of activity, greater attention ought to be paid to the percentage of truly exanthematous secondary manifestations. He believed that a time must come, in the practice of every vaccinator, when renewal from a primary stock of the most active kind would be needed. The best of all vaccination for the million was that of human arm-to-arm, provided that animal vaccination were partly joined thereto as a help to excellence, but strictly kept in the background. This might be accomplished with perfect safety to the cause of vaccination. Those opponents of the method who feared that its mismanagement might imperil the protection of the people against small-pox by limiting the production of the lymph to one place and to one management, might be reassured by a thorough arrangement of the details such as would discourage a too easy resort to it. The advantages of the method, would, he trusted, ultimately range authoritatively on the side of the movement, in order wisely to control it. Animal vaccination, carried on with the skill and experience now attainable, was satisfactory to the fullest extent. The cultivation of the lymph required a special skill, and more unceasing care than in arm-to-arm vaccination—a powerful argument for its restricted application, but not for its suppression. In its best form and with care, it acted on the human subject with a certainty little inferior to that of ordinary lymph. The subsequent course was thoroughly Jennerian in its constitutional and its local effects. It was never in children followed by erysipelatous inflammation or ulceration. In adults, he had a few times seen such results, but these were traceable to a fault of health in the patient. On the other hand, without skill, constant care, and ample resource, mischief would speedily arise, either by sudden extinction of the stock or by propagation of a weakened lymph. These dangers, were, however, wholly avoidable. A question must arise as to whether Government or the public should take this matter in hand. He gave the preference to organised private and philanthropic effort. But to whomsoever the duty might fall, three possible sources of preliminary supply would present themselves: 1. Existing stocks of primary cow-pox in animals; 2. Primary casual cow-pox; 3. Induced cow-pox. Of these, neither would possess any superiority from the simple fact of its origin, but only by its nearer approximation to a standard fixed by experts as upon the whole the best. Probably, at the outset, choice would be limited to the great existing stocks of transmitted cow-pox in animals. One or two competent persons should be delegated to visit and study the methods in vogue on the continent and in America. Examination would be made as to the behaviour and characteristics of the respective lymph-stocks with a view to the selection of the best, if there were any preference on an average result. The model ever present to his mind was the original Esneaux lymph of 1868, superseded somewhat capriciously in 1870. He was indebted to Dr. Warlomont for a frequent supply of the lymph at present cultivated in Brussels, which he was glad to use when occasion demanded.

The Brussels stock, in spite of the drawbacks of preserved lymph, and distance to travel, gave very good results; but, if it were desired to provide an opportunity of renewal from what Jenner called "the most active kind of virus", or, as might be said, for a safe step nearer the original exanthem, then he would prefer that of Esneaux. He was, however, speaking solely of the effect of preserved lymph. It should be almost a *sine quâ non* that the standard of 1868 should be accomplished by those who desired to establish the supplemental method here on a firmly beneficial basis. The next source of possible supply of primary cow-pox was the discovery of a so-called spontaneous case. He had travelled hundreds of miles to examine all sorts of vesicular eruptions on cows, without having been once successful in the search; nevertheless, a little money might be advantageously spent in taking such steps as would make spontaneous vaccinia difficult of occurrence without coming to the ear of authority. It was certain to happen in time somewhere; and to be on the alert was the best way to secure the expected benefit. The last possible source, and the most promising, was that of induced cow-pox, or the affection successfully induced on the cow by inoculation of variola. This operation had mostly been difficult to perform, but sometimes it had seemed very easy. The best and cheapest way to make this valuable resource available would be to offer a substantial premium for its production to members of the medical profession residing in dairy districts. Any gentleman desiring to make the essay should receive the free aid of an appointed officer, who should obtain and have responsible care of the variolous virus, and be at the same time a witness to fact. In this way, a new lymph would not long delay to be ready for further modification if needed, and for multiplication on heifers. He believed that this transformation had been effected very much oftener than was thought, even remembering the numerous recorded instances. One surreptitious success had come to his knowledge. A surgeon of position in an English county had two rich patients who refused to be vaccinated in the ordinary way, but offered to submit to the operation, provided the surgeon would inoculate a cow with small-pox, and employ for their cases the lymph proceeding therefrom. This was successfully done. The virus set up a great deal of inflammation in the patients' arms, but no general eruption. The surgeon declined to publish the case, because he heard that such an act might be thought by some to be illegal. This gentleman might now possibly be persuaded to publish particulars. In conclusion, it might be safely affirmed that, even with a restricted access to the new method, the Vaccination Acts would work with somewhat less of friction and public scandal than at present; but whilst strongly insisting on the absolute necessity of the step under discussion, growing out of the change of circumstances, the arrangements of detail were more difficult than the enunciation of the principle. A debt of benefit was owed to Jenner and vaccination, which must now be repaid by giving labour and thought to this important matter. Mr. Greene then proceeded to say that Mr. Hart's report on Animal Vaccination, printed in the BRITISH MEDICAL JOURNAL of November 29th, and now in the hands of those present, was a most valuable document, showing a vast amount of industry and energy; but no one had said anything about the method of practising animal vaccination, and he insisted that this subject should be gone into. He saw by the report that the successes on the continent were pretty equal to those obtained here. But let them look and see what this amounted to. He noticed that at Rotterdam and Berlin accounts were given of the pock-marks coming after the insertion, and he contrasted the results obtained by the National Vaccine Establishment. He took it that Mr. Hart's report assumed that the chief bulk of English vaccine cases did not, in successes, come up to the standard of the National Vaccine Establishment. It might be granted, for argument's sake, that a considerable portion of our vaccine was as bad as the figures seemed to show; but, in so doing, he should only grant that our vaccine was equal to the best of the animal vaccine. Therefore, it was apparent that humanised lymph was superior to animal when used with vaccinating skill, which the report gave to the officials of the National Vaccine Establishment, and which it claimed for the continental animal vaccinations. But was the bulk of our vaccine, for which no statistics were available, as bad as it was said to be? His own experience said it was not, and every medical man in the room who vaccinated was competent to judge whether it was so or not; and he appealed to them whether the successes in England were only equal to 39 per cent. for every point of insertion. Then there was a side issue in regard to the uncertainty of animal lymph, and there were two causes of failure. The first cause of this was the haste with which the medical man was compelled to do his work. He had a number of children before him, and he could not keep the calf upon the table too long, and he was therefore obliged to take the matter very rapidly; and, supposing that the matter should coagulate, there was then the chance of failure. Where the medical man did not have to unduly hasten, there the matter would take perfectly; but there were calves and calves. Some would be quiet enough; but there were evil-spirited calves, and pugnacious calves—calves full of "rowdyism" and violence, leading them to struggle violently against the unavoidable. This continuous struggling obliged the vaccinator to hasten his operation; and, if he did not, the animal became thoroughly exhausted. He had seen a calf go into a violent struggling, rendering it impossible to continue, the pocks drying up under observation, and, even where they had not done so, he had had the calf taken off the table. When it was brought on again, the next day, he had found that the result of this violent exercise on the part of the calf was, that the matter did not give the same results as before the violence had changed the matter. The second cause of uncertainty was the comparative insusceptibility of the bovine as compared with the human nature. They had heard what Dr. Martin had said of the failure in primary vaccination, and he himself had proved this: that failure in carrying out the primary vaccination of infants with human lymph was a very uncommon event—the infantile nature took the virus readily; but with the bovine lymph there was not this certainty. He gave some matter from a calf to a friend, who vaccinated the arm of a clergyman's child. Around the original insertion, there was a complete recurrence to cow-pox, for there were some twenty to thirty supernumerary cow-pox vesicles. He quoted the report by Mr. Hart in proof of his assertion that considerable technical skill was required, and added that when an animal vaccinator succeeded, he said, "I am clever"; when he failed, he said, "What different matter, and what great skill is required!" It was not to be denied that a certain amount of success had attended animal vaccination; but he desired to point out, and to press the point, that the susceptibility was an uncertain quantity in the bovine species, but that it was a comparative quantity in man.

Dr. STEVENS, of the Local Government Board, said he was not aware of the intention to hold this meeting until too late for him to come prepared with facts, and he did not see Dr. Cameron's letter in the *Times* until the previous night. He gathered from Dr. Cameron's letter that Dr. Cameron considered the continuance of small-pox in the country to be largely due to the deterioration of humanised lymph. Upon that point Dr. Stevens claimed to speak. He had seen more vaccinated children than any man either alive or who had lived; and he was engaged in the work during the transition period through which the country passed in regard to vaccination. All his experience led him to the opinion that the arm-to-arm system practised in this country was as nearly perfect as a system could be made, and as efficacious as could be desired. He had some statistics bearing upon the question, in which the deaths from small-pox in different periods were in groups of ages. Now the epidemic which commenced its invasion in 1876—in the last quarter of that year especially—gave that year a total mortality of 735 of all ages. Of these deaths, 88 were in children under one year old; 128 in those between one year and five years; 175 in those between five years and twenty years; 269 between the ages of 20 and 40; 69 between the ages of 40 and 60; and 9 in persons above sixty years of age. It was a very curious fact, that the percentages of deaths from small-pox, in the ratio of the different ages, appeared to have relation with the ratio of deaths in the year 1877; for the deaths of those under one year in 1876 were as 11.9 to the whole number; in 1877, the figures stood at 10.0; while in 1878 they stood at 12.2. In the group of ages between 1 and 5, the ratio of deaths stood in 1876 at 17.0; in 1877 at 17.2; and in 1878 at 1.6. In the next group of ages, between 5 and 20, the deaths stood in 1876 at 23.8; in 1877 at 28.1; and in 1878 at 30.2. In the next group of ages, between 20 and 40, the deaths stood in 1876 at 36.5; in 1877 at 33.8; and in 1878 at 31.3. In the group of ages between 40 and 60, the ratio of deaths stood in 1876 at 9.3; in 1877 at 9.1; and in 1878 at 7.7. In the cases of death above 60, the death-rate was 1.2 in 1876; in 1877 it was 1.4; and in 1878 it was 1.6. These figures showed the death-rate of children under one year, the age at which some children would not be vaccinated, to be fairly uniform. In the next group of deaths, between one and five years, it would be seen that the latest year showed a vastly lessened rate of mortality—a lessened rate which did not bear out the suggestion that the lymph had deteriorated. In the next group of years, between 5 and 20, would be included the deaths of the irregular classes who escaped the vaccinators—the street Arabs—and the importations of Irish emigrants. Then, too, it would be seen that the Small-pox Hospital returns gave the mortality at the ages of 31 to 36 as the chief of the mortality between the ages of 20 and 40; and, as the total mortality between these ages had lessened from 36.5 in 1876 to 31.3 in 1878, it would be seen that there was a great improvement. [*Hear, hear.*] Now, these statistics spoke very well for the way in which vaccination was carried out in this country. Another thing he might mention, to show that there was no falling off in the protective powers of humanised

lymph, was the fact that the mortality of the epidemic which had lasted until the present time was not half that of the epidemic of 1870-71; for, while the death-rate of 1870-71 stood at 10,615, that of 1876, '77, '78, and '79 was not above 5,000. With regard to the supposed weakening of the humanised lymph, as stated by Dr. Cameron in his letter to the *Times*, it was that humanised lymph which had effectually protected the nurses in the small-pox hospitals, for not one of the nurses so protected had had small-pox. Dr. Stevens did not wish to asperse bovine lymph, because he knew it to be very valuable; but if it were thought, by the adoption of this system, to satisfy the anti-vaccinators, it would fail. With regard to its use being a protection against the inoculation of syphilis, he had investigated allegations brought forward by the anti-vaccinators in cases where it was said that children had received syphilis in the vaccination, and he had not brought home the syphilis to the vaccination in any one case.

Dr. A. CARPENTER asked Dr. Stevens if he had seen any case of syphilis among the vaccinated children.

Dr. STEVENS replied that he knew of cases, but he had not seen one such case in the whole of the inquiries and investigations he had made for the Government. Then with regard to the present position of the vaccination question, this demand for animal lymph was an appeal made to the laity by some members of the medical profession. He acknowledged that it was incumbent upon the Government to obtain from the best sources the matter for the vaccination of the people; and that it was a fair subject of inquiry by the medical men of that large and important meeting, called by the important Committee formed of members of the large and important body of the British Medical Association, to see if the Government should or should not be pressed to take up this lymph; but to tell every person who was about to have his child vaccinated, that it was right to go to the cow for the lymph, was both illegal and mischievous. The proposition, he held, was largely due to the antivaccinators. The antivaccinators urged that they should have the right to go to the cow. For instance, a man who was fined repeatedly for not having his child vaccinated, said he would go to the cow, and have the vaccination performed from bovine lymph. One of the guardians gave him half-a-sovereign to buy the lymph; and then the man said that he would not have it done at all. The strongest of the objections he had heard against vaccination was, "You shall not give us the disease of a beast." He had told them that they ate the flesh of the beast and drank the milk of the beast; but the reply was, "We do not care about that; you shall not give us the disease of the beast". The danger of communicating by vaccination what were termed "accidental but formidable affections", was, as many gentlemen were fully aware, infinitesimally small; in fact, the danger could hardly be numerically represented; and as to the weakness of the humanised lymph, he did not believe it, for he found it unsupported by trustworthy facts. He would add, with regard to the allegations respecting the communication of syphilis by vaccination, that there were too many checks to admit of this communication; and the legislature might better study the health of the people by providing proper conveyances to and from the vaccine-stations for the children, than by providing an alternative system of vaccination itself. He opposed the proposals of Dr. Cameron to give the choice of the alternative system, and contended that the Government should be responsible for obtaining the best lymph.

Mr. HENRY LEE then addressed the meeting, which, he said, was there to ascertain facts. Dr. Warlomont had come from Brussels, and wished to dissipate any prejudices which any of the British public might have against vaccination generally or against the system of animal vaccination, and Dr. Warlomont had taken this course in order that vaccination might have its full scope in the future in this country. The speaker gathered, from the information which had been afforded the meeting, that it was the received opinion that, if any poison were taken from the human subject and inserted in the calf, the matter used from the calf upon the human being would be perfectly safe, and free from syphilitic poison. But he had known cases where animal vaccination had been tried, and the persons vaccinated had received a disease which had lasted for months. His opinion was, that the matter should pass through three or four calves, or else any original human disease in the matter would come back into the human family through the calf. Then as to the statement that syphilitic contagion by means of vaccination was not known before 1871, his (the speaker's) book came out before that year, and he mentioned the subject. Then as to revaccination; he had seen a great number of cases where persons who had come to be vaccinated had large sores upon their bodies, and had them for years; and he could not impress too much upon practitioners the care they should exercise in vaccinating syphilitic persons.

Dr. DRYSDALE said that he had seen some of the advantages of animal vaccination. The British medical man had to deal with a large uneducated public, and when the legislature compelled the people to be vaccinated, it was but fair that they should be allowed their choice of taking the vaccine matter from the animal, which could not be suspected of physical delinquencies. As to the question of the contagion of syphilis through vaccination, he thought this danger might be left out of the question, for, with the exception of Mr. Jonathan Hutchinson's case, there was little evidence. But that one case had an important influence upon the mind of the public, and raised such a dislike to vaccination, that they should not be forced to adopt only the humanised lymph and the arm-to-arm system. He had tried the ivory points, but did not find them successful, and he found that the same thing had resulted in Brussels—that the dry points did not succeed so well as could be wished. If animal vaccination were to be successful, it must be done from the calf upon the table.

Dr. BALLARD moved the adjournment of the meeting until the 18th instant, at four o'clock, in the same rooms.

This was carried; as was also a cordial vote of thanks to Dr. Warlomont and to the Chairman, which was moved by Dr. CAMERON, M.P., and seconded by Dr. ALFRED CARPENTER of Croydon.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council of the College was held on Thursday, the 11th instant. The minutes of the previous meeting were confirmed. Those gentlemen found qualified by the Court of Examiners for the Fellowship last month were admitted Fellows of the College. On the recommendation of the Committee on Examination in Anatomy and Physiology, the following gentlemen were elected members of the Board of Examiners in Anatomy and Physiology for the ensuing year: Messrs. John Wood, Christopher Heath, Arthur Durham, Walter Rivington, and Thomas Pick, in Anatomy; and Messrs. Henry Power, J. W. Hulke, W. Morrant Baker, and Benjamin T. Lowne, in Physiology. A letter was read and accepted from Mr. Curling resigning his office as a member of the Court of Examiners.

MEDICAL EDUCATION.

ON Saturday last, the 6th instant, a meeting of the Metropolitan Counties Branch was held at the house of the Medical Society of London, 11, Chandos Street, to receive and discuss the Report on Medical Education drawn up by the Committee appointed to consider that subject in June last. The chair was taken by John Wood, Esq., F.R.S., President of the Branch.

Mr. Lund and Dr. Leech of Manchester attended as a deputation from the Council of the Lancashire and Cheshire Branch, which had on the previous day carefully examined the Report, and had passed resolutions thanking the Metropolitan Counties Branch for having taken action in the matter, and making various suggestions and objections with regard to the recommendations of the Committee.

After discussion, the recommendations of the Committee were adopted in the following form.

1. Intending medical students should pass an examination in the elements of Botany, Physics, Biology, and Inorganic Chemistry, prior to admission to the regular medical curriculum.

2. Every student of medicine, before going up for his final examination, should produce a certificate of having studied for a period of not less than six months with a general practitioner who dispenses his own medicines, or of having dispensed for six months at a public dispensary.

3. The age of twenty-two years should be attained before a student is permitted to receive a licence to practise medicine and surgery.

4. An examination in Elementary Anatomy and Physiology, at which every student must appear, should be instituted at the end of the first year of medical studies.

5. After passing the "primary" professional examination, every student should be compelled to devote at least two full years to the study of Clinical Medicine, Surgery, and Obstetrics, at a recognised hospital, prior to being allowed to present himself for his final or qualifying examination.

In the course of the discussion, it was remarked by Dr. Quain and the President, that the recommendations of the Committee would be found to accord in principle with the provisions of the conjoint scheme for England, as finally settled by the Committee of Reference, but which the Committee of the Branch had not before them during their deliberations. Dr. Quain added that, of course, the regulations of the Conjoint Board comprehended the whole plan for medical education and examination, and that it might be put into operation at once if the

Scotch and Irish bodies were equally ready to co-operate. It was the question of direct representation which interfered with such co-operation being made compulsory.

In concluding the proceedings, the President expressed the thanks of the meeting to Mr. Lund and Dr. Leech for their presence and their valuable suggestions and assistance.

ABERDEEN AND GLASGOW UNIVERSITIES' CLUB.

THE annual dinner of this Club was held on Friday, December 5th. Dr. A. P. Stewart, who looked well and robust in health, occupied the chair, and was received with hearty cordiality. He was supported by the Rev. Mr. Boyd, Rev. Mr. Jackson, Dr. Matthews Duncan, Dr. Ligertwood, Mr. Ernest Hart, Dr. P. Smith, Dr. Ford Anderson, Dr. Aveling, Dr. Stephen Mackenzie, Mr. Couper, Dr. Brunton, Dr. Lionel Weatherley, Dr. Fancourt Barnes, and others. The graduates enjoyed an excellent dinner and some very good speaking; and towards the close of the evening, subjects closely connected with the political and medical future of the universities were discussed informally.

The toast of the evening was given by Dr. STEWART from the chair. He especially drew attention to some facts and figures, for which he said he was mainly indebted to Professor Struthers of Aberdeen. Whereas in the last decennium the number of students in the Arts Faculty of the University of Aberdeen had remained tolerably steady and stationary, standing now at 330, and in 1868-69 at 321, the number of students in Medicine had very nearly doubled, having been only 194 in 1868-69, whilst last year they were 379. The law students, who were for that year 10, were last year 12 in number; and the divinity students, who, ten years ago, showed an entry of 30, showed this year an entry of 34. Nevertheless, he gave also some curious figures on the subject of bursaries. Thus it appeared that for the 352 students of arts there were 223 bursaries, amounting to £3,751 in total annual value; while for the 42 students of divinity, there were 27 bursaries, of the total annual value of £639; but in medicine, 251 students attending had to share between them one bursary of the annual value of £26. This strange anomaly certainly called for the application of some remedy. He mentioned, in regard to the number of the medical students who had previously graduated in arts, that the proportion in Aberdeen was about 1 in 8, which was more than in Edinburgh or Glasgow by a good deal; but Aberdeen must not take too much credit for that. It was the arts bursaries which carried so many on to the end of the arts curriculum, after which some of them took to medicine. Dr. Stewart added, that a larger number discovered early the comparative uselessness of half of the arts curriculum, and if they intended to be medical, left it for medicine. The four years' curriculum—to say nothing of the antiquated nature of some of the studies—followed by another four years in medicine, was too serious a slice out of a human life to the youth of, say, seventeen to nineteen. It was hoped that the recent Universities Commission would recommend an arts degree on a shorter course and with a suitable curriculum, which the intending medical student might be advised to take; but they had not done so, adhering simply to the plan of a good preliminary examination in general education as a test of a good school education. So that question was settled. Unless the arts curriculum was to some extent modernised, its fate must be decay or standstill; and standstill, now-a-days, meant fall behind. That they saw, notwithstanding all their bursaries and money prizes, while medicine was prospering without either bursaries or scholarships or any other external aid. He need hardly say that he attached great importance to an intending student of medicine receiving a good general education; but that was a totally different question from proposing to compel him to go through the present antiquated four years' curriculum in arts, as it was called. Dr. Stewart referred also, on the strength of figures communicated by Dr. Gairdner, to the continued progress of the Glasgow University, and to the great improvements recently made there in the buildings, which are now magnificent, and to the large increase in the number of students which had followed the appointment of Professor McKendrick to the chair of Physiology and the establishment of the Muirhead Demonstratorship in Physiology. He concluded by an eloquent appeal to the graduates of the Universities of Glasgow and Aberdeen to support their club, to attend its annual dinner, and to unite themselves one to another by the bonds of good fellowship and of common love for and devotion to the interests of their Alma Mater.

Dr. BRUNTON and Dr. MATTHEWS DUNCAN spoke on behalf of the Universities. The latter said that the University of Aberdeen was steadily rising in the appreciation of southerners and of Englishmen, and required to be seen and known to be fully appreciated. At the school at which he was now teaching, St. Bartholomew's, they had great reason to congratulate themselves on the great buildings for medical teaching which had recently been added; but he would venture to say to any of his colleagues at St. Bartholomew's that even now they would not compare with the medical buildings at Aberdeen. In the presence of a representative of that great medical Association which was now taking so active a part in shaping medical destinies—the medical destinies of the profession in this country—he would say that he hoped that before long the British Medical Association would meet in Aberdeen, in order that it might learn, and that the profession might learn, how large a part Aberdeen was able to play in efficient medical education.

Dr. LIGERTWOOD, in responding for the public services, referred with profound and grateful appreciation to the Reynolds' banquet, at which the British Medical Association had shown its sympathy with the Army Medical Department in a striking manner, and in which so many eminent members and so many of the most distinguished members of the profession had united to do public honour to a medical officer of the army. He gave a history of the gallantry of Dr. Sylvester, who won his Victoria Cross in the advanced trenches of Sebastopol by standing, sword in hand, over the body of a wounded officer when the whole of the troops occupying the advanced trench had run to fall back upon the supports in the face of the advancing Russians. The determined attitude of Sylvester, he said, had saved his patient's life, and the Victoria Cross had been won by him at the point of the sword, but in the strict performance of his professional duty. He mentioned also another brother officer medical man, who alone stood erect when the combatant officers around were ducking to avoid shells and balls, and, when asked why he should run risks which others avoided, replied that they were combatant officers and could do as they liked, but that he represented the non-combatant service, and dare not resort to any expedient to avoid the incidental dangers of his non-combatant work. Dr. Ligertwood's speech was loudly cheered. He concluded by saying that, as to the new Army Medical Warrant, he should say nothing, except that the Government, or any Government, might rest assured that the army medical officers would never feel themselves adequately rewarded by any mere money payment, but that they had at heart the sentiment of honour, and would never rest satisfied until they received such a share of the honours of the field as was due to their devotion and to their relative and social position in the regiments and brigades in which they served.

Dr. AVELING proposed "The Guests", coupled with the name of Mr. Ernest Hart, and took occasion to pay a tribute, in words which it is unnecessary to report, to the Association and to the JOURNAL.

Mr. HART, in reply, said that his experience of the Scotch Universities had been mainly social and personal, and connected with the many interesting gatherings of the graduates at which he had had the honour of being a guest. He thought, however, that the Scotch Universities were playing a more and more important part in medical education, not only in virtue of the increasingly great work which they were doing, but also because it was coming to be more and more generally recognised that they afforded the best type of medical education and that to which we in London must gradually assimilate. He was never tired of reiterating, in the pages of the JOURNAL editorially and wherever he could exercise any influence, that the metropolitan system of medical education, carried on at a large number of private establishments, was radically bad; and that connected with its many defects was the still greater hardship and difficulty connected with the chaotic state of medical graduation in the metropolis. The London medical student, even if he scrambled through his medical education more or less satisfactorily, was at a great disadvantage in respect to graduation. The London University was an University in London, and not an University of London; and there was nothing in London comparable to the Scotch University system, which concentrated in one centre great teaching power, good examining power, and a facility for University graduation such as had made the names of the Scotch Universities celebrated for centuries throughout the world, and showed them now standing in full prime of the life which had existed for three or four centuries, steadily growing more solid, more prosperous, and more useful, than at any previous period of their career. The evidence of Professor Turner before the Select Committee of the House of Commons had been the most valuable evidence given, as he felt satisfied that it must tend considerably to modify the views of the Government and of the profession, and to bring about in the end a new type of medical education and graduation for England. He advised that, in the next session, the Universities of Glasgow and Aberdeen should equally be represented, and that their system of education and graduation should be described in as much detail, and with as much accuracy, and with as much power, as that of Edinburgh had been by Professor Turner. Finally, he said, to revert for a moment to the political aspect of this club, it must be remembered that while the Universities consisted of three Faculties—Arts, Law, and

Medicine—of which Medicine was by far the most numerous, their representatives to Parliament had up to the present time been exclusively legal. The representation of such universities in Parliament ought not to be considered as a warming-pan for the legal profession, but it should be remembered not only that these universities owed a great part of their greatness to their medical faculties and to their medical students and graduates, but that they owed to them also their biological chairs, the chairs of botany, of zoology, and of the biological sciences, which were everywhere carried in the train of medicine, and which had been largely filled by medical professors, and mainly supported by medical students. He hoped that, at no distant time, the Club would make its influence felt, and that the result would be the representation of these universities in Parliament by medical members.

This subject was then discussed by subsequent speakers at considerable length; and Dr. MACKENZIE, in returning thanks for the warm and well merited toast in which his health and that of Dr. Fancourt Barnes was proposed, as the organisers of the dinner, dwelt especially on the necessity of providing funds by subscription among the graduates for carrying on a political contest with a view to the return of a medical member. It was stated that the cost of a political contest was at least £3,000; that it was not reasonable that a medical man should be called upon to expend this sum out of his own pocket for the honour of representing the University; but that a considerable sum should be raised, as in all other political movements is common, in order to cover a large part of the expenses at least of the candidate, and to enable the University to make some such boast as was made lately on the occasion of the return of Mr. Robert Lowe as member for London University, viz., that his candidature cost him one penny—the price of the postage stamp for the letter in which he returned thanks to the members of the committee for the honour which had been done him.

A proposition was also discussed at the close of the meeting for raising a fund to found a bursary at the Universities—a course which was warmly advocated by Dr. Stephen Mackenzie, who undertook to act as honorary secretary for such fund.

PUBLIC HEALTH.—During last week, the forty-ninth week of the year, 4,488 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 28 deaths annually in every 1,000 persons living. The annual death-rate was 23 per 1,000 in Edinburgh, 25 in Glasgow, and 37 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Salford 18, Portsmouth 20, Norwich 21, Oldham 22, Sheffield 23, Sunderland 24, Bradford 25, Hull 25, Leeds 26, London 27, Birmingham 28, Manchester 28, Bristol 28, Nottingham 28, Newcastle-upon-Tyne 29, Plymouth 29, Brighton 30, Liverpool 37, and the highest rate 44 in Wolverhampton. The annual death-rate from the seven principal zymotic diseases averaged 3.8 per 1,000 in the twenty towns, and ranged from 0.6 and 1.4 in Norwich and Oldham, to 4.6 and 4.7 in Nottingham and Leeds, and 6.6 in Liverpool. Scarlet fever showed the largest proportional fatality in Newcastle-on-Tyne, Sunderland, and Sheffield; measles in Leeds, Nottingham, Plymouth, Birmingham, and Liverpool. Diphtheria caused 15 deaths in London, 4 in Liverpool, 2 in Birmingham, and 2 in Manchester. Five deaths were referred to fever in Leeds and 4 in Sheffield. Five more fatal cases of small-pox were recorded in London, but not one in any of the nineteen large provincial towns. In London, 1,888 deaths were registered, being 86 above the average, and equal to an annual death-rate of 27.2, a higher rate than has prevailed in any week since the first of April last. The 1,888 deaths included 5 from small-pox, 67 from measles, 90 from scarlet fever, 15 from diphtheria, 57 from whooping-cough, 31 from different forms of fever, and 9 from diarrhœa—in all, 274 deaths, which corresponded with the average, and were equal to an annual rate of 4.0 per 1,000. The deaths referred to diseases of the respiratory organs, which in the eight preceding weeks had increased from 190 to 576, further rose last week to 612, and exceeded the corrected weekly average by 135; 414 resulted from bronchitis and 135 from pneumonia. Different forms of violence caused 41 deaths; 38 were the result of negligence or accident, including 15 from fractures and contusions, 4 from burns and scalds, 2 from drowning, and 12 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 27.1°, and 15.0° below the average. The mean degree of humidity of the air was 64, complete saturation being represented by 100; the air was therefore very dry. The direction of the wind was variable, and the horizontal movement of the air averaged 11.2 miles per hour, which was 1.4 below the average. Rain or melted snow was measured on two days of the week, to the aggregate amount of 0.12 of an inch. The duration of registered bright sunshine in the week was equal to 34 per cent. of its possible duration.

SPECIAL CORRESPONDENCE.

PARIS.

[FROM OUR OWN CORRESPONDENT.]

Sir Henry Thompson in Paris.—The Decapitated Head.—M. Charcot's Demonstrations.

DURING a visit to Paris lately, Sir Henry Thompson had an opportunity of trying his new apparatus for removing the fragments left in the bladder after lithotrity on a patient in M. Guyon's ward at the Necker Hospital; and I am indebted to M. Lebel, *interne*, for the following notes of the case. The patient, a man aged 54, had already been operated on twice (lithotrity) by M. Guyon; and, on the 18th of November last, Sir Henry Thompson, who saw the patient for the first time, introduced a *lithotriteur*, and ascertained that the stone was rather voluminous, its great diameter measuring about five *centimètres*. It was easily seized and crushed, and, with his wonted dexterity, which astonished the assistants, Sir Henry removed eight fragments in the space of two minutes. He then removed the *lithotriteur*, and introduced the catheter for washing out the bladder. He employed his new apparatus, a very good description of which is given in the *Gazette Hebdomadaire* of the 31st October last, and in the *London Medical Record* of the 15th November. At first, the aspiration failed to bring away any fragments, owing to the great depth of the bladder; and it was necessary to push the extremity of the catheter deep down the cavity where the fragments were deposited. During these manœuvres, it was easy to hear the noise of the instrument striking against the fragments, which was audible even to the assistants. The instrument at last brought away fragments and powder about the size of a hazel-nut. Sir Henry reintroduced the *lithotriteur* a second time, and, in three minutes, seized the stone, which was very hard, and about two *centimètres* in diameter. This he broke up into several fragments. He then introduced the catheter, and removed the fragments by aspiration. In removing the instrument, a small fragment of stone was found fixed at the opening at the end, which, however, traversed the urethra without injuring the latter. A third time Sir Henry broke the fragments of the stone in three minutes, and removed them by aspiration. The stone was found to be very hard. The patient, who was put under the influence of chloroform, bore the operation very well, which lasted in all sixteen minutes. I saw the patient a few days after, and he was doing well.

A most difficult point was lately raised in medical jurisprudence in Paris as to the responsibility or irresponsibility of the man Prunier who was last month executed at Beauvais for the murder of an old woman, on whom he had previously committed rape. The criminal was guillotined; and, about five minutes after the execution, his head was made over to Dr. E. Decaisne, who, assisted by his son Dr. Gaston Decaisne and Dr. Evrard, tried certain experiments, with the view of elucidating that much contested question as to whether the head, once removed from the body, suffers or not. There has been a popular belief that it does, as certain contortions of the muscles of the face had been observed; but the experiments of the above-named gentlemen seem to have produced negative results. Their report will be found in full in the *Bulletin de l'Académie de Médecine;* but we may here give the conclusion which they arrived at. "We have ascertained, as far as it is humanly possible to do so, that the head of the criminal in question had no semblance whatever of the sense of feeling; that the eyes lost the power of vision; and, in fact, the head was perfectly dead to all intents and purposes." The responsibility, or otherwise, of the murderer, however, is not so clearly made out; for, notwithstanding the *post mortem* appearances, which point to cerebral lesions evidently the result of alcoholism, the reporters have come to a negative conclusion—that is, nothing, as asserted by them, would exonerate the culprit of the terrible crime of which he was convicted, and for which he paid the extreme penalty of the law. The medical and lay papers are, however, unanimous in considering that the unhappy criminal, having acted under the influence of a diseased brain, of which he showed manifest symptoms during life, ought to have had a respite of his sentence, or, at any rate, that he ought to have been kept under observation for a sufficient length of time to enable the medical authorities to judge as to whether he should be treated as a criminal or a patient. This case, which would be a favourable one for the advocates of the abolition of the sentence of death, clearly indicates the defectiveness of the law, and the absolute necessity of consulting under such doubtful circumstances medical men before sentence is pronounced, whether in criminal or in other cases.

The opening of the new amphitheatre which was lately constructed for clinical lectures on nervous diseases at the Salpêtrière, took place a fortnight ago, by an inaugural address of Professor Charcot. These lec-

tures will be delivered every Sunday morning; and the first, which was attended by upwards of five hundred students and practitioners, was devoted to "contracture", and to the deformities which it produces in the lower extremities. After having exhibited a certain number of patients presenting the phenomena described, M. Charcot demonstrated a great number of analogous cases by the electric light. The series was terminated by engravings borrowed from the work of Montgeron on the "convulsionnaires" of St. Médard, and representing a young woman declared incurable before and after her "miraculous" cure. M. Charcot, moreover, stated that this case belonged to the list of those of which he had presented the analysis.

ASSOCIATION INTELLIGENCE.

GLOUCESTERSHIRE BRANCH.

THE next meeting will be held, at 7.30 P.M., on Tuesday, December 16th, at the General Hospital, Cheltenham, under the presidency of Dr. WILSON.

The following communications are promised.

1. The Treatment of Hip-joint Disease by the application of Thomas's Splints: Mr. Cardew.
2. Constipation and its Treatment: Dr. Robert Smith.
3. Surgical and Medical Cases of interest.

RAYNER W. BATTEN, *Honorary Secretary.*

Gloucester, December 8th, 1879.

BATH AND BRISTOL BRANCH.

THE second ordinary meeting of the Branch will be held at the Bristol Museum and Library, on Wednesday evening, December 17th, at half-past seven o'clock; J. BEDDOE, M.D., President, in the Chair.

EDMUND C. BOARD, *Honorary Secretary.*

7, Caledonian Place, Clifton, November 26th, 1879.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

THE adjourned discussion an Antiseptic Surgery will be resumed at St. Thomas's Hospital, on Wednesday, December 17th, at 8 P.M.

H. NELSON HARDY, *Honorary Secretary.*

The Grove, Dulwich, S.E., December 10th, 1879.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

THE next meeting of this district will be held at the London Hospital Medical College, on Thursday, the 18th instant, at 9 P.M.; GEORGE WELLER, Esq., in the Chair.

Business.—1. Discussion of Dr. Orlebar's paper on the Treatment of Phthisis.

2. Paper on the Legal Status of Medical Practitioners: Judicial Rulings *versus* Medical Opinions. By R. H. S. Carpenter, L.R.C.P.

A. GRANT, M.D., *Honorary Secretary.*

370, Commercial Road, E., December 11th, 1879.

THAMES VALLEY BRANCH.

THE next meeting of this Branch will be held at the Greyhound Hotel, Richmond, on Thursday, December 18th, at 5.30 P.M.

The following papers will be read.

1. Dr. Herman: On the Use of Vaginal Anteversion Pessaries.
2. Dr. Langdon Down: On Some of the Causes of Idiocy.
3. Dr. Fenn: On Myxœdema; and will exhibit a Patient.

The dinner will take place after the meeting, at 7 P.M.

FREDERICK J. WADD, *Honorary Secretary.*

Richmond, Surrey, December 3rd, 1879.

GLASGOW AND WEST OF SCOTLAND BRANCH.

A MEETING will be held in the Faculty Hall, on Friday, December 19th, at 3 P.M.

There will be some references made as to the question of Fees in Medico-legal Cases; and a discussion on the Relation of Croup and Diphtheria, introduced by Dr. J. B. Russell, from the statistical point of view.

CORRESPONDENCE.

THE DISCUSSION ON ANTISEPTIC SURGERY.

SIR,—As a perhaps inevitable result of the publication of the discussion at St. Thomas's within two days of its occurrence, some inaccuracies have crept into the report of my remarks, to two of which I beg your permission to refer.

In speaking of my deaths from blood-poisoning, I am made to state that they amounted to 4.82 per cent. The numbers should have been 0.82 per cent. And the sentence immediately following in the report, "The St. Bartholomew's percentage was 1.44 per cent. of blood-poisoning", should have been as follows: "The St. Bartholomew's percentage of deaths from blood-poisoning was 1.44, or nearly double mine".

The other mistake to which I wish to allude is this. The reporter has made me say of "a surgeon" that "after steeping a piece of liver for some time in spirits of wine, so as to make sure that it was perfectly dead, he *gave it to* a rabbit, and after some time he killed the rabbit to look what was going on". This is, of course, sheer absurdity; but the fact which I mentioned was, that the German surgeon referred to introduced pieces of liver or some other organ, after prolonged steeping in alcohol, into the abdominal cavities of living rabbits, and afterwards killed the animals at different periods in the hope of ascertaining which element of the living body was chiefly concerned in the substitution of living structures for the dead material, or, in other words, its organisation. For, as I remarked (though the reporter has omitted the statement), it seemed to me scarcely creditable to British surgical science that doubts should still be expressed in this country regarding the occurrence of organisation of catgut or other forms of dead tissue, while our German brethren are investigating the precise nature of the well established process.—Your obedient servant, JOSEPH LISTER.

London, December 9th, 1879.

ANIMAL VACCINATION.

SIR,—In addition to the many powerful arguments that you bring forward in your able preliminary report in favour of a renewal of animal vaccination, published in the JOURNAL of November 29th, will you permit me to call attention to the fact that the epidemic of 1871-72 gave distinct evidence of the inefficiency of vaccination as it has been practised in England of late? Not only did it kill nearly forty thousand persons—as many, in fact, as in an epidemic before the introduction of vaccination—but it also assumed all the characteristics of an epidemic of small-pox unmodified by vaccination. In proof of this, I forward a small chart showing the course of small-pox in Sweden before and after the introduction of this method, and a similar diagram giving the progress of the disease in England since the commencement of the registration of the causes of death. You will observe that the complaint has never been controlled so thoroughly in England as in Sweden; and, in its latest outbreak in this country, its course compares with the ante-vaccination epidemics of Sweden.

May I also express an earnest hope that the renewal of our lymph-supply may, if possible, be obtained from genuine cases of cow-pox, and not from calves or heifers inoculated from others, or, worse still, vaccinated from the human subject, as in the Lanoix method?

As variola in the human subject is to some extent weakened by the fact of inoculation, so, if it be transmitted artificially, so to speak, the cow-pox thus produced will not be the disease that conferred immunity upon Jenner's patients, but will be "a weakened, bastardised disease, inferior in energy to the true vaccine disease" (see Proust, *Traité d'Hygiène*, p. 761).—I am yours sincerely, ARTHUR RANSOME.

1, St. Peter's Square, Manchester, December 1st, 1879.

SIR,—I regret very much that I have been unable to attend the conference on animal vaccination, in which I have always taken a very warm interest. I notice, in your review of the history of the subject in the JOURNAL, you say very little about Russia. I think, therefore, you may like to refer to a paper of mine (written on my return from St. Petersburg) which appeared in the *St. George's Hospital Reports* for 1875. Relying upon the excellent results obtained there in the Foundling Hospital, I advocated the introduction into England of animal vaccination as a supplementary supply, which would be specially useful in time of panic and pressure upon the vaccine-stations, and also as allaying the alarm which some people have regarding the inoculation of syphilis.—I am yours faithfully, EDWARD T. WILSON.

Westal, Cheltenham, December 6th, 1879.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, DECEMBER 9TH, 1879.

JOHN ERIC ERICHSEN, F.R.C.S., F.R.S., President, in the Chair.

Gangrene of Skin of Body following Vaccination.—Mr. JONATHAN HUTCHINSON exhibited the body of a child aged three months, which had been vaccinated on November 11th. The child from whose arm the vaccine lymph was taken was apparently healthy; and three other children vaccinated with the same lymph showed no unusual symptoms. The other children of the same family were all healthy. On the eighth day, the vaccinated spots had risen as usual, but the child's body presented an eruption, which the medical man under whose care it was believed to be variola. Three days later, the vesicles of the eruption were surrounded by large red areolæ, which developed into gangrenous patches. The child was found dead one morning about three weeks after the vaccination. The gangrenous spots were not quite symmetrical, but were more copious and showed greater symmetry on the back than on the front of the body. The most advanced patches showed abrupt eschars; there was nothing like rupia. The head was less affected than the trunk. The vaccination scars showed the normal condition. An inquest had been held, it having been supposed that the condition was due to syphilis; but, at present, Mr. Hutchinson saw no reason for believing this to be the case. He suggested that it was a case of the eruption, which sometimes follows vaccination, passing into gangrene. He had long believed that this sometimes occurred in varicella; but he had never before seen it in connection with vaccinia.

TWO CASES OF CARCINOMA OF THE BREAST PRECEDED BY SO-CALLED ECZEMA OF THE NIPPLE AND AREOLA. BY HENRY MORRIS, M.A., F.R.C.S.

The paper contained the clinical history and the description of the *post mortem* examination of two cases in which eczema of the nipple and areola was followed by cancer of the breast, and subsequently by diffuse secondary deposits in the liver and other parts of the body. Hitherto no complete report of any similar cases had been published, although five years since Sir James Paget first pointed out the connection between the two diseases. Both the cases now reported differed in some important features from Sir J. Paget's description; viz., in the extent of the so-called eczematous inflammation; in the length of time between the commencement of the eczema and the supervention of the cancer; in the continuity of morbid changes between the seat of the eczema and the cancerous mammary nodules; and in the age of the persons—always women—affected. The rarity of the cases in which cancer of the breast had supervened upon eczema of the nipple and areola was inferred from the fact that, out of three hundred and five cases of cancer or supposed cancer of the breast which were treated by the author in the cancer out-patient department of the Middlesex Hospital up to the end of 1878, these were the only two instances in which the association between the two diseases had existed.

ECZEMA OF THE NIPPLE AND CANCER OF THE BREAST; AN INQUIRY INTO THE NATURE AND MUTUAL RELATIONS OF THE MORBID CONDITIONS WHICH HAVE BEEN ASSOCIATED UNDER THESE NAMES. BY GEORGE THIN, M.D.

The paper dealt with the condition of the skin of the areola and nipple in a case operated on by Mr. Henry Morris, and in another operated on by Mr. George Lawson. It further dealt with the kind of cancerous tumour found in these two cases and in another breast given to the author by Mr. Knowsley Thornton. The clinical history of Mr. Morris's case was before the Society. Mr. Lawson's case was that of a woman aged 52, in whom the affection diagnosed and treated as eczema had existed four years. The duration of a perceptible tumour in the breast was uncertain, but a year before the operation none could be felt. In Mr. Thornton's case, a breast-tumour had existed three years, and had been preceded for a year by a discharge from the nipple. The gland was atrophied, and the skin over it puckered. The nipple was enlarged and covered with wart-like excrescence. All the three tumours were of the kind which, when small, localised, chronic, and without concomitant affection of the lymphatic glands had been described by English and some German pathologists as adenoid or adenoma (the cases with a more malignant history clinically being confounded with the other, or scirrhous type of mammary cancer). Similar tumours had been described by Waldeyer as examples of what he called *fibro-carcinoma cysticum mammæ*, by Labbé and Coyne as *epilhelioma intracanaliculaire*, and by Cornil and Ranvier as *carcinome villeux*. The author endeavoured to show that all the recorded cases of eczema of the nipple with cancer of the breast belonged to this category of tumour, and that the association with the more common or scirrhous variety of cancer had not yet been observed. The cancer associated with the diseased areola and nipple took its origin by a cell-formation in the lactiferous ducts. It extended by descending into the smaller ducts, and also by the continuous growth of columns of cells which passed into the connective tissue by breaking through the membrana propria both of the larger and smaller ducts. The forms assumed by the growth depended on the situation. In the cutis and in some parts of the breast, the cell-columns resembled those of scirrhus. In other parts, especially in the deeper parts of the breast, the tendency was to the formation of round columns and spherical masses of cells. The central cells of these columns sometimes broke down, and tubes were formed; and when this was the exclusive formation, the appearance described as adenoma was seen. These columns sometimes combined to form large spherical masses, the central cells of which liquefied, cystic cavities being then produced. The external layer of cells, both of the small tubes and the large cavities, had a tendency to be columnar, and sometimes the cells were typical examples of columnar epithelium. This columnar epithelium was the stamp of the origin in the columnar epithelium of the ducts, and with the formation of circular cell-groups and the comparative absence of alveoli afforded a basis for the distinction of the "duct-cancer" from the scirrhous type or "parenchymatous cancer". The author believed that all cancers of the breast could be referred to one or other of those forms, according as the original point of departure had been from the epithelium of the ducts or from the secreting epithelium of the acini, and that the nomenclature of these tumours would be simplified by the exclusive use of such terms as duct-cancer and parenchymatous cancer. He could not agree with those pathologists who made the presence or absence of a membrana propria the criterion of a duct or parenchymatous cancer (adenoma or scirrhus). In duct-cancers, he had found that newly formed cell-masses might have no membrana propria; whilst large masses of secondary formation might have it highly developed. He had found it as a product of new growth around some cancerous masses, whilst other masses near them showed no evidence of it. It was found around cell-masses which did not seem to have been growing rapidly. Around some cell-masses in this form of cancer, he had found a thick layer of very minute fibres which had the characteristics of fine elastic fibres. The layer was between the membrana propria and the fibrillated connective tissue, and was analogous to the layer of elastic fibres described by Henle as surrounding the large lactiferous ducts, but in extreme instances much exceeded it in extent. Its formation around masses of morbid epithelium in duct-cancer was regarded by the author as analogous to the formation of the normal elastic layer around the healthy epithelium of the large ducts. The changes in the skin were confined to the epidermis and the papillary layer of the cutis, and the diseased area was sharply limited towards the healthy tissues; in one case the boundary being formed by a broad descending portion of epidermis, and in the other by a narrow groove on the superficial side of the rete mucosum. In the diseased epidermis, many cells of the rete mucosum had disappeared, leaving holes in their place. Many of the remaining cells showed signs of disintegration, both in the nucleus and cell-substance. The rete mucosum as a tissue was broken up into masses, between which the connection was sometimes very slight, and in some places it only existed as a ragged remnant. In the papillary layer, the bundles of connective tissue had, to a large extent, become disintegrated, and the space between the rete mucosum and the pars reticularis was filled with a granular substance thickly infiltrated with exudation-cells. The deeper parts of the skin were healthy. Similar changes were found on the surface of the nipple, on which there still existed a ragged epithelium containing many degenerating cells. These appearances showed that the surface of the skin had been subjected to the action of a destructive influence radiating from the nipple, which prevented by its continuous action the restitution of the integrity of the rete mucosum and the bundles of the papillary layer, whilst the destructive effect was not sufficient to produce actual ulceration. The destruction of the deeper cells of the rete mucosum and of the connective tissue of the pars papillaris showed that the affection was not eczema. There was no cancerous epithelium in the diseased skin-area. The author believed that the evidence pointed to a slowly advancing cancerous change near the mouth of the lactiferous ducts, which at a very early stage led to irritative effects on the superficial tissues of the nipple and surrounding skin, and eventually penetrated into the substance of the mammary gland.

After the reading of the paper, Dr. THIN demonstrated on some enlarged drawings the structural differences between adenoma or duct-cancer, and scirrhus or parenchymatous cancer. He also showed drawings of a peculiar case, described by Dr. Foster, in the *New York Journal of Dermatology*, as one of scleroderma. He regarded it as a

severe case of the affection of the skin which had been found associated with cancer of the breast. The patient was a single woman aged 36, who in the summer of 1875 noticed a fissure of the nipple and a swelling under the skin of the right breast. After a time, the breast assumed an appearance which led two New York surgeons to regard it as an example of the *squirrhe en cuirasse* of Velpeau. In nine months, the skin, the greater portion of the chest in front and as far as the scapula behind, and also the skin of the left arm became affected. The woman died about two years after the first appearance of disease in the nipple. The induration had spread over almost the entire trunk and both arms. During the last month of life, the site of the left breast was occupied by an irregular ulcerating mass, which had a rather scanty but highly offensive discharge.

The discussion on the two papers was adjourned to the next meeting of the Society, on January 13th, 1880.

EDINBURGH OBSTETRICAL SOCIETY.

WEDNESDAY, NOVEMBER 12TH, 1879.

— WILSON, M.D., President, in the Chair.

SEVERAL pathological specimens were shown.

President's Address.—After thanking the Fellows of the Society for the high honour they had accorded to him in electing him their President, Dr. Wilson gave an able and interesting address on the contrast between the obstetric and gynæcological practice of forty years ago and that of the present time. Since he began practice, chloroform, the sponge-tent, the sound, the air and hydrostatic dilators, etc., had all been added to the gynæcologist's armamentarium. It was interesting to note how much their science and art were indebted to the genius of their greatest president, Sir James Simpson. An interesting *résumé* of the Society's proceedings for last year was given. Valuable papers had been communicated by Professor Simpson, Drs. Angus Macdonald, Keiller, Halliday Croom, Underhill, Hart, and others. The President hoped their present session would be a successful and prosperous one.

Dr. KEILLER, Dr. CHARLES BELL, and Professor SIMPSON thanked the President for his able address.

Report of the Royal Maternity Hospital.—Dr. HALLIDAY CROOM communicated a report of the past three months' work at the Royal Maternity Hospital. During the quarter, there were 47 intern and 114 extern cases. The report dealt especially with the in-door cases. After a lengthened account of the various presentations, positions, and complications which occurred during pregnancy, parturition, and the puerperisms, Dr. Croom took up the question of the mortality. During the quarter, three maternal deaths took place, all from septicæmia. The symptoms were very similar in each of the cases. 1. Rise of pulse and temperature; 2. Restlessness; 3. Tenderness over the hypogastrium and in the iliac regions; 4. Prostration and a general typhoid condition; 5. Vomiting; 6. Copious watery stools. The duration of the disease was three, four, and six days respectively. There was a relatively high pulse and low temperature. The *post mortem* appearances were similar, a slight pelvic peritonitis, with a sloughy and diphtheritic condition of the uterus, especially at the site of the placenta and cervical tear. Dr. Croom attributed the origin of the septicæmia to the want of a mortuary and *post mortem* room detached from the main building of the hospital. Deaths and *post mortem* examinations had occurred during the hot summer weather, which he believed had rendered the house septic. This was specially observable in the frequent pelvic disturbance which occurred during August; but it was only when specially predisposed persons, such as he had shown the patients to be, were exposed to the infection that the septicæmia became definitely and fatally developed. A detached mortuary has since been erected.

PRESENTATION TO DR. ELIN.—On Thursday, November 27th, a testimonial was presented to Dr. George Elin at the Herts Royal Infirmary, in acknowledgment of his long and valuable services as one of the medical officers of the institution. The testimonial consisted of a handsome English clock, chiming the quarters on eight bells, and striking on a gong, in an oak case, with bronze ornaments and bracket to match; also eight silver spoons in case, made after the fashion of apostle-spoons, but, as these are for dessert, the image of the goddess Pomona is on each spoon instead of an apostle; they are parcel-gilt, chased and engraved. On the clock and on the case of the spoons is "Presented to G. Elin, M.D., in token of his valuable services during twenty-two years as an honorary medical officer of the Hertford General Infirmary, 27th November, 1879". The presentation was made by the Rev. L. Deedes, who delivered an appropriate speech; after which Dr. Elin returned thanks.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

THE NOTIFICATION OF INFECTIOUS DISEASE.

SIR,—I have read with much interest the report in the JOURNAL of November 22nd, by Mr. Ernest Hart, the Chairman of the Parliamentary Bills Committee, on recent legislation with regard to the notification to sanitary authorities of cases of infectious disease, which is not only extremely useful to all who are interested in this matter, as showing the progress already made, but also as indicating the points on which further improvements can be effected, and errors avoided in the future which have been committed in the past. The most important portion of the report, however, is undoubtedly the model clause which he has suggested for adoption by sanitary authorities who may wish to follow in the steps of those who have now obtained legislative powers. Uniformity of procedure in this matter is unquestionably of the highest importance, and it is time that the opinion and experience of those who are qualified to advise in regard to it should be directed to drawing up such a model clause as the Chairman of the Committee has suggested. But it is equally desirable that no mistake should be committed in framing such a clause, and that it should be very carefully considered before being recommended for the adoption of sanitary authorities. Any suggestion thus authoritatively promulgated should be as free from objection and as complete as it can be made. Now the first point to be noted in connection with the suggested clause is that, although certain duties are prescribed by it, there is not a word in the clause itself about penalties in case of default of such duties.

This defect in the suggested clause is so serious that it is hardly worth while going into further criticism of its provisions; but I may add that there are several of them which scarcely indicate, in the way in which they have been drafted, much practical acquaintance either with the legal difficulties involved in criminal proceedings taken under such provisions, or with the mode in which they are likely to operate. I hope, therefore, that the Committee will at once withdraw their recommendation, and reconsider the wording of the clause, especially in regard to the fundamental points to which I have referred, when I have no doubt that they will be able to evolve a form of clause which will not only be likely to commend itself to criticism from the standpoint of legal intelligibility, but also of sanitary efficiency.

I do not think it necessary to say anything here upon what I believe to be the cardinal mistake which the Committee make in dealing with the question of notification apart from that of the whole question of the arrest of infectious disease, as I have already discussed this point at some length in papers read before the Social Science Congress and elsewhere. I think it right, however, to again enter my protest against such a course, which is, in my opinion, as unstatesmanlike in its procedure as, I believe, it is likely to be unsatisfactory in its results.—Yours truly,

FRANCIS T. BOND, M.D.

Gloucester, November 24th, 1879.

MEDICAL OFFICER OF HEALTH FOR GLOUCESTERSHIRE.

SIR,—I have read the very lucid report on the "Notification to Sanitary Authorities of the Occurrence of Cases of Infectious Disease" which appeared in the JOURNAL of November 22nd.

Granted that the model clause suggested in the report be adopted by sanitary authorities and embodied in coming Improvement Bills, and that at no distant date it becomes part of a public Act, I would ask, having regard to the provisions of the Public Health Act, 1875, 1. What are the limits of practical usefulness to which sanitary authorities can apply the information when obtained? 2. Assuming that its object is to check the spread of infectious disease, what action is it proposed to take in each case on the occurrence of infectious disease in the houses of any of the following classes: the very poor, better class artisans, tradesmen, and the upper classes? 3. On receiving the report, what power of entry have the officers of the sanitary authority? 4. Having entered, what power have they of enforcing their directions? 5. How can they prevent working men or women from going to their place of work at times when members of their family may be sick of these diseases? 6. How can they prevent shopkeepers whose children may be ill, say of small-pox or scarlet fever, from seeing their children and subsequently attending to their shop? How are members of a family living widely apart to be prevented from visiting their sick relatives and returning home by some public conveyance? 7. How, in streets where the doors of the houses open on to the footpath, like rooms in a corridor, is communication to be prevented? 8. How, with due regard to the provisions of the Education Act and the necessary education of the people, is the vast question of the spread of infectious disease by children mingling in schools to be dealt with? 9. Granted the legal authority, will the public submit to the necessary control, and what kind of staff will be necessary to enforce the regulations? 10. If powers are obtained, within the limits of the possible, will they accomplish the end in view?

These questions, sir, are neither idle nor unimportant. They daily force themselves on the attention of every intelligent sanitary officer when engaged in the practical work of his vocation. They well deserve the careful consideration of all who value attainable results rather than high sounding speculations, and who, in this busy and crowded country of ours, earnestly strive to mitigate some of the evils incidental to our social condition.—I am, sir, your obedient servant,

York, November 24th, 1879. S. W. NORTH.

*** We publish these letters from Dr. Bond and Mr. North, the opinions of both of whom are entitled to much respect, so as to allow both sides of the question to be heard. But to attempt to answer their communications would be to argue the question of the registration of disease *ab ovo*, and this we have neither the space nor the inclination to do. It is, we think, the deliberate opinion of those who have devoted most attention to the subject, that the notification of infectious disease is an indispensable part of sanitary machinery. This conclusion has not only been accepted and endorsed after repeated discussions at successive annual meetings of the British Medical Association, but nearly every eminent sanitarian has, at one time or other, earnestly urged it. It has recently become law under different shapes in fourteen different places, and it was specially referred to the Parliamentary Bills Committee of the Association to consider in what way legislation for the purpose might best be shaped. It was under these circumstances that the Chairman prepared the report, and drew the model clauses to which our correspondents refer. If such registration is not to be carried out, as Dr. Bond and Mr. North would appear to desire, until the fullest conceivable use of the information can be

made, there is an end at once to sanitary progress. To wish to do nothing because one cannot do everything is by no means a new theory in the history of the world, but it has never met with much favour from practical men. As to Dr. Bond's strictures on the model clause, a moment's consideration will make it manifest to him that no single compulsory clause in any Act of Parliament whatever is enforceable without a penalty being attached to its non-fulfilment. Local Acts contain other compulsory clauses than those relating to this particular subject, and as penalties would attach to the infraction of these latter also, it was judged best to leave to the lawyers whether or not the same penalty clause should apply to all. As to the "legal unintelligibility" of the clause, we need only say that it will be found almost *verbatim* in two local Acts which have been passed by Parliament, only on the favourable report of the legal experts of the Local Government Board; and on that point, therefore, Dr. Bond need have no fear.

MEDICAL OFFICERS AND THEIR HOLIDAYS.

We gladly publish the very important correspondence that has passed between the Corporation of the Poor of Exeter and the Local Government Board, respecting medical officers' holidays. It will be seen therein that the Central Board lays down a totally new rule, viz., that, in the case of the absence from duty, such as is implied in a medical officer's holiday, the guardians should appoint a temporary medical officer; but the oracle is silent as to who is to pay him. There is, however, nothing in these letters which controverts the position we took up in our answer to a correspondent, published in a recent issue. The Local Government Board conduct their business in so loose a style that we should not be surprised to learn that a wholly different reply has been given elsewhere.

"November 23rd, 1879.

"Sir,—As in this Union the Local Government Board has given a complete different reading of our power of leaving without special leave from the guardians, I beg to enclose for publication (that others may know) the correspondence that passed.—I am, sir, yours truly, J. Woodman, F.R.C.S., Medical Officer,

"The Editor of the British Medical Journal. City Workhouse."

"Office of the Corporation of the Poor, Exeter, August 1st, 1879.

"My Lords and Gentlemen,—A question has arisen whether the consent of the guardians is necessary before a medical officer of the Union absents himself from his duties. The medical officer of the workhouse having appointed a deputy, in pursuance of Article 193, is of opinion that he may take a holiday of a fortnight without the previous consent of the guardians, deeming it necessary only to intimate the fact of his going away and the name and address of his deputy to the master of the workhouse and the nurse. The guardians are desirous of knowing whether the medical officer's view of the question is a correct one, and have directed me to ask you to be kind enough to favour them with your opinion, whether a medical officer may lawfully absent himself from his duties for a lengthened period (such as a week or more) without the previous permission of the guardians.—I have the honour to be, my lords and gentlemen, your very obedient servant,

"The Local Government Board, Whitehall." "George Huxham, Clerk."

"Local Government Board, Whitehall, S.W., August 13th, 1879.

Sir,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 1st instant, in which you inquire, for the information of the guardians of the Exeter Union, whether a medical officer may lawfully absent himself from his duties for a lengthened period (such as a week or more) without the previous permission of the guardians, having intimated to the master of the workhouse and the nurse the name and address of his deputy.

"I am directed to state that, in the opinion of the Board, the attendance of the person nominated by the medical officer in pursuance of the order is only intended to be given in cases when the officer, although at the time present in the district and in the discharge of his duties, is unable at the moment to visit. In the event of the officer being prevented by illness or other sufficient cause from discharging his duties for a period such as is mentioned in your letter, the guardians should appoint a fit person to discharge his duties in his absence.—I am, sir, your obedient servant, J. F. Rotton, Assistant Secretary.

"G. Huxham, Esq., Clerk to the Guardians of the Exeter Union, Exeter."

TREATMENT OF TWO DISEASES IN AN INFECTIOUS HOSPITAL.

Sir,—In reply to "Medical Officer of Health", I can state that, a few years back, an infectious hospital was built in connection with the Croydon Union Workhouse. The building consists of four spacious wards, with eight beds in each ward. Upon one occasion, having one case only of small-pox under treatment, a patient suffering with scarlet fever was admitted, placed in a separate ward, and as far removed as possible from the small-pox patient. The scarlet fever patient was seized with the small-pox and died. The guardians were so impressed with the danger of admitting cases of scarlet fever with cases of small-pox, and acting under the advice of the Local Government Board, have since erected a separate pavilion for the admission and treatment of scarlatina.—I am, yours faithfully,

Alfred George Roper, F.R.C.S.,
Medical Officer to the Croydon Workhouse and Infirmary.

*** There cannot be two opinions that the pavilion style of building, with the wards for different diseases separated from each other by a belt of outside air, is the proper one for infectious hospitals. But, with proper precautions, such an occurrence as that referred to by our correspondent need not have happened.

WORKHOUSE OFFICIALS.

Sir,—Will you, or some other member of the Association, kindly inform me if it is usual for the medical officer to a workhouse to attend the officials of that institution gratis?—and oblige yours obediently, Medical Officer.

December 1st, 1879.

*** The medical officer of a workhouse is not required by the terms of his contract with the guardians to attend other than the pauper inmates; but we have heard that it is considered by most medical officers good policy to give advice and medicines to the master and matron, as those officials have it in their power to augment or minimise the labours of the medical officer. The Local Government Board, so far as the metropolis is concerned, has laid down a rule that none of the officers are entitled to either medicine or attendance at the cost of the rates. Obviously, therefore, the same rule holds in the country, where, too frequently, all medicines are supplied by the medical officers

MILITARY AND NAVAL MEDICAL SERVICES.

THE ARMY MEDICAL DEPARTMENT.

Sir,—The Army Medical Department is by no means a popular service now-a-days, and yet in all material advantages it has gained largely within the last quarter of a century. Thirty years ago, when the daily rate of pay was only 7s. 6d. commissions were eagerly sought after; and when the competition was first established in 1858 the fortnightly examinations never failed to attract numbers largely in excess of the advertised vacancies. How is it, then, that all enthusiasm for this once coveted career has evaporated, and that the students of our medical schools look with but languid interest on the new warrant, which is expected to remove all sources of discontent, and place the department on a new and sound basis of prosperity? To this question I can give an unhesitating reply; and that is, that no indication is given of any return, partial or complete, to the old system of regimental service. If any one ask my advice concerning army medical service as a life career, I invariably give the same answer; and that is, that I would recommend no young man with reasonable prospects elsewhere to accept a commission until the system of unification has been modified in some way. I usually find that my opinion precisely corresponds with that independently formed by my questioner, and I feel most strongly convinced that, although the service may in future not suffer from lack of candidates, it can no longer hope to attract the best men, or even the second best, from our medical schools. I am not going to weary your readers with the recital of the oft told tale of the loss of prestige and social comfort and consideration implied in the abrupt destruction of the regimental system, but it is perfectly obvious that army doctors can never really be paid in anything like competitive measure with civil life, and that some peculiar attraction must be sought for elsewhere.

In olden days, the doctor, if a gentleman, was part and parcel of the regiment to which he belonged, not unfrequently managing the mess and various business arrangements, the trusted adviser of all, from the colonel to the private, sharing in all the social pleasures, and in all the interests and good fellowships of the family circle to which he belonged. How effectually all this has been made a thing of the past, can be told only too effectually in the wretched lodging house lives of many medical officers now attached to some of our most important military stations. But I should not have ventured to trouble you with these remarks were it not for the authoritative statement made by Surgeon-Major Reynolds, V.C., at the recent Association dinner. He there said "under such a régime I can imagine the doctor in the army assuming a higher social grade than he otherwise has held. He would find himself, instead of being a half outsider of a regiment, able to take his position as a real outsider, and able to take the position appertaining to a doctor and a gentleman."

If this, sir, in any degree foreshadows the reality of coming events, I am more than ever confirmed in the wisdom of my policy of advice to those who think of entering the army medical department. The "real outsider," if I understand the term aright, is to have merely a professional bond of union with those to whom he is attached, his "position" is to be maintained by dreary isolation, the refining influences of association with a body of polished and high-minded gentlemen is to be withdrawn in favour of some undefined principles of independence and dignity which can hardly spare him from much dulness and discomfort. In future he is practically to be a civil practitioner in club practice; but then why not make him a civilian altogether?—Your obedient servant, Robert Farquharson.

Balrothery Union.—Dr. W. E. Adrien of Oldtown has resigned as medical officer to the workhouse, a post he had held for nearly forty years. The Board of Guardians, in accepting his resignation, adopted the following resolution: "That, in accepting the resignation of Dr. Adrien, we desire to place on record our deep sense and high appreciation of the very estimable manner in which he has at all times discharged the onerous and important duties of medical officer of our workhouse; and, while we regret that advancing years renders it necessary that he should sever his connection with us, we trust he may be spared to enjoy a long life of ease and happiness in his retirement from that position which he has so faithfully and efficiently filled for such a lengthened period."

Nuses' Home and Training School, Belfast.—The annual meeting was held on November 28th, being presided over by Lord Arthur Hill. The report referred to the infirmaries at Derry, Tyrone, and Downpatrick, in all of which nurses trained in the Belfast Home are working as matrons to the satisfaction of their medical officers. During the year ended 1st November, the private nurses attended one hundred and forty-eight cases, being an increase of nineteen over any preceding year. The public derive special advantages from an institution of this kind in being able to obtain trained nurses, and the good done has been of a very widespread character. As was pointed out, it does not come into collision with the Society for Providing Nurses for the Destitute Poor, but is rather an auxiliary and a great help to it.

French Hospital.—The twelfth anniversary of the opening of the French Hospital was commemorated on Saturday evening by a private banquet, given by the Committee to Mr. Eugene Rimmel, the honorary secretary of that institution, to whom was presented a chronometer of the value of one hundred guineas, with an address recording their appreciation of his valuable services since the foundation of the hospital, to which he greatly contributed. The chair was taken by the treasurer, Mr. Elzingre, supported by the head physician, Dr. Vintras, and the rest of the medical staff, and by all the members of the Committee. The usual annual festival in aid of the funds of this charity will take place on the 31st January, under the patronage of the French Ambassador.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—Second M.B. Examination, 1879. Examination for Honours. [The bracket indicates equality of merit.]—Medicine.

First Class.

Smith, Robert Percy (Scholarship and Gold Medal), St. Thomas's Hospital
Williams, Dawson (Gold Medal), University College
Mackern, George, Guy's Hospital (obtained the number of marks qualifying for a Gold Medal)
{ Gill, Richard, B.Sc., St. Bartholomew's Hospital
{ Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital

Second Class.

Fuller, Thomas Warberton, Guy's Hospital
Boyd, James Stanley Newton, University College
Bond, James William, University College
White, William Hale, Guy's Hospital
{ Buckell, Arthur Edward, University College
{ Hayle, Thomas Hahnemann, Owens College and Manchester Royal Infirmary
{ Hine, John Edward, University College

Third Class.

{ Herman, George Ernest, London Hospital
{ Taylor, Harold Gilbertson, King's College
Hayward, Thomas Ernest, St. Bartholomew's Hospital

Obstetric Medicine.

First Class.

Smith, Robert Percy (Scholarship and Gold Medal), St. Thomas's Hospital
Fuller, Thomas Warberton (Gold Medal), Guy's Hospital
Gill, Richard, St. Bartholomew's Hospital
Sheppard, Charles Edward, St. Thomas's Hospital
Herman, George Ernest, London Hospital

Second Class.

Gabb, James Percy Alwyne, University College
Hine, John Edward, University College
Forsbrook, William Henry Russell, Westminster Hospital

Third Class.

Williams, Dawson, University College
Taylor, Harold Gilbertson, King's College
Buckell, Arthur Edward, University College
Hayward, Thomas Ernest, St. Bartholomew's Hospital
Boyd, James Stanley Newton, University College
Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital

Forensic Medicine.

First Class.

Taylor, Harold Gilbertson (Gold Medal), King's College
Hayward, Thomas Ernest, St. Bartholomew's Hospital
Sheppard, Charles Edward, St. Thomas's Hospital

Second Class.

Pughe, Tiaeliesin Wilim Owen, Liverpool Royal Infirmary and Guy's Hospital
Sainsbury, Harrington, University College
Smith, Robert Percy, St. Thomas's Hospital
{ Barling, Gilbert Harry, St. Bartholomew's Hospital
{ Hine, John Edward, University College

Third Class.

Bond, James William, University College
Hayle, Thomas Hahnemann, Owens College and Manchester Royal Infirmary
Maylard, Alfred Ernest, Guy's Hospital
Colquhoun, Daniel, Charing Cross Hospital

B.S. Examination. Pass List.

First Division.

Boyd, James Stanley Newton, University College
Maylard, Alfred Ernest, Guy's Hospital
Pughe, Rhinallt Navalaw ap Joan, Liverpool Royal Infirmary

Second Division.

Bond, James William, University College
Jones, Thomas, Guy's Hospital
Williams, Dawson, University College

B.S. Examination. Examination for Honours.

Second Class.

Jones, Thomas, Guy's Hospital
Boyd, James Stanley Newton, University College

Third Class.

Bond, James William, University College

M.D. Examination. Pass List.

Bury, Judson Sykes, B.S., University College
Carrington, Robert Edmund, Guy's Hospital
Carter, William, LL.B., B.Sc., Charing Cross and St. Thomas's Hospitals
Gadsby, John Topham, B.S., University College
Glynn, Thomas Robinson, St. Thomas's Hospital and Liverpool
Hadden, Walter Baugh, St. Thomas's Hospital
Nicholson, John F. (Gold Medal), St. Thomas's Hospital
Paget, William Smith, Liverpool, and University College
Raine, George Rolph, Guy's Hospital
Smith, Herbert Urmson, St. Thomas's Hospital
Uhthoff, John Caldwell, Guy's Hospital

Logic and Psychology only.

Buchanan, Arthur, Guy's Hospital
Cattle, Charles Henry, Leeds, and University College
Edwardes, Edward Joshua, St. Mary's Hospital
Henderson, George Courtenay, University College
Lubbock, Montagu, Guy's Hospital
Phillips, Sidney Philip, University College
Silcock, Arthur Quarry, B.S., University College
Willoughby, Edward Francis, University College

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

BALROTHERY UNION—Medical Officer for Workhouse, at a salary of £90 per annum, and £10 yearly as Consulting Sanitary Officer. Residence within five miles of Workhouse. Election on the 15th instant.

DUNFANAGHY UNION—Medical Officer of the Cross Roads (Falcaragh) Dispensary District, Gweedore portion. Salary, £100 per annum, with £10 per annum as Medical Officer of Health. Registration and Vaccination Fees. Election on the 17th instant.

*DURHAM COUNTY ASYLUM—Assistant Medical Officer. Application, with testimonials, stating age, qualifications, etc., to Dr. R. Smith.

GORT UNION—Medical Officer for Ardrahan Dispensary District, at a salary of £140 per annum, with £10 per annum as Medical Officer of Health; Registration and Vaccination Fees. Election on the 18th instant.

*HAMPSTEAD PROVIDENT DISPENSARY—Medical Officer. Applications on or before the 27th instant.

*LONDON HOSPITAL—Medical and Surgical Registrars for 1880. Salary, £100 per annum. Applications on or before the 22nd instant.

*MIDDLESEX HOSPITAL—Medical Registrar and Surgical Registrar. Applications on or before the 20th instant.

NEW BOROUGH ASYLUM, Nottingham—Medical Superintendent. Salary, £450 per annum, with furnished apartments, gas, coals, vegetables, and washing. Applications on or before December 16th.

PORTUMNA UNION—Medical Officer for Workhouse, at a salary of £60 per annum, with £5:10 per annum as Consulting Sanitary Officer. Election on the 20th instant.

SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon. Salary, £80 per annum, with board. Applications on or before December 22nd.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

CAMPBELL, Patrick E., M.B., C.M., appointed Junior Assistant Medical Officer to the Warwick County Lunatic Asylum, Hatton.

COLLIE, David, M.B., appointed Resident Clinical Assistant to St. Luke's Hospital.

LENDON, Alfred A., M.B., appointed House-Surgeon to the Bristol Royal Infirmary, *vice* G. Herbert Lilley, M.D., resigned.

SCOWCROFT, J. Edwin, F.R.C.S.Ed., appointed Honorary Surgeon to the Bolton Infirmary.

WHARRY, Arthur, M.R.C.S.Eng., appointed House-Surgeon to the Great Northern Hospital.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

MARRIAGE.

FRANCIS—FOWLE.—On the 10th instant, at St. George's, Hanover Square, by the Rev. John Bennett, assisted by the Rev. W. J. A. Large, M.A., Chaplain to St. Thomas's Hospital, George Philip Francis, Surgeon, Bourton, Dorsetshire, only son of Charles Francis, Esq., of Brecon, South Wales, to Catherine Florence, second daughter of John Fowle, Esq., of South Kensington.

DEATHS.

FOWLER.—On December 5th, at Brighton, after a few hours' illness, Anne Sophia, the beloved wife of Robert Fowler, M.D., of Bishopsgate, E.C., aged 47.—Friends will kindly accept this intimation.

GALTON, Edmund John, Esq., on December 6th, at Brixton Rise, Surrey, in the 74th year of his age.

GOODE.—On the 6th September, at his residence, Friar Gate, Derby, Henry Goode, M.B., late Fellow of Pembroke College, Cambridge, aged 60.

STREET-AMBULANCES.—A street-ambulance of a new description for the use of "run over" cases in street accidents has been presented by the inventor, Lieutenant Maclure, L.S.R.V., to the Society for Preventing Street Accidents and Dangerous Driving. The ambulance can be folded up when not in use, thus occupying no more space than a pole eight feet long. We understand it is the intention of the Society to place one of these ambulances at the Mansion House, Regent Circus, Charing Cross, and other dangerous street-crossings, as it is found that in conveying to the hospitals "run over" cases in common cabs often converts a simple fracture into a more serious injury, owing to the jolting of the vehicle and the unsuitable position of the sufferer.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

MEETINGS OF SOCIETIES DURING THE NEXT WEEK.

MONDAY.—Medical Society of London, 8.30 P.M. Dr. Cockle (the President), "The Sequel to a Case of Aortic Disease"; Mr. Thomas Bryant, "On the value of Parallelism of the Lower Extremities in the Treatment of Disease or Injury of the Hip-joint, with the best means of securing it"; Professor Forster, "Experiments on the Contamination of Atmospheric Air with the Vapour arising from Arsenical Pigments".

TUESDAY.—Pathological Society of London, 8.30 P.M. Dr. W. Ewart: Extra-pericardial Aneurysm; Hæmorrhage into Pericardium. Dr. Barlow: Emphysematous Cyst of the Lung, with Atelectasis. Mr. Hutchinson: 1. Supposed Rupture of Roots of Brachial Plexus; 2. Two Cases of Peculiar Skin-disease. Mr. Bryce Barron: Congenital Malformation of the Heart. Dr. Miller Ord: 1. Large Gall-stone passed *per anum*, with Remarks on the Structure and Formation of Biliary Calculi; 2. Some Urinary and Intestinal Calculi. Mr. Hulke (for Dr. Silva Lima of Bahia); Specimen of Ainhum. Mr. Brailey: Glioma of Optic Nerve and Brain. Dr. Meredith: Ovarian Cyst, which had repeatedly Ruptured during Nine Years. And other specimens.—Specimens exhibited by card: Dr. Coupland: Organs affected by Visceral Syphilis. Mr. James Adams: Cystic Sarcoma of Testis with Enchondroma. Mr. Hulke: Specimens and Drawings of Cancers. Dr. Lediard: 1. United Kidneys; 2. Dislocation of the Hip from Disease.—Specimens on the table by 8 o'clock for inspection.

WEDNESDAY.—Association of Surgeons practising Dental Surgery. 7.30 P.M.: Council Meeting. 8.30 P.M.: Casual Communications.

THURSDAY.—Harveian Society of London, 8.30 P.M. Harveian Lecture. Mr. Edmund Owen, "On Certain Practical Points in Connection with the Surgery of Childhood"

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SIR,—Can any of your readers kindly inform me of any private institution or family where some patients of mine can place their little girl, aged six years? She is subject to epileptic attacks (not violent ones), and is a finely developed, healthy, intelligent child, but most mischievous, and difficult to manage. They feel that some special training is required for her to develope her mental faculties, and break her of her mischievous habits, and are anxious to find some place where she will be kindly treated, and at the same judiciously managed. As they have other children, they feel that it is necessary to separate them for their mutual good.—An answer in your paper will greatly oblige.—Yours faithfully. E. M. S.

PRURITUS ANI.

M.R.C.S. writes:—Wear a piece of cotton wool of the size of a walnut or larger at the anus: a few shreds of the wool should be inserted inside the sphincter, and this will be sufficient to retain the whole in its place. A fresh piece must be used after each evacuation. After two years' experience, I can speak most highly of this way of relieving the intolerable annoyance of the pruritus; so long as I wear it I am quite comfortable. For about twelve years, I have been a martyr to the complaint. I had tried different applications and modes of treatment, including most of those recommended in the JOURNAL, and also tried total abstinence, but without effect.

A DISGUSTED MEMBER.—It is difficult to surmise the object of the departing Registrar-General.

BATHS IN COLD WEATHER.

SIR,—As your contemporary remarks, in order to combat the evil consequences of a chill, efforts should be made to restore the vital energy of the nerve centres. As an advocate of preventive medicine, I would suggest that the system should be kept at the highest sanitary pitch possible. The human body as it should be in health being represented by x, we should prevent the increase and multiplication on y by z. To ensure this *desideratum* combined with open air exercise, I have been in the habit for the last quarter of a century of taking a bath of the temperature as supplied by the cistern, all the year round, up to the neck, and occasionally head under. At one time, I used not to object to break the ice; now, with ten degrees of frost outside, I appreciate the luxury of a gas-fire to look at when in the cold water, and to warm my toes when out of it; but as some of the family prefer the bath a little with the chill off, and as it is always desirable to have a hot bath at hand, if necessary, I have for some time been on the look out for an apparatus to do away with the necessity of hot water pipes from the kitchen boiler, so liable to danger, to get out of order, and not to be available when most wanted. Eureka! in the "Crown Boiler" made by Ewart & Son of Euston Road.
1, Norfolk Square, W. P. HINCKES BIRD, F.R.C.S., S. Sc. Cert. Cam.

SIR,—Will any of your readers kindly inform me, through the medium of the BRITISH MEDICAL JOURNAL, how it is possible to apply Sayre's apparatus to the spine while the patient is in the recumbent position.—Yours obediently,
December 1879. M.D., Queen's University.

FLATULENCE.

SIR,—Can any of your readers suggest a remedy for the following case? A patient, about 40, apparently in perfect health, complains to me of flatulence. He has no dyspepsia, heartburn, water-brash, eructations, sour taste, or costiveness; the liver works well. He has never been but abstemious; but, thinking it might possibly be his small modicum of wine, he has even left off that of late. His appetite is good, and he has no pain; but is distressed by a feeling of tension in the abdomen, particularly about two hours after meals. There is a good deal of tympanites, especially over the course of the colon. I have tried nitro-muriatic acid and nux vomica, carbolic acid, charcoal, assafœtida, and galbanum, and to no effect.—Yours very truly,
December 1879. INQUIRER.

MEDICAL ETIQUETTE.

SIR,—Will you kindly give space in your JOURNAL for the insertion of the following case, and oblige me with your opinion concerning it?

Mr. G. holds a policy in an Accidental Assurance Company (the Railway Passengers'), and, having met with an accident, sends for his usual medical attendant (Dr. B.), who pronounces him wholly incapacitated *pro tem.* He therefore applies for the form which has to be filled up and forwarded to the office of the company before he can obtain the weekly allowance to which he is entitled. Mr. ——, a neighbouring medical practitioner, happened to be referee for the above company, and, by virtue of his office, as he says, proceeds to the house of Mr. G. (Dr. B.'s private patient), and, contrary to the instructions given by Dr. B. to his patient, insists on removing the dressing from the wound—I suppose with the object of forwarding his opinion on the case to the company. Was Mr. —— justified in thus interfering with Dr. B.'s patient without having consulted or otherwise procured Dr. B.'s permission to visit the case? and can the assurance company give Mr. ——, as their referee, the right to interfere with another legally qualified medical practitioner's private patient? In any case, was not Mr. —— guilty of a breach of medical etiquette? or at least did he not display very bad taste in acting as he did?—I am, sir, yours faithfully, M.D.T.C.D.

*** Mr. —— ought not to have interfered with the case under any circumstances, without communicating with Dr. B.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

SALINE LIQUID EXTRACTS OF THE DIGESTIVE FERMENTS.

SIR,—In justice to an eminent firm of chemists, who have often been pioneers in pharmaceutical improvement, even at the risk of seeming to ungraciously minimise the credit due to another chemist, will you allow me to point that the "liquor pepticus" and "liquor pancreaticus", so lauded by Dr. Roberts as (by implication) new and original preparations, prepared expressly for him by Mr. Baden Benger, are *not* by any means novel preparations, however good they may be, and doubtless are. Dr. Roberts's authoritative dicta have naturally attracted much attention, and, I think, justly; yet since the impression left by his remarks is that both the preparation made by Mr. Benger, and the use made of it, are matters entirely new (which is hardly the case), I think the following correction should be made. In Mr. Benger's preparation there is nothing new, however good it is, for Messrs. Savory and Moore (of 143, New Bond Street) made both a peptic and a pancreatic liquor—viz., a bland saline non-alcoholic mother-liquor of both pepsine and pancreatine five or six years ago at least. The labels of both preparations were, I am informed, registered at the time they were first made, so that it is impossible for any one to dispute Messrs. Savory's claim to having originated the two articles. For between three and four years I have been in the habit of employing them in medical practice, as many chemists through whom I have specially ordered them, and many dyspeptics to whom I have specially recommended them, can prove—both for the purpose of direct administration by the mouth at suitable periods after taking food, and for the pre-digestion of soups and milk-gruels before administration to sick persons. It is an odd coincidence, yet, being a fact, let me say—as many makers of peptic preparations throughout England can testify—for the last seven or eight months I have been making experiments with several of the best known peptic preparations in the market, with the view of ascertaining their relative energy and value, and also what (if any) advantage there might be in their administration together, instead of apart, and at periods corresponding to the well known different stages of digestion; and my results were almost ready for publication, when, to my surprise, and yet not my displeasure, Dr. Roberts's paper showed me that he had been working the same view and driving an almost parallel series of levels, with, of course, not very dissimilar results. In a short time I hope to make public both my facts and conclusions, undeterred by the foreboding that I may be accused of stealing Jupiter's thunder; but for the present I may only remark that my experience has convinced me of the great superiority of saline over alcoholic liquid preparations, and of the superiority of the latter even over the various dry powders (with one exception, Bullock's pepsina porci), however carefully prepared. The fact that liquid forms of the digestive ferments are usually most "active" (keep energetic longest), has, I believe, been often said; and yet with our profession, or perhaps more correctly with the purchasing public, preference has generally been given to pepsine and pancreatine in the form of powder. Why, I know not, since the powder is not even the most convenient, easiest-made-ready form; but the fact at any rate accounts—as Messrs. Savory inform me—for pancreatic preparations especially being almost exclusively advertised in the form of powder. Yet not alone myself, but doubtless many other medical men, have known of the existence of Messrs. Savory's unadvertised liquors, and have known of their great superiority over other preparations.

In that it is an unscientific blunder to mix diastase, pepsin, hydrochloric acid, and trypsin, as is done in "lactopeptine", "peptocolos", and some other preparations, I quite agree with Dr. Roberts, and had, independently, come to the same conclusion before Dr. Roberts's masterly articles appeared. I demur, however, to the necessity for the administration of any bicarbonate of soda with a dose of pancreatic liquor, when given by the mouth two-and-a-half or three hours after a meal: at least I have not found it necessary with Messrs. Savory's saline pancreatic liquor. Mr. Benger's preparation I only obtained very recently, and have consequently had but a limited experience of it. Of the two pancreatic liquors, both, I find, pancreatise fatty material almost equally well, but not equally milk, deprived of most of its cream and not of its casein. Of the two liquors, taken neat or slightly diluted with water, patients, I find, almost invariably prefer Messrs. Savory's liquor, on account of its pleasant taste.

Of the liquid preparations of pepsine I have used, Messrs. Bullock's acid glycerole of pepsine leaves very little to be desired. It is wonderfully active; and children, on account of its sweet taste, take it readily; and in several of the wasting diseases to which they are subject, as well as in the debilitated digestion of convalescence, I have found it of inestimable benefit. In infantile diarrhœa of more than one type, in doses quite as large as those fixed by custom as proper for adults, I know of no agent of such indisputable value. But Messrs. Savory and Moore's saline essence (or liquor) of pepsine is the best preparation I have ever seen for adults, and best liked by them, because not sweet. Its curious likeness in taste, smell, and colour to good mushroom-ketchup has led me to prescribe it to be put up undiluted, labelled "The digestive ketchup", for squeamish and "particular" patients, directing it to be taken as a sauce with the mutton-chop or other food. The veriest *gourmet* will relish it in this fashion; and in many instances to this day, I believe, the pious fraud has never been discovered.—I am, etc., F. ARNOLD LEES, F.L.S.

DR. JOHN TAYLOR (Bayswater) is thanked for his kindness; but he seems to be unaware that the document which he has been at the pains to transcribe is, in fact the evidence given by Jenner on the 22nd March, 1802, before a Committee of the House of Commons, to whom was referred for consideration a petition for som public acknowledgment of his services to the State. The document in question is reprinted in Mr. Simon's "Papers relating to the History and Practice of Vaccination" (page 1 of Appendix), and again on page 388 of the Report of the Select Committee of the House of Commons on the Vaccination Act of 1867 (Parliamentary Paper of 1871). Under these circumstances, it would seem unnecessary to reproduce it in these columns.

A DISTRESSING CASE.

SIR,—Mr. Francis B. Dalton (M.R.C.S., 1831; L.S.A., 1829), who practised at Hampstead twenty years, and at Teddington for a short time, and was also a surgeon-major, is dying of cancer, and is in great distress through want. His illness has prevented him from doing anything for some time; and his wife has actually had to take a small tobacconist's shop, which has been a failure, and they are now in a sorry plight. The thought that any of us by sickness might be incapacitated from winning our daily bread should make us compassionate with the misfortunes of others. Mr. Dalton has been in St. George's Hospital (his old school), and has there been operated upon; but the disease has returned, and his strength is being drained by several abscesses.

I will gladly take charge of any donations, however small, and see the money laid out to their best possible advantage.—Yours faithfully,

2, Portugal Street, Grosvenor Square, W. HEYWOOD SMITH.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

PARTNERSHIP IN POISONING.

A STARTLING statement (says the *Pall Mall Gazette*) was lately made in the Chancery Division on a motion for a receiver and an injunction in a partnership action, the business carried on being that of chemists and druggists. According to the plaintiff's counsel, the defendant had unfortunately taken to drink, and the result was that on at least two occasions he had mixed deadly poisons with medicines which were to be taken internally. On one occasion the defendant mixed chromate of lead with the medicine, and on another verdigris. As the counsel truly remarked, this fact alone proved the danger of going on in a business such as a chemist's and druggist's in partnership with the defendant. "If any unfortunate patient died", he said, "it would be ruin to the plaintiff". Certainly, the mixing deadly drugs with medicines by one of two chemists and druggists in partnership with each other would, if persisted in as a practice, ultimately tell on the reputation of both members of the firm; but, on the other hand, juries are apt to take a very lenient view of little mistakes of this nature. Chemists have often been tried for manslaughter when they have poisoned a sick person in error; but convictions are seldom obtained against them. Perhaps the good esteem in which the practitioners as a body are generally and deservedly held avails to shield the few who now and then render themselves liable to process of law.

MEDICAL CORONERS.

SIR,—I should be glad to hear the opinion of some of the readers of your JOURNAL upon the following case. On November 24th, a child aged ten months died quite suddenly; and, as the family medical man had not attended the child within the last few weeks, of course an inquest took place. The coroner (a medical man himself) brought with him, a distance of eight or nine miles, a surgeon just come from town from his final examination, as the medical witness, who gave his evidence without a *post mortem* examination, and without knowing any family history of the deceased or the parents. Here, neither the general family attendant, nor even a medical man in practice, was called to give evidence, but were quite ignored, and the usual fee, of course, put into the pocket of a personal friend. This I consider a case which should not pass unnoticed; and, in justice to the family medical man, I am induced to publish it.—I am, sir, yours, etc., COUNTRY DOCTOR.

*** The proceedings described by our correspondent were altogether irregular, and the proper course would be to lay the case before the magistrates, with a view to the disallowance of the fees. Such conduct on the part of medical coroners would go a long way to justify the course taken by government in the new Coroners' Bill, of rendering a medical man ineligible for the office. It is an unfortunate circumstance that medical coroners have on several occasions within the last few years so misconducted themselves in performing the duties of the office as to provoke public notice and censure.

VOLUNTARY DISLOCATION.

MEN vary greatly as to the sources of pleasure. That which is conveyed in the subjoined notice has the merit of originality.

"We" (*New York Hospital Gazette*) "are in receipt of a circular from Mr. Charles H. Warren, the celebrated contortionist, in which are published letters and opinions from Drs. F. H. Hamilton, D. Hayes Agnew, O. J. Coskery, L. McL. Tiffany, W. W. Dawson, Henry J. Bigelow, C. L. Ford, and others, upon the wonderful power exhibited by Mr. Warren of voluntarily dislocating nearly every joint in the body. This is undoubtedly the most extraordinary case of this kind on record, and is fully authenticated by the above-named gentlemen. We have *had also the pleasure* of seeing Mr. Warren successively dislocate the inferior maxilla, scapula, humerus, elbow, wrist, phalanges of the toes and fingers, knee, patella, ankle, and, most wonderful of all, both hip-joints, which he effects by a complete control over a magnificently developed muscular system, aided by a congenital relaxation of the joint-ligaments. No one should lose the opportunity of seeing and studying such a phenomenon."

TREATMENT OF WHOOPING-COUGH.

SIR,—I would recommend to F.R.C.S. the inhalation of the fumes of carbolic acid in the treatment of whooping-cough. I have applied it in the following way during the past few months. Place the little patient in a small room with closed doors and windows, and, having heated the kitchen fire-shovel sufficiently to produce rapid evaporation of any fluid, pour upon it about two drachms of common carbolic acid; dense fumes will be given off, and the atmosphere become charged with them. If the patient happen to have a paroxysm of coughing now, it will often be cut short after breathing the carbolised air. The above can be repeated two or three times a day; and any rooms frequented by the patient should also be carbolised, especially the bedroom. I have known this treatment have an almost magical effect, but should scarcely recommend it if there be any lung-complication. The quantity of carbolic acid may be increased or diminished at discretion. Of course, special attention must also be paid to the general health.—I am, sir, your obedient servant,

Chesterfield, Dec. 1st, 1879. RICHARD JEFFREYS.

A MEMBER (Surgeon to a Forester's Lodge).—We are afraid "A Member" cannot demand a quarter's salary in lieu of a quarter's notice. As a matter of courtesy, he might fairly have expected such notice; but as there was no definite agreement, it cannot be said that there has been a breach on contract.

A PECULIAR OBSTETRIC EXPERIENCE.

SIR,—The following experience is so peculiar professionally, and probably unique, that I am tempted to offer it to the notice of my medical brethren. Some days since, I was hurriedly sent for to see a woman, wife of a small tradesman, who was said to be violently flooding. On my arrival, to my surprise I found *two* women in the one bed. The one for whom I was especially sent was said to be now easier and free from flooding, but that the other (her sister) was very bad, her "womb having come down" suddenly while looking after her sister. Upon examination, I found a three months' fœtus born, all but the head. I removed the child and placenta, which followed immediately, and turned to my other patient, and found that she, too, was miscarrying, and at about the same period of gestation.

It has, I imagine, fallen to the lot of few practitioners to attend two sisters at the same time, in the same bed, for abortion at the same period of gestation.—Your obedient servant, GERALD E. BARRON, M.B.

Roslin, Caterham Valley, November 7th, 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

ANIMAL VACCINATION.

SIR,—I am sorry that a pre-engagement will prevent my being present (as I had much wished to be) at the meeting in Chandos Street. Animal vaccination would be a great boon for India generally (it has already become popular in the Bombay Presidency). I was once employed by Government to assist in introducing vaccination in the Hills, and we succeeded in establishing a depôt there. The supply was excellent; but the opposition in some quarters was unconquerable. As you are aware, the Hindoos believe that small-pox has been sent by one of their goddesses: they dare not, therefore, fight against it. The Hindoos have, likewise, a religious veneration for the cow. I argued, therefore, that if we could *prove* to them the identity of small-pox and cow-pox—the former being modified and rendered not only harmless but actually protective by its passage through the cow—we should advance the cause of vaccination. My effort failed. I introduced some variolous matter into the udders of three cows (calves were not available, and hence, perhaps, my failure), but with no results whatever. The opportunities for making these experiments were scanty, and I could not therefore repeat them, nor could I induce my coadjutor (who remained in the Hills after I had left for other duty) to make them. They would only be likely to succeed in a cold climate like that of the hills, or in the cold season in the plains. Cow-pock is not, so far as I know, natural to the cow in India. There was a spurious form of it met with some fifty years ago at, I believe, Moorshedabad, in the plains, but for protective purposes it was useless. Thanks to the efforts made by successive superintendents of vaccination—especially by Dr. Charles of Calcutta—vaccine virus is now imported into India of excellent quality, and compulsory vaccination is gradually becoming law. But the great thing is to demonstrate to the people the connection that exists between this virus and their holy animal. I am therefore, if only on that account, a warm supporter of animal vaccination, and I fully realise the advantages of it to society at large.—Believe me, very faithfully yours, CHAS. R. FRANCIS, Surgeon-General (retired).

UNIVERSITY DEGREES IN MEDICINE.

SIR,—In your issue of November 22nd, a correspondent states that only about three or four per cent. of the candidates at the Edinburgh professional examinations are "plucked". That may have been so when "M.D.Edin." graduated, but at present the percentage is very much greater. The Registrar informs me during the last two years the average of failures at the different professional examinations is forty per cent.; in the first and second professional examinations the percentage is nearly fifty per cent; in the final, rather over thirty per cent., making up the average percentage named. The reason fewer are "plucked" in the final examinations may be easily explained, because by the first and second of the professional examinations the lazy students are weeded out.—I am, sir, yours, etc., ALMA MATER.

TRANSIT OF A PIN FROM THE STOMACH TO THE KNEE.

SIR,—In reading Dr. Corbett's interesting case on the journey of a needle from the stomach to the hand, I am reminded of a similar case which came under my notice last summer. On visiting one of my patients, I was asked to look at the servant's knee. I found a small abscess on the inner side, and just above the knee. This I lanced, and immediately a black pin escaped, head foremost. The girl declared it was the pin she had swallowed seven or eight months previously.—I am, sir, yours truly, FRED. EVANS, M.D.

Cardiff, October 22nd, 1879.

THE ENFORCEMENT OF THE DENTAL ACT.

SIR,—If I am rightly informed, the Dental Act came in force in the beginning of August last. What steps should each qualified person take to prevent the Act from becoming a dead letter? In our town here the chemist still drives a roaring trade in "extracting" and performing all manner of dental work. Your advice as to the necessary steps to put an end to this will oblige yours, etc., H.

*** The Dental Act provides that "Any person who, not being registered (in the *Dentists' Register*), takes or uses the name or title of 'dentist', either alone or in combination with any other word or words, or of 'dental practitioner', or any name, title, addition, or description, implying that he is registered under this Act, or that he is a person specially qualified to practise dentistry, is liable, on summary conviction, to a fine not exceeding twenty pounds, provided that he is not a legally qualified medical practitioner". A private person cannot institute a prosecution for the foregoing offence except with the consent of the Medical Council, or of a Branch Council; but the Medical Council, or a Branch Council, or a medical authority, can institute such a prosecution. In the case cited by our correspondent "H.", the reference would naturally be made to the Scotch Branch of the Medical Council. Another course would be to send a statement of the case or cases to the British Dental Association, that body having undertaken to investigate cases of alleged infringement of the Dentists' Act; and, if not otherwise disposed of, to bring them before the Medical Council. Before taking action, it will be well to remember that the Dentists' Act does not visit with punishment the mere act of performing dental operations; but it debars unregistered persons from claiming fees for such operations, and punishes them if they hold themselves out as dentists, etc.

AMERICAN MEDICAL GRADUATES.

SIR,—I am anxious to correct an impression that has been conveyed to the profession through your JOURNAL by Dr. H. Junius Hardwicke, that "any body or community of men in the United States can form an University and grant medical degrees". Every such body or community of men has to obtain the sanction of the State legislative authorities before degrees of any kind can be granted; further, no recognised school of medicine in the United States can confer any degree without the consent of the Commissioners of Public Charities and Correction, *alias* the Commissioners of Police, who sign the same. This is what should be in England. There ought to be an University examination and a State examination: the University could be quite distinct from the State; and the diplomas conferred could be marked by such distinctions as "M.D., University of Cambridge", or "M.D., State Examination", which for all practical purposes would be quite sufficient; and in the case of a consultant, the difficulty could be easily overcome by a reference to the *Directory*.

In other respects, the letter of Dr. Hardwicke of the 15th instant is quite correct, although I can assure him that considerable pains are taken in the better class schools to ascertain whether any gentleman who is applying for admission has gone through the proper amount of study. I can answer for this as far as Dr. Austin Flint, jun., of New York, is concerned, who is the secretary to one of the largest hospitals there.

Dr. Hardwicke appears to imagine that only those who have obtained English as well as foreign degrees in medicine are entitled to registration. This may be all very well; but how are the public to distinguish between an absolute quack and a man who has legitimately studied at a proper medical college, and whose unforeseen circumstances have compelled him to reside in the United Kingdom? It would appear to be the rule to look after oneself alone, and leave the poor striving medical student or assistant, or poor foreign graduate, out in the cold: and when I tell Dr. Hardwicke that often the corporate bodies here have refused to examine a foreign graduate because he has not attended their own lectures, perhaps he will be inclined to sympathise. I myself, a foreigner to all intents and purposes, have striven to direct the attention of the government to the poor underpaid and hard-worked assistant; and this would seem to be a nobler field to follow than the accumulation of distinctions to the names of those who are already recognised in the eyes of the law.—I am, sir, yours, etc., AN M.D. OF NEW YORK.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

Sir J. Fayrer, London; Dr. Carpenter, Croydon; Dr. Braxton Hicks, London; Mr. Spencer Wells, London; Mr. Rushton Parker, Liverpool; Dr. Wm. Moore, Dublin; Dr. George Johnson, London; Dr. D. Foulis, Glasgow; Mr. J. R. Lane, London; Dr. Sigerson, Dublin; Dr. Edis, London; Dr. Paterson, Glasgow; Dr. F. Semon, London; Mr. Gant, London; Mr. W. Thomson, Dublin; Mr. A. E. Durham, London; Mr. Hulke, London; Dr. Ringrose Atkins, Waterford; Dr. Bantock, London; Dr. E. Long Fox, Clifton; Mr. R. W. Parker, London; Dr. W. R. Thomas, Sheffield; Dr. Sansom, London; Mr. Rouse, London; Dr. F. T. Roberts, London; Dr. Sinclair, Dublin; Dr. J. Morton, Glasgow; Mr. N. C. Dobson, Bristol; Dr. Oliver, Newcastle-upon-Tyne; Dr. F. C. Turner, London; Mr. John Simon, C.B., London; A Disgusted Member; Mr. J. B. Emmerson, Biggleswade; Mr. D. Fairweather, Penicuik; Dr. F. A. Lees, Wetherby; Dr E. Haughton, London; Mr. E. Groves, London; Dr. E. Copeman, Norwich; Mr. P. Hinckes Bird, London; Mr. Wannan, Arbroath; Dr. A. S. Taylor, London; Mr. T. Jones, West Bromwich; Mr. H. Greenway, Plymouth; Mr. G. P. Atkinson, Pontefract; Dr. J. B. Gill, Hastings; Dr. C. R. Francis, London; Dr. E. J. L. Blacker, Northampton; Dr. A. Cordis, Geneva; Dr. Sedgwick, London; Mr. W. A. Smith, Plumstead; A Member; Dr. W. T. Stoker, Dublin; The Secretary of the Harveian Society; Dr. Ormsby, Dublin; Mr. A. T. Wear, Newcastle-upon-Tyne; Mr. F. Scott, Manchester; Mr. Packman, Sheffield; Dr. A. Grant, London; S. D. F.; Dr. H. Walter, South Petherton; Dr. J. G. Parsons, Bristol: W.; Dr. J. E. Crooke, Gravesend; Dr. J. H. Courtenay, Lucea, Jamaica; Mr. E. Garraway, Faversham; A Medical Officer; A Member of the Staff of Guy's Hospital; Dr. Newington, Ticehurst; Dr. Scowcroft, Bolton; Mr. A. Kelly, New York; Dr. A. H. Bennett, London; Dr. Norman Kerr, London; Sir James Paget, London; Mr. E. Evans, Beaumaris; Mr. A. Bernard, Ross; Dr. Heywood Smith, London; Mr. P. Q. Karkeek, Torquay; Dr. A. H. Carter, Birmingham; The Secretary of the Medical Society of London; Dr. Ormsby, Dublin; Dr. F. Churchill, London; Our Dublin Correspondent; Dr. Styrap, Shrewsbury; Dr. A. H. Newth, Hayward's Heath; Our Paris Correspondent; Dr. McCall Anderson, Glasgow; Our Edinburgh Correspondent; Our Glasgow Correspondent; Dr. Orange, Crowthorne; Dr. Rabagliati, Bradford; Dr. G. H. Mackenzie, Edinburgh; Mr. M. Duggan, Castle Eden; Dr. J. F. Sutherland, Paris; Mr. W. S. Watson, London; Mr. E. T. A. Bayton, London; Dr. Morell Mackenzie, London; Dr. H. Harris, Redruth; Dr. Cameron, M.P., Glasgow; Dr. Leonard Sedgwick, London; B. O. F.; Dr. J. L. Blacker, Thrapston; Dr. John T. Nayle, New York; Dr. J. Diamond, Murhill; Dr. R. Farquharson, London; Dr. E. T. Wilson, Cheltenham; Dr. Eben Watson, Glasgow; Mr. G. T. A. Staff, St. Ives; Dr. Brailey, London; Dr. Kennedy, Elie; Mr. Brown, Hull; etc.

BOOKS, ETC., RECEIVED.

Fits: Diagnosis and Immediate Treatment of Cases of Insensibility and Convulsions. By John H. Waters, K.C. St. G.C., etc. London: J. and A. Churchill. 1879.

The Cosmopolitan Masonic Calendar Diary and Pocket-Book for 1880. London: George Kenning.

Memorial Oration in Honor of Ephraim McDowell, the Father of Ovariotomy. By Samuel D. Gross, M.D. Louisville; 1879.

Skin-Diseases: including their Definition, Symptoms, Diagnosis, Prognosis, Morbid Anatomy, and Treatment. By Malcolm Morris. With Illustrations. London: Smith, Elder, and Co. 1879.

Clinical Lectures on the Diseases of Women. Delivered in St. Bartholomew's Hospital. By J. Matthews Duncan, M.D., LL.D., F.R.S.E. London: J. and A. Churchill. 1879.

Notes on Fever Nursing. By James W. Allen, M.B. London: J. and A. Churchill. 1879.

1880.

THE BRITISH MEDICAL ASSOCIATION.

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The ANNUAL MEETING of the Association for 1880 will be held in August, at Cambridge,

under the Presidency of

G. M. HUMPHRY, M.D., F.R.S.

The ADDRESS in MEDICINE will be delivered by JOHN B. BRADBURY, M.D., Physician to Addenbrooke's Hospital.

The ADDRESS in SURGERY will be delivered by TIMOTHY HOLMES, M.A., F.R.C.S. Surgeon to St. George's Hospital.

The ADDRESS in PHYSIOLOGY will be delivered by MICHAEL FOSTER, M.D., F.R.S., Prælector of Physiology in Trinity College, Cambridge.

The objects of the Association are—the promotion of Medical Science, and the maintenance of the honour and interests of the Medica Profession. The Subscription to the Association is One Guinea annually; and each Member on paying his Subscription is entitled, in addition to the other advantages of the Association, to receive weekly, post free, the "BRITISH MEDICAL JOURNAL: BEING THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION." The Subscription is payable, in advance, on the 1st January in each year.

Gentlemen desirous of becoming members of the Association should communicate their wish to the HONORARY LOCAL SECRETARIES, or to the General Secretary, F. FOWKE, Esq., 161A, Strand, London, W.C., in order that the proper steps may be taken for their election.

For the Annual Subscription of One Guinea, paid in advance, the BRITISH MEDICAL JOURNAL is forwarded weekly to Members, free by post. For persons not Members of the Association, the Annual Subscription is Twenty-eight Shillings.—Orders, enclosing remittances, should be addressed to FRANCIS FOWKE, Esq., at the Office of the Journal, 161A, Strand, W.C.

GRANTS in AID of ORIGINAL RESEARCHES in MEDICINE and the ALLIED SCIENCES.

Annual Grants of the total value of £300 are made, in aid of Scientific Researches in Medicine and the Allied Sciences. Applications, stating the nature and objects of the intended research, should be sent to Mr. ERNEST HART, Honorary Secretary to the Scientific Grants Committee, or to the General Secretary, at the Office of the Association, 161A, Strand, London, W.C.

THE BRITISH MEDICAL JOURNAL for 1880,

Edited by ERNEST HART, Esq.

The JOURNAL includes the earliest *scientific, social, and political information* on all subjects interesting to the Profession; LEADING ARTICLES and Editorial Comments on the subjects of the Week; ORIGINAL ARTICLES and LECTURES by the most eminent authorities; MEMORANDA and RECORDS of DAILY PRACTICE by Hospital and General Practitioners; Extracts from BRITISH and FOREIGN JOURNALS; Reports of the Practice of the HOSPITALS and Asylums of Great Britain and Ireland; Full Reports of the Proceedings of the BRITISH MEDICAL ASSOCIATION and of its BRANCHES and COMMITTEES; SPECIAL CORRESPONDENCE from the principal cities and localities of Great Britain, Ireland and the Continent; REPORTS of thePRINCIPAL MEDICAL SOCIETIES in ENGLAND, SCOTLAND, and IRELAND; REPORTS on NEW INVENTIONS; SPECIAL REPORTS on SANITARY and MEDICO-LEGAL QUESTIONS; REVIEWS of BOOKS; a Department devoted to the PUBLIC HEALTH and POOR-LAW SERVICE; a Department devoted to the MILITARY and NAVAL MEDICAL SERVICES; University Intelligence; Lists of Vacant Appointments; Obituaries of Medical Men; NOTICES and ANSWERS to CORRESPONDENTS.

The arrangements for reporting the proceedings of the MEDICAL SOCIETIES in the United Kingdom are very complete, and include the Transactions of Societies in London, Edinburgh, Dublin, Manchester, Liverpool, Glasgow, Leeds, Bradford, etc., ogether with elected Reports of the Papers read, and the Cases and Specimens exhibited, at the Meetings of the Thirty Branches of the BRITISH MEDICAL ASSOCIATION.

The Department devoted to the interests of the **PUBLIC HEALTH** and **POOR-LAW MEDICAL SERVICES** has been largely developed, and the services of gentlemen of the highest authority and largest experience have been obtained. The Department includes notices and answers to questions from Medical Officers of Health and Poor-Law Medical Officers, and is intended to assist and support them in the performance of their difficult duties.

The Department devoted to the interests of the **ARMY** and **NAVY MEDICAL SERVICES** fulfils similar functions in respect to these services.

In the forthcoming Volumes will be published, adequately illustrated—

THE HARVEIAN ORATION delivered at the Royal College of Physicians of London. By **John W. Ogle, M.D., F.R.C.P.,** Consulting Physician to St. George's Hospital.

THE LUMLEIAN LECTURES delivered at the Royal College of Physicians of London, **on the Digestive Ferments, and the Preparation and Use of Artificially Digested Food.** By **William Roberts, M.D., F.R.C.P., F.R.S.,** Physician to the Royal Infirmary, and Professor of Medicine in Owens College, Manchester.

THE CROONIAN LECTURES delivered at the Royal College of Physicians of London, **on the Pathology and Treatment of Typhoid Fever.** By **William Cayley, M.D., F.R.C.P.,** Physician to the Middlesex Hospital.

THE GOULSTONIAN LECTURES delivered at the Royal College of Physicians of London, **on Epilepsy.** By **William R. Gowers, M.D., F.R.C.P.,** Assistant-Professor of Clinical Medicine in University College, and Assistant-Physician to University College Hospital.

SIX HUNTERIAN LECTURES, delivered at the Royal College of Surgeons of England. By **Jonathan Hutchinson, F.R.C.S.,** Senior Surgeon to the London Hospital.

THE HARVEIAN LECTURES delivered before the Harveian Society of London. By **Edmund Owen, M.B., F.R.C.S.,** Senior Assistant-Surgeon to St. Mary's Hospital.

THE INGLEBY LECTURES delivered at Queen's College, Birmingham. By **Balthazar W. Foster, M.D., F.R.C.P.,** Physician to the General Hospital, and Professor of the Principles and Practice of Physic in Queen's College, Birmingham.

Papers contributed to Discussions on the following subjects at the last Annual Meeting of the British Medical Association.

TYPHOID FEVER AND OTHER INFECTIOUS DISEASES: THEIR PROPAGATION BY DRINKING WATER. By **Alfred Carpenter, M.D.,** Croydon; **J. Lane Notter, B.A., M.D.,** Assistant Professor of Military Hygiene in the Army Medical School, Netley; **Edward Ballard, M.D., F.R.C.P.,** London; **Norman Kerr, M.D.,** London; and **R. S. Hudson, M.D.,** Redruth.

ALCOHOL IN MEDICINE. By **James Little, M.D., F.K.Q.C.P.,** Physician to the Adelaide Hospital, Dublin; **H. Macnaughton Jones, M.D.,** Professor of Midwifery in Queen's College, Cork; **E. T. Tibbits, M.D.,** Bradford; **Norman Kerr, M.D.,** London; and **J. M. Howie, M.B.,** Liverpool.

TRACHEOTOMY IN CROUP. By **A. H. Corley, M.D.,** Surgeon to the Richmond, Whitworth, and Hardwicke Hospitals, Dublin; **William Squire, M.D., F.R.C.P.,** London; **Robert W. Parker, M.R.C.S.,** Assistant-Surgeon to the East London Children's Hospital; and **William Thomson, M.D., F.R.C.S.I.,** Surgeon to the Richmond Hospital, Dublin.

LUPUS: ITS NATURE, VARIETIES, AND TREATMENT. By **Jonathan Hutchinson, F.R.C.S.,** Senior Surgeon to the London Hospital; **McCall Anderson, M.D.,** Professor of Clinical Medicine in the University of Glasgow; **Balmanno Squire, M.B.,** London; and **J. Herbert Stowers, M.D.,** London.

JOINT-DISEASES: THEIR DIAGNOSIS AND TREATMENT. By **John Fagan, F.R.C.S.I.,** Surgeon to the Belfast Royal Hospital; **William Mac Cormac, F.R.C.S.,** Surgeon to St. Thomas's Hospital; **F. J. Gant, F.R.C.S.Eng.,** Surgeon to the Royal Free Hospital; **G. B. Morgan, L.R.C.S.I.,** Surgeon to the Sunderland Infirmary; and **C. Steele, F.R.C.S.Eng.,** Surgeon to the Bristol Royal Infirmary.

HÆMORRHAGE DURING PREGNANCY AND PARTURITION. By **A. V. Macan, M.D., F.K.Q.C.P.,** Lecturer on Midwifery in the Carmichael Medical College, Dublin; **T. More Madden, M.D.,** Obstetric Physician to the Mater Misericordiæ Hospital, Dublin; **W. Walter, M.D.,** Manchester; and **N. Kerr, M.D.,** London.

Reports presented to the Scientific Grants Committee of the British Medical Association.

The Subjects of Research are :—

The Changes produced in the Blood-vessels by Alcohol: Dr. John Barlow.

The Minute Anatomy of Pyæmia: Dr. Stephen Mackenzie.

Pathology and Treatment of Hydrophobia: Dr. Burdon Sanderson, F.R.S., Dr. Lauder Brunton, F.R.S., Mr. Ernest Hart, and Dr. W. R. Gowers (Committee).

Life-History and Pathological Relations of Microscopic Specific Organisms : Dr. Ewart.

The Physiological Action of Alcohol, with special reference to its Mode of Elimination : Dr. H. R. Crocker.

Vegetable and Animal Parasites of the Human Skin : Dr. Thin.

The Origin of Bacteria : Mr. Chiene.

The Natural Form of the Arterial Pulse-Wave : Dr. Roy.

The Application of Antiseptic Surgery in Cases of Lesion of the Head : Dr. Ferrier and **Dr. Gerald Yeo.**

The Function of the Kidney : Dr. Newman.

The Anatomical Characters of Certain Diseases of the Skin : Mr. M. Morris.

Investigation on Anæsthetics : Dr. McKendrick, Dr. Ramsay, and Dr. J. Coats (Committee).

The Relation between Bacteria and Surgical Diseases : Dr. Ogston.

The Relation between the Nitrogenous Egesta and Muscular Work : Mr. North.

The JOURNAL will also contain :—

The President's Address, the Addresses in Medicine, Surgery, and Physiology, and the Addresses of the Presidents of Sections, delivered at the Annual Meeting of the BRITISH MEDICAL ASSOCIATION.

Clinical and other Lectures and Addresses, and Papers on Important Scientific and Practical Subjects, by Medical Officers of the Hospitals in the United Kingdom, and other eminent Members of the Medical Profession.

The Journal will also contain leading Articles by eminent experts on important points in the Progress of Medical Science.

Lectures and other Contributions from the following Members of the Profession :—

ADAMS, JAMES E., F.R.C.S., Surgeon to the London Hospital.—CONTRIBUTIONS on SURGICAL SUBJECTS.

ADAMS, WILLIAM, F.R.C.S., Surgeon to the Great Northern Hospital.—The PATHOLOGY and TREATMENT of POTT'S DISEASE of the SPINE.

AITKEN, LAUCHLAN, M.D., ROME.—The BACILLUS MALARIÆ.

AITKEN, WILLIAM, M.D., F.R.S., Professor of Pathology in the Army Medical School, Netley.—PATHOLOGICAL SUBJECTS.

ALLBUTT, T. CLIFFORD, M.A., M.D., Physician to the General Infirmary, Leeds.—1. DILATATION of the STOMACH and its TREATMENT. 2. AORTIC REGURGITATION and the CORONARY CIRCULATION.

ALLCHIN, WILLIAM H., M.B., Physician to the Westminster Hospital. — CLINICAL LECTURES.

ALTHAUS, JULIUS, M.D., Physician to the Hospital for Diseases of the Nervous System.—The PATHOLOGY and TREATMENT of DISEASES of the SPINAL CORD.

AMPHLETT, EDWARD, M.A., M.B., F.R.C.S., Assistant-Surgeon to the Charing-Cross Hospital and to the Central London Ophthalmic Hospital.

ANDERSON, T. McCALL, M.D., F.F.P.S., Professor of Clinical Medicine in the University of Glasgow.—LECTURES on CLINICAL MEDICINE.

ANNANDALE, THOMAS, F.R.C.S.Ed., F.R.S.E., Regius Professor of Clinical Surgery in the University of Edinburgh.—CLINICAL SURGICAL LECTURES and OBSERVATIONS.

ATKINS, RINGROSE, M.A., M.D., Medical Superintendent of the District Lunatic Asylum, Waterford.—1. OSTOOMALACIA OCCURRING in a CASE of CHRONIC DEMENTIA. 2. CASES ILLUSTRATING PSYCHOLOGICAL PATHOLOGY.

ATKINSON, EDWARD, M.R.C.S., Surgeon to the General Infirmary, Leeds.—CONTRIBUTIONS on SURGICAL SUBJECTS.

ATTHILL, LOMBE, M.D., F.K.Q.C.P., Master of the Rotunda Hospital, Dublin.—SUBJECTS CONNECTED with GYNÆCOLOGY.

BACON, GEORGE M., M.A., M.D., Resident Medical Superintendent of the Cambridge County Lunatic Asylum. — INSANITY and its TREATMENT.

BAKER, W. MORRANT, F.R.C.S., Surgeon to and Lecturer on Physiology at St. Bartholomew's Hospital.

BALL, BENJAMIN, M.D., Professor in the Faculty of Medicine, Paris.—CLAUSTROPHOBIA.

BANHAM, H. T., M.A., M.B., Physician to the Infirmary, Sheffield.

BANTOCK, G. GRANVILLE, M.D., Surgeon to the Samaritan Hospital. — OVARIOTOMY.

BARKER, ARTHUR E. J., F.R.C.S.I., Assistant Surgeon to University College Hospital.—The DRY COTTON WOOL PERMANENT DRESSING.

BARLOW, THOMAS, M.D., Assistant-Physician to the London Hospital and to the Hospital for Children.

BARTLEET, THOMAS H., M.B., F.R.C.S., Surgeon to the General Hospital, Birmingham.—CLINICAL LECTURE on a CASE of LIGATURE of the EXTERNAL ILIAC ARTERY.

BARTON, JOHN K., M.D., Surgeon to the Adelaide Hospital, Dublin.—On PHAGEDÆNIC ULCERATION.

BASTIAN, H. CHARLTON, M.A., M.D., F.R.C.P., Professor of Pathological Anatomy in University College and Physician to University College Hospital.—CLINICAL LECTURES.

BAXTER, E. BUCHANAN, M.D., F.R.C.P., Assistant-Physician to King's College Hospital, and Professor of Materia Medica and Therapeutics in King's College.—SUBJECTS CONNECTED with THERAPEUTICS and CLINICAL MEDICINE.

BEACH, FLETCHER, M.B., Medical Superintendent of the Asylum at Darenth.—CASES of ATHETOSIS.

BENNET, HENRY, M.D.—INFLUENCE of MOUNTAIN AIR in the TREATMENT of PULMONARY CONSUMPTION.

BENNETT, EDWD. H., M.D., F.R.C.S.I., Professor of Surgery in the University of Dublin, and Surgeon to Sir Patrick Dun's Hospital.—1. COMMINUTED FRACTURES of the UPPER THIRD of the SHAFT of the FEMUR. 2. COLLES' FRACTURE.

BENNETT, A. HUGHES, M.D., Assistant Physician to the Westminster Hospital.—ELECTRICITY as a DIAGNOSTIC AGENT.

BERKART, J. B., M.D., Assistant-Physician to the City of London Hospital for Diseases of the Chest.

BERNARD, WALTER, F.K.Q.C.P.I.,—On the MODE of CONVEYING STYPTICS to the BLEEDING ORIFICES in *POST PARTUM* HÆMORRHAGE.

BEVERIDGE, ROBERT, M.B., Physician to the Royal Infirmary, Aberdeen.—REPORTS of CASES.

BOULTON, PERCY, M.D., Physician to the Samaritan Hospital.—DISEASES of WOMEN.

BRADBURY, J. B., M.D., Physician to Addenbrooke's Hospital, Cambridge.—1. CASE of HODGKIN'S DISEASE, with REMARKS. 2. CASE of ACUTE PLEURISY, with COPIOUS EFFUSION, SUCCESSFULLY TREATED by ASPIRATION.

BRADLEY, S. MESSENGER, F.R.C.S., Surgeon to the Manchester Royal Infirmary.—PERFORATING RODENT ULCER.

BRAILEY, W. A., M.A., M.D., Lecturer on Comparative Anatomy at Guy's and St. George's Hospitals.—SYMPATHETIC OPHTHALMITIS.

BRAMWELL, JAMES P., M.D., L.R.C.S.Ed. Visiting Surgeon to the Perth Infirmary.—NERVE-STRETCHING in SCIATICA.

BRISTOWE, JOHN S., M.D., F.R.C.P., Physician to St. Thomas's Hospital.

BROWNE, J. CRICHTON, M.D., Lord Chancellor's Visitor in Lunacy.—CEREBRAL COMMOTION.

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BUCHANAN, GEORGE, M.A., F.F.P.S., Professor of Clinical Surgery in the University of Glasgow.—CLINICAL SURGICAL REPORTS and CASES.

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CARPENTER, ALFRED, M.D., J.P., President of the Council of the British Medical Association.—1. NOTES on SANITARY PROGRESS. 2. PUBLIC MEDICINE.

CARTER, ALFRED H., M.D., Physician to the Queen's Hospital, Birmingham.—On CERTAIN DISEASES of CHILDHOOD.

CARTER, WILLIAM, M.B., LL.B., Physician to the Royal Southern Hospital, Liverpool.

CASSELLS, J. PATTERSON, M.D., Aural Surgeon to the Royal Infirmary and Lecturer on Aural Surgery in the Royal Infirmary School of Medicine, Glasgow.—1. The ETIOLOGY of AURAL EXOSTOSES and their REMOVAL by a NEW OPERATION. 2. The PRODUCTION of ARTIFICIAL DEAFNESS. 3. DISEASES of the EAR in INFANCY and CHILDHOOD.

CATON, RICHARD, M.D., Lecturer on Physiology in the Liverpool Royal Infirmary School of Medicine, and Physician to the Northern Hospital, Liverpool.—1. RHEUMATIC PARALYSIS. 2. CASES of INTEREST.

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CHAVASSE, THOMAS F., M.D., Assistant-Surgeon to the General Hospital, Birmingham.—The TREATMENT of KNOCK-KNEE.

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CHURTON, THOMAS, M.D., Lecturer on Materia Medica in the School of Medicine, and Physician to the Dispensary, Leeds.—The DIAGNOSIS of the QUALITY of a PLEURITIC EFFUSION.

CLARK, ANDREW, F.R.C.S., Assistant-Surgeon to the Middlesex Hospital.—SURGICAL CASES.

CLARKE, W. MICHELL, M.R.C.S.Eng., Consulting Surgeon to the Bristol General Hospital.—The BEST MODE of TAPPING in CASES of ASCITES and HYDROTHORAX.

CLOVER, J. T., F.R.C.S.—ETHIDENE DICHLORIDE and other ANÆSTHETICS.

COCKLE, JOHN, M.A., M.D., F.R.C.P., Physician to the Royal Free Hospital.

COLLIE, ALEXANDER, M.D., Medical Officer of the Fever Hospital, Homerton.—The ETIOLOGY of ENTERIC FEVER.

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CORY, ROBERT, M.B., Assistant-Obstetric Physician and Joint Lecturer on Midwifery at St. Thomas's Hospital.

COTTLE, WYNDHAM, M.A., M.B., F.R.C.S.Eng., Senior Assistant-Surgeon to the Blackfriars Hospital for Diseases of the Skin.—The TREATMENT of RINGWORM.

COWELL, GEORGE, F.R.C.S., Senior Surgeon to and Joint Lecturer on Surgery at the Westminster Hospital.—SURGICAL CASES and CLINICAL LECTURES.

CRITCHETT, G. ANDERSON, M.R.C.S. Eng.—CASES in OPHTHALMIC PRACTICE.

CROCKER, H. RADCLIFFE, M.D., Physician to the Skin Department of University College Hospital.—PAPERS on DERMATOLOGY.

CROFT, JOHN, F.R.C.S., Surgeon to and Lecturer on Practical Surgery at St. Thomas's Hospital.

CULLINGWORTH, C. J., M.R.C.P.Lond., Surgeon to St. Mary's Hospital, Manchester; Lecturer on Medical Jurisprudence Owens College School of Medicine.—CLINICAL STUDIES in GYNÆCOLOGY.

DAVIDSON, A., M.A., M.D., Physician to the Liverpool Royal Infirmary.—CLINICAL CASES.

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AN ESSAY
ON
CONTAGION: ITS NATURE AND MODE OF ACTION.*

By JOHN SIMON, C.B., F.R.S.

[This paper was written in April 1878, as an article for Dr. Quain's forthcoming *Dictionary of Medicine*, and, from the intention with which it was written, has the form and references of a dictionary article. By way of postscript, a note bearing present date has been added.—November, 1879, J. S.]

It is not yet possible to say, in any universal sense, with regard to the metabolic contagia, what is the essential constitution of "contagious matter", or what the intimate nature of the "transforming power" which the particle of such matter exercises on the particles which it infects. As regards the question of the Force, chemists, when they refer in general terms to the various acts which they designate acts of fermentation, allege that certain processes of change in certain sorts of organic matter induce characteristic changes in certain other sorts of organic matter, not by the common chemical way of double decomposition with reciprocally new combinations, but (so to speak) as a mere by-play or collateral vibration-effect of the chemical force which is in movement; and, though language can hardly be more vague than this for any scientific purpose, it expresses clearly enough the conviction of experts that a certain great force in nature lies beyond their power even of definite nomenclature, much more of exact identification and measurement. In that most interesting, but most difficult and hitherto almost uninvestigated, branch of chemical dynamics, we are supposed to have our nearest clue to the scientific problems of the present subject-matter. It may be conceded that the "contact-influences" which are dimly recognised as causing the fermentatory changes of dead organic matter have apparent analogues in many of the morbific influences of contagion: for the changes which chemists call "fermentatory" are all catalytic or disintegrative of the organic compounds which they affect; and when living protoplasm is brought by contagion into processes of characteristic decay, the analogy seems sufficiently close to justify the word "zymotic" in the naming of the nature of the process. But it must not be forgotten that, among immediate effects of contagion in the living body, are cases wherein the process (so far as we can yet see) is primarily not catalytic or disintegrative, but, on the contrary, anaplastic or constructive. Thus, when tubercle gives rise to tubercle, whether by secondary and tertiary infection in a single diseased body, or by infection from the sick to the healthy, each new tubercle which the contagion brings into being is a growth-product of the texture which bears it. And, similarly, when the innumerable varieties of cancerous tumour propagate themselves by contagion, each after its special type, in the bodies of the respective sufferers, it is growth, not disintegration, which we first see. It would seem that in those cases of anaplastic "contact-influence" something far beyond the analogy of chemical fermentations must be involved; and, in view of some of them, the physiologist has to bethink himself of the analogy of that "contact-influence" which becomes the mainspring of all normal growth and development when the ovum receives spermatic impregnation.—As regards the ultimate organic constitution of the several metabolic contagia (each of them of course abstracted from accidental admixtures, and seen or conceived in the smallest and simplest units of quantity and quality in which its specific force can be embodied) modern research seems more and more tending to show that the true unit of each metabolic contagium must either be, or must essentially include, a specific living organism, able to multiply its kind. For, with regard to those other contagia (as we may properly call them) which spread fermentatory processes in common external nature, and of which it is as clear as of the morbific contagia that they multiply themselves in proportion as they act, it seems to be established beyond reasonable doubt that the "self-multiplication" of each of them as it acts is the infinite multiplication of a specific microphyte; and that this microphyte (acting apparently by means of a matter which it produces and from which it can be mechanically separated) is the essential originator of the fermentation.† This being the case in regard to those fermentations, it seems probable that the same is in substance true of the specific morbid changes which extrinsic contagia produce in the materials of the living body; probable, namely, that low self-multiplying organic forms, specific in each case for the particular disease which is in question, are essential to each morbid poison; that the increase of each contagium as it acts is the characteristic self-multiplication of a living thing; and that this (however obscure may yet remain its mode of operation) is the essential originator of change in the affected materials of the diseased body. The fact that low organic forms of the sorts now spoken of have often, or generally, been seen in the morbid products and tissues of persons with zymotic disease, would not by itself be a proof, or nearly a proof, that the forms are causative of the morbid change: for obviously they might be mere attendants on the necrosis and decomposition of bodily material, availing themselves of the process (just as certain insects would) to feed and multiply: and in many of the cases in which micrococci have been seen in morbid material, no direct proof could be given that the meaning of their presence was more than that. There are, however, some cases in which this proof has been completely established; and, although such cases are at present but few, the significance of each of them in aid of the interpretation of other cases is of the highest importance. The researches of successive able observers in regard of the splenic fever of farm-stock, and those of Dr. Klein in regard of the "pneumo-enteritis" (as he names it) of swine, have shown that in each of these cases the microphyte which attends the disease is botanically specific; that it and its progeny can be conducted through a series of artificial cultivations apart from the animal body; and that germs thus remotely descended from a first contagium will, if living animals be inoculated with them, breed in these animals the specific disease. It is equally well known that the organism (spirilla) which is found multiplying in the blood during the accesses of relapsing fever is botanically specific; but, in regard to this disease (which is not known to affect any other animal than man), experimental proof is still wanting that the microphyte, after long artificial cultivation, will be able to infect with the disease. Studies as complete as those which have been made in splenic fever and pneumo-enteritis will no doubt sooner or later be made in regard to many other of the diseases, but their progress will necessarily be slow; partly because the objects which have to be scrutinised, and to which specific characters have to be assigned, are so extremely minute, and often so similar among themselves, that none but very skilled and very patient microscopical observers are competent to pronounce on them; and partly again because the conditions of the case are such as to limit very closely the field within which the essential experimental observations can be made. Meanwhile, however, the two diseases, regarding which the larger knowledge has been obtained, must be regarded as highly suggestive in regard of other diseases of the same pathological group, and particularly as giving importance to fragments of evidence (not by themselves conclusive) which have been gathered of late years in studies of some of these other diseases. Eminently this is true of the large family of the septic infections—including on the one hand erysipelas and pyæmia with its congeners, and having on the other hand tuberculosis intimately associated with it; and almost equally it is true of enteric fever and cholera and diphtheria, and of the small-pox of man and beast. Thus, though it would be at least premature to say of these diseases that they certainly have as their contagia microphytes respectively specific to them, it seems at present not too much to say that probably such will be found the case; and, if as much may not yet be said of many other diseases which are due to metabolic contagia, it must be remembered that the right lines of study relating to contagia in this point of view have not till within very recent times been opened.

Of the natural history of the contagia, considered independently of the part which they play in the living body, there are hitherto only the beginnings of knowledge. The absolutely first origin of contagia may perhaps not be more within reach of scientific research than the absolutely first origin of dog or cat; but their nearer antecedents—the states out of which they come when first about to act on the living body, and generally the variations which they and the common ferments exhibit under natural and artificial changes of circumstance, are within easy reach of investigation; and those humbler studies are likely to give very useful results. For some of our cases, we seem to have an instructive analogy in the facts which Professor Mosler has put together in explanation of the blue-milk contagium of dairies: facts showing that the omnipresent penicillium glaucum, if its spores happen to alight in particular (morbid) sorts of milk, will operate distinctively on their casein as an anilin-making ferment, rendering the milk blue and poisonous, and imparting to each drop of it the power to infect with a like zymosis any normal milk to which it may be added.* In our own more special field,

* Concluded from page 926 of last number.

† The doctrine to which the words in parentheses refer (that the microphyte is not itself the ferment, but the producer and evolver of the ferment) tends to bring the case of these ferments into parallelism with that of the chylopoietic and other functional ferments which more highly organised creatures produce for the purposes of their own economy. In the latter case, the distinction between the ferment-yielding live bodies (say certain gastric cells) and their not-live product (say pepsin) is already familiar.

* Virch. *Arch.*, vol. xliii.

pathologists have already learnt that certain of the so-called "morbid poisons"—the contagia of erysipelas, pyæmia, and tuberculosis are intimately related to the common ferment or ferments of putrefaction; and that the most vehement of these contagia can be developed by the artificial culture of successive transmissions in the living body from the comparatively mild contagium of any "common" inflammatory process.*

Two other directions suggest themselves as likely to lead to fields of useful observation and experiment. On the one hand, in comparative pathology, and with the tracing of contagion from animal to animal, there is the possibility that at last some lower and relatively worthless order of animals may be found the starting-ground of fatal infections for higher orders; and this, perhaps, by contagia which in their former relations are of mere inflammatory significance. On the other hand, in geographical pathology, and with the tracing of contagion from place to place, local centres of contagium-origination may possibly be found, in which the contagium, before it enters the animal body, will show itself an independent microphyte of the earth, first operating on the animal body as the essential force in a local malaria. Some of the worst pestilences known to the human race—yellow fever, cholera, perhaps plague, and also some of the diseases of cattle, have in their history facts which suggest that sort of interpretation: the supposition, namely, that certain microphytes are capable of thriving equally (though perhaps in different forms) either without or within the animal body; now fructifying in soil or water of appropriate quality, and now the self-multiplying contagium of a bodily disease. In regard to our own common ague-poison, there seems every reason to suspect that its relation to soil is that of a microphyte; and though we know ague only as practically a non-contagious disease, we do not know that any little transfusion of blood from sick to healthy would not show it to be (in that way) communicable from person to person. [*See* Postcript below.]

It needs hardly be said that exact scientific knowledge of the contagia, and of their respective modes of operation, is of supreme importance to the prevention of disease. With even such knowledge of them as already exists, diseases which have in past times been most murderous of mankind and the domestic animals can, if the knowledge be duly applied, be kept comparatively or absolutely in subjection; and the fact that at the present time fully a fifth part of the annual mortality of the population of England is due to epidemics of contagious disease is only because of the very imperfect application hitherto made of that knowledge. In the present article, it is not necessary to state in detail the practice which ought to be adopted in the various different cases of infectious disease; but briefly it may be said that one principle is at the root of all such practice, whatever the disease to which it relates. This principle, which of course becomes more and more important in proportion as the infection is dangerous, and as the persons whom it would endanger are many, is the principle of thoroughly effective separation between the sick and the healthy: a separation which, so far as the nature of the disease requires, must regard not only the personal presence of the sick, but equally all the various ways, direct and indirect, by which infective matters from that presence may pass into operation on others. Especially as regards the diseases which make serious epidemics, the principle of isolation is not carried into effect unless due care be taken to thoroughly disinfect in detail all infective discharges from the sick, and all clothing and bedding and towels and like things which such discharges may have imbued, and finally, as regards certain contagia, the rooms in which the cases have been treated; and in order to secure these objects, it is essential in all grave cases to make such nursing-arrangements and such arrangements of the sick-room (whether private or in hospital) that no retention or dissemination of infectious matters will escape notice. It is likewise essential that all who attend on the sick should be careful not to carry contagion to other persons, as they may but too easily do, particularly in scarlatina and in certain traumatic and puerperal infections, if they omit to take special precautions against the danger. *See* articles on Quarantine and Disinfection, and articles on the special diseases.

The social conditions through which, in our own country at the present time, the more fatal infectious diseases are enabled to acquire epidemic diffusion are chiefly such as the following:—that persons first sick in families and districts, instead of being isolated from the healthy and treated with special regard to their powers of spreading infection, are often left to take their chance in all such respects; so that, especially in poor neighbourhoods, where houses are often in several holdings, and where always there is much intermingling of population, a first case, if not at once removed to a special establishment, will almost of necessity give occasion to many other cases to follow;—that persons with infectious disease, especially in cases of slight or incipient attack, and of incomplete recovery, mingle freely with others in workplaces and amusement-places of common resort, and, if children, especially in day-schools, and that such persons travel freely with other persons from place to place in public conveyances;—that often, on occasions when boarding-schools have infectious disease getting the ascendant in them, the schools are broken up for the time, and scholars, incubating or perhaps beginning to show infection, are sent away to their respective, perhaps distant, homes;—that keepers of lodging-houses often receive lodgers into rooms and beds which have recently been occupied by persons with infectious disease and have not been disinfected;—that persons in various branches of business relating to dress (male and female) and to furniture, if they happen to have infectious disease, such as scarlatina or small-pox, on their premises, probably often spread infection to their customers by previous carelessness as to the articles which they send home to them, and that laundries further illustrate this sort of danger by carelessness in regard to infected things which they receive to wash;—that purveyors of certain sorts of food, if they happen to have infectious disease on their premises, by carelessness spread infection to their customers;—that streams and wells with sewage and other filth escaping into them are most dangerous means of infection, especially as regards enteric fever and cholera, and that great purveyors of public water-supplies, so far as they use insufficient precautions to insure the freedom of their water from such risks of infectious pollution, represent in this respect an enormous public danger;—that ill-conditioned sewers and house-drains, and cesspools receiving infectious matters, greatly contribute to disseminate contagia, often into houses in the same system of drainage, and often by leakage into wells. Of the dangers here enumerated, there is perhaps none against which the law of England does not purport in some degree to provide. At present, however, they all are, to an immense extent, left in uncontrolled operation; partly because the law is inadequate, and partly because local administrators of the law often give little care to the matter; but chiefly because that strong influence of national opinion which controls both law and administration cannot really be effective until the time when right knowledge of the subject shall be generally distributed among the people, and when the masses whom epidemics affect shall appreciate their own great interest in preventing them.

Whenever that time shall come, probably the public good will be seen to require, with regard to every serious infectious disease which is apt to become epidemic, that the principles which ought to be accepted in a really practical sense, and to be embodied in effective law, are somewhat as follows: (1) that each case of such disease is a public danger, against which the public, as represented by its local sanitary authorities, is entitled to be warned by proper information; (2) that every man who in his own person, or in that of anyone under his charge, is the subject of such disease, or is in control of circumstances relating to it, is, in common duty towards his neighbours, bound to take every care which he can against the spreading of the infection; that, so far as he would not of his own accord do this duty, his neighbours ought to have ample and ready means of compelling him; and that he should be responsible for giving to the local sanitary authority proper notification of his case, in order that the authority may, as far as needful, satisfy itself as to the sufficiency of his precautions; (3) that so far as he may from ignorance not understand the scope of his precautionary duties, or may from poverty or other circumstances be unable to fulfil them, the common interest is to give him liberally out of the common stock such guidance and such effectual help as may be wanting; (4) that so far as he is voluntarily in default of his duty, he should not only be punishable by penalty as for an act of nuisance, but should be liable to pay pecuniary damages for whatever harm he occasions to others; (5) that the various commercial undertakings which in certain contingencies may be specially instrumental in the spreading of infection—water companies, dairies, laundries, boarding-schools, lodging-houses, inns, etc., should respectively be subject to special rule and visitation in regard of the special dangers which they may occasion; and that the persons in authority in them should be held to strict account for whatever injury may be caused through neglect of rule; (6) that every local sanitary authority should always have at command, for the use of its district, such hospital-accommodation for the sick, such means for their conveyance, such mortuary, such disinfection-establishment, and generally such planned arrangements and skilled service, as may, in case of need, suffice for all probable requirements of the district.

Persons who are imperfectly acquainted with the scientific and social facts relating to the present subject matter, or who have never seriously considered them, may think it would be over-sanguine to expect any

* See particularly Professor Sanderson's papers in successive yearly volumes of *Reports of the Medical Officer of the Privy Council* from 1868 to 1877. It concerns the second fact mentioned in the text to remember that apparently every "common inflammatory process" includes more or less of textural changes which are necrotic and of septic tendency. See *Holmes's System of Surgery*, first edition, article "Inflammation".

general recognition of principles so peremptory as the above may at first appear to them; but, if so thinking, they would perhaps have underestimated the rapidity with which knowledge is now increasing as to the common interests and mutual duties of mankind in respect of dangerous infectious disease. Fourteen years ago, when the so-called cattle-plague or steppe-murrain was imported afresh, as a long-forgotten disease, into this country, and was found to affect very large pecuniary interests, primarily of the chief landowners of the United Kingdom, but secondarily of other classes, an immensely valuable stimulus was given to the education of the country, and especially of its legislature, in regard to the preventability of the infectious diseases. And the remarkable zeal and ability which have been shown in providing adequate laws and admirable administrative arrangements against the diffusion of steppe-murrain and other infectious diseases of Farm-Stock are not likely to be found permanently absent in relation to the interests of Human Life when once the true bearings of the subject shall have got to be popularly understood.

[Since the writing of the above, a year and a half ago, there seems to have been made, in one of the directions referred to, an important and most interesting addition to positive knowledge. In two recent numbers (July and October 15th) of the *Archiv für experimentelle Pathologie*, Professors Klebs and Tommasi-Crudeli report the particulars of a research recently conducted by them at Rome with regard to the essential cause of the ague which is endemic about that city; and, so far as can be judged from that account, the doctrine that ague-poison is a microphyte of malarious soil is no longer a mere matter of suspicion (as my text expresses it) but is a matter of experimental certainty. The investigators, namely, declare that they can isolate from malarious soils and their atmosphere definite microphytic forms capable of separate cultivation; and that, when successive generations of this "bacillus malariæ" (as they name it) have been cultivated in successive quantities of an indifferent fluid, subcutaneous inoculation of rabbits with any final fluid in which the *bacillus* is germinating will give ague to the subjects of the experiment. The argument of my text (in the section relating to the natural history of contagia) may suggest how extremely interesting it would be to ascertain whether, when animals are under influence of the *bacillus malariæ*, the fever can be propagated from them to healthy animals by means of small transfusions of blood. —November 1879. J. S.]

ABERGAVENNY.—The number of deaths registered in Abergavenny last year is the lowest on record. The death-rate is in the proportion of 17 per 1,000 of the estimated population, and its lowness is chiefly attributable to the almost entire immunity from zymotic diseases. Only eight deaths from this class occurred, and even among these there are two or three whose place in the class is questionable. Mr. Steel reports a still increasing improvement in the sanitary state of the town, especially in the habits of people dwelling in the closest and worst built courts. There still remains a good deal to do, and the questions of sewage disposal and trade nuisances seem to deserve the earnest attention of the local authority.

REIGATE (URBAN AND RURAL).—The borough of Reigate, as has already been shown in Dr. Thorne Thorne's report on the recent epidemic of typhoid fever at Caterham, is usually remarkably healthy. The rate of mortality during the five years of Mr. Jacob's appointment has been lower in this district than in any other portion of the combination. Last year, it was 14.3 per 1,000, or slightly (.2) above the average of the last five years. The deaths (16) from zymotic diseases were very much fewer than in any of the four preceding years, and were at the low rate of 9 per 1,000. Three cases of small-pox are recorded; four cases of scarlet fever in Reigate and a small outbreak at the Earlswood Asylum; attacks of diphtheria in two houses; two cases of enteric fever; and a somewhat extended prevalence of whooping-cough. In all these cases, the proper remedial measures were taken. Some of the polluted wells that still remain in the district have been closed, and a supply taken from the water companies. Sewerage and house-drainage are also progressing satisfactorily. The rural district of Reigate is also a very healthy one, the death-rate being 15.3 per 1,000 of the estimated population. The deaths from zymotic diseases were 10 per cent. of the deaths from all causes, and at the rate of 1.6 per 1,000. Small-pox, measles, and whooping-cough were not prevalent in any part of the district. Thirty-nine cases of scarlatina, 28 of diphtheria, and 10 of enteric fever were reported. As regards diphtheria, Mr. Jacob could, in many instances, find no connection between the cases, though one outbreak (at Horley) was clearly traceable to the school. Schemes for the sewage disposal of Merstham and Horley are now in a forward state, and a code of by-laws has probably by this time received the sanction of the Local Government Board.

REMARKS
ON
ANIMAL VACCINATION.

*A Paper read at the Conference of the Parliamentary Bills Committee of the British Medical Association, on Animal Vaccination, December 4th, 1879.**

BY E. WARLOMONT, M.D.,
Member of the Royal Academy of Medicine of Belgium; Director of the State Vaccine Institute at Brussels, etc.

IT is not, however, sufficient that the lymph from the calf be harmless, it must be inoculable and preservative against small-pox. It must be inoculable. But how can it be otherwise? What was it, in fact, but animal lymph which caused Jenner to make his immortal discovery? When Jenner had the inspiration which has made his name revered, what had he before his eyes but a person who, having had the abraded epidermis brought into contact with an animal-vaccine pustule, had been inoculated with the matter of that pustule? This person had thus unwittingly practised upon himself animal vaccination. Animal vaccination is, then, the progenitor of all other vaccination, present, past, and future, and if it had not been efficacious, vaccination would have been unknown. Of what use is it to push demonstration further? Animal vaccination is—and we profit by this opportunity to define it—nothing else than the maintenance of original vaccinia (cow-pox) upon its native soil, where it is cultivated by successive inoculations, without ever having recourse to other sources. It is not, as our opponents are pleased to say, thinking thus to overthrow our proceedings, lymph taken from children, and replanted on calves (a method known as "retrovaccination"), but lymph which has never received any other aliment than that of its native soil. How then could it lose its qualities, and what analogy could be pleaded for the belief that it was necessary that such virus, to live and prosper, should be cultivated upon strange soil?

Perhaps I shall be asked to adduce, in support of my statements, comparative statistics. I should regret that such a request were addressed to me, for I should feel bound to take no notice whatever of it. I would never consent to furnish as proof such an element of appreciation, because I should reject it as coming from my opponents. Comparative statistics are only valuable when all the conditions of a proper comparison can be brought together. It would be necessary, to arrive at any reliable result in this respect, to have identity of vaccinated subjects, identity of condition in the lymph employed (living or preserved, in the dry or liquid form), identity of the age of the lymph; identity, moreover, of the capacity and judgment of the experimenters. I shall wound no one, I think, by remarking how very important it would be, in such a question, for statisticians to put on one side their predilections, and also what difficulty there would be in getting identity of conditions, all of which are indispensable. Comparative statistics, even if they were made by Aristides, would only satisfy himself.

It would not be quite the same with statistics giving absolute results, since they cannot be left to the caprice of opinion. The subjoined appears to me to unite the good qualities of absolute exactitude and truth. In 1870 and 1871, thirty-six of the most trustworthy physicians of Belgium acquainted me with the results obtained by them in vaccinations and revaccinations with animal lymph on points sent out by the State Vaccine Institute at Brussels. These are the results: 1. In vaccinations, out of a total of 500 cases, 479 successes, or 96 per cent.; 2. In revaccinations, out of a total of 5,425 cases, 3,419 successes, or 62 per cent., a result superior to those shewn in all statistics. In England, the best vaccinators only calculate upon 90 per cent. of success in vaccinations performed with human lymph in tubes, and 95 per cent. with the same lymph on ivory points.

I shall here finish what I have to say about statistics, without wishing on that account to cast any doubt or disparagement on the comparative figures adduced by men whose character I respect too much to think of doubting their sincerity.

But it is not sufficient to adduce figures: it is necessary to know at what time and under what conditions they have been brought together.

* Concluded from page 928 of last number.

We should wish to say a few words on this subject. Innovations, new methods, are not introduced without much groping in the dark and the committal of mistakes. Animal vaccination has not escaped these gropings or these faults. At the commencement, no doubt, it was not modest enough in its pretensions. From this have arisen attacks, which its adversaries have perhaps pushed too far; and from it especially have arisen the prejudices which are not yet extinct, and which justified to a certain degree the hesitation of early days. Thus, in certain circumstances, in certain places, the use of matter taken from vesicles the value of which had not yet been ascertained by experience, whether with regard to development or age; the employment of lymph too old or too young, or that of lymph taken from animals which did not fulfil the desired conditions—all this has given rise to disappointments, which have been used, not without some reason, but perhaps with too much eagerness, against the method.

As a matter of fact, animal vaccination has, in our minds, during the fourteen years that we have followed this tedious business, not without having removed all the objections to it, made, in our hands, daily progress, both with regard to the cultivation of the lymph, its results, and the preservation of the product. After having tried to preserve it in a liquid state, we were obliged to abandon this method, because the lymph coagulated in the tubes and could not be got out. We then adopted the method of keeping the animal lymph on ivory points, drying it rapidly, for delivery in this form to vaccinators. Nothing is more practical for expeditiousness and preservation. But it was necessary, in order to get from this lymph all the desired effect, to introduce the matter thus dried into sufficiently wide openings in the skin. On this account, the so-called English mode of scarifications has since been largely adopted.

This method, nevertheless, has itself had to encounter adversaries; it has been reproached, and will continue to be reproached, with causing exaggerated traumatism. Here, again, we have supplied the corrective: a "vaccinateur trephine", with which even the heaviest hand or the most presbyopic eyes can make a circular incision of a depth sufficiently small to protect from accident. Finally, we have borrowed from M. Chambon, who has been kind enough to communicate it to us, a most simple means of defibrinating the animal lymph before its introduction into the capillary tubes, and of thus preserving all its limpidity and its fluidity. For several years, we have thus furnished, to whomever has asked for it, liquid or dry lymph, thus allowing practitioners to choose for its insertion whichever method—scarifications or punctures—may suit them best. All these improvements should, it would seem, have annihilated an opposition which, having at first some measure of foundation, has now no *raison d'être*. It is, however, by no means so, as you know.

As to the vaccination of the calves, several years passed without my arriving at anything which was perfectly satisfactory to me. I vaccinated—and things happened at Brussels as they happened at Paris and Milan—an animal on a given day; then I vaccinated children from this animal on the fifth, sixth, seventh, or eighth day, according to the temperature, to the habits, and a little according to the convenience of the inhabitants. From the beginning, I have adopted the following course. I inoculated a calf on the Friday, and, on the Tuesday or Wednesday following, the children came to be vaccinated. Full of confidence in the results which I had at first obtained with good calves, I did not give sufficient attention to the variations which occur in eruptions; and it has more than once happened to me that, when the public had arrived at the station, I vaccinated without being sufficiently careful as to the choice of vesicles, of which, as further observation has taught me, some may be fit and others inert, or nearly so, in the same animal. On some children, the vesiculation was admirable; in others, it miscarried. The great fault of this arrangement was that, having caused often a large number of children to assemble for vaccination, and finding ourselves before an animal which did not supply us with all that we wanted, we performed the vaccinations nevertheless, and with lymph which we ought to have rejected. This practice has been the cause of a great depreciation of animal lymph—not at Brussels, because I soon stopped myself, pursuing my observations and correcting my practice, but elsewhere. At Paris, during the year that preceded the siege, and during the siege itself, grave faults were committed: often a single calf served for the vaccination of more subjects than it ought; and I think the conscience of those who proceeded in this way cannot be quite easy. When it was a question of vaccination, the evil was not so great; if they did not succeed, they began again. But it is quite different in revaccination. Then it is really a matter of conscience, and it is necessary to have lymph which can be thoroughly relied upon. What has passed at Paris continues, I must say, to weigh cruelly on animal vaccination in France, where it has not yet succeeded in resuscitating itself, notwithstanding honest and conscientious efforts.

For ten years, I have proceeded on a plan which completely protects me from such mishaps. I always vaccinate two calves at once. They progress in a parallel course; if one of them give doubtful vesicles, the other gives good ones, which enables me to be always perfectly sure of my vaccinations. For twelve years, I have vaccinated each year from eight to twelve hundred children. Every one will corroborate my statement that, when I vaccinate fifty children in half an hour with living animal lymph by simple puncture, taking the lymph from selected punctures, of which I am perfectly sure, not one of these punctures fails. Thus, when I see the criticisms that are made, as much abroad as in this country—when I read parallel facts as to the two vaccinations, in which the parallel is always unfavourable to animal lymph—I shall be allowed, it is indeed my duty, to combat the objections made to the latter.

These objections are ranged under three heads: 1. The transmission of animal lymph, even from the calf to the arm direct, is less certain in its results than that of lymph taken from arm to arm; 2. Animal lymph does not keep so well as humanised lymph; 3. The transmission of lymph from calf to calf is liable to frequent interruptions, even in the hands of the best operators.

1. *The transmission even from calf to arm is uncertain.* This assertion is the result of an inquiry made ten years ago, when the method was yet in its infancy, and when experience had not yet laid down its principles. In 1869, it was not known, as it is now, that the vaccine vesicle gives a product which is more active in proportion as it is younger. In more than one institute, lymph was then still used which had been taken from vesicles seven or even eight days old. Now it is no longer the same; it is in the course of the fifth day from the inoculation that the lymph is taken, whether for preservation or for immediate vaccination; and since then the results have completely changed. As I said a moment ago, no puncture fails when all the conditions are observed. I shall refrain from bringing forward, in support of this, copious statistics; I prefer to call to witness all those who have watched my operations—Mr. Ernest Hart, for example, who has seen my results—I should prefer, in short, to confine myself to a simple affirmation, resting on my honour. This result is now so certain that the vaccinators of the Brussels district send to me, each week, children to convert into vaccinifers. There has not been a single instance of these children being sent back on account of failure. And here I would make an observation that must not be omitted. In the same way as animal lymph, that derived from the arms of children is more active the younger it is; but in the child it is difficult to have recourse to this early taking of lymph without occasioning pain, and perhaps unpleasant traumatism. Moreover, how much lymph can be got from a vesicle on a child before the end of the seventh day? It is with difficulty that one gets at the lymph, and however little pressure or probing is used, blood comes. If, then, it were shown that lymph is only really active when taken five or six days after inoculation—and opinion takes this direction—it would soon run short, not only because the crop would not be abundant enough, but because the greater proportion of mothers would refuse to allow the hardly developed vesicles to be touched. Neither of these difficulties hampers animal lymph, for the pincers express at the fifth day innumerable drops of the most limpid and active lymph from the vaccine vesicles on the animal.

2. *Animal lymph does not keep so well as human lymph.* This assertion, like the preceding, belongs to the legend of the past. From the first, it was never true as regards dry lymph on ivory points. During the twelve years that we have made use of it in this form, it has shown a longevity comparable to that of human lymph in whatever form it was kept, and it is to it that the Belgian physicians owe the success of which we have spoken above. It is to it also that many colleagues living in the most distant countries—India and America—have had recourse many times, with success, for renewing their stock from ours. But it has not been always the same with regard to lymph preserved in tubes. At the commencement of our work, our failure was such that we had one day to utter this cry of distress: "If we do not succeed in preserving liquid animal lymph better than before, tubes will be the ruin of the new method." And indeed the matter, taken directly and without any preparation from the pustule, rapidly coagulates in the tubes and cannot be expelled therefrom: to such a degree in fact, that for several years we only sent out points, failing constantly with lymph in tubes. It is different since, by a most simple method, we have introduced the animal lymph into the tubes only after it has been defibrinated. It is thus kept in a perfect state of limpidity, and maintains its activity so well (the tubes are closed without the use of heat) that we have been able lately to inoculate a calf without any failure with tubes which had been filled in this way several months before. Let us, then, hear no more of this old stereotyped argument, which, true ten years ago, is now obsolete and no longer deserves any credit. Animal lymph defibrinated and inserted with the needful care into tubes closed without

heat, by paraffin or an artificial capsule, keeps as long and as well as humanised lymph.

3. The third objection remains: *the transmission of lymph from calf to calf is liable to frequent interruptions, even in the hands of the best operators.* In order to reply to this, I would ask permission to reproduce the following passage from a report which I addressed some months ago to the Minister of the Interior at Brussels, on the administration of the State Vaccine Institute, the direction of which is confided to me. The question which was put to me by the Government was this: "The aim of the State Vaccine Institute has been principally to promote the production and gratuitous distribution throughout the whole country of vaccine lymph. To what extent has this aim been attained?" I quote from my reply: "To answer this question, it will be sufficient to inform you, as to the first point, that, since the establishment was created [its formation dates from the 11th July 1868] it has continuously produced, without a day of intermission, all the lymph necessary for the requirements, however extensive they might be, of vaccination and revaccination throughout the country. The production of lymph has not then been promoted merely, it has been realised without interruption and without limits. As to the second point, there is not a doctor in Belgium who, at whatever moment he might require it, has not been gratuitously put in possession of lymph asked for by him for the renewal of his stock. In what measure have practitioners profited by this permission? Their demands have increased from year to year; so much so that, of nearly 2,000 medical men practising in Belgium, all of whom do not vaccinate, rather more than 1,200 have, during the year 1878, had recourse either once or more to our establishment with a view to the renewal of their stock. The regularity and promptitude of dispatch have left nothing to be desired. With very rare exceptions, the lymph asked for by letter has been sent by return of post, and practitioners have been thus put in possession, within twenty-four hours, even in most remote parts of the country, of the animal lymph asked for by them. Many times, under urgent circumstances, doctors have made demands by telegraph. Never have these demands remained an hour uncomplied with. The service to the public has been performed with the same rapidity and punctuality. Once, during the serious small-pox epidemic of 1870-1, which brought requisitions without number—as many as five hundred a day for a considerable period—the same punctuality and promptitude characterised the despatch. I may be permitted here to say incidentally, as an example of the immense service rendered to the country by the State Vaccine Institute, that revaccination, that prophylactic measure of so great an importance as to be equalled by no other in the vast field of public or private hygiene, is one of its best results; and that this fact dates from the day when the service was created. Up to that time, revaccination had only been recommended, or at least demanded exceptionally. To escape a danger that they preferred to doubt, people refused to submit themselves to an operation of which they were pleased, on the other hand, to exaggerate the peril. Now, the repugnance to the insertion of human lymph has given place, conquered by animal lymph, to favour. In Belgium, revaccination has now taken its place in the customs of the intelligent part of the community, who are henceforth quite ready to obey the word of command that we have given to the public, and which we have formulated as follows:—'Revaccination is a safe rampart against small-pox, if the resistance it ensures be proportionate to the violence of the attack'. Now, a recent successful revaccination gives this impregnable resistance. It is necessary, then, to be revaccinated every time that there is an epidemic of small-pox in the neighbourhood, and the more scrupulously in proportion as the epidemic is intense. For all those who follow this prescription, and the number of them is now great, small-pox,—that most terrible of all maladies—has no danger. The security given to families ought to be carried to the credit of the Institute as an inestimable benefit."

I shall here conclude this quotation, which I have used as a preface to my reply to the objection under discussion; but, before making this reply, I shall be allowed, I think, to remark that England, in systematically rejecting animal vaccination, as it has officially done up to the present, has thus neglected to deprive revaccination of the principal obstacle which has been obstinately thrown in the path of its general acceptance, and that it has by this neglect committed a fault for which public opinion has, perhaps, the right to reproach it. However this may be, the objection founded on the difficulties of execution is disposed of by the facts already stated. If he who speaks to you has been able during more than ten years to preserve his animal vaccination service from all interruption, the pursuit of a similar object and the execution of a similar programme cannot be beyond human power. What has been done in Belgium can be done in England. But will the organisation and the direction of such a service be an easy task? Very far from the truth would he be who had such a notion. One can, indeed, hardly realise all the zeal, the care, the incessant supervision exacted by such an enterprise, and in default of which all the wheels of the machine will stop at once.

It is especially necessary that care be taken to inoculate new animals at the precise moment when the vesicles of the vaccinifer are in all their activity, in default of which the risk is incurred of only having an unsatisfactory vesiculation, or even a totally abortive one. It is necessary to watch with a constant solicitude the health of the animal in use, the loss of which when the stock has but one branch would stop the whole of the working. It is necessary, in short, to collect the lymph oneself, so as to take it from good vesicles and to avoid the irregularities and the faults of inexperienced or unscrupulous assistants. My experience has shown me the importance of care even in the very smallest trifles.

During the year of my novitiate, only one calf was, as a rule, brought each week to the establishment and inoculated. But it happened more than once that the single animal, on which rested all the hope of the work, gave defective or insufficient results; perhaps because it was in poor or bad health, or from some other cause. From this arose great annoyance and great mischief, against which it was necessary to be constantly on the watch. Since 1869, the Direction has taken the excellent course of always maintaining a double source of supply by means of two calves each week; moreover, it has made arrangements with a foreign correspondent, who every week sends it some tubes from his own supply. In this way, interruptions in the working are almost impossible. Since these measures were taken, the Director of the Brussels Institute can go to rest with a light heart, and without being condemned at the first failure to be buried alive after the fashion of negligent or unfaithful vestals. Thus, so far from wishing to deny the difficulties of the enterprise, we are the first to recognise them. It is because they are real that the greater number of isolated experimenters, having only their zeal and insufficient experience to support their efforts, have almost invariably failed, to the great detriment of the reputation of the method, which they hastened to impugn. Animal vaccination was worth nothing, they said; when it was only those who performed it—and performed it badly—who should be held responsible for its constant unsuccess.

From this have arisen premature judgments, which continue to weigh upon a method as yet imperfectly understood. We formally lodge an appeal against the conclusions of Dr. Seaton's report of 1869; but we think it right to state the spirit in which this appeal has been made, and the grounds upon which it rests. We are only doing our duty in paying merited respect to the high impartiality, the wisdom, the great experience of the author of that report. His deductions spring naturally from the facts ascertained by his researches; but let us say at once that what might have been correct ten years ago is now so no longer. The method has thrown off its swaddling clothes; it is no longer a child, but a full grown man, who has outgrown all the imperfections of youth.

Animal vaccination can, then, proceed henceforward with a firm step; but on the condition that it is confided to trusty guides. These guides should possess three essential qualities—experience, accuracy, and the sinews of every enterprise, "ways and means". Confide the creation of a vaccine institute to inexperienced hands, and you will condemn it beforehand to sterility; put it in able hands, and success is assured, if you do not cripple its resources. And let it not be thought that the necessary expenditure for such an institution attains considerable proportions. I estimate that, for an annual expenditure of a thousand pounds, London could keep up a first-class vaccine institute, and derive immeasurable advantage from it.

There still remain two points for me to touch upon. We have already seen that animal vaccination has been reproached with being uncertain in result; in other words, with wanting in activity. We know what this allegation is worth. But there are others who reproach it with having too great an activity. An university professor, otherwise a very estimable man, repeats every year to his pupils in the same unvarying tone, that humanised lymph is preferable to animal lymph, because the latter is too strong, because it gives rise to phlegmons, etc. What can we understand by all this, if not that he has confounded the method in its principle and in its applications? If he had compared the two lymphs by employing them according to the same method, this notion would never have possessed him; but he has been spoken to about the scarifications made for the purpose of utilising the lymph on points, and the disasters (!) which they cause. He has been shown pustules made by means of lymph inserted into deep, wide, and painful incisions, sometimes ingenuously made with the badly sharpened end of the ivory points themselves. And he has believed all this, and has arrived at the conclusions which have just been quoted.

So there is not enough activity on one side, and too much activity on the other. All this would be unpleasant if we had not, to cut the matter short, the high authority of Dr. Seaton, which cannot be impugned. Dr. Seaton says: "Neither in the size of the vesicle, nor in the intensity of the local symptoms, nor in the length of period which the eruption takes to run its course, is there any notable difference" between animal and humanised lymph. And this is the truth. If any do not share in this opinion, it is because they have observed badly and have not understood, for example, that if very young animal lymph give rise to a luxuriant eruption upon which we must congratulate ourselves, it would doubtless be the same if human lymph equally well chosen were made use of, and that the contrary would take place under opposite circumstances.

Let us pass to the conclusions. Does animal vaccination preserve from small-pox as does humanised vaccination? Up to the present, no one has contested this, and we have no taste for fighting windmills. We confine ourselves, therefore, to what we wrote five years ago on this subject. "Out of more than ten thousand children vaccinated at Brussels with animal lymph, from 1865 to 1870, and who went through the terrible epidemic of small-pox which in 1870 and 1871 frightened the world, not a single one was, to my knowledge, reported as having been attacked by the disease. The same immunity was shared by those —a much larger number—whom I had revaccinated, and who, at the same period were living in epidemic centres." Three years later, in 1878, wishing to have a clear conscience, we appealed to our colleagues, at a meeting of the Belgian Academy of Medicine, in the following terms. "I have said before that no such case had been reported to me. I repeat it; and, up to the present, none of the numerous practitioners that I have questioned on the subject have contradicted me. Have there not been any? It seems to me impossible. However this may be, I appeal to the medical officers of hospitals and charities to clear up the point, which, on account of the deductions to be drawn from it, requires to be strictly verified." This appeal has remained, and still remains, without reply. Such a silence is what I hope to inspire in you as the most eloquent testimony in favour of the method of which I am the most confident defender.

In spite of all this, there are yet found men, high in scientific and public opinion, who, relying upon distant experiences, badly done and badly construed, and upon opinions which they maintain because they have not the courage to abandon them, persist in repeating, every time that they have the chance, that animal vaccination is a bad thing. Let us content ourselves with answering them—relying on the reasons that we have just brought forward—with this other formula, which is just as distinct and is perfectly true, that animal vaccination is a good thing.

I will conclude by stating precisely the position that I recommend should be assigned to animal vaccination. This position has not the exclusive character that might be inferred. In the recent report which I addressed to the Minister of the Interior of Belgium, and to which I have referred above, I have thus frankly explained it. The State Vaccine Institute, whilst being the supporting column of vaccination in the country, ought not to have any thought or claim of substituting itself for the traditional practices. Vaccination from arm-to-arm, strong in its ancient rights, is, and will long yet remain, the greatest strength against small-pox, and nothing ought to be omitted to encourage and regulate it. Animal vaccination ought now only to be its faithful auxiliary, but an auxiliary so useful, that it would be as unjustifiable to pass it by as to desire to upset suddenly the classical method.

These are, gentlemen, the considerations which I have had the honour of placing before you. If I am permitted to come from so far to bring them, it is not because I had great confidence in my feeble resources. But I have thought that your kindness would not fail me; and I remember especially that I am in the country where one of its greatest orators, I think, Mr. Gladstone, has said those charming words, which come so appositely to screen my insufficiency: "The success of the orator is in the feeling, not of him who speaks, but of him who listens."

TOTTENHAM.—This is a very practical little report, and shows much real progress. The death-rate for 1878 was 17.3, the total number of deaths being 590. Of these, 97 were from zymotic diseases, giving a rate of 2.8 per 1,000. Enteric fever caused 7 deaths, scarlatina 21, diarrhœa 26, diphtheria 9, whooping-cough 19, measles 13, and small-pox 2. One long-standing trade nuisance has been got rid of, and another is much less offensive. Hille's process of treatment of sewage, which has been in constant use for three years, is well spoken of, and the sludge is removed without difficulty. The water has been most favourably reported on each month by Dr. Frankland, though a constant supply is a desideratum. A disinfecting oven and a proper mortuary seem to be wanted in this rapidly-growing district.

RESEARCHES

ON THE

TEMPERATURE IN PHTHISIS AND SOME OTHER DISEASES:

WITH REMARKS ON THE GENERAL VALUE OF THERMOMETRIC OBSERVATIONS IN DISEASED CONDITIONS.

An Address delivered at the Opening of the Session of the Liverpool Medical Institution, October 1878.

BY A. T. H. WATERS, M.D., F.R.C.P.,

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As a contrast to the oscillations of temperature in acute phthisis, let me call your attention to those of acute capillary bronchitis. Under ordinary circumstances in bronchitis attacking the larger tubes, the temperature does not rise high; but, in capillary bronchitis, the rise is often considerable. It rarely, however, reaches the elevation of acute pneumonic, or even acute tubercular phthisis. There is, in some cases, a difculty in making a differential diagnosis between acute capillary bronchitis, and acute phthisis. I think the thermometer affords important aid in such cases; and I have been able, by its use—by recognising that the temperature did not reach a great height, although it was sustained for many days at a rather high level—to give a favourable prognosis, although the physical signs were such as might have existed in acute phthisis.

Let me call your attention to Table No. VIII, which represents the temperature-movements in a case of severe capillary bronchitis. The oscillations were very decided; but you will observe that, unlike that which occurs in phthisis, or typhoid fever, the temperature was highest in the morning—much higher, indeed at 9 A.M. than at 9 P.M.; and this is not an isolated case; in several others of a like nature, I have found the temperature highest in the morning.

TABLE VIII.—*M. C., aged 28. Acute Capillary Bronchitis.*

Date.	Morning.	Evening.
February 7	—	101.2
,, 8	100.6	100.8
,, 9	101.5	101.7
,, 10	102.0	102.3
,, 11	103.2	99.0
,, 12	104.0	100.0
,, 13	103.0	99.0
,, 14	103.2	99.6
,, 15	102.6	99.2
,, 16	102.8	99.1
,, 17	101.6	100.0
,, 18	100.2	99.6
,, 19	98.6	99.0
,, 20	98.6	98.6
,, 21	98.0	98.6
,, 22	98.6	98.4

Table No. IX represents the temperature in the case of a woman who was admitted into the Infirmary under my care. Her condition for several days was such that I was unable to form a correct opinion of the nature of her disease. From the temperature, pulse, and general aspect, as well as the physical signs, I feared that we had to deal with a case of acute tuberculosis of the lungs. Soon, however, the temperature began to assume oscillations, which made me hope that no tubercular disease existed. The temperature was highest in the morning. Gradually the patient improved, and made a satisfactory recovery. The case turned out to be one of acute capillary bronchitis, with probably some localised pneumonia.

The differential diagnosis between phthisis with cavities, and some cases of bronchitis with dilated bronchi is by no means easy. Without attaching undue importance to thermometric observations, it cannot be doubted that, while the physical signs may be such as to admit of hesitation as to the exact nature of the affection, the thermometer may afford valuable aid. I have referred to the fact that, in capillary bronchitis, I have found that the temperature does not have the afternoon, or evening rise so common in phthisis; on the contrary, the temperature is highest in the morning. In the following case, which simulated in a great measure one of chronic phthisis, but which I diagnosed—I believe correctly, as far as could be judged by the course which the disease took —as one of bronchiectasis, I was aided much by the thermometer. The temperature never rose high; and, instead of having an evening exacerbation, had almost invariably an evening remission.

* Concluded from p. 808 of JOURNAL for November 22nd.

TABLE IX.—*E. B., aged* 25. *Acute Capillary Bronchitis.*

Date.	9 A.M.	5 P.M.	9 P.M.
November 30	—	—	102.4
December 1	102.8	103.0	102.6
,, 2	102.7	—	102.6
,, 3	103.4	101.2	101.8
,, 4	100.7	102.2	103.7
,, 5	102.6	101.9	102.3
,, 6	105.8	101.4	101.4
,, 7	103.7	99.4	101.2
,, 8	103.4	102.0	101.7
,, 9	101.8	101.0	102.1
,, 10	103.4	—	99.3
,, 11	102.0	99.5	101.0
,, 12	102.0	100.5	100.2
,, 13	102.0	—	101.4
,, 14	102.0	99.9	100.2
,, 15	100.2	—	99.2
,, 16	99.5	99.2	99.9
,, 17	100.9	—	—
,, 18	100.2	99.5	99.5
,, 19	99.4	—	99.0
,, 20	99.0	98.6	99.0

TABLE X.—*J. S. Bronchitis: Bronchiectasis*

Date.	Morning.	Evening.
October 17	100.2	98.6
,, 18	99.6	99.0
,, 19	99.8	98.6
,, 20	100.4	99.3
,, 21	98.9	99.4
,, 22	100.0	98.0
,, 23	99.2	100.2
,, 24	99.0	99.5
,, 25	100.5	98.6
,, 26	100.0	98.6
,, 27	100.1	99.0
,, 28	100.6	99.2
,, 29	100.3	98.6
,, 30	99.6	99.0
,, 31	100.0	99.3
Nov. 1	99.8	98.6
,, 2	100.0	99.0
,, 3	98.6	98.6

Very important indications of the existence of phthisis are often afforded by the use of the thermometer before any physical signs can be detected. As a remarkable instance of elevation of temperature in such a case, let me call your attention to the following.

M. C. (Table XI) was admitted into the Infirmary under my care on February 12th, 1878. She complained of having had shiverings, and of feeling generally ill. Her temperature on the day after admission was 101 deg. in the morning, and 102.4 deg. in the evening; and the following morning it had fallen to the normal. A careful examination of the patient was made, and no physical signs of disease could be detected in the lungs or elsewhere. There was neither cough nor expectoration. On the evening of this day, the temperature rose to 102.8 deg. at 5 o'clock, and at 9 it had fallen to 100.2 deg. The following day, at 2 P.M., it rose to 103.8 deg., and at 9 P.M. it was down to 100.2 deg.; the next day two rises occurred. These elevations of temperature were accompanied with shiverings, almost approaching to decided rigors, so that the case presented very much the aspect of an irregular quotidian ague, or one of septicæmia.

TABLE XI.—*M. C., aged* 40. *Phthisis.*

February 13	Morning	101.0
,, ,, ...	Evening	102.4
,, 14	9 A.M.	99.0
,, ,, ...	5 P.M.	102.8
,, ,, ...	9 P.M.	100.2
,, 15	9 A.M.	101.7
,, ,, ...	1 P.M.	101.0
,, ,, ...	2 P.M.	103.8
,, ,, ...	5 P.M.	101.5
,, ,, ...	9 P.M.	99.2

The diagnosis at which I arrived was, that the case was one of phthisis; but for several days, although the chest was carefully examined from day to day, no physical signs of lung-mischief could be detected. After a time, however, slight crepitation was noticed at the right apex, and the nature of the case became clear. I considered it one of catarrhal pneumonic phthisis of a subacute form.

For some days, the temperature was irregular in its elevations and depressions; but, as the disease became pronounced, the alterations of temperature assumed a form which is, I believe, the most frequent type in phthisis—namely, that the temperature is highest at or about 5 to 6 P.M., that a fall begins from 5 to 7 P.M., that at 9 P.M. there has been a considerable fall, and that a low level is maintained during the night and forenoon.

And it is to this part of the subject that I now wish to call your attention.

In a large number of cases of phthisis—whether acute, subacute, or chronic—I have found that the temperature has been highest at or near five o'clock in the afternoon; that, as a rule, there is a decided fall of temperature before 9 o'clock P.M.; and that the temperature is low in the morning. There can be no doubt, I think, that there are different types as regards temperature in phthisical cases. There are some cases in which it is highest late in the evening, nine o'clock or so. There are other cases in which the temperature is highest in the morning. These are, however, very exceptional cases; indeed, I think this kind of temperature only occurs under exceptional circumstances—circumstances of a passing character. Then, again, there are some cases of phthisis which have two exacerbations, and two remissions in the twenty-four hours, simulating, in this respect, cases of septicæmia. But of a series of cases, now amounting to a large number, and including several thousand separate observations, the main results are as I have stated.

I must now call your attention to a series of tables in illustration of the point to which I have referred.

Table No. XII shows the temperature of the patient already referred to, as having a very high temperature before any physical signs of lung-disease could be detected. The temperature in this case, and also in those which follow, was taken at 9 A.M., 5 P.M., and 9 P.M.

TABLE XII.—*M. C., aged* 40. *Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
March 8	98.5	101.6	100.5
,, 9	100.8	—	102.0
,, 10	98.6	103.5	101.0
,, 11	98.6	101.5	100.8
,, 12	101.5	102.7	102.0
,, 13	99.0	102.8	102.0
,, 14	100.6	102.7	101.0
,, 15	99.7	101.8	100.0
,, 16	101.8	103.0	101.0
,, 17	99.7	103.8	101.6
,, 18	98.4	102.6	100

Table No. XIII gives the hourly variations of temperature for an entire day in the same patient.

TABLE XIII.—*Hourly Variations of Temperature in the case of M. C.*

March 15	7 A.M.	97.2
,, ,, ...	8 ,, ...	97.6
,, ,, ...	9 ,, ...	98.0
,, ,, ...	10 ,, ...	99.0
,, ,, ...	11 ,, ...	99.6
,, ,, ...	12 ,, ...	99.6
,, ,, ...	1 P.M.	99.6
,, ,, ...	2 ,, ...	99.7
,, ,, ...	3 ,, ...	100.0
,, ,, ...	4 ,, ...	100.6
,, ,, ...	5 ,, ...	101.6
,, ,, ...	6 ,, ...	102.0
,, ,, ...	7 ,, ...	101.4
,, ,, ...	8 ,, ...	100.4
,, ,, ...	9 ,, ...	100.0
,, ,, ...	10 ,, ...	99.8
,, ,, ...	11 ,, ...	99.6
,, ,, ...	12 ,, ...	98.8
March 16	1 A.M.	98.5
,, ,, ...	2 ,, ...	97.4
,, ,, ...	3 ,, ...	97.4
,, ,, ...	4 ,, ...	98.3
,, ,, ...	5 ,, ...	98.3
,, ,, ...	6 ,, ...	97.6

Table No. XIV shows the temperature of a case of phthisis in the third stage (active), taken three times a day.

TABLE XIV.—*R. T., aged* 35. *Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
March 10	101.2	101.8	100.4
,, 11	100.0	102.0	101.0
,, 12	101.0	102.4	101.5
,, 13	101.0	102.5	101.6
,, 14	100.0	101.0	102.0
,, 15	99.2	101.6	101.0
,, 16	100.0	102.4	101.0
,, 17	102.0	102.6	101.0
,, 18	102.0	102.7	100.9
,, 19	102.6	103.0	100.2
,, 20	101.0	102.6	101.0
,, 21	102.0	102.5	101.5
,, 22	102.5	103.0	101.0
,, 23	101.0	102.5	101.7
,, 24	99.0	101.2	101.0

Table No. XV shows the variations of temperature in the same case for one day, at 4, 5, 6, 7, 8, and 9 P.M.

TABLE XV.—*Hourly Variations of Temperature in case of R. T.*

March 28	4 P.M.	100.7
,, ,,	5 ,,	101.5
,, ,,	6 ,,	102.0
,, ,,	7 ,,	102.0
,, ,,	8 ,,	101.4
,, ,,	9 ,,	101.1

Table No. XVI shows the temperature in the same patient when the disease had advanced further, when both lungs were riddled with cavities, and the patient was extremely emaciated. You will observe that the temperature was irregular. I have little doubt that, if it had been taken hourly every day, it would have been found that there was more than one exacerbation followed by remission during the day. Profuse perspirations occurred at various times—sometimes in the middle of the day; these were attended occasionally with high temperatures. On April 20th, at 1 P.M., the temperature was 103.6 deg., and the patient was perspiring freely.

TABLE XVI.—*R. T., aged* 35. *Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
April 20	—	101.0	100.5
,, 21	100.0	101.2	102.0
,, 22	103.0	103.8	103.5
,, 23	102.0	101.0	101.9
,, 24	103.0	101.0	100.9
,, 25	100.6	99.0	99.4
,, 26	100.2	101.8	102.0
,, 27	102.5	101.0	100.3
,, 28	99.6	102.0	101.8
,, 29	102.6	101.5	101.0
,, 30	102.8	103.3	102.7
May 1	101.4	103.2	103.3
,, 2	102.0	103.6	103.6
,, 3	103.2	102.0	101.8

Table No. XVII shows the temperature in a case of phthisis running a somewhat acute course.

TABLE XVII.—*E. T. Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
April 24	102.0	104.0	103.2
,, 25	102.4	103.8	103.3
,, 26	100.0	103.6	102.7
,, 27	100.0	103.6	102.6
,, 28	99.0	102.4	101.3
,, 29	100.0	101.8	101.7
,, 30	101.0	103.0	102.5
May 1	100.8	102.7	102.8
,, 2	101.0	102.7	102.6
,, 3	101.0	103.4	102.8
,, 4	102.0	103.4	103.0
,, 5	101.4	102.5	102.6
,, 6	100.3	103.0	102.0
,, 7	99.8	102.5	102.0
,, 8	100.4	102.3	102.0

Table No. XVIII shows the temperature in a case of phthisis in the third stage attended with *diuresis*.

TABLE XVIII.—*E. W. Phthisis, third stage.*

Date.	9 A.M.	5 P.M.	9 P.M.
March 25	100.0	102.4	100.0
,, 26	99.5	101.5	100.7
,, 27	100.0	102.4	101.0
,, 28	100.0	101.8	100.7
,, 29	99.5	102.0	101.5
,, 30	100.7	101.7	100.1
,, 31	99.0	102.0	101.0
April 1	99.5	101.8	101.2
,, 2	100.0	101.0	100.7
,, 3	99.8	102.1	101.7
,, 4	100.6	102.5	101.6
,, 5	100.9	102.0	100.9
,, 6	99.9	102.4	101.4
,, 7	100.0	101.6	100.9

Table No. XIX shows the temperature in the same case for one day, taken at 5, 6, 7, 8, 9 P.M.

TABLE XIX.—*Variations of Temperature in the case of E. W.*

April 11	5 P.M.	102.0
,, ,,	6 ,,	102.0
,, ,,	7 ,,	101.4
,, ,,	8 ,,	100.0
,, ,,	9 ,,	100.0

Table No. XX shows the temperature in a case of phthisis in the early stage.

TABLE XX.—*M. McG., aged* 17. *Phthisis: Early stage.*

Date.	9 A.M.	5 P.M.	9 P.M.
April 2	99.2	100.7	100.0
,, 3	99.1	101.0	100.6
,, 4	98.6	100.8	100.0
,, 5	99.0	101.0	100.0
,, 6	98.6	101.0	100.0
,, 7	99.0	101.0	100.0
,, [illegible]	98.6	100.9	100.0
,, 9	99.5	101.0	100.1

But, in giving illustrations of what I have found to be the most frequent form of temperature-oscillation in phthisis, I must also add that there are many exceptions to the rule. In some cases, the temperature is highest late in the evening, about 9 o'clock, even to the extent of a degree or more; whilst, again, the usual fall which comes before that hour may be delayed, so that the temperature at 5 and 9 o'clock varies very little. (See Table No. XXI.)

TABLE XXI.—*E. M. Phthisis.*

Date.	9 A.M.	5 P.M.	9 P.M.
September 16	100.2	102.0	101.7
,, 17	98.8	102.5	103.0
,, 18	99.0	102.6	103.0
,, 19	100.0	102.5	103.0
,, 20	101.0	103.0	102.9
,, 21	100.3	103.0	103.2
,, 22	99.0	103.0	103.1
,, 23	100.8	102.6	102.0

I have already mentioned that in some cases more than one exacerbation followed by remission occurs. It is chiefly, I believe, in the later stages of the disease that this takes place. Table No. XXII shows the variations of temperature (in a case of phthisis in the third stage) during one day, taken every third hour. In this case, there were two distinct exacerbations.

TABLE XXII.—*Variations of Temperature. A. M. Phthisis.*

February 8	6 A.M.	101.0
,, ,,	9 ,,	101.6
,, ,,	12 ,,	99.0
,, ,,	3 P.M.	97.2
,, ,,	6 ,,	100.0
,, ,,	9 ,,	103.0
,, ,,	12 ,,	100.5
,, 9	3 A.M.	99.8
,, ,,	6 ,,	100.5

As the result of these observations, it would appear that, whether phthisis is in an early or a late stage, if active mischief be going on, there are, as a rule, important variations of temperature, and that in a majority of cases—I believe in a very large majority—the highest temperature is marked about or near 5 o'clock P.M., and that there is a very decided remission in the morning. I need not insist on the importance of this fact in reference to the diagnosis of phthisis, and on the great error we might commit in estimating the condition of a patient by a single thermometric observation, made, for instance, in the morning in our own consultation rooms, just at the time when the temperature is lowest. No temperature-observations can be relied on in forming a diagnosis in a case of incipient phthisis, unless made at least twice or thrice a day; and, if only one observation can be made, the worst time for it is the morning.

I cannot stop to consider at any length the question as to how far phthisis may be progressive without there being any elevation of temperature. It is quite certain that some cases are met with where there is little or no elevation, but these are exceptional.

In considering the facts which I have brought under your notice, one cannot help asking whether this particular form of temperature-oscillation is a characteristic of phthisis, or whether it may not be so of all forms of allied diseases. I have endeavoured to ascertain what is the usual course in other forms of tuberculous affections, as of the bones, peritoneum, etc.; but at present my facts are not sufficient to warrant me in coming to any definite conclusion, and I must wait for further inquiries. I will, however, refer to some cases which have a bearing on the subject.

In lumbar abscess and caries of the bones, I have found a more elevated temperature in the evening than in the morning. In one case of pelvic abscess with diseased bone, the temperature was for a few days taken at nine, five, and nine, and it was always highest at five.

In a very interesting case of peritoneal inflammation, which was for

a long time very obscure as to its real nature, the observation of the temperature led me to infer that there was some tuberculous condition. The most careful examination of the lungs revealed no disease, and the physical signs observed in the abdomen were such as might be consistent with the formation of a tumour. In the progress of the case, the temperature assumed the type which I have referred to as existing so often in phthisis; and I was led to express an opinion that there was some tuberculous condition present. The temperature-oscillations are represented in Table No. XXIII. The patient died, and the necropsy revealed the existence of tubercular peritonitis, and a very few tubercles were found in the lungs.

TABLE XXIII.—*M. C., aged* 28. *Tuberculous Peritonitis: a few Tubercles in the Lungs.*

Date	9 A.M.	5 P.M.	9 P.M.
April 26	99.0	102.0	102.6
,, 27	101.0	102.0	101.6
,, 28	98.6	103.0	102.3
,, 29	98.6	102.0	101.9
,, 30	100.3	103.0	102.5
May 1	99.8	104.0	102.8
,, 2	99.0	104.6	103.9
,, 3	99.4	103.6	101.3
,, 4	98.6	103.7	102.0
,, 5	98.3	103.0	101.8
,, 6	98.3	102.6	102.0
,, 7	99.0	102.0	101.3
,, [illegible]	98.6	101.4	100.6
,, 9	99.3	101.0	100.8
,, 10	99.0	100.8	100.8
,, 11	98.3	100.3	100.0

In considering these temperature-oscillations, it is impossible not to note that, to a certain extent, they seem to be exaggerations of the normal changes. In the healthy, there is a fall in the evening and early morning. So in phthisis; but, then, in the healthy, the late morning temperature is fairly high, whilst in phthisis it is often very low.

But I must now pass on to consider another subject. How important becomes the use of the thermometer in the early days of a typhoid fever, when, perhaps, there is no definite symptom to attract attention; but yet the thermometer reveals an abnormal temperature with evening exacerbations and morning remissions, thus enabling us to surmise, if we cannot absolutely diagnose, the existence of the disease. Here, however, I must say that conditions are often met with which must warn us not to attach too much importance to mere temperature. Whilst many a so-called feverish cold has shown itself by its development to be an attack of typhoid, the existence of which might have been feared had the temperature been taken, so, on the other hand, cases are by no means infrequently met with in which no inflammatory conditions can be recognised, where the temperature is so high and the general state such as to give rise to the fear that typhoid may exist, but where, after the increased heat has been maintained for a few days, defervescence occurs, and the real nature of the case becomes apparent. As an illustration of what I mean, let me call your attention to the Table No. XXIV.

I was called to attend in consultation a gentleman aged 23, who, living in a house in which the drainage was by no means satisfactory, was seized with feverish symptoms. There was no evidence of inflammation, no sore-throat, no catarrhal symptoms; but the pulse was quick, and the temperature 101 deg. The following morning, it was 103.2 deg.; and, in the evening of the same day, it rose to 103.6 deg. The case went on with the alternations of temperature depicted in the table XXIV. There was slight delirium at night, gurgling in the right

TABLE XXIV.—*R. G., aged* 23. *Jaundice.*

Date.	Morning.	Evening.
September 22	101.2	—
,, 23	103.2	103.6
,, 24	102.6	—
,, 25	—	102.4
,, 26	103.6	103.2
,, 27	100.2	101.5
,, 28	99.3	101.0
,, 29	100.0	98.6
,, 30	98.6	—
October 1	98.6	—

iliac fossa, slight looseness of the bowels, but no tenderness of the abdomen. We hesitated as to the diagnosis. In the face of these symptoms, there was a fear that typhoid existed; and we insisted on a treatment of absolute rest, strict regimen, etc. On the sixth day of the attack, there was a decided defervescence, and, at the same time, a slight icteric tint appeared. On the following morning, the temperature was still lower, and now the case resolved itself into one of jaundice, doubtless due to a catarrhal condition of the bile-ducts.

There are several points in connection with the temperature of typhoid fever to which I should like to call your attention, but time forbids. One subject I will, however, refer to, viz., how far the pyrexia of typhoid simulates that of acute phthisis. It is well known that there are considerable oscillations in the temperature of typhoid, the evening temperature being higher than that of the morning; and, indeed, towards the end of an attack, there is a very marked morning defervescence, almost amounting to an intermission. But, in the early days of the fever, this does not obtain.

It has been usual with me to have the temperature of my fever cases taken twice a day only—at 9 A.M. and 9 P.M.; but of late I have had it taken three times daily, as in phthisis, at nine, five, and nine. My numbers are not yet enough to enable me to speak decidedly on the point; but I have found that, as a rule, the temperature is higher at 9 P.M. than at 5 P.M.; but this is not always so. In some cases, the temperature has been highest at 5 P.M.

Amongst the many interesting questions in connection with our subject is: What is the highest temperature which is consistent with the maintenance of life in the human economy? All observations hitherto made tend to show that, when the temperature of the body in any case of pyrexia reaches eight or ten degrees above the normal, there is grave danger unless the heat is speedily reduced. Wünderlich says that the highest recorded temperature in a living man was 112.55 deg. Fahr. Brodie found the temperature 111 deg. in a case of injury to the spinal cord. But this temperature was far surpassed by that which is said to have occurred in the remarkable case recorded by Mr. Teale of Scarborough, in which a lady, who suffered an injury whilst riding, is reported to have had a temperature which on one occasion reached 122 deg.; and Mr. Teale says that, during seven weeks, the temperature never fell below 108 deg., and rarely below 110 deg., and yet the patient recovered.

This case is so remarkable and so exceptional that I think we may set it aside as having no applicability to ordinary cases of fever; and we must, I think, in spite of it, conclude that a temperature of 110 to 112 deg. is not compatible with anything like a prolonged maintenance of life.

Cases of intermittent fever sometimes have a very high temperature. I have myself known a rise to 107 deg.; but Dr. Macintosh states that he has known a rise to 110 deg.; but, then, this high temperature soon subsides, a very rapid defervescence takes place.

In pneumonia, the temperature rarely rises above 106 deg. In a series of one hundred and six cases of the acute form of the disease which have occurred in my hospital practice, there is only one case in which the temperature reached 106 deg. in the axilla, and the case was not fatal. In only a small proportion of cases did the temperature (taken in the axilla) pass beyond 105 deg. The highest recorded temperatures in cases ending favourably that I am acquainted with are 106.7 deg. by Ziemssen, and 107 deg. by Kocker. In fatal cases, a temperature of 108.9 deg., 109.4 deg. has been reached before death.

An examination of the temperature-charts of cases of acute pneumonia affords interesting evidence of the nature of this pneumonic fever. It runs, in some cases, a very definite course; a high temperature is maintained for some time, a so-called crisis comes, and there is a very rapid defervescence. But this is by no means always the case. There are often two, or three decided remissions, followed by exacerbations, before the final defervescence comes. Tables No. XXV and XXVI illustrate these points.

TABLE XXV.—*R. T., aged* 17. *Pneumonia.*

Date.	Morning.	Evening.
January 17	—	106
,, 18	104.8	104.3
,, 19	104.3	105.4
,, 20	102.0	99.5
,, 21	97.5	98
,, 22	99.1	99.8
,, 23	99.2	99.4
,, 24	99.4	—
,, 25	99.0	—
,, 26	98.6	—

In cases of septicæmia, the temperature has risen to 109.6 deg., and yet life has been maintained; but apparently this has resulted from the fact that the heat has been quickly subdued by the external application of cold. Again, in typhoid fever, when the temperature has risen to an alarming height to over 107 deg., a rapid cooling has followed the use of the tepid bath, and life has been apparently thereby saved.

TABLE XXVI.—*J. W., aged* 14. *Pneumonia.*

Date.	9 A.M.	5 P.M.	9 P.M.
April 10	—	105.0	103.7
,, 11	101.7	102.0	102.8
,, 12	104.0	104.0	102.0
,, 13	100.5	103.0*	104.0
,, 14	99.0	—	98.6
,, 15	98.0	98.6	98.6
,, 16	99.0	98.6	99.0

* Same temperature at 1 P.M.

In injuries and diseases of the nervous system, very high temperatures have been recorded. I have referred to Brodie's and Teale's cases. But, in speaking of nervous diseases, I have never found, in my own experience, that life has been maintained when a temperature such as would be probably fatal in other diseases has been reached. Table No. XXVII shows the temperature of a man who was the subject of cerebral hæmorrhage, and also of a slight fracture of the internal table of the skull. He was admitted into the Infirmary under my care with apoplectic symptoms. For several days, the temperature was low; but, during the last three days of life, it rose considerably, and reached, shortly before death, 107.4 deg.

TABLE XXVII.—*Cerebral Hæmorrhage.*

Date.	Morning.	Evening.
November 11	98.6	98.6
,, 12	99.0	98.6
,, 13	100.0	98.0
,, 14	98.6	98.6
,, 15	99.0	99.0
,, 16	98.6	99.0
,, 17	98.6	99.0
,, 18	99.0	99.0
,, 19	98.6	99.0
,, 20	98.6	99.0
,, 21	100.0	103.0
,, 22	103.0	103.5
,, 23	105.0	106.0

Shortly before death, 107.4

Table No. XXVIII shows the temperature-ranges in a case of delirium tremens complicated with pneumonia. The first rise indicates the pneumonic fever from which the patient convalesced, but the delirium continued; and, before death, there was a decided rise in temperature, reaching 107.4 deg. shortly before dissolution.

TABLE XXVIII.—*S. S., aged* 32. *Delirium Tremens, with Pneumonia.*

Date.	Morning.	Evening.
November 7	—	98.6
,, 8	99.0	—
,, 9	100.8	99.7
,, 10	104.0	101.0
,, 11	101.0	100.4
,, 12	100.0	100.0
,, 13	99.0	100.7
,, 14	99.6	100.0
,, 15	99.0	100.0
,, 16	99.0	100.0
,, 17	99.0	101.0
,, 18	—	101.0
,, 19	99.0	100.0
,, 20	99.2	—
,, 21	102.4	104.5
,, 22	107.4	—

It would be very interesting, if time permitted, to consider the causes of increased temperature in pyrexia; but, perhaps, in the present uncertainty of our knowledge, it would not be very profitable. Although increased heat constitutes one of the most prominent symptoms of fever, it is assuredly only one of its factors, or one of its results; and yet it is impossible to shut our eyes to the great importance of carefully attending to it as an indication for treatment. When we see, in cases of septicæmia, of acute rheumatism, of typhoid fever, etc., the temperature rising to 107, 108, 109, or 110 deg.; and when, apparently as the direct result of this increased heat, we witness the gravest disturbances of the functions of the nervous centres, and dissolution threatened; and when, under the influence of external cold, we see the temperature rapidly fall, the coma disappear, the delirium subside, and the patient restored to a condition of comparative comfort and real safety, it is impossible not to come to the conclusion that this high temperature, whatever may be its essential nature, has been, in these cases, a main cause of the alarming symptoms which were present. Were the coma or the delirium due in either case to the poisoned or altered condition of the blood, the mere reduction of heat would scarcely afford the marked relief which we witness. Were the phenomena the result of some impression on the nervous centres produced by organic change, however slight, it is difficult to understand how this lowering of temperature could give rise to the rapid and striking alterations which are sometimes seen; and thus, I think, in our present state of knowledge, we must admit that temperature plays an important part in the phenomena of the pyrexial state; and, in studying the therapeutics of fever, we may well give a large share of our attention to those measures which have the effect of diminishing heat. This part of the subject is one on which I cannot enter now, although I hope on some future occasion to lay the results of my observations before the Society, and to speak of my experience on the use of cold applied externally, of quinine, of alcohol, of digitalis, of aconite, of salicylic acid, and of free nutrition as temperature-depressors in various forms of fever.

In estimating the rise and fall of temperature in disease, it is obvious that we cannot trust to our unaided senses; and that, in the thermometer, we possess a guide which, if properly used, can scarcely deceive us. The rapid rises of temperature which sometimes occur can only be recognised and appreciated by the application of this instrument of precision; and it cannot be doubted that it has in many cases rendered most valuable service, and been the means of saving life by pointing out the necessity for prompt and decided action.

THE BACTERIC ORIGIN OF TUBERCULOSIS, AND ITS ANTISEPTIC TREATMENT.

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I HAVE now before me a private letter from Dr. Max Schüller of Griefswald, and a copy of a short article by him, on the Treatment of Tuberculosis, extracted from the *Berliner Klinische Wochenschrift*. They both refer to a question of so much interest and importance, that they merit something more than a passing notice.

The substance of Dr. Max Schüller's letter is as follows. Some months ago, he published a paper describing experiments he had made on tuberculous or scrofulous rabbits, in order to study the effects of a treatment based on the theory of the bacteric origin of this disease, or rather of the artificial disease in his animals. These animals were infected by the throat with tuberculous matters, and so made tuberculous. Then he derived from the tubercular matters a small form of round bacterium or coccus by a process of Professor Klebs of Prague, which he names "*fractionirte Cultus*"; and with these he made the same experiments, and with the same results—viz., tuberculosis of the internal organs and a tuberculous inflammation of an injured knee-joint. He was thus convinced that tuberculosis in his animals was a disease caused by living elements or special organisms (*Monas tuberculös* of Klebs). He then tried certain drugs which he believed would have an inimical effect on the said organisms, and he found that, of the similarly infected animals, those that were not treated all died, in variable times; while those submitted to treatment not only remained alive, but recovered their health and increased in weight. He thought the results of his experiments justified him in appealing to medical practitioners to give a trial to what might prove a causally indicated treatment for a disease hitherto without any remedy. Professor Rokitansky of Innsbruck was one of the first to accept this invitation to make observations on man, and he is stated to have obtained good results. Dr. Max Schüller regrets that the newspapers should have published paragraphs with such sensational titles as "No more Tuberculosis": and he believes that the application of this mode of treatment to human subjects is attended with many more difficulties than in the case of animals, and that it requires to be continued for several months.

The drug he especially recommends is the benzoate of soda: this is inhaled in solution (2 to 5 per cent.) in distilled water, and by means of a spray-producer. For a man of average weight (sixty *kilogrammes*), the daily dose is from thirty to sixty *grammes*. If the stronger inhalation be not well borne, the drug can be given internally for several months, five to ten times a day, in *gramme* doses, in milk, and then weaker inhalations may be used. He considers it most important that the inhalations should be persisted in as often and as regularly as possible, through weeks and perhaps months; and the patient must "*devote his life to his cure*".

As, in order to give the smaller daily dose, viz., thirty *grammes*, it would be necessary for the patient to inhale the spray of twenty ounces of a five per cent. solution in the twenty-four hours, an ordinary

Siegle's spray-producer would prove quite inadequate, and it would be necessary to employ one of those used for surgical antiseptic dressings.

In private practice, two to four times a day will be often enough for the inhalations of the spray, and such inhalations should be prolonged for half-an-hour. The patient should, at first, be recommended to make as little effort as possible in inhaling, and only by degrees should he be allowed to make deeper inhalations. A period of rest should follow each inhalation.

Benzoate of soda (as obtained from Messrs. Bell and Co., Oxford Street), is a white granular powder, with a faint odour of benzoin, and a sweetish not unpleasant taste. It is freely soluble in water. It is sold at one shilliug and sixpence the ounce, and therefore is not very expensive, as has been stated.

The above is a condensed account of Dr. Max Schüller's recommendations and directions. I shall shortly call attention to some of my own observations.

ON SOME CASES OF ABNORMALLY HIGH TEMPERATURE.*

By HORATIO DONKIN, M.B.Oxon.,
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CASES of high temperature have been from time to time reported with more or less detail, involving contradictions to the generally received opinions as to the amount of heating the human body can undergo without dangerous symptoms or death. These have not had much weight, chiefly, perhaps, from being without an amount of evidence sufficient to outweigh their alleged *à priori* unlikelihood, and from a neglect of full precautions to exclude imposture, which has been known to play some part in the production of cases of this kind.

We are at present taught that the danger to life becomes great when the thermometer placed (with due care) on skin or mucous membrane registers over 106 deg.; and that a few degrees higher than this are incompatible with life, if not quickly reduced. The cases I am now about to quote seem to some extent to contradict this teaching; and, if genuine, to establish, first, that temperatures as high as 111 deg. Fahr. and even several degrees higher, may occur without any concomitant symptoms of danger, and often without any discoverable organic disease confessedly sufficient to account for the rise; but, secondly, that the high temperatures are probably of a very short duration.

The second of these statements, though it may appear at first sight to lessen the difficulty of believing in these cases of high temperature ending in recovery, really raises a greater difficulty; for how is the fact of rapid cooling through nine or ten degrees in a few minutes to be accounted for, in the present state of physical or physiological knowledge?

I shall relate the chief points of several cases which seem to bear upon this subject, giving shortly the evidence for the genuineness of the facts alleged. It will be rather my object here to call attention to the possible occurrence of these cases, and incite to further observation of them, than to theorise on their explanation; for, if the facts be true, their importance is obvious.

CASE I.—The first case I shall quote is that of a nurse, aged 19, at the East London Hospital for Children. At the end of an attack of enteric fever in January 1878, her temperature rose one afternoon to 105 deg., and in the evening, at 8.30, to 109.4 deg. She was put into a bath at 90 deg., with orders for the water to be gradually cooled to 60 deg. After ten minutes of the bath, a thermometer in the mouth showed 97.6 deg. After this date, all enteric symptoms soon disappeared; but for several months there were remarkable fluctuations of temperature, of which the following will serve as examples.

1. On January 25th, 1878, the temperature at midnight was 110 deg., taken twice (with no appreciable interval of time between the observations) with the same thermometer. Very soon afterwards, 109 deg. was registered by another thermometer. Again, the first thermometer being used, the temperature was found to be 108.4 deg. Shortly afterwards, a third thermometer in the mouth showed 108 deg.; and again the same at 12.30, only 98 deg. The first two thermometers, again used in the axilla, now showed 99.2 deg. From this time till 1 A.M., the temperature, taken in the mouth, axilla, and rectum, remained about 99 deg. The pulse was 92. The skin was not very hot to the touch, as I was informed. No observations were made as to respiration. I would note here, however, that when, on subsequent occasions, which, from the apparent evanescence of the high temperature, were very rare, actual observation was made of the skin and respirations, the number of the latter was considerably raised; and the skin, *at least* once, was found to be very hot to the touch.

2. Several temperatures between 107 and 110 deg. having occurred between the end of January and February 19th, and there being reason to believe that they lasted but a very short time, from the fact of it being very rare to get two successive high registrations, I had a registering thermometer strapped in the axilla, and noted every twenty-four hours. This was done every day till March 2nd. On each removal, the index showed a temperature of over 108 deg.; the highest being 111.6, 110.5, 110, and four times 109 deg. During this period, two temperatures of over 108 deg. and two of over 107 deg. were taken in the mouth, noted at the time.

The patient was removed on March 2nd to the Westminster Hospital, for further observation. During nearly a month there, the temperature behaved in the same way; the maximum thermometer showing registrations from 108 to 111 deg.; and the temperature, taken in the ordinary way in the mouth and axilla, being often over 105 deg., and sometimes as high as 108 and 109 deg. On one occasion (March 23rd, at 6 P.M.), the house-physician registered 107.2 deg. in the right axilla; the maximum thermometer, which had been in the left axilla for half an hour, showing 107.8 deg. Five minutes afterwards, the temperature in the mouth was 98.8 deg., and in the right axilla 98.6 deg. This observation shows (*a*) that the high temperature was not local—to one axilla, for instance; and (*b*) that the temperature apparently fell in five minutes through nearly nine degrees. At the time of this high temperature, the pulse was 102, the respirations 32, and the skin was very hot to the touch. With the temperature-fall, the respirations sank to 24.

It is to be remarked especially, with reference to this case, that the high temperatures were *generally unaccompanied by any discoverable constitutional symptom other than a feeling of "flushing", or "rushes of heat", described by the patient.* No organic disease has been discovered in the patient, after repeated and careful examination by many observers, with the exception of uterine retroflexion and displacement of the left ovary. She was more or less anæmic throughout, and suffered from amenorrhœa. She complained frequently of considerable pain in the left side of the abdomen, probably in the ovarian region; and was always, and is still, short of breath.

I have published this case at length in the *Lancet* of May 11th, 1878, and of March 15th, 1879; to which reports I must refer those who are interested in the subject. But, before leaving it, I must give some account of the precautions taken to establish the alleged facts, in view of their abnormality and apparent inexplicability.

1. *Several* trustworthy observers registered the high temperatures.

2. *Several* thermometers were used: a fact which renders the objection of the inaccuracy of the instrument untenable.

3. From an early period of the case, I treated the patient as an impostor, though there was never any reason for suspecting her; and her great anxiety to be considered, as she felt, well, would render it likely that any imposture would have been in the opposite direction. Feeling, however, that no personal factor should enter into a scientific investigation, I caused, on several occasions, strict precautions to be taken to detect imposture; such as manipulation of the thermometer, or changing it for another, etc., or the concealment of some heated substance in the bed. *E. g.*,

a. *Four* temperatures between 107.4 and 108.6 deg. were taken in the *mouth*, the patient being persistently watched.

b. A temperature of 106 deg. was observed by myself on March 2nd, 1878, the axilla having being previously examined, and the patient's hands being in view during the whole time.

c. A temperature of 108.4 deg. was taken in the axilla on March 13th by the House-Physician at the Westminster Hospital, who kept in view the patient's hands.

d. A temperature of 105.2 deg. was taken in the axilla when the patient was under the influence of chloroform (for a vaginal examination).

e. On February 21st, temperatures of 106 and 105.9 deg. respectively were shown by a registering and non-registering thermometer, held simultaneously *in the mouth.*

f. On one occasion, the thermometer kept in the axilla to register the maximum temperature, which appeared to be so evanescent, was covered with strapping, and the patient's arm was strapped firmly to her side. Seals were, moreover, placed on the strapping, rendering it apparently impossible for the instrument to be reached without detection. On removal of the strapping, the thermometer registered 109.6 deg.

For these reasons, I infer that the temperature of 111.6 deg., the

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

highest recorded in this case, though in this instance it was taken by the maximum thermometer without the special precautions used on the above occasions, may be taken as genuine. It may also be inferred, from numerous observations made, that it is likely that the high temperatures were always rapidly evanescent.

I have dwelt thus long on this case, as it is perhaps the only one that I am fully justified in considering as able to stand *alone* as establishing the facts alleged. For, though in some of the others the evidence is very strong, I have not been able to investigate and observe them personally to such a rigorous extent as the nature of the inquiries would claim. But, if genuine, as I believe them to be from the evidence in my possession, they are valuable as illustrations.

CASE II.—This case was kindly supplied to me by Dr. Greig Smith, of the Bristol Royal Infirmary, and was published by his permission in the *Lancet* of March 15th, 1879, to which I must refer for particulars and good evidence of precaution in the establishment of the facts. The temperature frequently rose to 108 deg., with no evidence of organic disease. The girl, aged 19, was very emotional, and suffered from abdominal pain, "ovarian" tenderness, and at first vomiting. She had "hot flushes" at the time of the high temperatures, and looked flushed. On one occasion, Dr. Smith found a temperature of 99 deg. ten minutes after one of 104 deg.

CASE III.—This was published by Dr. Ormerod in the *Lancet* of November 9th, 1878. A woman aged 32, among many other high temperatures, had one of 115.8 deg. There were great abdominal pain, and marked excitability, but no urgent symptoms; and no organic disease was discovered.

CASE IV.—Dr. Cheadle reports to me a case of a girl aged 18, in St. Mary's Hospital, convalescent from enteric fever, where a series of rapidly fluctuating temperatures occurred, beginning about one month after the fever had seemingly disappeared. The highest was 111 deg. One of 108.6 deg. was taken with every precaution by Dr. Cheadle himself.

CASE V.—This case was published by Mr. J. Cæsar in the *Lancet* of June 14th, 1879. Among other high temperatures, 113 deg. was taken. The girl, aged 15, was unconscious during the period in which the high temperatures occurred. She had been suffering from enteric fever, complicated by double pneumonia; but made a rapid and complete recovery. Mr. Cæsar himself made the observations of temperature.

CASE VI.—A man aged 34 was admitted into Westminster Hospital under my colleague Mr. Davy, with synovitis of the knee. After the actual cautery, he suffered great pain. His temperature on one occasion was found to be 112 deg.; on another, 110.4 deg. was noted, falling in twenty-five minutes to 100 deg. More than one thermometer were used; two having been tested and found to be nearly accurate by Dr. Dupré. There was no constitutional disturbance other than a feeling of great heat, and no evidence of organic disease or pus-collection. Great pain was always coincident with the high temperature.

CASE VII.—This case was of a woman aged 42, who was admitted into the London Hospital suffering great pain in the stump of a thigh, injured after amputation. She had several temperatures over 108 deg. On one occasion, 111.2 deg.; on another, 112 deg. There was profuse sweating. On incision into the stump, no pus was found; but the pain was relieved after the removal of some diseased bone, and the high temperatures occurred no more. There was evidence in this case that the high temperature did not probably last *more* than an hour; but no observation was made as to how *short* a time they may have continued. I am indebted for the notes of this case to Mr. J. Andrew Clark, the house-surgeon, from whose account I have condensed the above notice.

CASE VIII.—I mention this case as being probably valuable on account of several very high temperatures having been noted in the *rectum*. On one occasion, two thermometers being placed simultaneously in the rectum and axilla, registering respectively up to 115 and 117 deg., both indices were driven up to the top of the stem. Though I have notes of this case, which occurred abroad, and good evidence of its accuracy, I have not yet received permission to publish the particulars. But in general I may say that it corresponds with most of the other cases, both as regards recovery and the presence of great pain.*

REMARKS.—In analysing these cases from the facts in my possession, over and above what I have space to quote here, the following results appear.

1. In most, *pain* is a very prominent symptom.

2. The female sex is probably more prone to show these phenomena than the male. Seven of the above cases were females. The man, moreover (Case VI), was described to me by the house-surgeon as very emotional.

3. There is no serious importance in the temporary rise of temperature *per se*. All of these cases ended in recovery; in some, notably in Case I—where even *pain* was not a very prominent symptom—there was generally no concomitant complaint of any severity, with the exception of pain at the time of the high temperatures.

It has been objected to these cases, that most of the high temperatures have been taken in the axilla; and it has been said that this fact (1) renders fraud a more likely hypothesis than if the thermometer had been placed in the mouth or rectum, and (2) may mean merely a local temperature.

With regard to fraud, Case I shows that some high temperatures occurred in the mouth, and that others, though taken in the axilla, were verified by precautions which may be said to have excluded fraud. The objection that the temperature was merely "*local*", whatever this may mean, applies equally to all clinical observations of temperature. It is assumed, when a temperature of (*e.g.*) 104 deg. is taken in the axilla in a case of fever, that this is the temperature of the body. The difference between a temperature taken in the axilla and one taken within a mucous orifice, such as the rectum, depends chiefly on minor and accidental points, as evaporation, etc., and is simply a matter of a degree or two. An observation of a high temperature taken simultaneously in two axillæ is, as far as our present knowledge goes, as valuable an evidence that the heat is not merely local, as if one of the thermometers had been placed in the rectum, or on any other mucous surface.

It is for the physiologist to discuss the question as to whether or not a surface-temperature, taken with proper precautions either on the skin or the mucous membrane (allowing for accidental modifications), represents approximately in all cases the temperature of the whole circulating blood. At present, certainly, clinical thermometry is based on the assumption that it does.

And further, should future observation confirm the facts I have alleged, we must look to physiology to give us some explanation of the rapid fall of temperature which seems to have taken place at least in some of the cases. In some cases, as my notes show, there was considerable sweating with the high temperatures; in others, shortness of breath. In Case No. I, in which alone I have any observations on the quantity of urea eliminated, there appears, from one series of observations of the urine carried on every two hours, that there was no concomitant increase of urea with the higher temperatures. From the want of evidence of increased oxidation occurring with these abnormally high temperatures, further observation is needed, in similar cases, of the products and state of the eliminatory organs; and it is important to have additional evidence as to the length of time the high temperatures last. This is more difficult to obtain than would appear at first sight.

Cases of this nature would seem, as far as my very limited observation goes, to hint at some "nervous" origin. In the absence of any evidence of an accepted cause of increased body-temperature, and of other symptoms that we might in such a case expect, we find, in most of the instances I have quoted, some amount of emotional excitement, and in nearly all *great pain*. I will enlarge no further on this, as the suggestion of an ultimate nervous origin for any symptom is after all at present almost a cloak for ignorance, and an illustration of the method *obscurum per obscurius*.

To refer to the sympathetic supply to the blood-vessels, or to a "heat-regulating centre", in this context, would be premature. I am therefore content to bring the facts alleged in this paper, with such evidence for them as I have been able to give, before the notice of others, in the hope that further clinical observation will decide in one way or the other as to their genuineness; and, in the event of this being confirmed, that physiology may throw some light on their explanation.

* Since this paper was written Dr. Roddick of Montreal has kindly informed me that he has no doubt as to the accuracy of the observations as to temperature. The case was admitted for some uterine trouble, but afterwards symptoms of pyo-nephrosis occurred. The high temperatures happened nearly always when the urine had been clear for a day or two. They were very frequent.

AMPUTATION AT THE HIP: USE OF DAVY'S LEVER.

By R. CLEMENT LUCAS, B.S.Lond., F.R.C.S.,
Assistant-Surgeon to Guy's Hospital, and to the Evelina Hospital for Sick Children.

As it is by the accumulated experience of many surgeons, rather than by the extended practice of one, that an instrument is accepted or condemned, I think it right to state the result of my trial of Mr. Davy's lever for the compression of the common iliac artery during amputation at the hip-joint. The patient was a boy, aged ten years, who had suffered from hip-joint disease for six years. When he was admitted into the Evelina Hospital, there were shortening of the limb, eversion, and a gluteal abscess. I excised the head of the femur on August 4th, but the patient showed little recuperative power; he suffered from profuse sup-

puration and a high temperature; he grew gradually thinner; and it became evident, after a time, that a pelvic abscess had formed. The rapid emaciation and pallor left no doubt as to his approaching end. I therefore determined, on November 15th, to amputate.

Before placing the patient on the operating table, an experimental trial of the lever was made, under chloroform, on a convalescent patient. We satisfied ourselves in this way that, with very slight pressure, the femoral artery and its branches could be completely controlled.

The patient was prepared for operation as follows. His body and extremities (except the one to be amputated) were wrapped in cotton-wool, to keep up the temperature and favour circulation in these parts; Esmarch's bandage was then tightly applied from the foot to the middle of the thigh, to squeeze all the blood out of the limb; and ether was administered in preference to chloroform, as it has a stimulating rather than depressing effect upon the heart's action. Dr. H. Davy, the house-surgeon, passed the lever between eight and nine inches into the bowel, and raised the handle till pulsation could no longer be felt in the femoral artery. I then cut an antero-external flap, commencing below the pubic spine, and ending in the old wound made for excision. The flap was dissected up until the femoral artery was exposed, and this was then seized by two pairs of forceps, divided between them, and twisted. The femoral vein was treated in the same way. Another light cut exposed the profunda artery, which was secured like the femoral before division, and afterwards twisted. The soft parts were then divided to the level of the bone. At this time, a little spurt came from a branch of the external circumflex, but raising the handle of the lever appeared to control it. The amputation was completed by cutting a postero-internal flap. One or two vessels bled in the posterior flap uncontrolled by the lever, and from this I concluded that the lever was pressing at or below the bifurcation of the common iliac. My opinion of the lever is that, in action, it is efficient and preferable to that of other instruments at present employed in similar cases. At the same time, seeing how important it is in these amputations to save every drop of blood, I would strongly commend the proceeding of the dissecting-up of the anterior flap, and securing the vessels with forceps before their division. The surgeon thus, whatever tourniquet may be employed, renders himself almost independent of mechanical aid, and uses it only as an additional safeguard against loss of blood. Neither of the patients on whom the lever was tried suffered from diarrhœa or any abdominal symptom subsequent to its use. During the operation, the patient's pulse gave us no cause of anxiety; and since then (now a fortnight) his general condition has improved, although the discharge from the pelvic abscess and bed-sores remains profuse.

Before closing this note, I would like to insist on the extreme importance of keeping up the temperature, and of preserving every drop of blood during this amputation—details in operating which I have more fully discussed in the last volume of the *Guy's Hospital Reports*. Having by these means, and by the free use of stimulants during the first twelve hours, tided the patient over the danger from shock, there ought to be little further cause for anxiety, since torsion has eliminated all fear from secondary hæmorrhage, and antiseptic surgery has done much to exclude the possibility of death from septicæmia.

CLINICAL MEMORANDA.

THE PREVAILING EPIDEMIC OF MEASLES.

THE cases of measles which have come under my observation, in the epidemic now prevailing in the centre of West London, have presented certain unusual features. The experience of some other physicians corresponds, I believe, with mine; and I should be glad to inquire more widely whether these variations from the ordinary type mark generally the existing form. The peculiarities are these.

1. A previous attack of the disease has afforded no immunity from the present disorder. Children who *have* had measles before in the most typical form, and as lately as within the last twelve months, have suffered equally with those who have *not* had it before. Out of twelve cases of which I have knowledge, nine have had the disease previously, and eight of them within the year.

2. The symptoms of coryza have been unusually slight, the sneezing little, and in some cases absent; while the laryngeal catarrh and cough have been exceptionally severe. The latter especially has been a striking feature, being most violent and incessant, and, at the height of the disease, recurring so distressingly and constantly every few minutes as entirely to prevent sleep, and indeed rest of any kind, for a period of many hours.

3. Another symptom, unusually prominent in some cases, has been *vomiting*—coming on with the first fever, and continuing at intervals until the eruption began to decline; the retching not being a result of the cough, but independent of it—an effect of the measles poison.

4. The eruption has been profuse; more raised and papular than usual, and largely confluent in patches on the face and limbs.

5. About forty-eight hours after the fever has commenced to decline with the subsidence of the eruption—*i.e.*, on the fourth or fifth day after the first appearance of the eruption—severe earache has supervened, lasting several hours, and then passing away without discharge or other sign of otitis.

The temperature has ranged from 102° to 103.8°; the pulse 120 to 160; but in this there is nothing beyond what is seen in severe cases in ordinary epidemics. Leaving out of consideration for the present all but the first point, viz., the recurrence of the disease in the same individual a second time, the proportion of cases in which this has occurred is very remarkable. The question arises: Whether the first attack was really identical in nature with the second? Are these two distinct diseases, or forms of the disease (apart from Rötheln), each of which confers immunity from a second attack of the same variety, while affording no protection against the other?

W. B. CHEADLE, M.D.,
Physician to the Hospital for Sick Children.

RAPID PULSE.

IN recent numbers of the JOURNAL have appeared instances of "slow pulse". The following is an example of rapid pulse which has come under my observation. A young man aged 20, while intoxicated, received a scalp-wound across the vertex of the parietal bones in the middle line. Previously to this accident, he had been in perfect health. Subsequently, there were abscess and necrosis of bone, and, later on, all the symptoms of acute pyæmia. In two months, he recovered from all these conditions, and applied for medical relief, complaining only of general weakness as a result of his former illness. On examination, the patient was found perfectly convalescent, all his functions and organs being healthy. The cardiac dulness was normal; the heart's action was rapid, but regular; the sounds were clear and unaccompanied by any abnormal murmur. The pulse was weak, compressible, regular, and the number of its pulsations was as follows.

Date.	Pulse.
October 12	120
,, 13	96
,, 14	100
,, 16	116
,, 17	120
,, 18	124
,, 19	128
,, 21	120
,, 24	118
,, 26	120
,, 28	126
,, 30	140
November 1	120
,, 3	120
,, 6	120
,, 7	144
,, 8	144
,, 9	144
,, 11	128
,, 12	136
,, 13	142
,, 16	144
,, 17	140
,, 18	132
,, 19	124
,, 20	120
,, 22	140
,, 24	120
December 6	180
,, 8	162
,, 9	180
,, Evening	240
,, 10	196
,, 11	176
,, Evening	180
,, 12	180
,, Evening	194
,, 13	190
,, Evening	162
,, 14	160
,, Evening	190
,, 16	160
,, 17	160
,, Afternoon	136
,, Evening	120
,, 18	150
,, Evening	180
,, 19	194
,, 20	200
,, 21	140
,, 22	174
,, 23	160
,, 24	172
,, 25	196
,, 26	160
,, 27	150
,, 28	154
,, 29	160
,, 30	168

During the entire month of January, the pulse was counted daily, and varied from 120 to 200 beats per minute. The sphygmographic tracing was minute, but presented the general characters of a normal tracing. During these four months, the patient was to all appearances quite well in every respect, and he declared himself to be in excellent health and spirits and able to resume his work. I met him accidentally in the street some months afterwards, carrying on his trade as a baker. He asserted that he had never been in better health. His pulse, on being counted, was 160 per minute.

A. HUGHES BENNETT, M.D.,
Assistant-Physician to the Westminster Hospital.

ON Tuesday, December 9th, the officers of the Army Medical Department stationed at Portsmouth entertained Surgeon-General Best, lately Principal Medical Officer there, at dinner at the Naval Club. The farewell banquet was a very cordial affair, as Dr. Best had won golden opinions among his officers by his kindness and urbanity of disposition.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

(Cases under the care of Dr. CHEADLE.)

CASE 1. *Cerebro-Spinal Meningitis; Opisthotonos: General Muscular Rigidity and Hyperæsthesia: Extreme Emaciation: Treatment by Iodide of Mercury: Recovery: Tubercular Meningitis three months later: Death: Post Mortem Examination.* — Mary Jane B., aged 8, was admitted April 23rd, 1879. *History.* The child was taken ill quite suddenly on March 29th, with vomiting and diarrhœa, which lasted all night. The next day, she complained of headache, and held her head back; the vomiting and diarrhœa ceased. For a week she was delirious, *i.e.*, talking constantly about her lessons being hard for her, and not knowing those about her. She then became drowsy, and thus remained, complaining of headache and pains in the limbs and body. For the last week, she had kept her legs drawn up rigidly. She had lost flesh very rapidly. No squinting or convulsions were noticed. The bowels had been regular. The child told her mother that she struck her head against the desk at school; but it was not known when. She had always been delicate; and was fond of her lessons, which her mother thought to be too much for her. She had whooping-cough, measles, and scarlatina in infancy, and had since been subject to cough. The mother had had no miscarriages, and had three other healthy children living. Another child had died, one year and seven months old, of some "brain-disease". The father and mother were healthy, but the latter's father had died of consumption.

Condition of the Patient on admission. — She was extremely emaciated. She lay on her side with head retracted, eyes closed, mouth half open, semi-comatose, and entirely helpless. The neck was quite rigid; the thighs stiffly flexed on the belly; the arms rigid; the abdomen retracted. There was no facial paralysis; the left pupil was dilated; the right of natural size. She noticed nothing until roused, when she replied to questions in a peevish manner. There was extreme hyperæsthesia, and she screamed on the slightest touch or movement. There was no *tache cérébrale;* no otorrhœa. Pulse 96, regular; temperature 103°.

Subsequent Progress of the Case.—The first night after admission, the child screamed very much, called out, and was restless. She was ordered a draught of chloral hydrate and bromide of potassium at bedtime, and two grains of grey powder night and morning. Under chloroform, the spasm of the flexors of the thighs disappeared, but the retraction of the head could not be quite overcome. Upon atropine being applied to the eyes, the left pupil became dilated, whilst the right was unaffected, and remained irregular, fixed, and occluded; the fundus could not be illuminated; the left optic disc was pale, its outer margin distinct, the veins were full. There was no sign that any of the nerves at the base of the brain were involved, the difference in the pupils being accounted for by the state of the right eye. The temperature was very irregular, varying between 104.4 and 96.4. It was generally high in the morning and low in the evening; sometimes *vice versâ*. The patient remained in much the same state; and on April 30th, a mixture containing twenty minims of liquor hydrargyri perchloridi, with three grains of iodide of potassium, was ordered every six hours in place of the grey powder. By May 9th, a marked improvement had set in. The temperature had come down, ranging now between the limits of 101° and 97°, and the child lay with her eyes open; the pulse was 100, regular, but very thread-like; the tongue moist and clean. The knees were still drawn up to the belly, but the girl put them down when told to do so. She still disliked being touched, but was clearly much less sensitive. The head was still thrown back, and she screamed on any attempt being made to move it forward. The improvement which thus commenced proceeded rapidly; the temperature became normal; the rigidity and hyperæsthesia daily grew less; the child began to move her limbs voluntarily, and gained flesh most remarkably. The iodide of mercury was continued steadily, and by May 23rd, the patient could sit up and feed herself; indeed, could stand up and walk a little. She remained peevish and fretful; the left pupil was still dilated, the head slightly retracted and neck rather rigid. She put on flesh with marvellous rapidity, and by May 29th—five weeks after admission—was thoroughly convalescent, all morbid symptoms having disappeared; she was then sent to the Convalescent Hospital at Highgate. On her return from there, three weeks later, she was plump and well. Some time after her return home, however, she began to complain of headache and languor, and she was readmitted as an in-patient on August 26th, *i.e.*, about six weeks after she had been discharged from Highgate. She had lost flesh. The temperature was found to be irregular, varying from normal to 101°. Pulse 96, very small and irregular. She complained of frontal headache and pain down the neck, and vomited soon after admission. The bowels were confined; the tongue coated; the *tache cérébrale* was well marked. No optic neuritis could be detected in the left eye; the right could not be examined, owing to the state of the pupil. The signs of meningitis of the base became daily more distinct. By the morning of September 5th, she was blind, and a few hours later, was found lying unconscious, with her head retracted. She lingered in much the same state until the 10th, when she died.

Post Mortem Examination.—On opening the skull, the dura mater seemed natural; the sinuses contained thin black blood. The surface of the hemispheres was sticky, the convolutions flattened; the two hemispheres were tolerably firmly adherent to each other in front. Scattered over both hemispheres were some yellow masses, varying in size from a pin's head to twice the size of a millet-seed, firm, and confined to the pia mater, which did not adhere to the brain at these points, and was obviously unaffected round them. There were about six of these nodules in all. At the base of the brain, there was a good deal of recent exudation, and the pia mater showed many minute grey granulations in the interpeduncular space and on the upper surface of the cerebellum. No granulations were to be seen in the Sylvian fissure, although the opposing surfaces were very adherent; in fact, on the left side, the fissure was almost obliterated. The medulla and cerebellum were glued together by tolerably opaque lymph, and the cerebro-spinal foramen was obliterated. The lateral ventricles were somewhat dilated; the ependyma was very granular; and a good deal of clear fluid escaped on their being opened. The fourth ventricle was much dilated. The substance of the brain was firmer than natural. The right optic nerve was smaller than the left, and the right globe also; the vitreous humour was fluid, and of a greenish colour; the lens was soft, opaque, and adherent to the iris; the retina thin and atrophied; the choroid of a dirty brown colour; and the disc very small. The left eye was natural. There was no trace of any disease of the upper cervical vertebræ, nor of any injury to the skull. The bronchial and mesenteric glands were not enlarged. All other organs were natural, with the exception of the left lung, the upper lobe of which contained a small caseous mass, surrounded by a zone of a few grey granulations.

REMARKS BY DR. CHEADLE.—The above account is taken from the very excellent notes of the Registrar, Dr. Abercrombie, to whom I am greatly indebted for his careful observation of the case throughout. The chief interest in it lies in the nature of the first attack. Meningitis of the upper surface of the hemispheres, and probably of the cerebellum and medulla, undoubtedly existed. The evidence afforded by the symptoms was afterwards confirmed by the marks of the old mischief found on *post mortem* examination. But was this primary meningitis *tubercular?* Was the recovery from the first attack that rarest of all clinical events—even if it ever occur—a recovery from *tubercular* meningitis? I regret that, owing to the termination of the case during my absence for an autumn holiday, I cannot speak of the *post mortem* appearances from actual inspection. But, from Dr. Abercrombie's account, I do not think there is conclusive proof that the tuberculous process played an active part in the first meningitis. The caseous nodules in the pia mater of the convexity must, no doubt, have been of at least as old date as the primary attack, and they may have been tubercular in nature, but they do not appear to have been the exciting cause of the meningeal inflammation which coexisted; for it was noted that the pia mater was not adherent to the brain beneath them, and showed no sign of inflammatory action around them. The certain traces of old inflammation were found between the hemispheres and in the Sylvian fissures, and probably over the cerebellum and medulla, and here no caseous nodules were seen. The position of the primary inflammation, too—viz., at the convexity—is unfavourable to its being of tubercular character, since tubercular meningitis is essentially basic; yet, on the other hand, the Sylvian fissures, which the firm adhesions present then showed to have been the seat of inflammation in the original attack, are the very centres of disease in tubercular meningitis; and although no tubercles were observed there, these may have existed, and have been obscured by the products of the inflammation they set up. This special local connection of tuberculosis of the meninges with the Sylvian fissures, by the way, seems to me one of the strong arguments in favour of the infective origin of tubercle; for it is precisely the position in which the fragments brought by the arterial stream lodge; where caseous *débris* would be arrested; just as we find that embola

generally are arrested there. It is worthy of note that the caseous nodule in the lung was surrounded by a zone of grey granulations like those of the pia mater. The remarkable effect of mercury in this case naturally suggests the possibility of the condition being syphilitic; and the state of the structures of the right eye supports this view. But there was nothing else, either in the patient herself or in the family history, to confirm this. I have seen more than one case of simple cerebro-spinal meningitis closely resembling this, and not due to any disease of the bone, recover under the continued use of mercury, and in none of them has there been reason to suspect syphilitic taint. I have known an equally successful result in meningitis from mechanical injury or concussion, of which there was some history here. In the present instance, I ventured to predict the favourable issue, by the light of previous experience of the striking power of mercury in analogous cases.

That the first meningitis was tubercular then, although not proved, is not altogether improbable. The incident, at all events, suggests that a meningitis of the convexity and posterior surface of the cord, when none of the chief cerebro-spinal nerves are involved, may be curable, even if tubercular, and not of that invariably fatal issue which characterises ordinary tubercular meningitis, involving the vital nerves and centres of the base. This example, too, may fairly be placed in company with that solitary instance recorded by Trousseau, in which the cure of a meningitis judged to be tubercular was verified by *post mortem* examination long afterwards.

CASE II. *Rickets: Defective Diet: Development of Scurvy: Rapid Recovery on Antiscorbutic Diet.*—Harry S., aged 1 year 11 months, was admitted on June 27th, 1879.

History.—The child had been suffering for two or three months from swelling of the gums, with offensive discharge from the mouth. The mother was stated to be a drinker, and to have left her husband, the child being then placed out to nurse. This was seven months ago. The child had always been delicate, and had diarrhœa before the mouth was bad. His appetite was formerly ravenous. The woman who had had charge of him affirmed that he had had the following diet since he had been under her care; for breakfast, bread and milk and bread and butter; mutton broth, beef-tea, or gravy for dinner; on Sundays, a little meat and potatoes; but he did not eat much of the latter, as he did not like them. He had taken no other fresh vegetable food.

Condition on Admission.—The child was very small and feeble, and could not stand alone; the head was square, the anterior fontanelle widely open; the spine was curved in the lumbar region; the ribs were much beaded; the chest was constricted transversely; the abdomen large and lax; the spleen two and a half fingers' breadths below the ribs; the liver palpable. The gums were greatly swollen, so as almost to hide the incisor teeth, purple and protruding, in a spongy, almost sloughing, state, oozing and bleeding on the slightest touch; breath extremely offensive. The temperature ranged from 99° to 100-5°. There were no purpuric patches on the skin, muscular swellings, or signs of scurvy, other than the condition of the gums, febrile state, and general debility. There was no hæmorrhage except from the mouth. The child was ordered a diet of beef-tea, with vegetables, mashed potatoes, new milk, and raw meat. No medicines were ordered. By July 2nd, the temperature had gone down to normal, and the child was brighter and better in every way. The swelling of the gums had subsided, so that the incisors had come almost into full view; but the gums were still swollen in some degree, spongy, and purple. The blood was pale, but, when examined under the microscope, the corpuscular elements appeared normal. A mixture containing two drops of tincture of perchloride of iron was ordered to be given every four hours. The diet was taken well and agreed thoroughly. How extremely rapid the improvement was, may be judged from the following fact. The condition of the gums was so typical, that it seemed worth while having a sketch of them made for the museum, and I asked my friend Dr. Westmacott to make the drawing. He kindly called at the hospital for the purpose on the fourth day after the child was admitted, but by that time all the characteristic features, which had apparently existed unchanged for two or three months, had vanished, and no drawing could be made.

The fault of diet in this case could not be so minutely traced out in all its details as in three others previously recorded; but the child was a nurse-child, it was admittedly given only a small quantity of milk, and would not eat potatoes. There can be little doubt that it was fed almost entirely upon bread and butter, perhaps a little broth and gravy, and lacked the antiscorbutic elements which so largely protect the ill-fed children of the poor when short of milk, viz., fresh vegetables and potatoes.

Improvement proceeded so rapidly that the gums became normal in a few days more, and on August 11th, the boy was sent to the Convalescent Hospital at Highgate; free from the scorbutic condition, gaining flesh and strength daily, and emerging steadily from the rickety state.

REMARKS BY DR. CHEADLE.—This case, for the chief notes of which I am also indebted to the Registrar, is the fourth instance of scurvy occurring in young children which I have met with during the last three years. The particulars of the others have been already given in the medical journals. In them, as in this, the scorbutic condition supervened upon rickets, and could be positively traced to a scurvy diet.

The former cases were, however, more typical examples of the disease than the present one. In one, the urine was albuminous, and in two, there were well marked muscular swellings, in addition to the fungous gums and hæmorrhage.

In the instance above recorded, the immediate improvement which followed the administration of proper diet, without any other therapeutic treatment, was almost sufficient proof in itself of the nature of the case, and the correctness of the diagnosis.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, NOVEMBER 28TH, 1879.

E. HEADLAM GREENHOW, M.D., F.R.S., President, in the Chair.

Traumatic Aneurism of the Scalp.—Mr. W. J. TYSON (Folkestone) read notes of this case. W. M., aged 56, hotel proprietor, in September 1875, whilst shooting, was struck by a stray shot on the back of the head, causing considerable hæmorrhage, which was eventually stopped by cold water and the application of a handkerchief. The hæmorrhage did not recur, and a week elapsed before he saw a medical man, who detected nothing abnormal. Five weeks later, he was complaining of an indefinite kind of sensation about the parts, caused, as he thought, by the presence of a shot, which Mr. Tyson failed to find. He was not seen again until January 1877, sixteen months after the receipt of the injury; there was then a hard and firm hemispherical swelling, of the size of a walnut, destitute of *bruit* and pulsation; it was situated between the right mastoid process and the occipital protuberance; on its being punctured, a drop or two of blood escaped. Removal was recommended. In the following June, the swelling had increased to the size of a small orange; still no pulsation could be felt or heard. He was then operated upon. A long horizontal incision was made across the tumour, which was accidentally nicked, and furious hæmorrhage immediately came on; the lump was extracted as soon as possible, and ultimately the bleeding was stopped. The next day, however, whilst the sponge was being removed, hæmorrhage came on again; the vessel was then secured. The wound was over four inches in length and one in depth. After the operation, the patient had a mild attack of delirium tremens, which lasted for three days. He made a steady but progressive recovery. Seven weeks after the operation, the wound had completely healed. Mr. Tyson thought there was little doubt as to the nature of the case, viz., a small and partial division of an artery; probably, from the situation, a branch joining the occipital with the posterior auricular. The skin-wound had rapidly closed, leaving the vessel still open. The tumour slowly increased in size by the gradual deposition of fibrin. The length of time which the aneurism had existed, considering it to be false, was very uncommon, but this was accounted for by the unyielding condition of the surrounding scalp. The skin over this swelling was not thinned, and so it would be difficult to say how much longer the aneurism would have remained before bursting. The diagnosis plainly indicated by the history was obscured by the absence of pulsation or of a *bruit;* but during the operation, until the old clot was removed, the bleeding vessel could not be reached, and other vessels in the scalp were divided. The treatment adopted was the only one that could be recommended. Had the patient, in the first instance, consulted a doctor, and had he properly secured the vessel by dividing it, all further trouble might have been avoided.—Mr. HOWARD MARSH referred to an instance where an aneurism was mistaken for a sebaceous tumour, and its removal proceeded with. During the operation, an artery was accidentally wounded, and considerable hæmorrhage occurred. As in Mr. Tyson's case, the sac was opened, and subsequent cure by contraction followed. At St. Bartholomew's Hospital, Mr. Savory, having to operate for aneurism of the dorsal artery of the foot, opened the sac, and turned out the contents; the case did well.—Mr. TYSON observed that, in his case, the aneurism was originally thought to be a sebaceous tumour.

Excision of both Hip-joints for Symmetrical Disease(?): Femoral Necrosis: Antiseptic Operations: Successful Result.—Mr. J. CROFT read particulars of this case. Ada G., aged 4, was admitted under his

care in St. Thomas's Hospital in January 1879, for hip-joint disease on both sides. Two years previously, she had fallen downstairs. She had limped during the last eleven months, and complained of pain in both hips and knees. She had been under treatment at St. Thomas's Hospital as an out-patient for three months, and afterwards at the Children's Hospital in Waterloo Bridge Road. She had suffered more or less from starting pains at night for eight months, and as much in one leg as the other. On admission, she was miserably thin, and in bad health, and she had strumous ophthalmia, as well as the hip-disease. There was well-marked muscular rigidity at each joint; attempts at movements caused pain. The thighs were somewhat flexed on the pelvis, and the legs on the thighs. The feet were rather everted. Spurious lordosis existed. There was no extensive swelling, and no shortening. She was allowed a good diet, with wine, and she was carefully nursed. The keratitis was treated and cured. The limbs were straightened, and a modified double Thomas's splint adapted. Extension was maintained either by weights or by elastic bands. During the month following, her health steadily improved, though she suffered somewhat at night, and cried occasionally from starting pains. On February 26th, or between seven and eight weeks after her admission, a fluid collection was discovered between the great trochanter and the anterior superior spine of the ilium. About a fortnight later, or two months and a half after her admission, an attempt was made to evacuate the collection, or abscess, by the aspirator. A small quantity of thick puriform fluid was drawn off. Six months after her admission, and seventeen months after she was first observed to limp decidedly, she was still suffering from muscular rigidity and occasional spasmodic pains in both joints. The fluid had again collected on the left side. On May 17th, therefore, the left joint was excised antiseptically, and, as it has been termed, subperiosteally. Three weeks after the first operation, the right hip-joint was excised (on June 7th) in the same way. The wound on the left side healed in about five weeks, and the right side rapidly followed. On each side, the femur was sawn across at the level of the base of the great trochanter. The surface of the acetabulum was freshened by means of the gouge. The remaining cartilage and the granulations were cut away with the same instrument. The synovial membrane and its granulations were dissected out, and the lining membrane of the abscess on the left side was removed. The surfaces remaining after these procedures were carefully washed with carbolic solution, and a solution of chloride of zinc (forty grains to the ounce) was applied to them. A double modified Thomas's splint was employed in the after-treatment, and extension kept up by India-rubber bands. Passive movements were commenced after the third week. The parts excised were exhibited, and from each side might be divided into four: 1, the epiphysis or capitellum; 2, the main mass, consisting of the neck and top of the femur; 3, pieces of synovial membrane and bone cut out from the acetabulum; and 4, small pieces of detached dead bone. The epiphysis was found separated at the epiphysial line from the neck of the bone. On the left side, its upper surface was for the most part bare, and small pieces of dead bone were adhering to it, and its under surface was irregular where it had separated from the epiphysal cartilage. The upper end of the neck of the bone was bare; small crumbs of dead bone were lying upon it, and adhered to it. Some of these pieces had become unavoidably detached during manipulations. No trace of epiphysal cartilage remained. None of the trochanteric epiphysis remained on the specimens; it was left attached to the gluteal muscles. The parts from the right side exhibited very similar changes. The separation between the epiphysis and the neck was easily seen, though they were yet loosely connected. Two small sequestra were deeply imbedded on the neck of the bone, and a piece of dead cartilage was hanging by a thread of tissue to the epiphysis. The synovial membrane was swollen, and the perisynovial tissues infiltrated; but their condition did not appear to be that of synovitis hyperplastica tuberculosa. His objects in showing the case were as follows: 1. To illustrate the value of operating early in hip-joint disease, before the third stage had advanced; 2. The value of operating antiseptically; 3. The value of removing the parts freely; 4. The value of leaving the great trochanter attached to the muscles which were fixed to it; and 5. The case was rare and interesting from its being one of double disease, and from the disease being symmetrical (?).—Mr. BRYANT considered the case one of simple ostitis, not acute. The mischief was not synovial, a class of injury met with in older subjects as a rule. That the operation performed was a proper one, under the circumstances, no one could doubt. The disease had assumed a marked character; and he thought that the stage of the disease, and not time merely, should indicate the need of operative interference. He could not understand how Mr. Croft could describe his operation as subperiosteal, for necrosed bone must be devoid of any membranous covering. Mr. Croft did wisely in preserving the trochanter, and as much periosteum as possible. He had never satisfactorily succeeded in subperiosteal operations for excision, and regarded the term as a mere ornamental expression to which no actual meaning could be attached. He dissented from Mr. Croft's opinion that it was right to cut down into a joint, except on the strongest clinical evidence of disease, and the existence of pus. He thought excision should be done where necrosis was quite certain; but, as long as the head of the femur was in the acetabulum, it was not possible to tell with certainty if dead bone existed. But, with indubitable proof of this, it was right to cut into the joint, and follow with resection. He would like to know more concerning the early incision mentioned in the paper. He doubted its propriety. He had been disappointed with the results of resection in his own practice. There were but a few really excellent endings, the majority of limbs resected being only poor substitutes for a perfect one. Alluding to antiseptic surgery, he feared that its introduction had induced the undertaking of operations not sanctioned by every experience; joints, for instance, being too freely opened, because of the confidence felt in the protective spray and dressings. In many instances, those had been undoubtedly interfered with, which might have been permanently cured by time and rest.—Mr. HULKE congratulated Mr. Croft on the brilliant result he had attained. The history of the case proved that unfavourable conditions had existed. Operation should be resorted to as soon as possible when it was evident that necrosis was established in the joint. The determination of this time was, however, very difficult; and, unless there was a conviction that the fluid collected was really pus, no interference ought to take place. Even with pus collected, free incisions had often been sufficient to ensure a good recovery, so that pus did not of itself indicate the necessity for excision. He agreed with Mr. Bryant that, considering the operation, but a small mortality attended it; but much disappointment must be felt at the dwarfed nature of the limb that was the usual result. He endorsed the remarks made by Mr. Bryant concerning subperiosteal excisions, and had listened with much interest to Dr. Sayre's defence of the method some time since, when that surgeon was in England. But he did not feel satisfied that the periosteum was thereby preserved to an extent commensurate with the expectations to be formed from descriptions of the operation. All cases of this disease, even acute ones, would, he considered, eventually recover if submitted sufficiently early to treatment. In extreme cases, he advocated free incision, but had never seen anything but harm follow the employment of the aspirator in hip-joint disease.—Mr. PARKER noticed that, on the charts exhibited, the temperature was recorded once as 100°, and varied for some time from 99.4° to 100°. He was of opinion that a better classification of hip-diseases was desirable in the interest of young surgeons, to guide them in the treatment to be adopted. Under the most careful treatment, he had seen children progress from bad to worse, and in many had observed that the disease attacked also the side opposite to that first indicated. In five out of eight cases in which he had operated, he had removed loose sequestra of dead bone, and he therefore concluded it was very necessary to be assured of its existence at an early period. In his own practice, he adopted what he termed the antero-lateral incision. In making it, he cut in the direction of, and not across, the muscular fibres, thus ensuring the best results. Then, with a keyhole-saw introduced from above, down, and in, he was enabled to separate the head of the femur without disturbing the trochanter, or injuring the periosteum or muscles. —Mr. JONATHAN HUTCHINSON said that, in his experience, the separation of the epiphysis had been seen in only four or five instances. He had not noticed much perceptible necrosis in many cases. He agreed that disappointment usually resulted from the operation for excision. Many successful recoveries at the time had succumbed at longer or shorter intervals, and many had entirely failed. These had mostly been cases of late operative interference. He thought they might help to sustain Mr. Croft's dictum that early adoption of radical measures of cure was essential in these cases. The use of plaster-of-Paris dressings to ensure perfect rest might, he thought, be desirable; but he had seen the most marked benefit occur through the influence of change to seaside places; and, further, he placed much reliance on counterirritation over the seat of the affection in the early condition, which would, nevertheless, not justify the making of an incision into the joint. He recommended the covering of the whole joint in such treatment with tincture of capsicum, over which an oiled silk protective should be laid, and the whole permitted to remain for half an hour.—Mr. MARSH had seen many excisions at the Children's and St. Bartholomew's Hospitals. The results were not encouraging. Out of one hundred or one hundred and twenty cases, he could only point to six or seven entirely good results. This, he admitted, might be due to late operations and non-antiseptic treatment. It was not possible to draw any conclusions from a single case as to the wisdom of the proceeding, but admitted that the one brought forward by Mr. Croft was remarkable for the success attending it. Necrosis was comparatively rare in hip-disease, the condition of the bone noted being generally caries; of this carious material, part must remain

after operation, as its entire removal would involve the taking away of three or four inches of the femur. Neglect alone gave a formidable aspect to the disease. In all cases, if resorted to early enough, sea-air and counterirritation might be expected to work a cure. He knew cases in which recovery had followed the existence of sinuses, the children being now able to walk about freely. He suggested that the child shown by Mr. Croft should be kept in sight, and brought before the Society hereafter.—Mr. CROFT explained that, by early operation, he meant interference at a stage later than that in which no perceptible effusion into the joint had taken place. This condition he should term the incipient stage. If treatment by rest were then adopted, a favourable termination was certain. In the case he had recorded, however, the disease had progressed for seventeen months. The division of the disease into stages adopted by Sayre and other surgeons was useful for descriptive purposes, as in syphilis it was found convenient to speak of various conditions. The first stage in hip-disease terminated with effusion into the joint; the second extended from the effusion to the opening of the abscess; the third from this point to the end. Thus a child in the second stage was, in a pathological sense, only in an early stage of the disease. He had confidence in the wisdom of incision into the joint, and especially since the splendid results of antiseptic treatment justified such a course. He urged that, when the signs observed gave evidence of extensive degeneration, it was incumbent on the surgeon to make incisions at times, not alone to verify his assumptions, but to afford ease to his patient; and especially so, since the absolute certainty of healing that attended operations performed with minute antiseptic precautions. The term subperiosteal he had employed for want of a better to express his meaning. He had used it as explanatory of his method of procedure. The neck of the femur, he contended, could be turned out without the removal of any periosteum, since this was absent from the head of the bone; and hence he could not be said to speak of it in connection with that process. By the antiseptic method he meant Listerism pure and simple, and admitted no other system. Unsatisfactory results were all attributable to late operative interference. As to dead bone, he could not say there were any definite signs to indicate its presence, and had referred to it, therefore, in guarded language. He had not employed the aspirator to draw off fluid from the capsule of the joint when only serum existed. He thought favourable results might ensue from tapping. That it was unwise to generalise from a single case, he admitted, but had adduced a number of cases to sustain the conclusions he had formed. He believed the child exhibited would gradually acquire a new joint, on which it would be able to balance itself, and walk.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 2ND, 1879.

JONATHAN HUTCHINSON, F.R.C.S., President, in the Chair.

Specimens of Diseased Bone in Congenital Syphilis.—Dr. NORMAN MOORE showed the skull of a child, seven years of age, who had died in St. Bartholomew's Hospital of tubercular meningitis. There was general roughening and thickening of the skull, most marked on the parietal, the frontal, and the upper part of the occipital bones. There was depression of the inner table on each side of the coronal suture. The incisor teeth were deeply notched, but there were no other evidences of syphilis nor any signs of rickets. In the right lobe of the cerebellum was a cheesy mass, of the size of a walnut. The lungs were tubercular; two of the bronchial glands were caseous; and there were ulcerations on each side of the ileo-cæcal valve. On the anterior wall of the œsophagus were two rounded scars, which might possibly be syphilitic. The question was, whether the condition of the skull was due to syphilis or to scrofula.

Dr. MOORE showed a second specimen of a skull of a child, aged six years, who had died from ulceration of the intestine. The whole of the inside of the skull was more or less worm-eaten, the depressions corresponding with villosities on the dura mater. He did not think that this was due to syphilis, but he was at a loss to explain the pathology.

Mr. PARKER showed a series of bones from a child, aged seven weeks, who had died of marasmus, the result of congenital syphilis. The calvaria showed the gelatiniform degeneration described by M. Parrot. A condition of cranio-tabes was established, which was above the line of pressure when the child was lying back, and which therefore could not be attributed to pressure. The bones were eroded on the outside and on the inside. The condition was obviously one of ostitis, and not of periostitis, the periosteum appearing healthy. The lower part of the shaft of the humerus presented the same gelatiniform change. There was a similar condition of one tibia, and one ulna was thickened. There was no enlargement of the liver or spleen. The bony changes yielded with remarkable rapidity to mercury.

Dr. BARLOW showed one of the specimens which M. Parrot had brought over with him last year, and several specimens of his own, to illustrate Mr. Parker's case. The variety of disease described by Mr. Parker was quite different from that which gives rise to the natiform swellings of the skull. It was seen in much younger children, and led to loss of tissue instead of increase of tissue. One of the cases shown by himself exhibited erosions of the outer table, due to gelatiniform degeneration of the bone. The inner table was free from disease, and the condition thus differed from cranio-tabes, in which the lesion is chiefly confined to the inner table. He thought it premature to say that cranio-tabes was necessarily syphilitic, but he had no doubt that a very large proportion of such cases were so. Its pathogenesis was not altogether the same as that of gelatiniform degeneration. M. Parrot had pointed out that three factors generally united to produce cranio-tabes: 1. an abnormally soft skull; 2. a feeble child lying constantly on the back of its head; 3. pressure of the brain from the inner side. He had also shown that cranio-tabes might be congenital; and that, in such a case, it was situated at the front of the head and not at the back. In Mr. Parker's case, the disease was subperiosteal, *i.e.*, situated mainly in the outer layer of the bone; but there was another variety in which it was mainly endosteal, in which case it was situated at the growing end of the shaft of the long bones, but without involving the epiphyses. He showed two specimens illustrating this condition, in one of which part of the lower epiphysis of the radius had shifted bodily in consequence of softening of the lower end of the shaft; and as the result of this separation the condition of pseudoparalysis of the limb, described by M. Parrot, had been established. He should look upon Dr. Moore's first case as syphilitic, but thought it was quite different from any described by M. Parrot, as the latter had not described change of the inner table coincident with thickening of the outer table.—Mr. WARRINGTON HAWARD thought that both varieties of bone-changes described by Dr. Barlow could exist in the same patient; he had, indeed, described such a case. He agreed with Mr. Parker in looking upon the changes as strictly osteal rather than periosteal. He had seen a considerable number of cases of bone-disease in congenital syphilis, but had only had one death, and in this case death had taken place from another cause. He believed that in these cases the syphilis was not generally severe, and that they yielded well to treatment.

Living Specimen of Bone-Disease.—Mr. PARKER exhibited a girl, aged 15, who, though quite healthy in other respects, and presenting no other signs of syphilis, had several large hyperostoses on the clavicles, lower jaw, and elsewhere. He thought they were probably syphilitic. One of them had diminished under treatment, but several others had increased.

Tooth exfoliated in Congenital Syphilis.—The PRESIDENT showed the crown of a central incisor tooth which had come from the upper jaw of an infant two months old. The child had a small abscess over each central incisor in the upper jaw; and on opening one of the abscesses, the tooth exfoliated. He had long believed that the reason for the deformity of the permanent central incisor so characteristic of congenital syphilis was due to periostitis in early infancy, which tends to attack these teeth especially. He thought the teeth in Dr. Moore's case were very suggestive of congenital syphilis, but that they were not absolutely characteristic. He believed the living specimen shown by Mr. Parker to be one of syphilis. He could narrate several cases of enormous nodes, occurring at a late period of congenital syphilis, and he thought this fact was in favour of his theory that severe and long continued late symptoms in syphilis occurred in connection with parts that had been affected in a transient manner at an early stage. In one such case, spontaneous fracture of the femur had occurred.—Dr. WILTSHIRE said that it appeared that asymmetry of skulls was regarded by some as due to syphilis. He had, however, carefully examined the skulls of young children for several years, and found that asymmetry was very common, and just that form of asymmetry described as occurring in the skulls exhibited by Dr. Barlow, the two halves of the skull being nearly or quite equal in size, but one half being a little further forward than the other—the right being more often in advance of the left. There was frequently a similar asymmetry of the palate and also of the face. He thought that these syphilitic skulls showed about the average amount of asymmetry seen in healthy children.—Dr. LEES thought the asymmetry was very commonly associated with thickening of the skull, which would point to its being syphilitic. As regarded cranio-tabes, he thought that 80 per cent. of the cases were certainly syphilitic, and that the remaining 20 per cent. were probably so. Out of thirty cases which he had seen, there was only one which presented no signs of syphilis. He had seen a boy nine years of age, who presented nodes on the tibia, clavicles, and frontal bones. Syphilis was present in this case, but it was doubt-

ful whether it was congenital or acquired.—Dr. NORMAN MOORE asked whether the asymmetry of syphilitic skulls was not one of special points of the skull rather than of general form. He thought that it was very rare to find a symmetrical skull in man, and still more so in some of the lower animals.—Mr. EVE had recently dissected a fœtus in whom all the long bones presented the typical gelatiniform degeneration.—Dr. ORMEROD asked whether it were possible for a syphilitic skull to be thickened on the parietal and not on the frontal bones, and whether a small fontanelle without retiform eminences should be looked upon as syphilitic.—Dr. BARLOW, in reply, stated that he did not wish to imply that one might not find several forms of bone-disease in the same individual. He agreed that, where the bony changes were well marked, the other signs of congenital syphilis were generally slight or absent, the disease appearing to attack one tissue throughout the body. He had seen a case of large nodes like those of the girl shown by Mr. Parker, but in this case there was choroiditis disseminata. As regarded asymmetry, he did not think that M. Parrot would look upon asymmetrical skulls as necessarily syphilitic; but some syphilitic skulls were so soft that a high degree of asymmetry was easily produced in them. No doubt there might be an asymmetry due to osteophytes.

Primary Cancer of Gall-Bladder.—Dr. NORMAN MOORE showed this specimen, taken from a woman aged 59, who had only presented symptoms for two months. Every part of the wall of the gall-bladder was infiltrated with medullary cancer; the lumbar glands were involved, giving rise to a cancerous mass surrounding the duodenum and partly surrounding the pancreas. The cystic duct was occluded, but the common bile-duct was free, so that there was no jaundice. The gall-bladder contained four large and many small gall-stones. The question arose whether the cancer was due to the irritation of the gall-stones.—Mr. EWART had recently made a *post mortem* examination where there was cancer of the gall-bladder associated with gall-stones. In this case there was primary cancer of the head of the pancreas. He thought it possible that the cancer of the pancreas was due to the irritation caused by the passage of the gall-stones.

Primary Cancer of the Gall-Bladder.—Dr. COUPLAND exhibited this specimen. The tumour formed a firm white mass, of the size of a cocoa-nut, in the anterior part of the right lobe of the liver. In the centre of the growth was a small cavity full of calculi—evidently the remains of the sac. The growth was adherent to and had invaded the abdominal parietes and the first part of the duodenum; but the common bile-duct was not occluded, and there was no jaundice. There were no distal growths. Microscopical examination had not been completed. So far, it seemed to belong to the carcinomata. The subject was a married woman, aged 56, who had borne twelve children, and had always enjoyed good health. She was admitted into the Middlesex Hospital on August 29th, 1879, under Dr. Cayley's care, having suffered from epigastric pain, vomiting, and wasting for six months. A swelling in the hepatic region had existed for two months; and this, which was always firm, painful, and tender, slowly increased under observation. She died from exhaustion on November 21st.

Cancer of the Breast with Secondary Cancer of the Brain.—Mr. HULKE exhibited these specimens. The patient had been admitted into the medical wards of the Middlesex Hospital for some obscure cerebral disease, but was found to have scirrhus of the mamma, and transferred to him. When he first saw her she was lethargic, but, if aroused, complained of splitting pain in the head. After death, a cancerous growth was found involving the left lobe of the cerebellum and the tentorium cerebelli, and another in the parietal lobe of the left cerebral hemisphere. There were secondary growths in the liver. He remarked that secondary growths in the brain are very rare.

Enchondroma of Arm.—Mr. CRIPPS exhibited a tumour removed by Mr. Thomas Smith from the arm of a woman aged 28, which had been growing for seven years. There were three or four small hard lumps in the axilla, which were thought to be lymphatic glands. When the capsule of the tumour was cut through, about a dozen small nodulated cartilages fell out; each was about the size of a nut, and quite unattached. The bodies in the axilla proved to be of the same nature. He thought that probably the cartilages had been connected with the main body of the tumour, but that they had become detached. The bodies in the axilla might have arisen from cartilage-cells which had wandered up the lymphatics. There was only one such case mentioned in the *St. Bartholomew's Hospital Reports*.

The following specimens were exhibited by card.

1. Mr. HULKE: Cancer of Womb invading Vagina and Rectum: Colotomy.
2. Mr. HULKE: Cancer of Breast.
3. The PRESIDENT, for Dr. RODDICK of Montreal: Portrait of an Infant with Pedunculated Occipital Meningocele; also the Occipital Bone showing the opening through which the meningocele passed.
4. Mr. EWART: Intracardiac Aneurism; Root of Aorta opening into Right Auricle.
5. Mr. EWART: Intrapericardial Aneurism of Aorta opening into the Left Auricle.
6. Mr. WALSHAM: Myxosarcoma of Head of Tibia.

[Members of the Society who are desirous of having a somewhat fuller report of cases they may exhibit by card, than the simple mention of the name of the specimen, are requested to prepare a very brief abstract for the use of the reporter, as it is not possible, on the occasion of the meeting, to make a synopsis of the various cases exhibited in this manner.]

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 3RD, 1879.

W. S. PLAYFAIR, M.D., President, in the Chair.

Specimens.—Dr. GALABIN showed a Microscopic Section of Menstrual Decidua, which was passed on the first day of menstruation. The gland-tubes, cut across and having their epithelial lining intact, were seen. He also showed a Section from the Anterior Lip of the Cervix Uteri. The posterior lip was affected with early epithelioma, the anterior lip was eroded. The cervix had been lacerated, and there was ectropion of both lips, which had been removed by the galvano-cautery.

Dr. CLEVELAND showed a thick Gelatinous Umbilical Cord. Such cords required additional care in tying to prevent hæmorrhage.

Dr. HEYWOOD SMITH showed an Enlarged Uterus, which had been removed by Abdominal Section.

Messrs. KNOWSLEY THORNTON and DORAN presented their report on Mr. Cullingworth's Tumour, which they found to be a mixed sarcoma.

Transfusion of Blood.—Mr. E. A. SCHÄFER read a report on an experimental inquiry into the methods of transfusion. He had first tried to ascertain if any other fluid than blood, as milk for instance, could be substituted advantageously. Experiments under this head showed that rabbits generally died within twenty-four hours when ordinary milk was injected into their veins. Milk just drawn from the cow into a heated vessel, and milk which had been boiled were, however, innocuous. In animals reduced to an almost lifeless condition, the injection of milk into the blood-vessels was never permanently beneficial. Such animals always died. These results confirmed those of Howse and Dupuy in America. No fluid lacking hæmoglobin was of benefit in cases of acute anæmia. The transfusion of the blood of other animals into the human subject was negatived by the microscopical examination of human blood mixed with that of the lower animals. The red corpuscles of one or both kinds of blood quickly became dissolved. The amœboid movements in the white corpuscles quickly ceased, and the corpuscles perished. The blood or serum of the lower animals was, in fact, an active poison to the human blood-corpuscles. In man, human blood only could be used with advantage for transfusion. Numerous experiments in arterial transfusion were made on cats and dogs. The animals were first depleted of blood until the arterial pressure was almost zero; the femoral artery was connected by means of a glass cannula and India-rubber tube, filled with solution of carbonate of soda, with the artery of another animal. The result in every case was recovery of the depleted animal. A flow of one minute's duration usually sufficed to restore the patient. There was no danger of the flow being excessive, for the pressure in the arterial system of the recipient soon equalled that of the donor. The ordinary risks of transfusion, such as the introduction of air or clots into the veins, and phlebitis, were absent from this operation. The apparatus was simple, and the blood was at once introduced where it was most useful, namely, in the arterial system. In the human subject, the dorsal artery of the foot, both as recipient and as donor, was recommended. As regards vein-to-vein transfusion, it was both easy and rapid in its effect. The simple glass cannula and India-rubber tube constituted the apparatus. The intervention of an elastic pump, as in Aveling's apparatus, did not accelerate the flow, but sometimes stopped it by sucking in the wall of the vein. The following advice was offered as the results of these experiments. 1. Fluids other than human blood should never be used for transfusion in cases of hæmorrhage. 2. Transfusion should always, if possible, be effected through a simple flexible tube with glass cannulæ. 3. Direct centripetal arterial transfusion should, if possible, be employed; in default of this, direct venous transfusion is the best. 4. If it be impossible to perform either direct arterial or venous transfusion, mediate transfusion of whipped or unwhipped blood collected into a funnel and allowed to flow through an India-rubber tube and glass cannula into a vein can be tried. It involves, however, risk of the introduction of clots and germs of putrefactive bacteria into the vascular

system of the patient.—The PRESIDENT had always used defibrinated blood. He thought the views of Mr. Schäfer would prove more difficult in practice than in theory.—Dr. BRAXTON HICKS had used and recommended a mixture of saline solution with blood to prevent coagulation. If it could be shown that the saline mixture so made did not affect the main quantity of the blood in such a manner as to decrease its coagulating power when it arrived at the uterus, and thus arrest wholesome coagulation, this method was all that could be desired.—Dr. CHAMPNEYS had seen blood transfused from the carotid artery of the lamb directly into the vein of the forearm of the human subject in phthisis. No harmful results followed, nor was there any permanent benefit.—Dr. AVELING thought the difficulties and disadvantages of immediate arterial transfusion a serious objection to its general use. He believed immediate venous transfusion to be the safer and more useful mode of operating. Autotransfusion, by raising the legs and hips of the patient and compressing the legs and abdomen, would often cause sufficient blood to gravitate to the brain and heart.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

WEDNESDAY, NOVEMBER 19TH, 1879.

S. J. A. SALTER, Esq., F.R.S., President, in the Chair.

The Sensibility of Dentine.—The PRESIDENT called the attention of the Fellows to some physiological questions relating to the sensibility of dentine, and illustrated his remarks by diagrams. The points enforced were, that the dentine was, to a great degree, endowed with sensibility by its connection with the nerves of the pulp; but not wholly so, inasmuch as areas of exposed dentine were sometimes found acutely painful when touched by steel instruments or points, in teeth in which the tooth-pulp had entirely perished. In such cases, the connection of the sensitive dentine with the sensorium must be through the nerves of the periosteum, and he believed that such a nervous connection always existed. Mr. Salter further remarked that, in some instances in which there was sensitive dentine and the pulp still remained quick and alive, the usually received explanation, that the nervous connection was established by a direct radiation along the tubes from the pulp to the sensitive area of dentine, could not hold good, inasmuch as the intervening dentine might be, and often was eroded by decay, and yet an outlying mass of dentine remained painful to the touch. In such instances, if the pulp were the source of sensation, it must be established by a circuitous route and by collateral connections. The President read extracts from a letter of Mr. Coleman, in which he said he had met with cases of sensitive dentine that could only be explained by the views already propounded.

Retarded Dentition.—Mr. EDGELOW reported a case of retarded dentition. The patient was a girl aged 14, epileptic since her birth, with deficiency of the permanent teeth. She was small, short, had curvature of the spine, and a large head; and there was no syphilitic history. The upper and lower incisor were the only teeth that met, and there was consequently great deficiency of masticating power. Mr. Edgelow thought that, by adopting plates, it might be the means of causing the eruption of the other teeth.—A discussion ensued, in which the PRESIDENT, Mr. E. BARTLETT, and Mr. AUGUSTUS WINTERBOTTOM took part.

BIRMINGHAM AND MIDLAND COUNTIES BRANCH: PATHOLOGICAL SECTION.

NOVEMBER 28TH, 1879.

G. F. BODINGTON, M.D., in the Chair.

Rupture of Left Auricle.—Dr. HANDFORD showed a specimen of rupture of the left auricle from the passing of a cart-wheel over the chest of a man aged about 40. There was no trace of external injury. The patient was markedly syphilitic.

Cancer of Intestine.—Dr. MILNER MOORE (Coventry) exhibited two specimens of intestinal cancer; in one of which the cæcum was alone affected, and in the other the duodenum and pylorus, with constriction of the latter orifice, which only admitted a small quill. In both, the symptoms were very obscure till about three months before death, when abdominal tumours were detected. There was no obstruction of the bowels, and no melæna in either case.

Sudden Death from Aortic Aneurism.—Dr. LYLE related notes of a case of sudden death of a man aged 31, without previous warning of any kind, from rupture of aortic aneurism. (Specimen shown.) The aneurism was in the transverse portion of the arch of the aorta, as large as the fist, and communicating with the trachea about an inch above its bifurcation.

Uterine Myoma.—Dr. SAVAGE showed a large uterine myoma which he had removed by abdominal section.

Multiple Sarcoma.—Dr. BALTHAZAR FOSTER narrated a case of multiple sarcoma. The tumours were scattered over the trunk and upper extremities, and had existed for eleven years. Two years before death, the man had strained his left knee, and a large tumour afterwards developed in the brain, which extended by means of a thickened cord of lymphatics to a second large tumour in the abdomen. Microscopical preparations of the growths were demonstrated by Mr. H. G. Lowe.

Aortic Aneurism.—Mr. LOWE (for Dr. MALET) showed a specimen of aortic aneurism which communicated with the œsophagus and trachea.

Pathology of Sweating.—Dr. CARTER contributed a memorandum on the pathology of sweating, in which, after alluding to the physiology of the process, he brought forward evidence to show that the sweating which characterised phthisis, rickets, and many other morbid conditions was the direct proximate result of influences proceeding from some central nervous mechanism in the medulla or spinal cord. Although the stimuli which served to excite the sweat-centres probably varied widely in different cases, he suggested that in not a few instances, malaëration, malnutrition, and a consequent loading of the blood with histolytic products, operated directly on the sweat-glands, bringing about profuse sweating with a view to the purification of the blood.

Encephalocele.—Dr. SHAPLEY (Leamington) exhibited a case of encephalocele.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, NOVEMBER 29TH, 1879.

WILLIAM MOORE, M.D., President, in the Chair.

Osteitis of Head of Femur.—Dr. J. K. BARTON showed the head, neck, and neighbouring parts of the femur of a boy aged 8, who had suffered from symptoms of morbus coxæ. An abscess formed, and was opened. There were inversion and slight shortening of the limb. Excision was performed the previous Wednesday week. No visible ulceration of the cartilage covering the head of the bone was present, but the head itself was enlarged, and there was extensive osteitis of the cancellous tissue of the head and neck of the femur. The patient was progressing favourably.

Rupture of Liver and Right Kidney.—Mr. W. THORNLEY STOKER showed the liver and right kidney of a labourer aged 28, who had been crushed between the buffers of two railway wagons. Death was the result of secondary hæmorrhage into the peritoneum, which took place several days after the receipt of the injury. There had been no hæmaturia, nor was there any general peritonitis, although local adhesions had formed. The right kidney was lacerated across its anterior surface, but the rent did not penetrate the pelvis. Several large and deep tears existed in the liver, but the wounds were far advanced in the process of healing. The source of the fatal hæmorrhage was not satisfactorily made out.

Aneurism of Arch of Aorta causing Aortic Insufficiency.—Dr. J. MAGEE FINNY presented a specimen of thoracic aneurism from the body of a labourer aged 36. The man had suffered from violent darting pain in the right side of the chest, and subsequently from paroxysmal cough. The heart was much enlarged; its impulse being visible between the sixth and seventh ribs. There were a basic double *bruit* and a collapsing pulse. Posteriorly, a double murmur was faintly heard between the scapulæ. Advanced excentric hypertrophy of the left ventricle was found after death. There was a scabrous condition of the inner surface of the aorta, which was dilated into a large aneurismal sac. There was slight thickening of two of the aortic valves, but the regurgitation had been clearly caused in great measure by the proximity of the aneurism. In reply to Dr. Nixon, who asked whether a post-diastolic murmur, such as that described by Dr. Hayden as having been present in similar cases, had been heard in this instance, Dr. Finny said no such murmur had been heard.

Circulation of Sappey in Congenital Cirrhosis of Liver.—Dr. C. J. NIXON exhibited a case of extreme cirrhosis of the liver in a temperate young man aged 21. During life, the spleen had been greatly enlarged, and a cluster of veins (*caput Medusæ*) developed near the umbilicus. From these veins, a bleeding occurred on one occasion. Fatal hæmatemesis was the final symptom. The spleen weighed thirty-six ounces. A large vein ran from the right branch of the vena portæ along the ligamentum teres towards the umbilicus. This was probably the permanently patent umbilical vein. The case was presumably one of congenital cirrhosis followed by perihepatitis.

BRITISH MEDICAL ASSOCIATION: SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 20TH, 1879.

ANTISEPTIC SURGERY.

THE discussion on Antiseptic Surgery, which was continued on Wednesday last, must be regarded as forming an era in the history of the treatment of wounds. With the exception of the statistical accounts produced at these meetings, no new argument was, however, brought forward. The theory of the treatment has received but little attention in this debate. Excepting some remarks by Mr. Wood, no attempt has been made to adduce facts as proof either for or against it, though some surgeons objected strongly to statements made by Mr. Lister's supporters that a belief in the germ-theory is essential for the thorough practice of the system. Now, it may be well to point out that though Mr. Lister has based his system on the germ-theory of putrefaction, and though he has expressed himself as thoroughly convinced of its truth by the facts already known, he has not demanded a belief in it from those who wish to give his system a fair trial. What he does ask is, that the treatment be so carried out as to destroy the causes of putrefaction undoubtedly present in the air and on surrounding objects, quite irrespective of what the nature of these bodies may be; and his views are fully stated in the report of his address at the meeting of the British Medical Association at Plymouth in 1871. As far back as the end of the last century, a method of preserving fruits and meats was discovered by M. Appert, which consisted essentially in heating the substances in tightly closed vessels. It was found that tissues and fluids so prepared might be kept for an indefinite time without undergoing any alteration; and yet, as soon as these vessels were opened, alcoholic, putrefactive, or other fermentative changes at once commenced. In 1837, Schwann demonstrated that infusions prepared in the same way remained unaltered though exposed to the air, if only that air had been heated previous to its admission to the vessel. In 1854, Schröder and Dusch showed that this heating of the air was not necessary, but that its filtration through cotton-wool was alone requisite. And a few years later, Pasteur's well known experiment of bending the neck of the flask in various directions so as to necessitate a deposit of the dust of the air in the angles of the bent tube, demonstrated that the cause of putrefaction of boiled fluids was not the gases of the air, but some solid particles which could be destroyed by heat or removed by filtration. And similar proof has been brought forward by numerous observers, showing that the unboiled fluids and issues of the body, such as milk, urine, blood, and the organs generally, have no inherent tendency to undergo putrefaction. It has also been shown that air previously acted on by carbolic acid is as powerless as filtered or heated air in producing fermentative changes. All that is demanded by Mr. Lister is, therefore, that every precaution be taken to destroy the fermentative power of these particles—be they looked on as organic molecules, bacteria, pus-cells, or other substances—before their admission to the wound.

With regard to the results of antiseptic surgery, the speakers have generally referred to the question of blood-poisoning alone. Now, we venture to think that this is a point of only secondary importance at the present day; for it must be admitted, as pointed out by Sir James Paget, that strict attention to hygienic details, careful nursing, and absolute cleanliness, apart from strict antiseptic treatment, have done much to abolish these diseases. We cannot, however, agree with Sir James when he states that, in this respect, no better results could be obtained by the use of the antiseptic method of treatment; for taking the best results as yet given—Mr. Savory's table—we find that the deaths from blood-poisoning in St. Bartholomew's Hospital were twice as many as in Mr. Lister's practice, or about six times as many as in Mr. Lister's cases treated strictly antiseptically; while in some continental hospitals these diseases have completely disappeared. But there are causes of death which hygienic measures, and even the strictest cleanliness, are practically powerless to prevent. Such are deaths from prolonged suppuration, as after the opening of psoas abscesses without antiseptic precautions. The cause of the continued suppuration will be admitted by all to be the presence of putrid irritating fluids in the cavity of the abscess.

The experiments of Pasteur and Tyndall show that, even on the tops of mountains, a certain number of flasks opened will undergo putrefaction. How much more is not this likely to happen in the atmosphere of a large town! But experience has amply demonstrated that, under strict antiseptic treatment, this putrefaction, with its consequent suppuration, does not occur; and numerous cases of spinal disease with abscesses which have been completely cured, testify to the advantages of this method. And we need only refer to the table of joint cases published in our columns three weeks ago, to show that operations can be done under this treatment which are generally looked on as unjustifiable.

With such facts before us, why should we hesitate to adopt this treatment for all cases where it can be carried out? Why refuse to give our patients the benefit of protection against accidents which, it is admitted, can be prevented by this method? Means which can ensure safety in such dangerous operations as those on healthy joints must of necessity afford similar advantages in the more common operations of surgery.

THE MEDICAL SCHOOL OF THE UNIVERSITY OF CAMBRIDGE.

THE draft proposed statutes recently issued by the University Commissioners will materially strengthen the medical teaching of that University. The Colleges will be required to contribute the sum of about £20,000 a year towards strengthening the teaching power of the University; this sum, however, is not to be reached probably for several years together, for in 1882 the sum is not to be less than £8,000 nor more than £10,000. In addition to the money contribution, it is proposed that in every College one or more fellowships shall be assigned to professorships, and such fellowships shall be called professorial fellowships. Boards of Study are to be constituted in the University, consisting of the professors who may be assigned such boards severally, together with such readers, University lecturers, examiners, and other persons as may be chosen from time to time by the Senate. Among these boards are a Board of Physics and Chemistry, a Board of Natural Science, and a Board of Medicine. The Board of Medicine will consist of the Regius Professor of Medicine, the Downing Professor, the Professor of Anatomy, and a Professor of Pathology. The latter is altogether a new professorship, much needed in the University, and to be established under the new statutes. The stipends of the professors will, it is proposed, be raised in most instances from their present level, and will be endowed as follows: Regius Professor of Medicine, £400; Anatomy, £300; Pathology, £600; Physiology, £600. In addition to the above sums, each professor will also receive the dividend on his fellowship. In addition to the professors, a new body of teachers are to be appointed, called readers. Of these, there will be two readers in medicine, and two in natural science. The stipend of a reader is to be £400 a year, subject to variation by the grace of the Senate.

A further addition to the teaching power of the University is to be made by the appointment of University lecturers. These lecturers will be varied from time to time in accordance with the arrangements of the General Board of Studies and the special boards, provided that

ultimately the whole number be not fewer than thirty. Each lecturer will receive from his College an annual stipend of at least £200 as lecturer, irrespective of the income of a fellowship or other College emolument. Moreover, it is declared to be the duty of every professor and reader, not only to teach and give lectures in every year, but to devote himself to research and the advancement of knowledge in his department.

Every man who has at heart the advancement of medical science, the patronage, advancement, and support of the biological and natural sciences of our great Universities, will heartily rejoice at the promulgation of the scheme of which we have given here only a few indications. No doubt persons intimately cognisant with the working of the University will see defects and will suggest readjustments.

On questions connected with such considerations we need not at present enter. Possibly we may have to discuss them presently, and meantime they will be very fully debated in the University itself by the most competent persons. This much, however, may be said, that, from the day when these statutes come into operation, the University of Cambridge will have taken a new departure henceforth in the cultivation of the sciences. There will at least be one University in England in which the prosecution of biological science will have some of those advantages which it has long enjoyed in continental countries. For medicine, which owes so much to biological investigation and study, and which has given to the biological chairs of all the Universities the majority of their most distinguished professors and the immense majority of the students in the classes, this change is of the happiest omen. Cambridge has already assumed within the last few years a most distinguished place among the great teaching establishments and mother centres of medicine. Henceforth, and so soon as these statutes come into operation, it will take that place with a greater fulness of power, with fewer gaps in its technical instruction, and with greater certainty of attracting the flower of the medical students of the country to the University, and of giving them ample instruction when they have reached her Colleges.

ENTERIC FEVER IN INDIA.

It would appear that Surgeon-General Gordon, principal medical officer of British troops in the Madras Presidency, has not abolished enteric fever in India. We have before us a letter on this subject, addressed by Surgeon-General Ker Innes, principal medical officer, British forces in India, to the Quartermaster-General in India. It is not difficult to recognise, in this able document, the Roman hand of his accomplished secretary, Surgeon-Major Marston, a fact, if the etiquette of the service allowed, we are quite sure his superior officer would be the first to admit. This report, for such it is, is very different in matter and manner from that of Dr. Gordon on the same subject, which we were constrained, in the interest of scientific truth, to comment on unfavourably. The question is so important, that we make no apology for returning to it under the guidance of the author of this carefully prepared report. The report opens with the following significant statement. "Enteric fever, whether we regard it in relation to the mortality it causes, the long period of inefficiency it entails on the soldier who is the subject of it, or the great loss to which the State is subjected, is perhaps the most important of all the diseases making up the pathology of this country; for it must be remembered that, while the ravages of cholera as an epidemic visitation are more fearful, enteric fever is a disease of annual recurrence, and it is circumscribed within the limits of no particular locality; it may even be said to be conterminous with the presence of European soldiers; it is pre-eminently the disease of which the young soldier dies in this country; and it is one, if not the chief, source of sickness and inefficiency in well-nigh every camp and battery disembarked at Bombay during its first and second years of service, notwithstanding that such troops may be distributed throughout the various stations of the three Presidencies". Quoting Dr. Bryden, the statistical officer with the Government of India, the author supports the above statement with this fact: out of seventy-three regiments and batteries which came to India between 1871 and 1877, nine only remained free from enteric fever in the first twelve months after landing, a statement which, based on no theory, and supporting no foregone conclusion of any kind, "is sufficiently striking to arrest the attention of any candid inquirer desirous of studying disease as a subject of natural history or science".

Is the enteric fever of India not only allied to, but identical in its nature and causes with, that seen at home? If it be, "he may confidently anticipate that such causes, being of a preventable nature, are as capable of being discovered and removed in India as elsewhere". The points of similarity and dissimilarity or antagonism between the enteric fever of India and Europe are then considered. An admirable summary is then given of the etiology and morbid anatomy of enteric fever as seen and recognised in Europe. It is not needful to quote this here; our readers are sufficiently familiar with this part of the subject to make this unnecessary; but the following paragraph we must give in the writer's own words. "As far as the clinical features and pathological characters are concerned, enteric fever appears to be everywhere essentially one and the same disease. But the results derived from a perusal of the reports furnished to this office, as well as my own personal observations of the cases themselves, leave no doubt whatever in my own mind that you can, and do, meet with numerous instances of a disease in this country indistinguishable from what is recognised as enteric fever elsewhere, and such as I have myself seen in Great Britain, France, Germany, and the Mediterranean." To this weighty statement, we desire to add that, on the table before us, while we write, is a preparation sent from a military hospital in India, of the intestine of a young soldier who died from a disease, in its symptoms "indistinguishable" from those of enteric fever as too well known to us in hospital and private practice in this country, and we declare that the morbid appearances in this preparation are "indistinguishable" from those seen in the intestines of men who die of enteric fever in this climate; an observation the full significance of which will be appreciated by those who remember the saying of Louis, referred to in the report before us, to the effect that, in this disease (enteric fever), it is not necessary to see the whole body; a few inches of the intestine are sufficient to identify it. Those who, like Dr. Gordon, maintain that there is no such disease as enteric fever in India, should carefully consider the following weighty observation: "That the exanthem is wanting in many cases, and the diarrhœa in others; that its characters (as a fever) may be modified, and its fatality increased, by heat and climate; that the disease may begin suddenly, and with symptoms resembling ague; that it may, indeed, follow ague, exhibit a malarious character, or closely resemble some remittent or tropical form of disease other than enteric fever, is nothing to the purpose. The fact remains that one of the most common diseases of India is indubitably a fever, averaging three weeks in duration, exhibiting the diurnal remissions of temperature, the abdominal and other symptoms, of what is elsewhere known as enteric fever; that it is a very fatal disease, and, when fatal, that certain lesions—varying, of course, in their amount and degree, according to the duration and severity or otherwise of the case—are invariably found in the glandular structures of the small intestines and mesenteric glands."

With reference to the disputed question as to whether or not enteric fever is a new disease, the report contains this significant passage. "Dr. Bryden (Bengal army), whose works contain, on this and other diseases, a mine of information and a vast assemblage of facts, arranged and systematised with an intelligent purpose almost unique in statistical science, has pointed out that the ratio of fever-mortality (in the gross) of past years, if taken in relation to particular months or seasons, and newly arrived regiments, is nearly absolutely identical with that of enteric fever at the present time."

Here we must pause, but shall return to this important report on a future occasion.

DR. HEADLAM GREENHOW has resigned the post of Physician to the Middlesex Hospital, which he has held for many years.

DR. H. EMMINGHAUS, heretofore *privat-docent* in Würzburg, has been appointed Professor of the newly created Chair of Psychiatry in the University of Dorpat.

DR. H. DONKIN has been appointed to give the course of lectures on Materia Medica and Therapeutics at the Westminster Hospital next summer, in the absence of Dr. Phillips.

WE have received, at a late hour, from Mr. Bader, a further statement with respect to his recent action against Mr. Gordon. It will appear in next week's JOURNAL.

WE have to record a recent epidemic of diphtheria at Acock's Green, Warwickshire, where twenty-one cases in twelve houses have occurred. Four cases were fatal; and Dr. George Wilson ascribes two of these to the gases arising from the cesspools into which the sewage from the houses was discharged. There were other cases not so severe; and he was of opinion these were due to the fact that the manholes of the sewers were choked up by road dirt; and that the flushing chambers, having only been recently completed, were practically inoperative.

M. RAOUL PICTET, whose name is connected with the solidification of the gases, proposes, in the *Archives des Sciences*, to dissociate the metalloids by exposing them to the influence of the extreme temperature which can be obtained by concentrating the solar rays upon them by means of a gigantic metallic reflector.

OWING to the severity of the season and prevalent distress, the hospitals of Paris are at this moment overcrowded, the old annexes of the Hôtel Dieu are again occupied, and the Assistance Publique has been compelled to hire some empty warehouses and manufactories to accommodate those whose claims could not be denied. The Duc de Nemours, as president of the French Red Cross Society, has promised to lend the municipal authorities all the beds and hospital *matériel* used during the war; and committees are being formed to succour suffering humanity.

SCARLET FEVER has recently been intensely prevalent at Hinckley. From the beginning of the year up to the middle of November, there have been sixty-six deaths from that disease in a population of seven thousand people. The disease took an epidemic form in May last, and is now declining, but not before at least four hundred and fifty persons have suffered from its effects.

THE effects of the unusually cold and damp summer that we have experienced this year in the extraordinary reduction of the number of deaths from diarrhœa, has been a matter of very general comment, and is doubtless being made the subject of particular study by Medical Officers of Health. At Birmingham, where the mean temperature last quarter was 2.6 lower than that for the corresponding period of 1878, there were only 81 deaths from diarrhœa last July, August, and September, against 534 in those months in 1878. The effect of this diminished mortality has been to reduce the death-rate for the quarter to 16.35 less 1000, as compared with 22.47, 22.25, and 25.90 in the three preceding years.

A CONCERT will be given on the evening of Saturday, the 20th inst., at the Albert Hall, Kensington, in aid of the funds of the German Hospital, Dalston, by the Amateur Orchestral Society, of which His Royal Highness the Duke of Edinburgh is President. His Royal Highness the Prince of Wales and the Duke and Duchess of Edinburgh have promised to be present on the occasion. The concert promises to be one of great interest, as, in addition to several performances by the excellent orchestra of the Society, Madame Norman-Neruda, Mr. Charles Hallé, Miss Minnie Hauck, and Herr Henschel will give their valuable assistance, and Sir Julius Benedict will preside at the piano. A large attendance of the supporters and friends of the hospital is confidently anticipated.

AT a recent meeting of the Académie des Sciences, Baron Larrey read an analysis of Dr. Bateman's book on "Darwinism tested by Language". Baron Larrey pointed out that Dr. Bateman had transferred the subject of evolution to the domain of psychology, being convinced that hitherto naturalists had concentrated their attention too exclusively on the analogies between the body of man and that of animals, or, in other words, on the purely physical, anatomical, and material characters of man, neglecting the study of the intellectual and metaphysical attributes which establish an essential difference between man and the brute. Dr. Bateman's researches, which have been warmly eulogised by a portion of the English press, and as severely criticised by many English biologists, are stated to have met with a favourable reception in some quarters in Paris; and we understand that a French translation of his work will shortly appear.

THE HOME HOSPITALS ASSOCIATION.

THE decision of the Master of the Rolls, given, with great regret, against the right of the Home Hospitals Association to maintain occupation of their houses in Manchester Square, leaves that most useful institution in want of a freehold in the central district of London. The scene in court was, we believe, unusually tender, the lawyers on both sides concurring in regret that so useful an institution, and one by which the metropolis is to be largely benefited, should be so much put about for a suitable home. The Master of the Rolls said that he felt that he might any day break a leg, like his brother Malins, and that such an institution would be a great boon. It is therefore much to be hoped that some possessor of a suitable freehold will facilitate the further proceedings of this Association by offering it for sale to them on reasonable terms.

THE UNIVERSITY OF OXFORD.

IN the earlier part of this year, a petition was drawn up by Mr. Ernest Hart and signed by 2,000 members of the medical profession, and presented to the University of Oxford, praying for a reform of the serious abuses by which the Faculty of Medicine has been suppressed and the teaching of medicine exiled from that University. The medical profession will learn with great pleasure that very careful attention is being given to the representations so urgently made of the mismanagement and neglect of medical endowments, by which the teaching of medicine has so long been exiled from the University of Oxford, its medical faculty annulled, and the University and medicine alike despoiled of one of their fairest heritages and most precious resources. The petition in favour of a restoration of the medical faculty and a just use of its endowments, has been referred to a Committee. This Committee has taken the task in hand zealously; it has on it Dr. Jowett, Master of Balliol, Professor Smith, and others, who are earnest in desiring to redeem Oxford from the scandal of wasting £10,000 a-year without any benefit, except to a few professors, and here and there a preliminary student or two, who have to be seriously educated elsewhere. Professor Rolleston is, it is alleged, opposed to the reform of the medical faculty, and contented to do without medical students, who would be unlikely to prize information concerning "Anglo-Saxon interments and prehistoric pigs" as a part of the teaching of Dr. Linacre's professor of human physiology. Dr. Acland, the Regius Professor of Medicine, has never given a lecture on Medicine during the thirty years that he has held that office, nor a clinical lecture during all the years that he has held the Litchfield Professorship of Clinical Medicine, nor any course of bedside teaching during his long tenure of office as Physician to the Radcliffe Infirmary; he may therefore naturally think that any normal activity on the part of his successors or colleagues would be a reflection on himself. Not much may be hoped, perhaps, of active assistance towards the restoration of a medical Faculty from its present professors; but possibly gentlemen so energetic as the Master of Balliol and Professor Smith may avail even

against local professional opposition of influential and yet transparent character, and Oxford may begin to think that if Cambridge, which is almost destitute of medical endowments and has by no means so finely equipped a hospital, can attract a great medical class, it is discreditable that Oxford should continue to occupy its present melancholy relation to medicine.

DOCTORS OF SCIENCE AT CAMBRIDGE.

THE system of advancement to the dignity of doctor, in virtue of a thesis describing an original research, is to be adopted at Cambridge for students in science. Students in science who, having already taken a degree in Arts, Law, Medicine, or Surgery, have given proofs of distinction in science by some original contributions to the advancement of science, and have done all that is required by the statutes and ordinances of the University, may, it is proposed under the new statutes, be admitted to the title of Doctor Designate in Science, and shall afterwards be created Doctors at the time prescribed by the University.

HARVEIAN SOCIETY OF LONDON.

THE annual general meeting of the Harveian Society will be held on January 8th, 1880, for the purpose of electing the officers and council for the ensuing year, and transacting the usual business. The following is a list of the names of gentlemen proposed by the council, as officers of the Society for the year 1880. *President:* *Henry Power, Esq. *Vice-Presidents:* G. Eastes, M.B.; R. Farquharson, M.D.; *F. J. Gant, Esq.; *W. H. Day, M.D. *Treasurer:* *J. E. Pollock, M.D. *Secretaries:* J. M. Fothergill, M.D.; G. Field, Esq. *Council:* H. C. Stewart, Esq.; T. Fitzpatrick, M.D.; H. E. Sewill, Esq.; H. T. Mapleson, Esq.; Edmund Owen, M.B.; T. Buzzard, M.D.; *G. C. P. Murray, M.D.; *W. Squire, M.D.; *G. Danford Thomas, M.D.; *W. Ward Leadam, M.D.; *J. W. Langmore, M.D.; *Owen Roberts, Esq. An asterisk is prefixed to the names of those gentlemen who did not hold the same office the preceding year.

PRIZE ESSAY ON INDIAN FEVERS.

SURGEON-GENERAL C. A. GORDON, M.D., C.B., honorary physician to Her Majesty, has, with the approval of the Government of India, offered a prize of 500 rupees to the writer of the best essay on Fevers, as affecting the British soldiers in India. The competition will be open to all officers of the Army Medical Department and of the Indian Medical Service of the three Presidencies, whether upon retired or full pay, provided that they have, on the 31st August last, severally done medical duty with British troops in India during five full years and upwards. The 31st December, 1881, will be the latest date on which the essays will be received, and the Government of India has been solicited to request the Director-General of the Army Medical Department, the Secretary of State for India, and the Army Sanitary Commission, each to appoint one of three arbitrators, the latter unconnected with the Commission itself. The decision of the arbitrators will be published in England and India, if possible not later than July 31st, 1882.

THE MURCHISON MEMORIAL.

AT a meeting of the extra-academical teachers held at the Royal College of Surgeons in Edinburgh on December 1st, Dr. Keiller reported that he had received a communication from Dr. Greenfield, Honorary Secretary to the Murchison Memorial, intimating that, "At a meeting of the General Committee of this Memorial, on Friday, November 14th, the following resolution, moved by Dr. Richard Quain, and seconded by Dr. Spencer Cobbold, was unanimously adopted: 'That the General Committee, having heard the protest of the Edinburgh extra-academical teachers, resolve to recommend that the competition in Edinburgh for the Murchison Memorial Scholarship be open to all students of the Edinburgh medical schools'." After remarks had been made by various speakers on the satisfactory nature of the communication, the following resolution was proposed by Dr. Muirhead, seconded by Dr. Handyside, and unanimously agreed to: "That Dr. Keiller be asked to convey to the General Committee of the Murchison Memorial the thanks of the lecturers in the Edinburgh Extra-Academical School of Medicine for their frank and ready acknowledgment of the protest forwarded to them against the invidious exclusion of the students in this School from the competition for the Murchison Memorial Scholarship; and also for the prompt and unanimous acquiescence of the General Committee in the request of the lecturers to open the competition to all students in the Edinburgh Medical School, as had already been resolved upon in the case of the London Medical Schools." It was also resolved, "That a copy of this resolution be forwarded to the leading medical journals for publication."

DR. TRIMEN.

DR. H. TRIMEN, who leaves England to assume his appointment as director of the Botanical Gardens in Ceylon in January, is succeeded in the editorship of the *Journal of Botany* by Mr. James Britten, F.L.S., of the Botanical Department of the British Museum. Our readers have occasionally been indebted to this accomplished physician and botanist for information on botanical questions which we have referred to him. All who are acquainted with Dr. Trimen personally, or who are familiar with his excellent work, and especially the great illustrated work on *Medicinal Plants*, of which the last parts are now being issued by Messrs. Churchill, will congratulate Ceylon on securing his services, and will hope to hear that the appointment proves in every way mutually agreeable. It can hardly fail to be satisfactory.

THE SOUTH OF FRANCE.

THE *Morning Post* is undertaking a very useful task in inquiring into the sanitary state of some of the foreign health-resorts. Alluding to the long list of persons well known in English society who are wintering at Cannes, and similar lists might be furnished from Nice, Mentone, Monaco, San Remo, Bordighera, and the other health-resorts of the Riviera, it observes: "Along the whole coast new villas are being rapidly built, and huge and magnificent hotels are springing into prosperous existence. When it is recollected that the minimum rent of a villa is £400, and that the hotel charges are upon a scale based upon the value of health and the charms of a monopoly of sunshine, it will readily be conceded that an enormous sum of money must be transferred from the pockets of the invalids or valetudinarians and the great crowd that flies from the rigours of an English winter to bask in the warmth of the southern coast of France. In return for the hundreds of thousands of pounds that we hand over to the happily situated foreigners for these advantages, we receive the traditional welcome accorded to those who pay; magnificent promenades are laid out, planted with palm-trees and roses, bands play in the public gardens, and every possible facility is given for the enjoyment of all the pleasures that the sanitarium can afford. But we are afraid that the curse of foreign towns—inadequate drainage and defective sanitary arrangements—are to be found uncorrected in places which have no excuse of antiquity to allege, but which have, as it were, sprung into existence in the space of a single generation. It is too cruel that those in delicate health, whose condition renders them susceptible to any infection, should be tempted from their wholesome English homes, under pretext of seeking health, and be exposed to dangers easily avoidable by the expenditure on municipal improvements of a very small percentage of the great sum which these cities levy from their visitors."

M. CHEVALLIER.

ONE of the oldest members of the Academy of Medicine, M. Chevallier, died on November 30th, at his residence in Paris, in the eighty-seventh year of his age. M. Chevallier, who was formerly a disciple of the celebrated Vauquelin, was classed among the most distinguished chemists of that period. If his name be not connected with any great discovery, he has the merit of having made some happy applications of chemistry, which he particularly regarded on the practical side, and the means which it offers to resolve a great number of questions of social economy of the highest interest. He was Professor at the École de Pharmacie, and was appointed member of the Academy of Medicine in the section of Public Hygiene and Medical Jurisprudence, which he held

since 1824. He was the author of several interesting monographs; but that which established his reputation was his *Traité des Reactifs Chimiques*, and his *Traité des Falsifications*, which passed through several editions.

ESSAYS WANTED.

IT is stated that no essays have been sent in for either the Jacksonian or for the Collegial Triennial Prize of the Royal College of Surgeons; the 31st instant is the last day for doing so. For the former, the subject is "The Disease of the Lymphatic System known as Hodgkin's Disease, or Lymphadenoma", and its money value £12. For the Collegial Triennial Prize, the subject is "The Anatomy and Physiology of the Third, Fourth, and Sixth Nerves, as illustrated by Observation and Experiment in Health, and by reference to the effects of Injury and Disease". The prize consists of the John Hunter Medal, executed in gold, of the value of fifty guineas; or, at the option of the successful author of the dissertation, of the said Medal executed in bronze, with an honorarium of £50. No award of this prize has been made for upwards of twenty years.

THE BARNARD DAVIS COLLECTION OF SKULLS.

THE great osteological collection which Dr. Barnard Davis, F.R.S., has accumulated during a long life devoted to anthropological pursuits is well known, both in England and abroad, as the richest and most valuable ever formed by a private individual, exceeding, as it does, in variety and rarity of the specimens all the public collections of this country and most of them on the continent. It contains about eighteen hundred specimens of skulls and skeletons of various races of men, the value of which is greatly increased by an excellent catalogue, called *Thesaurus Craniorum*, in which each is fully described, and all known particulars of its history recorded. Many of the specimens are of especial value as belonging to races either entirely or nearly extinct; others are eminently illustrative of the ethnology of the British Isles, as those described or figured in the *Crania Britannica* of Davis and Thurnam, or of our colonies and foreign possessions. The owner of this collection has long been desirous of seeing it established in some central or public situation where it could be made available for future research; and no place seemed so appropriate to him as the Museum of the Royal College of Surgeons of England, as, when united to that already possessed by the College (which, it may be observed, it considerably exceeds in magnitude), for the first time in this country, a collection would be assembled in one spot worthy of a nation which, notwithstanding its extensive foreign connections, commerce, and colonies, has hitherto been behind, in this respect, many of our continental neighbours. We believe that, at one time, Dr. Davis contemplated leaving the collection to the College of Surgeons; but considerations for the interests of his family do not appear to have justified this arrangement, and he has now offered it for the sum of £1,000—which, considering its extent, and the labour and time taken in its formation, must be considered very moderate. Upon this becoming known to the Council at their meeting on December 11th, through a communication of Professor Flower, the Curator of the Hunterian Museum, it was the unanimous feeling of all present that it was most desirable that such a collection should be kept entire, and not permitted to leave the country; that it was the duty of the College, as the possessor and administrator of the great anatomical museum of the nation, to undertake the charge of the collection; and that, therefore, the opportunity of acquiring it upon the terms offered by Dr. Barnard Davis should not be lost. It was referred to the Museum Committee to consider and report whether the necessary sum could be provided out of the College funds, or whether it was desirable to seek for aid from other sources; for the latter alternative, several liberal offers were at once made by individual members of the Council. We feel sure that, not only the profession, but all who are interested in the scientific progress of the country, will have great satisfaction in knowing that the Council of the College have thus promptly stepped forward to save this noble collection from dispersion or expatriation; and that, if it should be thought that the College funds cannot judiciously be taxed at the present time, the country will as promptly respond to an appeal for such a truly national purpose. There must surely be many among us who would gladly take this opportunity of acknowledging their estimate of what the Museum of the College has done, and is doing, in maintaining the scientific reputation of the country and the profession to which we belong. The Hunterian Museum thus enriched would more than ever become the great centre of osteological and anthropological research and instruction, and in the hands of Mr. Flower, we may be sure that this collection would be so arranged, developed, and studied, as to be rendered in the highest degree available for the advancement of knowledge. It is an opportunity which must not be let pass.

MIDDLE-CLASS HOSPITALS.

A MEETING of the Committee of the Home Hospitals Association (for Paying Patients) was held on Tuesday—Mr. F. Cox in the chair; Sir Rutherford Alcock, K.C.B.; Dr. Quain, F.R.S.; and Messrs. Henry C. Burdett, S. W. Cawston, Ernest Hart, and John Watney being also present. The judgment of the Master of the Rolls having been considered, it was decided to take immediate steps to sell Berkeley House, the sanitary arrangements of which are almost perfect, and are described in detail in Dickens's *Dictionary of London*, under the head of "Drainage". A report from the Medical Board of Reference, signed by the President of the Royal College of Physicians, by Professor Erichsen, F.R.S., Dr. Quain, F.R.S., and others, and recommending the Committee next to take a freehold house in the west central or south-western districts (the judgment of the Master of the Rolls leaving none at present available in the western district), was then considered; and it was shown that the Committee's programme, as laid down in the original prospectus, embraced the above decision of the Medical Board. An eligible freehold was accordingly selected in Fitzroy Square, and, with the consent of the Chairman (the Duke of Northumberland), this house and grounds have been purchased. It is imperative that Berkeley House should be sold without delay, as, otherwise, the future proceedings of the Committee will be seriously hampered. The Committee agreed that, as soon as that house is disposed of, an energetic appeal should be made to that large section of the public who are interested in the establishment of middle-class hospitals, for an increase of capital, to enable the Association to purchase a freehold and to open a home hospital in the western district, where it is much wanted at the present time.

THE BROWN INSTITUTE LECTURES.

ON Wednesday, Dr. Greenfield, who has been appointed Professor Superintendent to the Brown Institute in succession to Dr. Burdon Sanderson, commenced the annual course of lectures in the great hall of the University of London. Amongst the audience were the President of the College of Physicians, Sir Joseph Fayrer, Dr. Wilks, Dr. Burdon Sanderson, Dr. Buchanan, Mr. Netten Radcliffe, Dr. Ord, and others, including a number of students. The Chairman of the Committee of the Brown Institute (Dr. Quain) remarked, in introducing the new professor, that six years ago he had performed the same duty when the first lecture was given by Professor Sanderson. Since that period, much good work had been done in the Institution by the Professor Superintendent, his assistants, and his pupils. He had no doubt that his hearers were familiar with these researches: such as those on the febrile process, on acute infective diseases, on inflammation, on tubercle, on diseases common to man and animals, and on pleuropneumonia in cattle; on foot-and-mouth disease, on small-pox in sheep, and on typhoid fever in swine. These inquiries had all extended the bounds of knowledge and tended to mitigate animal suffering; and the results were entirely in accordance with the will of the founder, and most gratifying to those who had succeeded thus far in carrying out that will. These investigations might have been extended with like happy results, but, unfortunately, the means at the disposal of the trustees were limited. It might have been reasonably expected, he added, that these means would be increased by the benevolence of the public. He believed this

would be the case, were the institution and its objects better understood. So far from this being the case, there were found those who, ignorant of what was being done in the institution, and infatuated by a misguided zeal, endeavoured to divert any contributions which might reach the institution by circulating in the neighbourhood hand-bills asserting that vivisection and other cruelties were practised there. It was lamentable to think that such persons, in their efforts to do away with a limited, hardly appreciable amount of suffering, should seek to circumscribe the operations for the relief of the widespread suffering of animals, and thus stultify the wishes of the benevolent founder, who made kindness to animals the characteristic of his institution. As a matter of fact, a large number of sick animals were treated at the Institute every year. Dr. Quain concluded by expressing his regret at the loss of the services of Dr. Sanderson who had done so much towards establishing the character of the institution on a scientific foundation, and in conferring on it some of the high reputation which he had himself acquired. He was, however, glad to say that Dr. Sanderson would still assist as a member of the Committee of Management, and afford information to his successor, Dr. Greenfield, who was to-day about to deliver his first lecture. He knew that Dr. Greenfield would be found a worthy successor, and would follow with success in the footsteps of his distinguished predecessor. Finally, he said he had an especial pleasure in introducing Dr. Greenfield, as being a distinguished graduate of that University in whose halls they were assembled. Dr. Greenfield commenced his lecture by alluding in complimentary terms to the labours of his predecessor in office, and informed his hearers that he proposed to devote the present course of lectures to a statement of researches on the infective process, carried out in the institution during the present year.

VACCINATION VERSUS SMALL-POX.

THE following very pretty instances of the power which vaccination possesses of modifying the severity of small-pox have been recorded by Dr. Ashby, Medical Officer of Health for part of Nottinghamshire. An unvaccinated girl died from very severe confluent small-pox, during an outbreak of that disease at Newark. Her brother, aged fifteen, had never been vaccinated, and was with his sister a great deal during her illness. However, he was persuaded to be vaccinated, and this was done in four places on July 17th. All the places "took" excellently; it was a typical case of primary vaccination. On July 25th, he began to be ill with small-pox, the eruption appearing on July 28th. But, instead of his having the severe confluent form, as his sister had, his was a typical case of discrete small-pox, all the pustules being isolated, and not confluent in any part of his body. Now, the period of incubation of small-pox being twelve days, the boy must have taken the infection about July 13th, or about four days before he was vaccinated. Although the vaccination was too late to prevent the disease altogether, yet vaccinia ran its course in his system concurrently with small-pox, and had the effect of very greatly moderating its severity. If he had not been vaccinated when he was, the chances were that he would have died, judging from the rate of mortality in unvaccinated cases which ruled in the outbreak in question; so that, in all probability, his life was saved by his having been vaccinated just in time—at any rate, there is no doubt that the severity of the disease was very much mitigated thereby. In another case, a man and his wife were engaged to take charge of a cottage that had been hired for the isolation of a case of small-pox in a rural village, and to nurse the patient. They had to close their own house, so they took their son (a lad about twelve years of age) with them to the cottage hospital. The man and the boy bore evidence of having been vaccinated, but no trace of any marks could be found on the woman. However, they were all three vaccinated on the morning of August 14th, before the case of small-pox was sent in. As the woman had never been done before, she was vaccinated very thoroughly in four places, using a separate point for each place, and four typical vesicles formed. The vaccination of the man and boy also took. About August 24th or 25th, the woman began to be ill (*i. e.*, about eleven days after she was vaccinated), and had a very slight attack of small-pox. She had only a few scattered pustules, and soon recovered. Thus it was evident that she took the infection of the disease at nearly the same time as she was vaccinated. Vaccinia and small-pox ran their course together in her system, the disease being extremely modified by the vaccination.

COMBATANTS AND NON-COMBATANTS.

WE have received several communications from experienced medical officers expressing disappointment that the authorities have not seen their way to do away with the invidious distinction between combatant and non-combatant officers. The medical officers of the army, more particularly those who have seen field service, feel that this distinction is a stinging injustice. Most of the wars in which this country has of late years been engaged have been waged, not against the regular armies of Europe, but with savage or semi-civilised nations; and anyone even moderately acquainted with the history of such wars knows that, while medical officers are exposed to risks peculiarly their own, they have to face those which in popular estimation are supposed to be confined exclusively to the ranks of professional soldiers, in the face of the fact that hardly any engagement is ever reported in the newspapers without the names of one or more medical officers figuring in the lists of killed and wounded. The distinction is a mere survival of feudal times; and, like some other survivals of the same kind, will ere long have to give place to more just notions on the fitness of things. We have said all we could in fairness say in praise of the provisions of the new warrant; but we entirely sympathise with those who, while not insensible to the improvements introduced by it into the service, maintain that "man does not live by bread alone". Men who serve their country with devotion in every climate by land and sea, and do their duty in cholera-stricken camps, take their turn in the trenches at great sieges, who have their comrades killed or wounded beside them in boat-service under fire, and calmly discharge their duties on fields of battle, are, who (shall say unreasonably?) affronted at being classed with those whose calling does not expose them to such honourable dangers. So long as this absurd distinction is officially maintained, the "relative rank" of the medical officers will continue to be a mockery and a delusion, a fruitful source of heart-burning, and a discouragement to a class of men it is the interest of the State and of the "combatants" themselves to enlist in this branch of the service of the crown. It is to be regretted that what must be done sooner or later was not done now; and that the "edifice" of army medical reform was not "crowned" by a concession that would have gratified an honourable body of men, and the profession to which they belong, without injury or injustice to any other class in Her Majesty's service.

FROST AND MORTALITY.

BOTH in summer and winter the death-rate is mainly governed by temperature, although the influence of social and sanitary condition is not, on that account, less distinctly marked. In winter, every degree of frost sensibly affects the death-rate, although the effect of cold upon the mortality varies in different populations in accordance with their condition. With but a few days' exception, frost prevailed continuously from November 14th until Saturday last, December 13th; and the first seven days of December were intensely cold. As is invariably the case, this frosty weather caused a marked increase in the mortality prevailing in London and the nineteen other large towns dealt with in the Registrar-General's weekly return. During the twenty-nine days ending the 13th instant, the thermometer at the Royal Observatory, Greenwich, fell below the freezing-point of water on twenty-five days; the lowest daily reading of the thermometer during this period showed an aggregate of 176 degrees of frost. So far back as 1870, the nearest approach to so much frost before the middle of December, occurred in 1871, when the aggregate degrees of frost, however, did not exceed 115. The annual rate of mortality in the twenty large English towns, which in the six preceding weeks had steadily increased from 21.9 to

27.4, further rose last week to 30.6, a higher rate than has prevailed in any week since the fifty-first of 1878. During the eleven weeks ending last Saturday, the death-rate in these twenty towns averaged 23.4 per 1,000 against 23.7 in the corresponding period of last year. As in 1878, there were but thirteen frosty days during the twenty-nine days corresponding with the period of which we are speaking, it follows that the recent cold proved, although more prolonged and more severe than the cold in the early winter of 1878, was not so fatal to the public health. The highest death-rate during this period in recent years occurred in 1874, when it was equal to 27.2 per 1,000, although in that year there were but fifteen frosty days on which 59 degrees of frost were recorded. While, therefore, we know that frost invariably raises the death-rate, it is not so easy to explain the varying effect of cold in different seasons and localities. In the meantime, it is a fact that the rate of mortality in our twenty largest towns rose to 30.6 last week under the influence of the severe frost that prevailed during the first seven days of December; and the Registrar-General has pointed out that the effect of cold upon rates of mortality is proportionably even greater in rural than in urban districts. It is easy to calculate, therefore, what a heavy death-toll the recent frost has levied throughout the country. The metropolitan returns afford us the means for judging pretty accurately the manner in which the excess of mortality due to cold is caused. The 2,132 deaths in London last week exceeded the corrected average number in the corresponding week of the last ten years by no less than 322. The deaths referred in London to diseases of the respiratory organs, excluding phthisis, which had steadily increased from 190 to 612 in the nine preceding weeks, further rose last week to 777, and exceeded the corrected average by 275. Thus 275 of the excess from all causes (322) were due to acute diseases of the respiratory organs, equal to 85 per cent. of the excess from all causes. The 777 deaths in London last week from diseases of the respiratory organs included 559 from bronchitis, and 149 from pneumonia. The fatal cases of bronchitis alone accounted for no less than 229, or 71 per cent. of the 322 deaths by which the deaths in London last week exceeded the average. This excess is mainly due to the direct effect of the frost; while the remainder of the excess may be attributed to its indirect effect upon persons whose health is impaired by various forms of organic disease, and also upon children suffering from measles, scarlet fever, and whooping-cough. These three last-mentioned infantile zymotic diseases have been unusually fatal in our large towns during the recent weeks of cold weather. The annual death-rate last week, which was equal to 30.7 per 1000 in London, averaged 30.8 in the nineteen large provincial towns, which have an aggregate population slightly exceeding that of London. The average effect of the recent cold appears, therefore, to have been almost identical in the metropolis and in the large provincial towns. In the several towns, however, the death-rate last week showed wide variations: while they did not exceed 20.2 and 21.2 in the two south-coast towns, Portsmouth and Brighton, they ranged upwards to 36.7 and 41.4. These wide variations were due to the combined effect of varying temperature and of sanitary condition. It would be both useful and interesting if the separate effect of those two influences could be correctly estimated.

INFECTION FROM THE DEAD.

SOME feeling was, we read, aroused recently in Milton-next-Sittingbourne by the open way in which the body of a young man who had died from typhus fever in the workhouse hospital had been removed from the hospital to the house of his friends, where the coffin was unscrewed, and the body remained exposed for several days until buried. Several other cases of fever had occurred in the locality after this, and the not unnatural inference was that the exposure of the body had spread infection. The Local Government Board have been consulted on the matter; but their reply is in substance that, when friends claim a body from the workhouse, or even from a sanitary hospital, the authorities are not justified in burying the body direct. They are bound to give it up to the friends. But we are not surprised that it is asked whether the local sanitary authorities might not properly see that the friends, in the case of death from infectious diseases, do not so expose the body as to run the risk of spreading infection? It is penal to expose a living person in any public place where infection may be communicated; and the rules on the exposure of the dead might well be even a little more stringent. The "waking" of dead bodies of those who have died of infectious disease, or the removal to places where they are not properly isolated, is clearly a source of danger—an offence of which the law might well take cognisance.

THE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

AMONGST the candidates for this office we notice the names of Dr. Peter Hinckes Bird, and of Mr. Turner, the able medical officer of health for Portsmouth. They are both well qualified for the sphere of duty which they seek. Dr. Hinckes Bird holds the Cambridge Sanitary Science certificate, and was for many years in charge of the Fylde district in Lancashire, comprising rural and urban as well as two urban sanitary authorities. He is also well known for his labours on the subject of ventilation and practical sanitary science in general. Mr. Turner, from his special opportunities as medical officer of health for one of our largest sea-port towns, would bring the experience necessary for the performance of the duties of a port medical officer; and is also favourably known for his painstaking researches into the causes of infant mortality and the ordinary unhealthiness of the large district in his charge.

GRAYDON'S AUDIPHONE.

IN the absence of any scientific details of this instrument, which we have not seen anywhere described except in the daily papers, we note that this apparatus for improving the hearing in the deaf is constructed on an ingenious and intelligible principle. Graydon's audiphone is described as consisting of a small electro-microphone, from the membrane of which a cord of the required length is stretched, to the further end of which is attached a piece of wood. The object of the apparatus is to make deaf people hear, and its mode of operation is simple enough. The person afflicted with loss of hearing takes a piece of wood between the teeth, and the person who wishes to converse with him speaks through the electrophone, taking care at the same time that the cord remains stretched. Thus, according to the statements made and to the theory of the inventor, the deaf man hears not through the tympanum, but by conduction through the teeth and bones of the face. The instrument is, of course, only effective when the deafness does not arise from atrophy of the auditory nerve, but when the nerve remains intact or active but is not reached by vibrations passing through the tympanum in the ordinary way. It is, of course, well-known to all surgeons that a watch held against the facial or cranial bones is frequently well heard by conduction when vibrations in the air do not reach the auditory nerve by the movements excited in the tympanum. According to the statements which were made at a public demonstration of the use of the instrument at a deaf institute at Cincinnati, a quite deaf coloured girl, with whom the teacher spoke at a distance of twenty-five feet with the audiphone, repeated word for word all he said to her. Another girl, who was born deaf, made it understood by finger-speech that while her teacher spoke to her she perceived the tones and perceived also the difference of intensity and intonation; but, as it was the first time that she had heard any sound in her life, she could not, of course, understand the meaning of the sounds she heard. We shall, no doubt, hear more either in confirmation or in contradiction of these reports, especially as we are promised that some of the instruments will soon be here.—Mr. James Samuelson writes on this subject from Liverpool;—"……The instrument is a flat flexible disc of some resonant metal (probably the material of which cornopeans are made), japanned and burnished, and fitted on a handle. It resembles a fan in appearance, and is not at all unsightly. By means of a cord, it can be curved to any extent, and is held in the desired position by a simple clamp on the hand. It acts as a soundboard, and requires to be placed under the upper row of teeth, through which and through the bones of the face sounds are conveyed to the auditory nerve. If that is not diseased,

the instrument is all the more efficient in proportion as the auditory mechanism is injured or imperfect. I saw the instrument in use in Chicago in August, and have, I believe, the only one in this country; but I have written to the makers, Messrs. Rhodes and Maclure (Mr. Rhodes is the inventor), and urged them to appoint agents over here, as I have found the instrument to be of real service to deaf persons."

SCARLET FEVER AND MEASLES IN LONDON.

THE fatal cases of scarlet fever last week in London were more numerous than in any week of the present epidemic, and exceeded the corrected weekly average by 40. The Metropolitan Asylum Hospitals contained 340 scarlet fever patients on Saturday last, and 63 new cases were admitted during the week. The deaths from measles, which had been 78 and 67 in the two previous weeks, further declined to 63 last week. The greatest fatality of measles occurred in East and South London.

SCOTLAND.

UNIVERSITY OF EDINBURGH.

IT has been formally announced that students of medicine intending to go in for their second professional examination in April may defer their materia medica and pathology till July. In this way, they can get up their anatomy and physiology more thoroughly and efficiently, as well as with less "cram". The importance and value of this change cannot be overestimated.

KILMARNOCK FEVER HOSPITAL.

AT the annual meeting of the subscribers to the Fever Hospital and Infirmary, Kilmarnock, held there last week, the Provost presided. From the annual report, it appeared that pecuniarily the institution was in a satisfactory condition; while the cases treated in the hospital numbered 488, this being an increase of 62 over the preceding year.

GLASGOW ASSOCIATION FOR PROVIDING TRAINED NURSES.

THE Association for Providing Trained Nurses for the West of Scotland held their fourth annual meeting in Glasgow last week. There was a powerful platform of medical men, clergymen, and others interested; while letters were received from many influential parties regretting their inability to attend. From the report submitted, the Association is most successful in its work. During the year, five nurses had attended 705 cases, and this involved 12,179 house-to-house visits; while 33 patients had been supplied with permanent nursing service at a merely nominal cost. The income for the year amounted to £1,584, and the expenditure to £1,142. The various speakers at the meeting alluded to the extreme usefulness of the institution and the strength of its claims on public charity.

THOMSON LECTURES IN ABERDEEN.

IN the Free Church College, Aberdeen, Professor McKendrick delivered the first of the lectures for the session (under the bequest of the late Mr. Thomson of Banchory) on Friday, December 12th. There was a large attendance of students and others. The lecturer chose as his subject the Brain and the Senses, which, he considered, would be profitable to students of divinity.

ABERDEEN INFIRMARY MANAGERS AND DISPENSARY PATIENTS.

THE Aberdeen Infirmary Managers, at a special meeting held on Monday, considered at length the subject of outdoor patients coming for advice and medicine, the number of such having largely increased of late. They resolved to give instruction to the medical officers first of all to give their attention to their indoor cases; next, each in turn to give advice and an order for medicine in the Infirmary to outdoor patients who resided beyond the dispensary boundaries; in the third place, to give advice in special cases to outdoor patients within the said boundaries if not on the poor's roll, and a card entitling them to receive medicine at the dispensary; but only on the condition that such cases present a statement of inability to pay, and a recommendation, and also a statement from a professional person that such cases are serious, and reported as such by the medical officer to the superintendent of the Infirmary.

HEALTH OF EDINBURGH, GLASGOW, AND LEITH.

IN Leith, the mortality is already 30 per 1,000; while the death-rate in Glasgow has risen to 31 per 1,000. In Edinburgh, last week, the death-rate had risen to 25 per 1,000. Of 106 deaths there, 46 were due to diseases of the respiratory organs; while 9 were due to zymotic diseases, of which 4 occurred in the New Town. There were seven deaths of people over eighty years of age.

GLASGOW SCIENCE LECTURES.

THE third lecture of the course held under the auspices of the Glasgow Science Lectures Association was given on the evening of the 11th instant, by Professor Schäfer of University College, London. Professor McKendrick presided. The subject of the lecture was, "The relation of Structure to Function in Animal Organisms". After dwelling in the commencement of the lecture on the difference which exists between the two sciences of anatomy and physiology, the lecturer proceeded to explain the relationship between the minute structure of an organism and the functions of that organism, and, by his manner of handling it, rendered the subject most interesting and clear to a large audience. A hearty vote of thanks was awarded to Professor Schäfer at the end of his lecture.

OUTBREAK OF TYPHOID FEVER IN SWINE.

ON the 13th instant, a steamer arrived in the Clyde, having on board a number of pigs from Montreal. The condition of the animals being suspicious, they were examined by Professor M'Call, the veterinary inspector, who has declared them to be suffering from malignant typhoid fever. It appears that, out of a cargo of 205 animals, 144 died on the passage, and were thrown overboard, and 12 have died since the cargo was landed. This is the first outbreak of typhoid fever among swine imported from Canada; and, as the disease is of a very contagious nature, the authorities have acted wisely in taking early measures to prevent the spread of the disease.

POISONING CASE AT GREENOCK.

A CASE of poisoning under peculiar circumstances has occurred at Greenock. An old woman returned home with some sausages which she stated she had found; and, after being cooked, they were partaken of by herself and the rest of the inmates of the house. All were soon prostrated with severe illness, from which they recovered under medical aid, with the exception of the old woman, who succumbed. An investigation has taken place by the authorities, and there seems some suspicion that the sausages had been prepared with poison for destroying rats, or else that they had become putrid, and were unfit for food.

THE FATAL CHILD-POISONING CASE IN GLASGOW.

IN a previous number of the JOURNAL, attention was directed to a fatal case of poisoning in Glasgow, where a woman administered, or caused to be administered, to a child, twenty-four days' old, fifty drops of laudanum, in consequence of which the child died the following day. On the 15th instant, the woman was tried by a jury on the charge of culpable homicide, and was found guilty. She was sentenced to six months' imprisonment; the judge remarking that she seemed to have acted, not so much from improper motives, as from culpability and recklessness of a most serious nature; and that the duty of the court, as representing the public, was to show that such practices cannot be indulged in with impunity.

REGISTRAR-GENERAL'S RETURNS.

ACCORDING to the weekly return of the Registrar-General for the eight principal towns in Scotland during the week ending with December 6th, the death-rate was 23.4 per thousand. This rate is 0.9 under that for the corresponding week of last year. The lowest mortality was

recorded in Perth—viz., 15.6—and the highest in Paisley—viz., 35.1. The mortality from the seven most familiar zymotic diseases was at the rate of 3.2 per thousand of estimated population, being one per thousand above the rate recorded during last week. The increase was most marked in the number of deaths in Glasgow caused by scarlatina and diphtheria. The death of an unvaccinated male child, two months old, was certified to have been caused by small-pox. From acute diseases of the chest, there resulted 177 deaths, being an increase of 77 on the number of the previous week. The increase was most marked in Glasgow. The mean temperature was 27.1 Fahr., being 10.0 under that of the week immediately preceding.

IRELAND.

THE Chief Secretary for Ireland has been pleased to appoint Dr. William Thornley Stoker to be Inspector in Ireland under the Cruelty to Animals Act, in the room of the late Registrar-General, Dr. W. M. Burke.

MR. H. W. MACINTOSH, Registrar of the Medical School of Trinity College, has been appointed Professor of Zoology in the University of Dublin.

THE LEDWICH SCHOOL OF MEDICINE.

SINCE the 28th of February, 1877, certificates of attendance at lectures given in this school have not been recognised by the University of Dublin. The circumstance which nominally gave rise to this step on the part of the Board and Academic Council of the University was stated at the time in this JOURNAL (March 17th, 1877, p. 335); and was one quite unconnected with the School itself, as was well-known to the initiated. The Proprietors and Lecturers of the School have now unanimously passed a resolution guaranteeing that three-fourths of each full course of lectures (as required by the University) must be attended by each University student in order to obtain the certificate of attendance, such attendance to be verified by a roll called at each lecture. The Board of Trinity College have agreed, on the faith of such assurance and undertaking—communicated under the signatures of the Proprietors and Lecturers of the School—to replace the Ledwich School on the list of medical schools recognised by Trinity College.

PRESENTATION TO DR. COLLINS.

LAST week, the medical staff of Jervis Street Hospital presented to their late colleague Dr. Collins an illuminated address, on his resigning his surgeoncy at the hospital to take up a partnership in a practice at Sydenham. The address bore eloquent testimony to the esteem in which his colleagues held Dr. Collins during the five years he had worked so "earnestly, loyally, and harmoniously" with them; and to his courtesy and urbanity, as well as to the profession skill and devotion to duty that characterised him. It spoke also of the opportunities he had had of performing numerous operations of magnitude, and of the judgment, care, and ability he displayed on these occasions. All these circumstances foreshadowed that future success which his colleagues, while regretting his departure from them, now cordially wished him. Dr. Collins's reply expressed his unfeigned pleasure at looking back on the harmony, good feeling, and kindly forbearance towards one another which had characterised the friendship and cemented the bonds of fellowship between himself and his late colleagues.

HOW CONTAGIOUS DISEASES ARE SPREAD.

A PERSON named Cotler was prosecuted by the Cork Sanitary Authorities last week, and fined by the presiding magistrate at the Police Court £5, with costs, for having held a "wake" on a child of his who had died of scarlatina. As an epidemic of scarlatina at present prevails in Cork, we trust that the highest penalty permitted by law having been imposed in this case will prevent a repetition of the offence.

ANTISEPTIC SURGERY.

THE adjourned discussion on Mr. Mac Cormac's paper on Antiseptic Surgery took place on Wednesday evening last, December 17th, at the meeting of the South London District of the Metropolitan Counties Branch of the British Medical Association, at St. Thomas's Hospital. There was a large attendance.

Mr. JOHN WOOD, F.R.S., President of the Branch, occupied the chair, and, in opening the proceedings, said: Among the remarks made at our last debate, was a personal appeal to myself by Mr. Timothy Holmes. It was to the effect that he had, some time ago, suggested publicly that, now that Mr. Lister had come to King's College Hospital, there was offered a favourable opportunity of comparing the results of the antiseptic system of treating wounds with the more simple methods, in the same hospital and under the same hygienic conditions, and that he had been disappointed at my not having taken up the challenge and practised the simpler method exclusively in my own wards. I had practised antiseptic surgery according to my lights and opportunities ever since Lemaire, in 1860, established the value of carbolic acid in the treatment of open wounds. I saw at once a means of counteracting the contamination which even pure water, and clean lint and instruments acquired, when exposed in hospital wards. I had previously practised in all my cases Chassaignac's method of drainage by India-rubber tubes, and had arranged my incisions in all operations with a view to effectual drainage by gravitation. When Professor Lister commenced the employment of carbolic acid, I looked with much interest for the results of his practice, which first appeared in a medical paper for March and July 1867. I had not a marked success beyond other plans with the carbolic putty treatment first employed by him; but when he combined with the use of spray the antiseptic gauze dressing, with more satisfactory results, I instituted the plan in one of my wards, and started a Siegle's steam-spray and the gauze dressing for six months. My antiseptic bark (which was making very fair progress on the whole towards harbour) came suddenly to grief. It was among the shoals of expense that it suffered shipwreck. At that time, my wards were shared by the late Sir W. Fergusson; and erysipelas having broken out among his patients, it spread to my side of the wards, the Listerian treatment notwithstanding. The committee of management of King's College Hospital had spent much money in hospital arrangement and improved nursing, and an additional expense of £50 in six months led to an intimation that, if I persisted in antiseptic experiments, I must furnish the funds. This was not unnatural, for my surgical colleagues, and notably Sir W. Fergusson, were of the opinion (still shared by many) that the pure waters of Damascus were as good or better than all the carbolised waters of Israel for purifying influence. Before this time, following the note of preparation sounded by Mr. Erichsen, the full tide of hospital hygiene had reached and cleansed the London hospitals at a period long antecedent to its visit to the pest-house lazarettos of the continent and elsewhere. This fact should not be forgotten in weighing the significance of the remarkable success of the simple treatment in St. Bartholomew's Hospital under Callender and Savory, whose statistics show only a fractional difference from those with which Mr. Lister has favoured us—a difference which may result from the fallacies lurking beneath all statistics. Upon this tide came the wave of antiseptics, and topping the wave was the foamy crest of Listerism. Perhaps my metaphor will be more exact if I say the spray of Listerism. Of this wave, and of this spray, we took at King's College Hospital the fullest advantage. It is rather too bad of Mr. Holmes to ask me to contravene all my cherished notions, to make all my patients the subjects of adverse experiment, and myself an awful example, for the purpose of furnishing forth a statistical table haply disastrous to some poor body, or even funereal. I have much reason to congratulate myself that I did not figure among the tables showing the very same thing given by Mr. Mac Cormac, and that I have thus escaped the oracular verdict of Mr. Holmes, that they were "utterly and completely useless". I agree with Mr. Holmes to a considerable extent as to the value of statistics compiled without regard to detail of conditions; and so far I find a further justification for declining to accept his challenge. When Professor Lister joined the staff of King's College Hospital, he stipulated for and made arrangements which enabled him to obtain complete seclusion of his wards, with a separate house-surgeon and nurses. One of my own wards freely communicates, and is nursed jointly, with that of another of my colleagues, and I have more than once had an invasion of erysipelas and other infections in that way. I think Mr. Holmes will admit that the conditions of the experiment could not,

under these circumstances, be equal. But I have tried to satisfy my own mind whether the system of Lister is so much superior to the more simple plan as to justify its increased cost. I have treated some of my cases by the simpler antiseptic method, and others by strict Listerism. I did so with the object of instructing my class in both, so that they might not be unprepared when opportunities came or failed. Those who are destined for the army especially should know the simple method, for I am informed by army surgeons that it would be impossible to carry out the Listerian treatment in a campaign or after a battle. I have by the simpler method had some cases quite as good as any; tapping of knee-joints and injection of iodine for hydrops articuli, in a broken down constitution, without fever and with complete success; some cases of opened knee-joint, with drainage-tube through joint for three months, and recovery with a movable joint. Some Listerian cases have shown signs of kidney-irritation, olive-coloured urine remaining undecomposed for a very long time; and others cases of skin-irritation (carbolic eczema). In one case, profuse salivation, lobular pneumonia, with olive-coloured urine, occurred after operation for removal of large myxoma from the face and head, with high temperature, getting better at once after removing the Listerian dressings. I have had one or two rare opportunities of comparing the two methods in the same patient, as to rapidity of healing, certainly on equal conditions. One was a case of removal of a benign tumour from each breast. The Listerian side was well ten days before the other. Whenever such opportunities have occurred, I have sedulously used them, and I am convinced of the exceeding great value of the Listerian dressings, and have employed the method on all serious operation cases, especially in abdominal and hernial cases, where the sac is removed, and in removal of varicose venous tumours.

Little or nothing has been yet said in this debate about the bacterian theory of Pasteur as applied by Lister to the explanation of pyæmia, and the *modus operandi* of his method of dressing. It has been asserted that, to practise his method rightly, you must be a disciple of the bacterian theory. As a prudential maxim, this is unexceptional, and may be useful in getting the work done properly. But, on looking over the past history of surgery, I find numerous instances where the practice was right, although the reasons for it were ridiculously and absurdly wrong. I will mention but one instance—the sympathetic powder of Sir Kenelm Digby. A simple dressing of clear cold water was applied to the wound, and the patient was all the better for it. The sympathetic powder was carefully applied to the weapon which inflicted the wound, and nobody was a penny the worse. I have one or two difficulties to get over before I can adopt the bacterian theory. 1. How is it that, if bacteria have a power so terrible in their effects, in nine hundred and ninety-nine cases of wound out of a thousand they are unable to exercise it? 2. How is it that a patient may die of pyæmia or septicæmia, self-poisoned, without an external wound at all, the source of infection being a deep-seated abscess, far secluded from contact with the air? 3. How is it that bacteria may exist in abscesses originating inwardly, and yet no blood-poisoning ensue? 4. How is it that wounds of the face-cavities heal so quickly and so well, and yet bacteria are found in number in the fur of the tongue and the mucus on the surfaces of those cavities? It is, indeed, true that the mucus or saliva is antiseptic, but the bacteria are lively notwithstanding. It may be that the antiseptic properties of the saliva may prevent the bacteria from propagating, and prevent, in fact, the formation of the zoogloea which pathological experiments have proved to be so fatal when introduced into the system; and that the supply of bacteria is kept up by fresh relays from the atmosphere; or their liveliness may even be the expression of social discomfort and dissatisfaction, instead of that of joyous contentment. But some admit to the full the bacterian theory, and yet deny the efficacy of the Listerian method. I cannot understand this. It seems to me that, if this bacterian pathology be true, Mr. Lister's spray-treatment is its exact therapeutic equivalent. And I cannot admire the strategy which would assail Mr. Lister's position on this point, where I believe him to be impregnable. If clouds of bacteria hover in the air, seeking whom they may devour, we surely can best fight them in the air with clouds of antiseptic spray, and prevent them from coming to close quarters. While thus defining the limits of my agreement with my esteemed colleague Professor Lister, I must take this opportunity of congratulating him sincerely upon the possession of those advantages which have made him so powerful an advocate of antiseptic surgery, and will give him so high a niche in the temple of scientific fame; upon the professional position which has given him the authority; upon the gifts of fortune which gave him the means; upon the gifts of nature, which gave him, in happy combination,

> "The patient thought, the steadfast will,
> Resolve and foresight, strength and skill",

which he has laid upon the altar of suffering humanity.

Mr. JONATHAN HUTCHINSON: The admirable paper with which Mr. Mac Cormac opened the discussion, and Mr. Lister's speech, comprising his statement of statistical results, are documents of very great value, and, together with the contributions of facts and opinions from other distinguished surgeons who have spoken, must do much to help us to sound conclusions. Yet the subject still remains one of great intricacy and difficulty, and, although there are points respecting which I feel able to hold clear and strong opinion, on the general question I speak with much diffidence. On this question, we are in great want of detailed statistics, and have a surplusage of those which are vague and untrustworthy. Hence much bewilderment. I am referring to the practical merits of the spray and gauze method of dressing wounds, which we now know as Listerism or "the antiseptic method". Respecting the antiseptic principle and the usefulness of antiseptics, we are, I think, agreed; it is as to the value, the comparative value, of that special method that some still doubt. As the time at my disposal is short, I may be permitted briefly to avow my own faith. I believe confidently that the spray and gauze plan of dressing is a very efficient plan of preventing the putrefaction of fluids in wounds; and this prevention is of the utmost importance in avoiding wound-fever and blood-poisoning. I believe, further, that it will not only prevent the influence of common air as a cause of the putrefaction of dead material, but that it is also potent to kill the germs by which are induced certain more or less specific forms of inflammation, such as suppurative phlebitis, erysipelas, and allied conditions. I cannot doubt that these measures keep wounds sweet, and do this under conditions which are not favourable, and when, without them, these results would not have been attained. I have seen large abscesses opened under the spray and dressed with the gauze which did not suppurate further, and which behaved in a way wholly unexampled under the older methods of dressing. I have also seen many large operation wounds so treated heal without suppuration, and without the slightest approach to a febrile condition. I have not yet ventured on any of the more daring procedures, such as opening comparatively healthy joints, or cutting into hernial sacs, with a view to radical cure; but I accept the evidence which has been recorded on these subjects. Let me be permitted to add, that I also quite believe that the details of Mr. Lister's plan are essential to its success. There remain several explanations which I wish to make, I desire to make a few comments on the stages by which our modern opinions have been reached, and upon the explanation of the fact, that those who do not employ the spray and gauze method are able to show that their results, in the gross, are nearly as good as if they did. My surgical memory easily goes back to the earliest periods of the movement which has resulted in a splendid reform of operative surgery, which has made the treatment of wounds comparatively without danger, and which has opened out to the surgeon many paths which were before impassable. It was not in one mind, but in many, that a zeal for the greater success of operations, and a feeling of great dissatisfaction with the results arose. Foremost, from the energy with which he devoted himself to the work, I must mention Sir James Simpson. He never tired of telling hospital surgeons that they were losing their patients on a scale which was far beyond what was inevitable, or of endeavouring to devise expedients which should help. In the belief that ligatures, and the bits of sloughing tissue which they were supposed to cause, were the means of poisoning wounds, an immense amount of ingenuity was devoted to perfecting the details of acupressure. The evils of hospitalism were loudly proclaimed, and the all-important duty of isolation of contagious cases was insisted upon. Next came the discovery of carbolic acid and its introduction into practice, and its use as a disinfectant of wounds. Earlier than this, Mr. Spencer Wells became editor of the *Medical Times and Gazette*, and he at once devised a scheme for bringing to the light the real facts as to the mortality of operations. I was then his junior coadjutor, and the collecting of materials devolved upon me, but the plan was his. The design was, by the publication of all operations in all the hospitals to which we could get access, to obtain data which should be trustworthy as to the rate of mortality of each, and the real causes of death. Of these statistics, Sir James Simpson and others largely availed themselves, and I believe they were indirectly the cause of much of our subsequent gains. If my memory do not deceive me, the first nine ovariotomies which we thus dragged to light were all fatal. The ratio of improvement in the results of other operations has not been so great as in this one, but it has been very large. It was whilst our minds were much occupied with acupressure, torsion, etc., that we heard of disinfecting the air and the wound by carbolic acid. By degrees, Mr. Lister developed his practice in detail, and with steady patience kept close to his germ-theory. The splendid results we partly know. But, during the development of Listerism, other and very important hospital reforms were in progress. Gradually every hospital was provided with an isolation-ward, and

cases of erysipelas, gangrene, and the like were promptly removed from proximity with the healthy. Torsion of the arteries and the catgut ligature superseded the old silk, and the proved value of carbolic lotions, etc., led to many other antiseptics—chloride of zinc, spirits of wine, iodine, terebene, etc., being largely employed. My object has been to prepare the way for an answer to the question, How is it, if the spray and gauze plan of dressing be so valuable, that some of those who do not use it get such excellent results? The statistics of St. Bartholomew's have been brought forward, first by Mr. Callender and more recently by Mr. Savory, in proof that Listerism is, at any rate, not essential. Mr. Bryant has mentioned his own results in support of the same position, and I have often referred to my own. At the London Hospital, for many years Lister's precautions have been most ably and zealously used by one of my colleagues, yet his mortality has never been lower than my own. The explanation is, I think, to be found by reference to several facts. First, most of us (I speak now of those not using the spray and gauze) have been sedulous in the employment of some other antiseptic. Mr. Savory and Mr. Callender have used carbolic oil; Mr. Bryant, iodine and terebene; myself, spirits of wine and lead; and to these much of our results have probably been due. Secondly, I think an exaggerated impression of the injurious effects of common air has got about. It was air laden with specific germs—those of erysipelas, hospital gangrene, and pyæmia—which in former times was so hurtful. From the risk of these, the isolation-ward and the frequent use of disinfectants for sponges, bands, and dressings has to a large extent freed us. Thirdly, it is quite possible that the spray-and-gauze plan, so useful in some cases, may in others be the cause of harm. Lastly, it ought probably to be admitted that those surgeons who show an unusually small percentage of mortality, whilst neglecting special antiseptics, are mostly of the cautious class, and abstain from operations involving peculiar risk. One of the duties which must be undertaken in the future, will be to investigate the mortality under different plans of treatment of each several operation. Let us inquire as regards excisions of the breast, removals of loose cartilage from joints, amputations in each several part, excisions of each several joint, etc., and ascertain what the average mortality is under treatment by cleanliness supplemented by poultices, and that under each kind of antiseptic application. The spray-and-gauze method does not appear to be well adapted for cases in which frequent movement of the part is likely to be hurtful—such, for instance, as compound fractures. Nor is it helpful where it is of great consequence to avoid a conspicuous scar. For the excision of tumours from visible parts, I have had far better results in the way of immediate union and inconspicuous scar from the lead-and-spirit plan. For wounds which have already been exposed to risk of infection, I think that other means are usually preferable; and so also in all cases in which inflammatory conditions have set in. It does not tend to repress inflammation, but only to prevent it; whereas the lead and spirit lotion does both. For most cases in which the surgeon makes his wound, the Listerian plan is admirable; and under this head we comprise all opening of joints and serous cavities, all osteotomies, most excisions of tumours, all openings of abscesses, and most amputations. So great are its advantages in this large department of surgery in diminishing suffering and preventing the risk of death, that there can, I think, be but one opinion as to the gratitude due from mankind to the genius, perseverance, and enthusiasm to which we owe it.

Sir James Paget: I am unable to point out the distinctions which might be drawn between the gauze and spray under the strict antiseptic treatment, and the details of the lesser degrees of antiseptic treatment, which Mr. Hutchinson has done. I must therefore speak more broadly of the antiseptic treatment, and I will limit myself to speaking of operations alone, without including cases of accidental wounds, compound fractures, or the rest, drawing as far as I can any observation from my own practice and that which I have seen at St. Bartholomew's Hospital. With respect to antiseptic treatment in cases adduced from foreign hospitals, they leave it impossible to doubt that it is absolutely potent for the repression of nearly the whole of the influences of air and infective disease. We hear it stated on authority that, speaking roughly, every wounded person introduced into a hospital, or every person wounded there, becomes a subject of some infective disease; and that upon the introduction of antiseptic treatment that condition of things ceases, or is reduced to a minimum. The only question is whether the same results can be attained by any other method. At St. Bartholomew's, Mr. Callender first, and then Mr. Savory, have shown that the mortality with a very partial application of antiseptic treatment is as low as has been reached anywhere. That statement I must confirm, both from my own experience there and from my practice in private, for I am very glad I can come in for a share of the praise granted to St. Bartholomew's Hospital for the diminution of its mortality. The statistics which have been introduced include the last three years of my own practice in the same wards in which I was succeeded by the gentleman who has produced those statistics. From my observations, I consider that the difference between hospital and private practice with respect to mortality is exceedingly small. I have kept papers of my cases for many years, and traced them, and I could not find that private practice had less mortality than hospital practice at St. Bartholomew's, except perhaps such as might be fairly assigned to the difference in the characters and conditions of the patients. But, setting aside the differences in social position, there was no difference in the mortality between the hospital practice and private practice treated by the same person at the same time on the same general principles. Then with respect to the mortality at different periods, I have had observation of hospital operations during a period of perhaps rather more than forty years; but I would rather take the period of thirty years, beginning with 1847, when I was first appointed assistant-surgeon to St. Bartholomew's up to the end of 1877. Of those thirty years, the first twenty years, or rather more, were occupied in both hospital practice and private practice, and the last seven years were occupied in private practice alone. Speaking roughly, but without any hesitation, I think it may be held that in the first period of thirty years, say the first ten years, the total mortality from operations of all kinds, and from all things which could be called surgical operations, amounted to not less than 15 per cent. In the second period, it fell certainly to not more than 10 per cent. In the third period, including the end of my time, it had fallen to five per cent., and I believe I may say that in the seven years of my private practice it was not more than 2 per cent., taking all operations together. So we have here to account for a reduction of mortality in the whole group of operations, major and minor, from about 15 per cent. to less than 5 per cent., and if I take the larger operations, the larger amputations, excisions of the breast, and the rest, I believe, I may say the average mortality would have fallen from 20 per cent. in the first period, down to less than 10 per cent. in the last period. I do not claim for myself any credit for having obtained such a result as that; but I congratulate ourselves, as members of the surgical profession, in having during the last thirty years achieved so great a result. Now it is quite plain that the antiseptic treatment can achieve this result, although I should not think anyone could fairly claim for this treatment the sole merit, seeing that it involves a great many more improvements in surgery. But taking the mortality at 30 per cent., in large operations, it leaves 70 per cent. of all patients, even at that time not susceptible to the fatal diseases against which the antiseptic treatment is directed. When one looks back at the treatment they received, and the manner of dressing wounds, the impression would be that the patients must die. There was no isolation, and no care. Every stump opened diffused an abominable stench over the whole ward, and the patients who had pyæmia, erysipelas, and putrid wounds, were all mingled together without any care whatever. But withal the 70 per cent. did well. Therefore let us remember we have not to deal with a widespread pestilence to which every one exposed to it would fall a victim. What have been the influences which have produced this diminution of mortality? First of all we have left off many very bad practices. For instance, in the period to which I refer, bleeding had not absolutely ceased after operations, nor before them. It was the impression in some persons' minds that it was necessary to prepare a patient for operation by loss of blood. Again, if a flush of erysipelas came on, or a deeper flush of cellular inflammation appeared, leeches were applied in any quantity by many surgeons; purgatives were given and diuretics were administered, not indeed by all surgeons. In the last twenty years, we have had the complete sanitation, so far as sanitary art has yet extended, of all our hospitals in which our patients are contained. At St. Bartholomew's, I cannot forget the tens of thousands of pounds which have been spent for this purpose; but in every hospital the greatest possible care has been taken to shut out the causes of infection, and to diminish, not only the number of patients subject to this class of infection, but the mortality of all the patients admitted there. Then we have had amongst us the whole system of skilled nursing. Surely this must have assisted to reduce the mortality to some extent. Again, medical education has very greatly improved of late; so that, not to speak of improvements in operative surgery, there are improvements in all directions in surgery, and in those who take care of our patients in hospital and in private practice. In the last ten years, there has been an influence still more potent; namely, the very keen rivalry into which our surgeons have thrown themselves, so that, if any cases under them do well, it should be cases after operation. If you compare the care taken by a surgeon of his patient after operation twenty years ago with that which is taken now, one would say it is enough in itself to account for all the difference that appears in the mortality. Now, counting all these things together, let me repeat that we have to deal with only 20 or 30 per cent. of our patients as being under all conditions susceptible to pyæmia, or

erysipelas, or gangrene; and upon those 20 or 30 per cent. we have to bring to bear all these influences, the leaving off of bad treatment, complete sanitation of hospitals, the perfect instruction of the nurses, and the improvement of all general practitioners, with the keenest rivalry in surgery; and it may be said there is little left now for antiseptic treatment by the dressing. I cannot but come to the conclusion that many potent causes have been at work during the last thirty years to diminish the mortality from operations; and in places like St. Bartholomew's Hospital it is proved that, by the careful use of all these things, the mortality may be brought to as low a standard as can be produced by the antiseptic treatment. I do not in the smallest degree consider the antiseptic treatment defective. I have no doubt it has achieved all that has been assigned to it; and, I repeat, the only question that can be raised is, can the same result be attained by any other means? By a great expenditure of time, money, and care, I think it has been shown in St. Bartholomew's Hospital, and I think also it has been shown in many instances in private practice, that the same results can be produced. But it may be said that there is something more which may be obtained under the antiseptic method. A patient ought to be cured with as little risk to his life as possible; but then he ought also to be subjected to such treatment as would be most likely to avert all serious illnesses after it. We have found, in the whole of the statistics adduced, that either the man died or he did not die; but by what a narrow hair's breadth he escaped from dying is never recorded. And here I think the antiseptic treatment, whether complete or partial, has a very large influence. I cannot doubt that the recovery of patients subjected only to a partial antiseptic treatment is very much quicker, very much more clear from active fever and other troubles after the operation, than it is in cases of those not so treated. I use a very potent antiseptic which Mr. Campbell De Morgan introduced—the solution of chloride of zinc (forty grains to the ounce). With that every wound is washed. I do not use, however, drainage-tubes; but I use torsion, or much more frequently a catgut ligature; and the wounds are always dressed with glycerine of carbolic acid. I am quite sure that the risks of producing a septicæmia which would be rapidly fatal were reduced to zero by that application; but the same effect probably would have been produced by carbolic acid. I kept for a period a set of tables which indicated not merely the mortalities, but that such and such patients were doing well and such and such ill; and I have no doubt that by the antiseptic method the diminution of fever and of consequent illness after the operation was very marked, so that the patients recovered both more rapidly and with less risk to life under the antiseptic treatment than they did without it. It is not enough that a patient should just escape with his life; he ought not, after these operations, to be in danger of loss of health by continued fever, or be in danger of chronic pyæmia, or of some state of feebleness induced by long suppuration, from which, after a period, he dies, but not as the result of the operation. I have spoken of what may be called roughly the general run of cases in surgery. There are certain groups of surgical cases in which, so far as I can yet see, it would be absolutely wrong to dispense with any portion of the most complete antiseptic treatment. Amongst these are cases of ovariotomy. I can compare my experience at St. Bartholomew's Hospital with one of my colleagues, Mr. Smith, and it makes me look back to that part of my life with remorse, and I may say that either through ignorance or inattention I had a mortality of which he could justly say he would be utterly ashamed. He has, during all those operations, used antiseptic treatment thoroughly; and his success has been so great, in contrast with my failures, that I cannot for a moment doubt its value; and though Mr. Spencer Wells' and Dr. Keith's operations, and Mr. Thornton's, extend over a large number of cases, yet their impression is, if it comes to no more than that, that they do better with the antiseptic treatment than without it. Then, as to osteotomy, what I have seen done in this with the antiseptic treatment would, I feel sure, have been a source of an immense mortality in olden time if done without it. I should add, too, the cases of incisions into healthy joints. These, according to the recollections of my early surgical experience, would involve the question whether the man could escape with his life without amputation. This, it is plain, can be done with safety now under the antiseptic treatment. Another group of cases is the opening of large abscesses. I remember to have believed, a few years ago—and I think I rightly believed—that I had never seen a patient recover who had a lumbar abscess opened by free incision; I believed every one died. Since that time, I have heard of and seen a number of cases where a large number of openings of psoas abscesses or abscesses in any part have been done with absolute impunity under antiseptic treatment. If I may briefly repeat my conclusion, it would be that the lowest rate of mortality yet obtained after performance of operations in a general manner may be obtained by complete care, simple dressing, perfect sanitation of hospitals and private houses, and good nursing, and the keen and constant attention of the surgeon. With this better class of surgical education, the illness consequent on the operation is very materially reduced by even a partial adoption of the antiseptic treatment, and there remain certain groups of cases in which, so far as I can ascertain, the complete antiseptic treatment is absolutely essential to success. But I think that of all the improvements achieved in surgery during my knowledge, this improvement in the mortality after operations is the greatest; and that, without any comparison, he who has most contributed to it is Professor Lister. I only doubt whether he has done more good by antiseptic treatment than by provoking others to do their best in other ways.

Mr. LUND (Manchester) said he should speak a little as a partisan, because he had had, from the very first, a great fondness for the antiseptic system. From the first, he saw that there was a principle underlying it. He had, at a very early stage of Professor Lister's operations, gone to Glasgow for the purpose of observation, and he had tried to adopt the most recent alterations; and the general conclusion to which he came was, that there was in the principle of antiseptic dressings an immense aid in the management of surgical cases. But the great question was, how far was it essential to carry out the principle of antisepticism in every case. What he saw in daily practice of that method was that it required personal supervision; it could be entrusted to so few, it required such constant attention, that cases were likely to go wrong. It might often be said that cases were treated antiseptically which were not so treated; but, where it could be carried out completely, the effects were most astonishing. As to trying to trace out how in some cases it succeeded, and in others it did not, he thought an observation that fell from Mr. Hutchinson opened out the subject. In wounds made by surgeons—perhaps not amputation wounds—wounds in small tumours or the opening of abscesses, how was it that it answered well in some cases and not in others? Mr. Lund thought the answer was that they always saw that the antiseptic treatment was hopeless unless it was began early. They did not succeed with their larger operations, such as amputation of the thigh, because it was very difficult to shut out the source of putrefaction. He thought the great benefit of the more careful application of general antisepticism was the avoidance of early putrefactive change. He knew the difficulties of carrying out the method, but he still thought it was a most valuable addition to the practice of surgery; and it should be carried out in that way in which it would be more applicable to a greater number of cases, and to a greater variety of conditions in the patients.

Dr. NEWMAN (Stamford) said that, in 1871, he spent his holiday in Edinburgh, and the major part of each day that he could give to Mr. Lister and to his wards he did. He came back from Edinburgh fully convinced of the value of antiseptic treatment, and he had since carried it out very thoroughly in almost every instance where he possibly could, both in hospital and in private practice. He was by conviction a thorough believer in the value of Mr. Lister's plan. The infirmary with which he was connected was small, and many years old. In his fifteen years' practice there, he had known, in proportion to the number of patients, a very serious prevalence of septic trouble more than once; and this occurred, for the most part, prior to the time when he became familiar with the antiseptic treatment. For a time at least, he stood alone in his belief in this; and therefore the opportunity was offered every now and then of having parallel cases in beds lying side by side, when not only he, but those also who were working with him, and seeing what was going on, could for themselves observe the influence of this plan as compared with that of the older plan. He remembered two compound fractures admitted within a week of each other; one under the care of a colleague; the other case under his own care. The one had not left the hospital at the end of six months; whilst the other, under antiseptic treatment, left the hospital at the end of two months. The fractures were almost precisely similar, the ages of the patients were almost precisely similar, both patients were agricultural labourers, and, so far as could be observed, they were both free from constitutional taint. The one left at the end of two months, with his fracture sound, and in all conditions as if he had met with a simple injury; the other, at the end of six or seven months, was still in the infirmary, with a trace of huge abscesses. He believed that he was the first surgeon in England to practise ovariotomy antiseptically. He did it in September 1871; he tied with catgut-ligature; and he had no doubt that, at the end of four or five days, that ligature gave way. But the antiseptic treatment was carried out thoroughly, and without the slightest constitutional disturbance. Warned by the fulness and pain in the abdomen, it allowed him in full confidence deliberately to break up to the lower angle of the wound, and to give exit to a quantity of effused blood. No kind of harm followed, and the patient recovered fast. The details were published in the *Medical Times and Gazette* of, he thought, February 1872. It seemed to him that

few men, comparatively speaking, understood how thoroughly matters of detail were involved. A lady met with a very serious compound dislocation of her ankle. Dr. Newman saw her, in consultation with a friend, who had read, but not seen, the details of Mr. Lister's work. They saw the patient a short time after the injury, and washed out the wound, and bathed it carefully. To his horror, when he saw the patient four days afterwards, he found that the wound was uncovered. Part of the so-called antiseptic treatment had consisted in the deliberately putting upon the raw surface of the wound a rag dipped in a five per cent. solution of carbolic acid. That alone was provoking suppuration. It was an antiseptic treatment as regarded the use of carbolic acid and the use of spray; but it was clear that the practitioner had not fully taken in how necessary it was to observe certain proportions. But he did not think a question of this kind could be settled merely by a reference to mortality. The entire absence of elevation of temperature, and the entire absence of constitutional disturbance, were great matters; they added to the comfort of the patient, they diminished the time during which the process of repair must be continued; and the patient, from the very first moment that the operation-wound was made, was put into a condition that no other treatment—no other half-antiseptic treatment—could put him in. He was, therefore, by conviction and practice, a thoroughly warm supporter of this special plan of antiseptic treatment.

Mr. KNOWSLEY THORNTON said that, with regard to the statistics of ovariotomy, the question had been more or less decided. He agreed with Mr. Macnamara's statistics in general, and with the view of Sir James Paget. For one special operation, statistics were utterly valueless, unless details of the cases were given. Supposing details of ovariotomy performed without antiseptics, and of ovariotomy performed with Lister's treatment and precautions, were given, there would be found mortality in the cases performed on Lister's plan; and, with all his precautions, there would be found death from septicæmia. But from what did this arise? Death arose from the fact that, when the patient came into the surgeon's hand, the serum was already contaminated, the fluid was already putrid with septic elements; the patient was already suffering from fever. In going over the statistics, he found collectively over three hundred cases of deaths from ovariotomy; more than one-third of those cases were put down as distinctly due to septicæmia, pyæmia, or septic peritonitis; nearly a third were due to peritonitis. Peritonitis disappeared almost entirely in the tables under antiseptic treatment; and one constantly found in the tables the words "septic peritonitis". Besides nearly a third from peritonitis, a large number of cases were put down as death from exhaustion and obstructed intestine. He believed the large majority of those deaths from exhaustion should come under the head of death from septicæmia. When, some years ago, he came to London, he came fresh from the teaching of Mr. Lister, and was an enthusiast in antiseptics; and what he had seen since had not changed his enthusiasm. He had the good fortune on coming to London to come at once to the practice of Mr. Spencer Wells. He thought Mr. Wells had done more by his example and teaching to improve general surgery, stopping short of antiseptic detail, than any living surgeon; and he thought the example he had given in one especial operation, if it had been more followed by surgeons generally, would have led to more favourable results in the hands of those who had not practised antiseptic surgery than Sir James Paget had shown. When he first saw the careful preparation of instruments and sponges, the brilliant and rapid operations, the careful after-treatment, and the personal care which was bestowed, he was very much struck, although he was not shaken in his convictions with regard to antiseptic surgery. The majority of cases dying after ovariotomy died from preventable causes, the chief of these being septicæmia. But there was something more. Sir James Paget had said, that there were well-doing cases and ill-doing cases. The ordinary course of the healing of the wound made in the abdominal section was very simple. The tissues were lax, and one could give efficient support and keep the wound at rest, and, as a rule, it was a very simple matter to heal that wound. But what was to be said with regard to that wound treated in the most careful way with dry dressing on the old system? The majority of those wounds healed by first intention, but the edges round the stitches were generally reddened by the fourth or fifth day. The dressings required to be changed, and if by any chance there was no distension of the abdomen, the reddening increased to suppuration; and when one was obliged to leave the stitches for some days for fear of imperfect union, at the end of a week or ten days, the stitches were taken out and there was suppuration, a considerable quantity of pus was formed, and would ooze out; and not only that, but occasionally that simple matter led to pyæmia from abscesses in the abdominal wall. Comparing that result with what was seen now, the simple difference was that the operation was performed on Lister's plan. The same silk was used, the stitches were put in, the wound was dressed, and for a week or ten days it was never looked at; and at the end of that time, there was not the least trace of irritation and reddening, and the wound had soundly healed. That result could not be obtained by any system of dry dressing or any other system of antiseptics. If it were the case in an external wound, was it not likely to be the case in an internal wound? That was proved by the fact that now operation-wounds were left for forty-eight hours without any bad results. One visit now sufficed where three or four visits a day were formerly required. The patients were freed from the pain and trouble and anxiety of dressing, and the surgeon was free from great anxiety about his cases. He thought that when the future history of surgery came to be written, this would be by no means the least part of the credit Mr. Lister would get from it, that surgeons had been free from these great anxieties, and therefore in a better position to give better attention to fresh cases.

Mr. MORRANT BAKER said that, if using carbolic acid and other antiseptics made one an antiseptic surgeon, then in the fullest sense he was one. But was it necessary in all cases to use that mode of treatment which had been called "Listerism"? or that which Mr. Hutchinson calls the "spray and gauze" system? He would answer, "No". He agreed in what had been said, that with our present knowledge it would be almost criminal not to use it in some cases; and if one were obliged to have the cartilage removed from a healthy knee-joint, and a man would have it used for himself, then he would be justified in having it used for a patient. But in some cases it seemed to him not necessary, and upon that point he would contribute a few statistics. The total number of capital amputations performed by him had been 52; amputations of the hip-joint, 3; thigh, 15; knee-joint, 1; leg, 12; ankle-joint, 6; upper arm, 3; fore-arm, 12. Of these only one died from any cause attributable to the operation; and that was a patient who, nearly five weeks after amputation in the upper third of the leg, died from exhaustion, a fatty liver being the only special disease found after death. He had no septicæmic symptoms. Five others died during residence in hospital; two of those from shock produced by the injury (not the amputation), within a few hours after amputation, and three of advanced phthisis or amyloid disease, one three weeks, one five weeks, and one more than six weeks, after the operation. In all those five cases the operation-wound was practically healed. He used antiseptics very freely, and he believed many operations, such as opening into healthy joints, with our present knowledge, should not be performed without the protection of the spray, and all the details of Mr. Lister's system. But there were many cases in which the system in its fullest details was unnecessary, and it had evils of its own, more particularly in the direction of carbolic acid poisoning, of infiltration in the wound tightly confined under antiseptic dressings, and of concealed recurrent hæmorrhage. There were many cases in which failure to keep the wound perfectly sweet occurred, where the system was not at all necessary, and where therefore it was better not to employ it. He thought the results after amputation above mentioned would not have been obtained, if in all cases the spray and gauze system had been adopted. He thought he was justified in not using this system in amputations, for the reasons he had given. The spray and gauze system was of great good in certain cases, but it had evils of its own, and it seemed to him that those who asserted it should be used in all cases, had not with sufficient candour stated what evils sprang from its use. Carbolic acid poisoning was a real evil: and he had seen cases in which he believed there had been great danger from the use of carbolic acid, and he had seen cases in which he believed that death had occurred from it. There were cases in which, under the spray and gauze treatment, there had been concealed hæmorrhage; and there were cases in which there was a failure in the system. It was impossible to say that there should be no failure; for, there must be failures in this system. For these reasons he thought that there were cases in which it was advisable not to use this particular form of antiseptic treatment, and therefore, he had, in such cases, disregarded the use of it.

Mr. MAC CORMAC, in reply, said: I venture to say that this discussion is one of the most valuable contributions to surgery which has been made for some time. The result of this discussion strikes me thus, that every one of those surgeons who use antiseptic means would say (and I would echo now, as I did in my former statement, the remark of Sir James Paget) that what we want to know is, what is the best method of using antiseptics, and what is the most easy and efficient method by which they may contribute to save human life and prevent suffering. That Mr. Lister's method does immensely contribute to that, I think this discussion has fully and certainly established. Since Sir James Paget has given the challenge, I would mention one case which has come under my own observation. On the first of this month, there came to this hospital a man sixty-two years of age, an habitual drunkard, with his tissues fatty; he had been run over by a heavily laden van, two

wheels of which passed over his leg, fracturing his tibia and fibula, separating the skin and the muscles from below, and also the muscles from one another. This injury was treated by the surgeon for one hour, and required the completion of the first dressing with the greatest skill and care; he made three large openings into the tissues of this limb, and he removed two large portions of the tibia. This man had also a wound on his head. He had during the treatment a slight attack of delirium tremens, but beyond this he has gone on well; his limb has not shown any of the symptoms you usually expect, and the only question that presented itself to the mind of our resident surgeon was whether he was justified in attempting to save the limb. At the end of sixteen days, he is going on very well; he has no local pain, his wounds are not inflamed; there is no discharge of pus, no abscess. He has had however, a slight attack of erysipelas in the head, connected with an injury there, but no erysipelas on his leg. He asked for food; and he has been doing in every way well. I happened to read to-night the paper of a surgeon connected with a hospital at Cologne, who mentions incidentally, discussing the question of removing tumour from the rectum, what his results were in 1878. He had 44 amputations, amongst them being 17 amputations of the thigh; 53 resections, 15 of the hip and 12 of the knee; 13 wedge-shaped removals of the bone, 10 amputations of the joints, one being of the thigh, 15 operations for false joints with refreshing, as it is called, of the bone-ends: and not one single case out of this large number of important operations was unfavourable or had any fatal result. I am, of course, with the limited time at my disposal, quite unable to review the mass of facts and opinions which have been brought before us. I ought to state that my attempt to bring forward some statistics, which I did simply as a contribution for what they were worth, was treated with some contempt by Mr. Holmes, although I have brought forward amongst those tables one which I thought would have been sufficiently satisfying. He had asked for a comparative series of statistics showing the results that might be obtained in the same hospitals by two surgeons—one under antiseptic surgery and the other not so. I found that such an experiment had been made in the Glasgow Royal Infirmary. The results of the experiment showed that, whereas one surgeon during three years treated 1,884 cases non-antiseptically and had a mortality of 5.84 per cent., another surgeon treated 1,706 cases antiseptically and had a mortality of 2.93 per cent., or just half the other. The other cases were where the special merits of this particular kind of treatment were well exemplified. There were cases illustrating the great and serious difficulties of an army actively engaged in war, and I claim to know something of what those difficulties are. A surgeon had been able to save such serious and fatal injuries as gunshot-wounds penetrating the knee-joint; and, although your Chairman has said he has been informed that it is impossible that antiseptic surgery shall be applied in military operations, I can assure you that it will be done; and that in Germany, where the surgeons have had a larger experience, perhaps, of late times than in other countries of injuries produced in war, the surgeons one and all of that country, I may say, are striving, and already with some success, to show and establish the means whereby antiseptic surgery shall be applied in war-time. I have to thank you for the kind manner in which you received my address, and also for the patience with which you have listened to me to-night, and the attention you have devoted to the discussion of this all-important subject.

The meeting then terminated.

HINTS ON THE CONSTRUCTION OF HEALTH-REPORTS.

AT the present time of the year, when medical officers of health throughout the country are thinking of the preparation of their annual reports, it may perhaps prove helpful if I take this opportunity of making a few suggestions, arising out of the perusal of some hundreds of such reports which have been reviewed in these columns.

Medical officers of health have from the commencement been a neglected class of officials. Called into being by an Act full of omissions, with the most imperfect organisation, and no instructions from headquarters of any kind to guide them, either in the performance of their difficult and responsible duties or in the method of preparing their reports, it is small wonder if we find the procedures of no two officers alike. Complaint has often been made to us by officers of health of the isolated position in which they are placed with regard to information. They do not receive the reports of the central department; they never hear, except by chance, of any discovery or etiological theories on the part of their fellows; and they may well feel themselves, as more than one has written to us, the Ishmaels of modern officialism, almost outcasts, and quite uncared for. This is by no means a fancy picture. Even officers of the largest experience and the greatest confidence in their own powers are often found to deplore their isolated position with regard to their colleagues. The numerous Associations of Medical Officers of Health that are now springing up undoubtedly tend to make this feeling less strong than before; but what is really wanted, is that medical officers of health shall have some definite relation with the central department and with each other, so that all may profit by the union. If, as Mr. Simon once attempted to carry out, and as we are not without hopes of seeing eventually effected, each medical inspector of the Local Government Board had a certain district assigned to him, instead of rushing promiscuously about the country as at present, and if he were put in relation with all the health-officers of his district, much good might be expected to follow. Health-officers would be able to appeal in their difficulties to a responsible person, and the latter would be able to work a wonderful change in the direction of uniformity in the method of the officers' work. This is, however, too large a subject for present treatment; but we have referred to it, because we think it would be of advantage, as well in the manner of reporting the work as in its actual performance.

Those who are competent to read between the lines of sanitary reports, can see clearly how much the officers are groping in the dark for want of a helping hand. If it were the business of a central medical official to read these reports, and to help the officer with regard to them, an immediate improvement would result. It must be obvious that the Local Government Board have to pass many reports which, though not up to the proper standard, are not sufficiently meagre to call for an official representation; and the medical officer of health goes on, therefore, unwittingly repeating his error, and thinking, with some amount of justification, that, because his reports have not been complained about, they fulfil all reasonable requirements. Our experience of some of even the printed reports compels us to say that this is by no means so. There are many scores of reports which fail to give the information they ought to contain—not from any laxity on the part of the writers, but clearly from want of knowledge. To such writers, suggestions would be most welcome, and would be by them readily appreciated; and this could be best done by putting them into distinct relations with a central inspector. Meanwhile, the subjoined jottings may, perhaps, be of some little service.

We have had occasion to observe every conceivable variety of annual reports. Some we have read with equal pleasure and profit, as containing sound opinions and careful investigations, thoughtfully and unobtrusively worked out. Others, again, though not coming up to the first standard, give a fairly satisfactory account of the proceedings of the year and of the current diseases; whilst others consist of the baldest comments on the year's statistics, with little or nothing of interest in them. There is much to discourage medical officers of health, and to deter them from taking trouble in reporting. Often, the sanitary authority for whom the reports are primarily intended "takes them as read", or delays their perusal, or requests the officer to expunge some passage which he feels to be just and right, or asks him to "cut them short", or, more frequently than not, refuses to incur the expense of their printing. But still, notwithstanding all this, we would encourage the medical officer of health to persevere, and to continue his efforts for the amelioration of the public health of the district, for educating public and official opinion, and for discovering the causes of the outbreaks of disease with which he has to deal. He must remember, indeed, that he is called upon to contribute to the general stock of knowledge with regard to the sanitary condition of the people and the preventable causes of sickness and mortality. This, though not among his duties as laid down in the Official Order of November 11th, 1872, is in fact one of the chief objects of his appointment, as set forth in an admirable minute of the General Board of Health in 1855, an extract from which we subjoin.

"The officer of health is appointed, first, in order that through him the local sanitary authority may be duly informed of such influences as are acting against the healthiness of the population of his district, and of such steps as medical science can devise for their removal; secondly, to execute such special functions as may devolve upon him by the statute under which he is appointed; and, thirdly, to contribute to that general stock of knowledge with regard to the sanitary condition of the people and the preventable causes of sickness and mortality which, when collected, methodised, and reported to Parliament by the General Board of Health, may guide the legislature in the extension and amendment of sanitary law."

Numbers of the officers who have sent us their reports for review have examined with much breadth of treatment the diseases prevalent in their district, and have discussed the various ways in which such prevalence can be accounted for, giving often striking instances of the accuracy of the theory for which they are contending. No praise is too

great for reports written in this spirit. They enable us to form judgments as to questions which must otherwise be left obscure; and, indeed, health-officers have it in their power to clear up many of the etiological puzzles that still exist in preventive medicine. Even the officer having charge of the most unimportant district may render considerable service in this connection, for he may be able, in cases that come under his notice, to speak with absolute certainty as to circumstances of a particular outbreak, of which his brother in a larger district can only speak in the language of probabilities. There is here a wide sphere of usefulness for officers of health; and we would appeal to them, therefore, to be careful to record in their reports the circumstances of any outbreak which can be traced to a common cause. It is surprising how few health-officers do this, a great many being content to leave the bare record of deaths without any sort of explanation as to their circumstances.

Another point which deserves attention is the neglect to state the actual position of the district as regards sanitary matters at the end of the year. A sentence or two may be interspersed in the report that such and such an improvement was recommended; but whether it was carried out, and how it affected matters, are left to the imagination. A careful summing up of the progress made, and a statement as to what remains to be done, are, we think, indispensable to a really complete report. Health-officers are too apt to write only for their own sanitary authorities, and thus degrade their reports to the level of a local interest only. They should aim at a larger circle of readers, whose attention can alone be sustained by adequate explanations as to the sanitary circumstances of the district.

Again, we hear too little of the medical officers' own work. Probably, this arises often from a delicate feeling of wishing to keep self in the background; but, without a statement of proceedings taken and advice given, the officer may unjustly be accused of a share in allowing the continuance of unwholesome conditions observed and condemned by him. He must, moreover, remember that his instructions distinctly require that the report "shall contain an account of the proceedings in which he has taken part or advised under the Sanitary Acts, so far as such proceedings relate to conditions dangerous or injurious to health, and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that the sanitary authority has power to regulate, with the nature and results of any proceedings that may have been so required and taken in respect of the same during the year". Hence there is no adequate excuse for shortcoming in this particular. Whilst upon this subject, we may also say that there seems to be a too general idea that a health-officer is only concerned with actual prevalences of disease, and with nuisances or matters to which his attention is specially directed. Section 3 of the Duties, as laid down by the Local Government Board, requires that he shall, by inspection of the district, both systematically and at certain periods, and at intervals as occasion may require, keep himself informed of the conditions injurious to health existing therein. These systematic inspections should be made by the medical officer of health, apart from the inquiries which under other articles of the Order he has to make into particular outbreaks of disease, or into unwholesome conditions to which his attention may have been specially called by complaints or otherwise. The object of these systematic inspections is, that the medical officer of health may assure himself that he is well acquainted with all the discoverable circumstances which are likely to affect the public health in his district. How often these inspections require to be made, and how detailed the inquiries should be, must be determined by the particular circumstances of the locality. In some neighbourhoods, a house-to-house inspection should, as far as practicable, be made; in others, this may not be needful; but every medical officer of health should at certain times set himself to examine into the state of his district, devoting some time to each portion of it, so as to be sure that no part escapes his notice. Of these inspections, of the judgment he has formed thereon as to the sanitary state of his district, and of the advice he has in consequence given to the sanitary authority and the action taken by the authority thereon, the annual report should contain a full account.

Finally, with regard to tables. We feel confident that a vast amount of time that might be very much more profitably spent is taken up in calculating unnecessary averages and devising superfluous tables that no one cares for, or even looks at. We could name two or three officers of health whose reports are hopelessly in arrear, probably in consequence of elaborate and useless tables appended to them, which must take infinite time and pains to prepare, but which are of no real use. Many such tables can only be looked upon as statistical juggles or pyrotechnics, and are quite out of place. At the same time, it is necessary, for the purposes of proper comparison with other places, that a certain minimum of statistics should be prescribed; and we may, therefore, intimate as briefly as possible what facts should, in our view, always be stated in tabular form in the report. The valuable tables devised by the Local Government Board, showing the deaths in the district classified according to diseases, ages, and localities; the population of such localities, and the births therein; the deaths among persons coming into the district, amongst inmates of public medical institutions, etc., will of course find a place in the report. A table may usefully be compiled, showing the growth of population and the birth- and death-rates as far back as possible, so as to show the effects of sanitary improvements. The legitimate should be separated from the illegitimate births, as the latter have not only an important social interest, but affect very considerably the infantile mortality. A table, showing the deaths from each of the infectious diseases in different streets, is often found very useful for comparison in large urban districts; and a table of the occupations of those dying from these diseases is not without its interest in populous centres, as showing the relative danger in this regard of different trades. Another table should be given, showing the deaths at different ages (*e.g.*, 0 to 1 year, 1 to 5 years, 5 to 20, 20 to 40, 40 to 60, 60 to 80, and 80 years and upwards), separating males from females. The addition of a table, giving the corrected rates, for a series of years, of the mortality in the district, from all causes, amongst children under five years; from causes medically uncertified; from each of the zymotic diseases, with phthisis, puerperal fever, and a few other selected diseases, would, we think, complete all that are really required or are of use. Medical officers of health may find it convenient, from special circumstances in their district, to add some other tables, and these, of course, should be encouraged; but against many of the cumbrous, useless tables that are now constantly met with, it is, we think, timely to protest. We are not without hope that it may eventually be found possible to publish an annual blue-book, giving uniform facts as to the sanitary progress, and as to the circumstances of the outbreaks of infectious disease in each district in the kingdom. A great step towards this end is uniformity in reporting, in aid of which the above suggestions have been offered.

ERNEST HART.

PUBLIC HEALTH.—During last week, being the fiftieth week of the year, 5,043 deaths were registered in London and twenty-two other large towns of the United Kingdom. The mortality from all causes was at the average rate of 31 deaths annually in every 1,000 persons living. It was 25 in Edinburgh, 31 in Glasgow, and 44 in Dublin. The annual rates of mortality in the twenty English towns were as follow: Sunderland 18, Portsmouth 20, Brighton 21, Oldham 22, Sheffield 23, Norwich 24, Newcastle-upon-Tyne 26, Hull 27, Bristol 28, Bradford 29, Leicester 29, Manchester 30, Nottingham 30, London 31, Leeds 32, Wolverhampton 33, Birmingham 33, Plymouth 35, Salford 37, and the highest rate 41 in Liverpool. The annual death-rate from the seven principal zymotic diseases averaged 4.2 per 1,000 in the twenty towns, and ranged from 0.5 in Brighton, and 1.2 in Portsmouth and Norwich, to 5.6 in Plymouth, and 8.3 in Liverpool. Scarlet fever showed the largest proportional fatality in Newcastle-upon-Tyne, Liverpool, and Bristol; and measles in Nottingham, Liverpool, and Plymouth. Small-pox caused 3 more deaths in London, but not one in any of the nineteen large provincial towns. In London, 2,132 deaths were registered, being 322 above the average. The annual death-rate from all causes, which had steadily increased in the six preceding weeks from 21.6 to 27.2, further rose last week to 30.7, a higher rate than has prevailed in any week since the fifty-first of 1878, when it was 31.1. The 2,132 deaths included 3 from small-pox, 63 from measles, 119 from scarlet fever, 10 from diphtheria, 82 from whooping-cough, 19 from different forms of fever, and 11 from diarrhœa—altogether, 307 deaths, against 281 and 274 in the two preceding weeks. These 307 deaths were 25 above the average, and were equal to an annual rate of 4.4 per 1,000. The deaths referred to diseases of the respiratory organs, which in the nine preceding weeks had increased from 190 to 612, further rose last week to 777, and exceeded the corrected weekly average by 275; 559 resulted from bronchitis, and 149 from pneumonia. These diseases were more fatal in London last week than in any week since the last of 1874, when in a smaller population they caused 897 deaths. Different forms of violence caused 69 deaths; 61 were the result of negligence or accident, including 24 from fractures and contusions, 9 from burns and scalds, 3 from drowning, 4 from poison (including 2, of a gas-fitter and of a painter, from lead-poisoning), and 15 of infants under one year of age from suffocation. At Greenwich, the mean temperature of the air was 31.1°, and 11.4° below the average. The general direction of the wind was south-westerly, and the horizontal movement of the air averaged 6.3 miles per hour, which was 6.5 below the average in the corresponding week of sixteen years. Rain or melted snow was measured on three days of the week, to the aggregate amount of 0.05 of an inch. The duration of registered bright sunshine in the week was equal to 9 per cent. of its possible duration.

CORRESPONDENCE.

DISTINCTION OF TYPHUS AND TYPHOID FEVERS.

SIR,—But for a sharp attack of illness, Dr. Perry's challenge of December 6th should not have had to wait so long for an answer from me; and it strikes me he would have done better if he had been content to "let well alone".

Let me explain that, before July 1836, I did not regularly attend the Glasgow Fever Hospital, though I paid occasional visits to its wards, as on that memorable occasion when I accompanied thither my friend Dr. Peebles, who then pointed out to Dr. Perry the typhus eruption, which had never till then been noticed or recorded in Glasgow. Let me also explain that, after my appointment as resident clerk, I was not attached to Dr. Perry's service, though I sometimes acted as his clerk in his clinical wards. I, of course, knew at that time that Dr. Perry had "new views" on fever, but they were so perplexing, that I preferred studying it for and by myself; and later on, in company with Andrew Anderson.

The document in which Dr. Perry laid his views before the Glasgow Medical Society is entitled, "Observations on Continued Fever, as it occurs in the City of Glasgow Hospitals" (*Edinburgh Medical and Surgical Journal*, vol. xlv (1836), pp. 64 to 70). It consists (1) of a preliminary statement regarding the provision made for the accommodation of fever patients, and of the numbers received, during the epidemics of 1831 and 1833 to 1835; and (2) of sixteen propositions wherein he describes pretty fully the characteristic features of contagious typhus and *dothinenteritis* or *gastro-enteritis*, as enteric fever was then commonly called. Proposition 14, quoted by Dr. Perry *fils*, is as follows: "That inflammation of the membranes of the brain, of the bronchi, and of the mucous membrane of the stomach and intestines, and various febrile affections arising from cold, fatigue, improper ingesta, etc., more particularly disease of the aggregated glands of the ileum and the mucous follicles, often termed *dothinenteritis* or *gastro-enteritis*, have been too often confounded by medical practitioners with typhous fever, though they are characterised by dissimilar symptoms, and require a very different mode of treatment."

This statement, if it had stood alone, might have been held as affirming, in a very general way, the difference between typhoid and typhus; and the enumeration of the symptoms characteristic of the former, when it exists as a disease *per se*, in the two long paragraphs of Proposition 16, gives a good, though in one respect very defective, description of the disease. But, as conditioned by his own statements in other propositions, the *specific* difference becomes very shadowy. Your correspondent candidly admits that his father "committed the mistake of stating that the intestinal glandular lesions so characteristic of enteric fever may be found as a complication in a proportion of typhus cases". Here are the words, and with them Proposition 16 commences: "That *dothinenteritis*, or enlargement of the mucous follicles of the smaller intestines, and enlargement and ulceration of the aggregated glands of the lower third of the ileum, occur in combination with contagious typhus, and are to be met with in about one in six of those who die from typhus. It also exists as a disease *per se*", etc. And further on, "When in combination with typhus, all the symptoms are aggravated in severity after the fourteenth day, and become more distinctly marked. This disease", he goes on to state with equal precision, "is an equally frequent accompaniment of small-pox as of typhus, and presents the same morbid appearances after death." To us, with our well-defined views of the disease, these statements appear as surprising and perplexing as they did to me when I commenced my study of it in 1836.

What, then, was Dr. Perry's idea of the nature of this disease, which could so often complicate both typhus and small-pox? That it was not a contagious exanthem is plain from the decisive terms of Proposition 12, "that contagious typhus never exists in combination with any of the other contagious exanthematous diseases". From this statement—let me rather call it *law*—and from his omission, before alluded to, of all reference to the typhoid rash in his enumeration of the symptoms of dothinenteritis (Proposition 16), it is quite clear that Dr. Perry had altogether missed the master fact of its being one of the specific exanthematous fevers, whether contagious or not.

There remains but one touch to complete the picture. Proposition 8 is as follows: "That contagious typhus is often to be met with in combination with other diseases, usually of a local character, as of the lungs, the mucous membrane of the stomach, and intestines, more particularly the aggregated glands of the ileum, or the membranes of the brain." *Dothinenteritis*, then, according to Dr. Perry's recorded opinions in 1836, was a disease which was "often met with in combination with" typhus and small-pox; was not a specific exanthematous fever; and was regarded by him (Proposition 8) as a typical instance of a "disease of a local character".

Did I do wrong in studying the subject for myself, when my observations soon led me to the conclusions that typhoid did not frequently complicate typhus and small-pox, but was entirely distinct from both; and was not a local but a general affection, of which the intestinal disease was but an important symptom—a specific exanthematous fever? These were my beliefs in the spring of 1840, and in these I know that Dr. John Reid concurred; and am I now wrong in repeating that "I am not aware that, in 1840, any persons in this country besides Dr. John Reid and myself were convinced of the specific difference of the two diseases"?

As regards the statement in my original paper, that Peyer's patches were distinctly elevated in two out of twenty-two cases of typhus, let me refer Dr. Perry to the paragraph on pp. 333 and 334 of volume 54 of the *Edinburgh Medical and Surgical Journal*, 1840, where he will find his objection fully anticipated. I need only quote the following sentence. "When, therefore, we speak of the elevation of the aggregate glands in typhus, we are no longer occupied, as in typhoid fever, in the measurement of palpable magnitudes, but, for the most part, with elevations which the French pathologists, as I have frequently witnessed, scarcely reckon any deviation from the healthy state."—Yours faithfully,

A. P. STEWART.

Grosvenor Street, W., December 17th, 1879.

SIR,—I have seen some letters in your JOURNAL regarding the difference between typhus and typhoid fever. Before seeing these letters, I never imagined that any person could attempt to dispute the claim of the late Dr. Robert Perry of Glasgow to the authorship of the new views. I am not acquainted with any of Dr. Perry's family; but I think it right that I should bear my testimony to the opinions which were promulgated by the man who is dead. I have not the least doubt that he was the real originator of the new views. I have examined my certificate, and I find that I left the Dublin College for the Glasgow Royal Infirmary, as dresser to Dr. John Macfarlane, in 1835, and that I attended Dr. Perry's clinical lectures from November 1836 till May 1837, when my connection with him ceased. During my attendance on his clinical instructions, I heard Dr. Perry lecturing so often on the distinctive points between typhus and what is now called typhoid, that I could never forget the subject. I saw his dissections of Peyer's glands till I was tired of looking at them. I never, at that time, heard of any man claiming the new views, except Dr. Perry. In fact, I imagine very few believed in his opinions on the subject; but rather thought he "rode a hobby" of his own.—Yours truly,

JAMES C. L. CARSON, M.D.

Coleraine, Ireland, December 13th, 1879.

THE UNIVERSITY OF EDINBURGH.

SIR,—The remarkable anonymous letter which appeared on page 842 of your issue of November 22nd, entitled "University Degrees in Medicine", and signed "M.D.Edin.", might perhaps have been allowed to pass with the silent contempt which it merits, for its object is transparent; but the anti-vivisection controversy has afforded a signal proof of the danger of allowing misrepresentations to pass unnoticed; and it may, therefore, be as well to expose the inaccuracy of your correspondent. I observe an answer to him by "Alma Mater" in your issue of to-day; but it is scarcely sufficient.

The rise in the number of medical students at this University began about fourteen years ago, and is assignable to the improvement of practical teaching, to the appointment of new professors and of additional assistants, by whom a large share of the practical teaching is conducted. The recent remarkable increase of attendance began five years ago, and was coincident with a change which I need not detail. It has certainly not been in the smallest degree due to any relaxation of the examinations, for during these years the examinations have been more stringent than ever. Five years ago, an extra examiner was appointed to take a half-share of the examination in each subject. These examiners have come from London, Cambridge, Manchester, and Glasgow; and they are all acknowledged to be specially qualified in their particular subjects. They set at least one-half of the questions for the written examinations; they examine one-half of the papers; they do one-half of the oral examination to which every candidate is subjected in every subject; and they are present at all the oral examinations, and hear every question that is put to the candidates. We like this system; for it entirely relieves us of the imputation, which might otherwise be made, that the questions at our examinations are adapted to our own

teaching. Our elaborated system of practical teaching gives every student an opportunity of thoroughly learning the various subjects, and enables us to exact tests at examinations which in some subjects are not exacted elsewhere. That the numbers of our graduates are not keeping pace with the increasing numbers of our students, is readily understood by those who conduct the examinations. I have had not a little experience as a teacher and as an examiner both in London and here, and I am thoroughly convinced that no examination for a medical degree ought to be more severe than that now held in this University; indeed, I have more than once objected to questions in one of the subsidiary subjects as too difficult. When some of our London friends inform Medical Councils and House of Commons Committees that our examination is nothing more than what ought to be the minimum for any diploma, I have no doubt that they are ignorant of its nature, and that they would quickly change their minds if they accompanied a student through all its phases, and *very quickly indeed if they were themselves submitted to it.*

I need not trouble you with many statistics, for any one may obtain them at the office of the Medical Council; but I may quote the numbers of those passed and rejected at our examinations in 1878. At the first examination for M.B., 262 candidates appeared, of whom 78 (25.9 per cent.) were rejected. At the second examination, 165 appeared, of whom 58 (35.1 per cent.) were rejected. At the final examination, 144 appeared, of whom 27 (18.7 per cent.) were rejected. That the percentage of rejections at the final examination is less than at the preceding two, is readily explained by the circumstance that many candidates are entirely eliminated by the first and second examinations.

These facts, I think, show the misleading character of your correspondent's statements. His closing remark, "It is indeed high time that somewhat were taken off the undue pretensions of some of the graduates of Scotch Universities", is, to say the least, a singular observation, supposed to emanate from one of them, and is a very clear indication of the value of the signature and of the motive of the letter. —I am, etc., WILLIAM RUTHERFORD.

University of Edinburgh, December 15th, 1879.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

PAYMENT OF MEDICAL OFFICERS OF HEALTH BY FEE.

IT is much to be deplored that there is so little *esprit de corps* amongst medical officers of health. Thus we learn with great regret that Mr. Linnington Ash, the energetic health-officer of the Holsworthy rural district, should have seen fit to allow himself to be nominated and appointed as medical officer of health to the Okehampton rural authority, who have just ousted Dr. Wynter Blyth, and to accept as remuneration a fee of three guineas for each visit and report. Such a method of payment is distinctly opposed to the spirit of the Public Health Act, and we are sorry to see that so many west-country boards are allowed to adopt it. Launceston is the latest instance in point. At the last meeting of that authority, a proposition was carried by a large majority to remunerate the medical officer of health by fee, notwithstanding the ineffectual protest of Mr. Courtenay, the Local Government inspector for the district. It is unnecessary to state the objections to this mode of payment, which stultifies the very object of the appointment of a medical officer of health, viz., the prevention of disease; and it is to be hoped this point will be borne in mind in any future enactment.

ALLEGED NEGLECT BY A POOR-LAW MEDICAL OFFICER.

AT a recent meeting of the Penzance Board of Guardians, a report was presented by the committee appointed to consider a complaint against Mr. F. E. Hunt, one of the medical officers of the board. The committee reported that, on October 26th, an overseer's order was delivered to Mr. Hunt, requesting him to visit a man named Martyn. On October 29th, Martyn's wife complained to one of the Board's vice-chairmen that no medical man had been to see her husband, and asked if he was to die for want of medical aid. The chairman was communicated with, who requested the clerk to telegraph to Mr. Hunt. This was done. In reply, Mr. Hunt gave an explanation, stating that when he had word respecting Martyn he was not aware the man was in bed. He had an important business engagement on the following day, and arranged with his deputy to visit the man, but was not aware until the following Sunday that this had not been done owing to his deputy's illness, but he attended him on the following Wednesday, the earliest day possible, the distance being eight miles. In the discussion which followed the committee's report, it was stated that Martyn had since died, and eventually the guardians resolved to submit the whole matter to the Local Government Board.

EPSOM.—The death rate for this district for 1878 was 16.4 per 1,000, or 1.3 above the mean of the preceding five years. There were no deaths from small-pox, measles, scarlet fever, diphtheria, or any form of continued fever. Whooping-cough caused one death, and diarrhœa five. The zymotic death-rate, which is always low in this district, was even lower than usual, being 0.8 per 1,000 of the population; and it would have been still lower but for the four deaths of children under five years of age from diarrhœa. One case of small-pox, two of enteric fever, and six of scarlatina, all of which were duly attended to, are recorded in the report. During the year, several water-closets were furnished with separate cisterns, two new sewer-ventilators were provided, and operations were completed which have increased the yield of the well supplying the town water. The sewerage of the common, and the construction of straining-tanks on the sewage-farm, have still to be completed.

MILITARY AND NAVAL MEDICAL SERVICES.

COMPETITION AND NOMINATION FOR ARMY MEDICAL APPOINTMENTS.

SIR,—As a competitor for an appointment in the Medical Service of the Army, I wish to call attention to the fact that there is nothing in the new Warrant, according to the analysis of it given in the JOURNAL of the 6th instant, to prevent an unsuccessful competitor from being at once nominated to the appointment he has sought for, notwithstanding he has failed in the examination. Nor is this all. Judging from the statement in the section of the analysis regarding "appointments", a nominated surgeon who may have been appointed just before the examination, or even while the examination is going on, will take precedence of all the surgeons who may be successful in the competitive examination. I understand the order of precedence to be laid down as follows. The nominated probationer is to take his place according to the date of his joining the department after appointment to it, or, in other words, according to the date of his nomination, if he at once join the department; while the one who gains a commission through competition is to take his position according to the date of the last day of the competitive examination. If this be true, is it worth while to subject myself to this competitive examination?

I have no fear about the open examination; on the contrary, I feel assured of success in it; but if I can get a recommendation for a nomination, and I have no doubt I have sufficient interest for this, and I get nominated to an appointment in time, I shall have the advantage of gaining a higher place in army rank than if I were to take even the first place at the competitive examination.

I am informed that every step gained in the army list at starting may prove to be of the utmost importance in one's career in after-life. A vacancy may occur in one of the higher ranks of the department, and the fact of a surgeon holding a higher position in class seniority may cause him to be promoted to it, while the surgeon next below him may have to wait a long time before a step of similar value falls vacant. Surely, then, the power of nomination, and the precedence given to the individual who enters under it, are sources of great injustice to those candidates for commissions who compete honestly and openly for the number of appointments in the Medical Department of the Army which are advertised to be vacant.

December 8th, 1879. I am, etc., M.D.

*** There is no limit in the Warrant as regards the time when candidates may be nominated to appointments in the Army Medical Department; and the order of precedence referred to in our correspondent's letter appears to be quite in accord with the terms of the Warrant.

EXAMINATION OF RECRUITS.

SIR,—I examined a recruit on the 27th November, and, considering him "fit" for military service, signed the usual printed form to that effect, for which I received from the sergeant by whom the man was brought to me, the fee allowed, four shillings. On November 30th, the sergeant wrote to me from the Brigade Depôt (fourteen miles from this town), stating that the recruit had been found "unfit", and the doctor's fee was disallowed. I declined by letter to return the fee, not wishing my time and trouble to go for nothing. On December 9th, I received a letter signed by the Adjutant, requesting me to return the four shillings at my earliest convenience, as the recruit who had been passed by me had been medically rejected at headquarters. To this I replied that, in the very few instances of rejection of recruits who had been examined and passed by me, I had hitherto been supplied with a printed form stating the cause of disqualification, and a reduced fee of two shillings and sixpence had in such cases been invariably allowed to me; adding that I had a very decided objection to give my time and trouble for nothing. I have to-day received a somewhat curt letter from the Adjutant, redemanding a return of the four shillings, making no allusion to the cause of disqualification which I desired to be informed of, and giving no information whatever as to the reduced fee, simply reasserting that the man whom I had pronounced to be "fit" had been found to be "unfit".

I have not returned the fee yet, but am anxious to know whether I can be compelled to do so. The examination of a recruit is not always a very pleasant duty, and the sum allowed is not a large one.—I am, sir, your obedient servant,

JOHN WILTON SHERIDAN.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following members of the College, having undergone the necessary examinations for the Fellowship at the half-yearly meetings terminating on November 29th, were reported to have acquitted themselves to the satisfaction of the Court of Examiners; and, at a meeting of the Council on December 11th, were admitted Fellows of the College.

Andrew, George, L.R.C.P.Lond., Egham, diploma of membership dated January 21st, 1874, of St. Bartholomew's Hospital
Hensman, Arthur, L.R.C.P.Ed., Harley Street, November 14th, 1866, University College
Johnson, John, M.B.Melb., Melbourne, January 31st, 1876, London and Guy's Hospitals
Miller, Richard Shalders, M.B.Lond., L.S.A., Gower Street, August 1st, 1877, University College
Robson, Arthur William Mayn, L.R.C.P.Lond., Leeds, July 21st, 1874, Leeds School

Seven candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 4th, 1879.

Baker, William James, Millbrook, Southampton
Harper, Charles Frederick, Stow Market, Suffolk
Jones, William, Aberystwith, South Wales
King, Ernest Edward, Saffron Walden
Redmond, Walker, Grange Loughgall, Ireland
Runnalls, Harry Boyle, New Quay, Cornwall
Stansby, Charles John, 154, Hoxton Street, N.
Walton, Robert Spencer, Hebden Bridge, Yorkshire
Williams, William, Llwydcoed, Aberdare

The following gentlemen also on the same day passed their primary professional examination.

McDonagh, James Samuel, University College
Papillon, James William, St. Thomas's Hospital

The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 11th, 1879.

Dunlop, Joseph Samuel, Coleraine
Goldney, Arthur Charles Nelson, Shepherd's Bush Road
Lukis, Charles Pardey, Southampton
Wright, Herbert Elliston, Edwardston, Suffolk

The following gentlemen also on the same day passed their primary professional examination.

Steer, William, St. Mary's Hospital
Paine, George Reuben Robins, St. Mary's Hospital

In the BRITISH MEDICAL JOURNAL of December 6th, page 919, column 1, "Talbot, Edward, St. Thomas's Hospital", should be "Palmer, Edward Talbot".

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

BELMULLET UNION—Medical Officer for Bangor Dispensary District, at a salary of £100 per annum, with £10 yearly as Medical Officer of Health; Registration and Vaccination Fees. Election on the 26th instant.

*BROMPTON PROVIDENT DISPENSARY—Medical Officer. Applications, with testimonials, to the Secretary, on or before January 3rd.

BURY DISPENSARY—House-Surgeon. Salary, £120 per annum, with furnished apartments, fuel, and lighting. Applications on or before the 27th instant.

*HAMPSTEAD PROVIDENT DISPENSARY—Medical Officer. Applications on or before the 27th instant.

HOSPITAL FOR SICK CHILDREN, Manchester—Senior and Junior Resident Medical Officers. Salary, £100 and £80 per annum, with board and residence. Applications on or before December 31st.

*LONDON HOSPITAL—Medical and Surgical Registrars for 1880. Salary, £100 per annum. Applications on or before the 22nd instant.

*MIDDLESEX HOSPITAL—Medical Registrar and Surgical Registrar. Applications on or before the 20th instant.

MIDDLESEX HOSPITAL—Assistant to the Ophthalmic Surgeon. Applications, with testimonials, on or before January 3rd, 1880.

MONAGHAN UNION—Medical Officer for Scotstown Dispensary District. Salary, £120 per annum as Medical Officer, with £15 per annum as Medical Officer of Health, exclusive of Registration and Vaccination Fees. Election on the 30th instant.

OUGHTERARD UNION—Medical Officer for Lettermore Dispensary District. Salary, £100 per annum, £10 yearly for boat hire, £12 per annum as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 31st instant.

PORTUMNA UNION—Medical Officer for Workhouse, at a salary of £60 per annum, with £5:10 per annum as Consulting Sanitary Officer. Election on the 20th instant.

*ST. BARTHOLOMEW'S HOSPITAL—Assistant-Surgeon. Applications not later than January 8th, 1880.

SEAMEN'S HOSPITAL SOCIETY—Visiting Physician. Applications on or before January 7th, 1880.

SOUTH DEVON and EAST CORNWALL HOSPITAL, Plymouth—House-Surgeon. Salary, £80 per annum, with board. Applications on or before December 22nd.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

*WORCESTER GENERAL INFIRMARY—Third Physician. Applications, with testimonials, not later than January 14th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

FREER, Edward L., M.R.C.S.Eng., appointed Honorary Assistant-Surgeon to the Birmingham and Midland Orthopædic Hospital.

MIDDLEMIST, R. P., M.R.C.S., appointed Honorary Surgeon to the Royal Masonic Benevolent Institution for Aged Freemasons and Widows of Freemasons.

*RUGG, George P., M.D., elected Medical Officer to the British Home for Incurables, Clapham Road.

BEQUEST.—Mrs. Mary Charlton, late of Priory House, Dudley, has bequeathed £10,000 to the Dudley Guest Hospital, founded by her late brother.

THE HOSPITAL FOR WOMEN AND CHILDREN, LEEDS.—A bazaar has just been held for the benefit of this charity in the Town Hall, under distinguished patronage and with the aid of a large number of influential stall-holders, and the result has been that close upon £2,000 has been obtained for the purpose of utilising two large empty wards not occupied for want of funds. The Hospital was established in 1854, and has treated 40,000 patients without a single paid officer or assistant.

THE LATE DR. HENRY STEWART.—At a recent meeting of the Managing Committee of the Stewart Institution for Imbecile Children, the following resolution was unanimously adopted: "This Committee have heard with the deepest regret of the decease of their late friend and colleague Dr. Henry H. Stewart, who manifested so warm an interest in this institution that bears his name, and is a lasting memorial of his great benevolence and liberality, and they desire to express and have conveyed to Mrs. Stewart their unfeigned sympathy in her bereavement."

PRESENTATION TO DR. CHARLES KEVIN.—Some of the friends of this gentleman in Ballymore and neighbourhood last week presented him with an address and valuable epergne on the occasion of his marriage and removal to Belfast, as a token of their esteem. The address stated that, as medical officer of Ballymore dispensary district, Dr. Kevin had discharged the duties with the greatest fidelity, had striven in every way to relieve suffering humanity—the great object of that honourable profession to which he belonged—and requesting him to accept their gift as a token of their appreciation of his professional services.

SNAKES IN THE SOUTH KONKAN.—An interesting letter on snake-bites is published in the *Asian*, from which we extract the following: "Of all the snaky places, with the doubtful exception of Sind, in the Bombay Presidency, the Ratnagiti, or South Konkan district, is the snakiest; and of all the snakes found therein, the phursa, or *echis carinata*, is by far the most common. With a population of just over a million, the deaths from snake-bite have, for years past, averaged considerably over a hundred. A few deaths are caused by cobras and dabois, but in the great majority of cases the fatal instrument is *echis carinata*. In 1876, of the 153,090 venomous snakes for which rewards were given in the Bombay Presidency, no less than 140,828 were destroyed in Ratnagiri, and of these upwards of 90 per cent. were phursas. In 1872, at a reward of two annas a snake, 115,921 snakes were killed in eight days (December 2nd to 10th). The configuration of the country, consisting of low rugged hills and rocky plateaus, is especially favourable to this species. Near the coast, the uplands are thickly covered with loose laterite boulders; while, further inland, at the foot of the Western Ghats, the laterite is replaced by trap. Under these rocks and boulders the phursas make their habitation, and multiply exceedingly. They are seldom seen by day, not leaving their hiding-places, as a rule, till darkness sets in, and then woe to the shoeless traveller who steps unawares on one. The bite of the echis appears to be fatal in about 20 per cent. of the cases. The action of the poison is comparatively slow. The average of sixty-two fatal cases treated at the Civil Hospital gives death in four and a half days, though, in some instances, patients lingered up to twenty days."

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

FLATULENCE.

SIR,—In reply to Inquirer, I should advise him to try sulphurous acid in forty-minum doses, either during or immediately after meals: if that fail, iodide of potassium in four-grain doses, with tincture of nux vomica and aromatic spirit of ammonia, might be tried.—I am, yours, etc., FLATULENCE.

WE are much obliged to Dr. Fergus Brown for his communication. We have received several copies at different times of the publications of the Antivivisection Society. As a rule, they are so utterly regardless of fact, and so determined to make facts, however adverse, square with their theory, that we avoid controversy with writers so hopelessly prejudiced, so unfaithful, and so violent in the language in which they express their theories and opinions.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN NOVEMBER 1879.

THE following are the returns made by Dr. C. Meymott Tidy to the Society of Medical Officers of Health.

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter.	Nitrogen	Ammonia.		Hardness. (Clark's Scale.)	
			As Nitrates,&c.	Saline.	Organic	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction ..	21.10	0.050	0.180	0.000	0.009	14.3	3.7
West Middlesex..	21.50	0.043	0.150	0.000	0.008	14.3	3.2
Southwark and Vauxhall	22.10	0.048	0.132	0.000	0.008	14.8	3.7
Chelsea.....	21.00	0.055	0.144	0.000	0.008	14.3	3.7
Lambeth	21.50	0.062	0.144	0.000	0.009	13.2	3.3
Other Companies.							
Kent	28.60	0.039	0.450	0.000	0.002	18.8	7.5
New River	20.60	0.014	0.138	0.000	0.007	14.8	3.3
East London	21.50	0.031	0.135	0.000	0.007	15.4	4.2

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours. The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in that of the Chelsea Company.

THE TITLE OF DOCTOR.

SIR,—I have still no intention of taking a general part in the present discussion relating to the title of "Doctor", as I wish to reserve what I have to say upon the subject for a future occasion. I think it well, however, to point out now, that a fortnight since I stated to you, that the London College of Physicians had no by-law, and that it had no legal right to make a by-law, prohibiting its Licentiates, Members, or Fellows from taking the titles of "Dr." or "Doctor of Physic"; nevertheless, in to-day's JOURNAL, I see a suggestion from a Licentiate of the College that "an humble appeal" should be made to the College to repeal the supposed by-law in question. It is singular to observe what a proneness there is amongst your correspondents to base their arguments upon impressions and opinions instead of upon facts; and we have a notable instance of this in the proposed "appeal" I am now noticing. Had your correspondent had the forethought to ascertain for himself whether there were such a by-law as he imagines, he would have discovered that no such by-law was in existence. As there is, consequently, no ground, as I shall soon show, for this "humble appeal", I would suggest that, instead of it, an association should be formed of the Licentiates of the College, to maintain whatever rights and privileges may belong to them as such Licentiates. I firmly believe, and have cause to say so, that the College would endeavour to uphold, as far as it could do so, any privileges it might consider, or be led to consider, devolved upon them in virtue of their connection with the College. As regards the by-law about which so many of your correspondents have written, I wrote to the Registrar of the College (Dr. Pitman) in September last, maintaining, amongst other claims I was advancing as a Licentiate of the College, that the College had no legal power to make such a by-law as that under discussion; and that, therefore, it would be invalid and useless. The following is an extract from the letter Dr. Pitman wrote to me in reply, and I hope it will be received as an authoritative and satisfactory settlement of this distinct part of the more general question of the right of the Licentiates of the College to use the title of "Dr."

"There is no by-law of the College now in force that has reference to the question of 'titles', but a resolution was passed in 1876 (April 10th), a copy of which I enclose. You will observe that the resolution is simply declaratory", etc.—I am, sir, your obedient servant, R. H. S. CARPENTER.

130, Stockwell Road, S.W., November 15th, 1879.

SIR,—I should not again have troubled you with any remarks on the title of Doctor, had I not been requested by several friends to reply to Dr. Carpenter's objection, that the evidence adduced applies exclusively to the London College and its diplomates, and is no authority for the Licentiates of the Edinburgh College of Physicians to claim the title.

Unfortunately, I have no documents relating to the Edinburgh College of Physicians; but it is the general opinion that all the three Colleges have much the same powers, except that the London College, by a subsequent Act, has the right to qualify in surgery as well as medicine. Many years ago, I received from the then secretary of the College a distinct assurance that the Edinburgh Licentiates possessed all the privileges of those of the London College. Be this as it may, the right of physicians to the title of doctor rests not on any special powers of any particular college, but upon the fact of their being physicians, and therefore belongs to all physicians alike, be they M.B., L.R.C.P., or Licentiates in Medicine of an University. The founders of the College in London were designated doctors in the Charter, not on the ground of being Fellows of the College, but because they were physicians licensed under 3 Henry VIII by the Bishop of London. All the Inns of Court have the power of making barristers, and these as such become esquires, so all the colleges of physicians make physicians, and these as such become doctors, and have on this ground alone been legally recognised as such.

I am, etc., ST. JOHN GAGE PARSONS, M.D., L.R.C.P.Edin.

Crofton House, Stokes Croft Road, Bristol.

SIR,—In the BRITISH MEDICAL JOURNAL of November 15th, it seems to me that your correspondent, "A Member", is decidedly mistaken; as I learned, through the Registrar of the King and Queen's College of Physicians, that the Master of the Rolls (in the case referred to by your correspondent), in giving judgment, held that Licentiates of the King and Queen's College of Physicians had no right to "M.D." after their names, but were not precluded from using the prefix of "Dr."—I am sir, your obedient servant, L.K.Q.C.P.I

December 6th, 1879.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

DR. FOTHERGILL ON "SOCIAL PARIAHS" OF THE MEDICAL PROFESSION.

SIR,—The remarkable letter of Dr. Fothergill in your issue of the 6th is not only an unjust criticism on the hard-worked country practitioners, but a base slander on the wives of those medical men in rural districts. I am afraid that Dr. Fothergill's experience of country practice must have been unfortunate, and he looks upon us country surgeons with a jaundiced eye. I have no doubt the ladies will be deeply grateful for his pity. He appears to forget that a country surgeon may possibly be a gentleman or his wife a lady; but from the description he gives of the two classes of wives, he must have been doubly unfortunate in selecting types for criticism in American papers. *Place aux dames.* The first class is one that I shall term "the weaker vessel" root and branch; and if such a class do exist, I feel a just and honest indignation against any husband who would allow his wife to be persecuted for the sake of his practice. What little benefit that might arise from the "cat's paw" he makes of his wife would be counterbalanced by the loss of her love and respect. Fortunately, I have never yet come into contact with this class of men.

The second class (wherever they may be found) deserve the contempt of honourable men. The ladies! (save the mark) of this class must also be few and far between; and I should imagine that touting would injure a practice instead of improving it. We will say nothing about the medical skill that required this advertisement. Again he says, "The man in the village holds a lower social status." I must beg to differ from him again. The medical man can either make or mar himself. If he respect himself, people will respect him. It is those petty and dirty transactions of the few that bring contempt on the majority. We have plenty of village doctors good sound practitioners, men of sterling merit. If the doctor or his wife choose to be "bullied" (as Dr. Fothergill politely terms it) by the parson or his wife, it will be their own fault, and they deserve it. I find as a rule, that the greater the learning and breeding of the clergyman, the more sociable and less inclined to domineer he is. It is true one does occasionally come across very disagreeable people in this class of life, but when we inquire into their antecedents we do not feel much astonishment. One that I came across some time since, originally started in a drug-shop, and contrived to get smuggled through the back door of the church, and consequently became a nuisance. But happily these are very few, and the country doctor has little cause to complain on this score.

Again, it is said that the single practitioner has not the "ghost of a chance" of getting on in the world. Would Dr. Fothergill be astonished to learn that many of the best country practitioners have done more in a pecuniary sense in their single days than in those of wedded bliss, without counting those that are still single? I fail to see how Dr. Fothergill can give such a decided opinion on American ground, not having visited the United States; and if he form an *ex parte* opinion of those Americans who visit England, it only goes for what it is worth.

I have two very intimate friends and one near relative who have travelled through the United States, and they one and all say the same thing, that the majority of the surgeons, etc., are inferior to those in England, (or rather) Great Britain, and one is puzzled to tell a legitimate practitioner from one who holds a £5 bogus degree from the self-styled University of Philadelphia, there being five quacks to every registered medical man in some parts of the United States.—I am, yours faithfully.

W. H. BROWNE.

SIR,—I am so much amused, and, indeed, a little indignant, at the position assigned to rural practitioners' wives by Dr. Fothergill's letter of the 29th November in your JOURNAL, which my husband has shown me, that I am tempted to give my experience on the subject, which, I am glad to say, is quite the reverse of Dr. Fothergill's bachelor opinion. I have been a country doctor's wife for more than six years, and during that time I have met with the greatest kindness, courtesy, and respect from all classes of society. Both my husband and myself visit and are received upon an equal footing by the families of the clergy and neighbouring gentry—indeed, upon no other terms would I meet them—and I hope I am not conceited when I say, instead of being a "social pariah", I believe myself to be considered a social acquisition. I may also add that I have no money of my own, and we are dependent on the means my husband's practice affords; that I am a lady by birth and education; I do not drop my "h's", or commit other social enormities, which, I am told, was the case with the wives of my husband's predecessors. I suppose if either the squire or clergyman were to marry women of this class, they would be equally ostracised, as Dr. Fothergill describes. There are doctors and doctors, and the same may be said of their wives. I believe it to be generally acknowledged that a man's social status, in whatever rank of life, depends much upon his wife; and I believe this to apply to medical men more particularly. Instead of wondering how country doctors get wives at all, I think any "innocent trusting maiden" may be proud to call herself the wife of a member of so noble a profession as the medical one. If she be a lady, she will meet with nothing but respect; and there are few spheres which afford so large a scope for usefulness as that of a country doctor's wife. There is an old saying, and, I think, a true one, to the effect that the world values one much as one values one self. I think Dr. Fothergill must also make allowance for the difference between the society of a country district in England and that of the United States.

I hope Dr. Fothergill has not continued to remain in single blessedness (?) for the reasons assigned in his letter, as I think they are rather jaundiced ones, and the remedy lies very much in his own hands.—Apologising for so troubling you, I am, sir, yours obediently,

A RURAL PRACTITIONER'S WIFE.

SIR,—As a country practitioner, I may be allowed to enter some sort of protest against Dr. Milner Fothergill's letters to an American paper and your JOURNAL, on the social status of country doctors in England. The writer of those letters professes a knowledge of the life of rural practitioners in America, and implies an extensive one of that of country doctors in England. I have no reason for impugning the truth of the former statement; but the latter I may be allowed to doubt. It is an easy process to make a theory, and then adjust facts to suit it afterwards by an ingenious distortion of them, or through looking at them from a wrong point of view. The latter seems to have been the case with Dr. Fothergill; he has evidently sat down to compose a theory evolved from his own inner consciousness, and has made his facts tally by looking at them through spectacles of his own colouring.

I cannot think the picture he draws of a country practitioner is realised in the life of a very large majority of country doctors. It is an insult both to the profession and the British public, which is ever ready to respect a man who is a gentleman by birth and education, if he only behave himself as such. In an ordinary country village, the medical man stands next to the clergyman; and his profession alone, even if it have nothing else to back it, brings him into contact with the good families of his neighbourhood, and if he be a gentleman, he becomes the friend and not only the medical adviser.

In illustration of the statement that the doctor's wife is a social pariah, I may borrow from his letter the supposition that the husband is asked to a dinner, while his wife, Cinderella-like, stays at home. Such a ridiculous statement has only to be read to be shown to be untrue, and needs no further comment. I appeal to such of your readers as are married country practitioners, and even to their wives, to support me in my denial. A doctor often starts in an out-of-the-way part of the country, where the only gentleman's house within miles is the vicarage. In such a case, how can a doctor's position be called an anomalous one? How can his wife be called an outcast from society when there is no society to cast her adrift? Country doctors' wives will, no doubt, thank Dr. Fothergill for his pity, but I fancy not without a thank-you-for-nothing sort of feeling. Knowledge of butter and of mothers' duties are no doubt great acquisitions, but not only to doctors' wives, and by themselves are of little use, even to the helpmate who tries to give her husband a "boost". Dr. Fothergill, no doubt, visits his country friends, and among them many are presumably doctors, and married, and I should like to ask him whether the idea of his friends' wives always and unfailingly calls up the idea of social pariahs?

For a writer who, like Dr. Fothergill, uses his pen so fluently, and deals out sentences with such ease and dexterity, it is doubtless a great thing to pad sentences with such rolling words as anomalous or social pariahs (how many have a full idea of what this latter means?). Such words may have a meaning or they may not, but they give a balance to sentences and a roundness to periods; but when facts speak distinctly against such words, the writer is no longer to be trusted, and his long words and well-turned propositions may be consigned to oblivion, the only fitting limbo for the "hare-brained chatter of irresponsible frivolity".

Apologising for trespassing on your space, I remain, yours faithfully,

Portishead, Somerset. L. A. WEATHERLEY, M.D.

CONDENSED MILK.

SIR,—Some time ago, I analysed a number of samples of condensed milk, purchased at different shops in London, and representing seven of the principal brands. The results are given in detail in a paper read before the Society of Public Analysts, printed in the *Analyst* for March 1879. The amount of "milk-solids not fat" varied from 22.46 to 27.03 per cent., corresponding to a condensation of from 2.41 to 2.9 parts of normal cow's milk into one part; the fat fluctuated between 6.13 and 12.76 per cent.; the cane-sugar, from 36.74 to 50.08 per cent.; and the mineral matter, from 1.74 to 2.20. The average amount of condensation was 2.69 to 1; or, in order to get a milk containing the same amount of milk-solids not fat, as did the original cow's milk, to one part by weight of the condensed milk, 1.69 parts by weight of water must be added. Or, since the average specific gravity of the samples was 1.281, to one part by volume of condensed milk, 2.45 volumes of water must be added to obtain a liquid with 9.3 per cent. of milk-solids not fat. The amount of total solids (average in the condensed milk 76.26 per cent.) contained in the milk thus diluted would then be, on account of the very large amount of cane-sugar, 28.3 per cent. If, however, the milk be so diluted that it contains 12 per cent. of total solids, that is to say, to the strength of cow's milk, its most important constituents, namely, casein, fat, and phosphates, are reduced to less than one-half their proper quantities.

In human milk, the proportion of nitrogenous matter to carbonaceous matter (1 part of fat being reckoned as equal to 2.4 parts of sugar) is as 1 to 4.3; in condensed milk, only as 1 to 7.7. Thus condensed milk contains far too small a proportion of flesh-forming materials to be able to serve as substitute for mother's milk.

Contrast with the calculations above given, and which it must be remembered are based upon the analyses, the directions given by the manufacturers. "For infants, add 7 to 10 parts of water" (Anglo-Swiss milk made abroad); "add from 7 to 14 parts of water" (Anglo-Swiss milk made in England); "7 to 10 parts of water" (Helvetia); "from 15 to 18 parts of water" (Norwegian).

Assuming that human milk contains one-third less casein than does cow's milk, although the difference is not in reality so great, we ought to add to one spoonful of condensed milk 3.6 parts of water, instead of from 7 to 18. If the dilution be actually made in the proportion of from 1 to 18, then the liquid is but little more nourishing than a dilute cane-sugar solution, containing as it does no more than 0.68 per cent. of casein, against upwards of the 3 per cent. of human milk.

The use of condensed milk necessarily leads to a dilemma. Either the dilution is made moderately, so that the proportion of casein is not less than 3 per cent., as in human milk (in that case, the milk is intensely sweet, and certainly indigestible and heavy, and quite unfit for infants' diet); or the dilution is carried to such an extent that the amount of solids in the diluted milk corresponds with that in normal human milk; but then the nitrogenous matter, fat and phosphates, are so much reduced, that their amounts are far smaller than are requisite for proper and perfect nutrition.

Condensed milk, in fine, may be useful and excellent for a great variety of purposes, and in cases where fresh milk is not obtainable; but it should not be regarded, as it is by Mr. G. Worthington, and unfortunately by a great part of the ignorant public, as "as close a representation of human milk as can possibly be obtained".—I am, sir, yours obediently, OTTO HEHNER, F.C.S.,

Fellow of the Institute of Chemistry of Great Britain; Public Analyst for the Isle of Wight and the Borough of Ryde.

54, Holborn Viaduct, London, November 1st, 1879.

SIR,—In reply to the query of E. M. S., I should suggest Normansfield, Hampton Wick. Dr. Down will be able to give him all particulars about the institution, which, I should say, is just the one he requires.—Yours truly, H. E. P.

GOUT IN THE STOMACH.

SIR,—I shall feel obliged by any gentlemen giving me their experience of the symptoms, course, and treatment (and, where fatal, the *post mortem* appearances, if any), of gout in the stomach.—I am, etc., H. M. C.

Hamilton House, Penge, S.E., December 1879.

GIACOMINI'S PROCESS FOR HARDENING THE BRAIN.

M. L. S. ASKS: What is this process, referred to twice recently in the JOURNAL?—Giacomini's process for hardening the brain is—1, to place it in a 50 per cent. solution of zinc chloride for ten or twelve days; 2, then in alcohol for ten days; 3, then immerse it in glycerine with one per cent. of carbolic acid; 4, when sufficient glycerine has been absorbed, it is set aside to dry, and then varnished with gum elastic. It is now firm enough to be handled, and looks like a wax model.

SIR,—If E. M. S. will apply to F. S. A., care of A. Le Prince, Esq., Park Square, Leeds, he will hear of a family where the little girl subject to epileptic fits, etc., can be placed, and have every care and medical attention.—Yours faithfully,

December 1879. F. S. A.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

OÖPHORECTOMY.

SIR,—The two cases of oöphorectomy published in the JOURNAL of November 8th, instant, by Mr. Lawson Tait, are both interesting and instructive to a certain extent, but not nearly so much so as they would have been if less curtly reported.

Of the first case it is reported: "I performed the operation on August 11th. There was no particular difficulty about the operation, save that the patient was very fat. On September 18th, she left the hospital quite well." And of the second: "The patient was admitted into the hospital on August 5th last. On the 8th, oöphorectomy was performed by Mr. Tait,' in the presence of several medical practitioners. Both ovaries were removed, and the pedicle of each tied by a special knot—'Tait's knot'. . . . The patient made a good recovery." Truly this is a brief report. This is a style of writing which has a pleasing abruptness about it, being agreeable to those who, like the writer, are *au fait* with the subject, but not quite so much so to others, who, like myself, may be seeking for reliable information on a subject of so much importance; one about which so little is at present known.

One of the most recent writers on oöphorectomy—Professor Simpson—has set a good example in the minute report of his case. He also gives a table of thirty-five cases, culled with much labour from other sources. In twenty-two (of the thirty-five) the incision was abdominal, and thirteen vaginal; nine of the twenty-two, or 44 per cent., were fatal; and of the thirteen, four, or 33 per cent., were fatal. Oöphorectomy is what may be called a new operation, and practical men are as yet divided as to whether the abdominal or the vaginal incision is the most desirable. For the purpose of clearing up this difficulty, Mr. Tait's cases are useless, however valuable in themselves, inasmuch as he omits the subject altogether.

The second case was under the joint care of Dr. Meredith and Mr. Tait. She was "a young woman aged 20", under treatment "on account of excessive menstrual discharge". She was under Dr. Meredith's care from May 1877 to January 15th, 1879, when he sent her to Mr. Tait, who reported "that he could find nothing amiss with the uterus, only that the fundus was a little enlarged—nothing more". From this date, she continued under treatment until August 8th, when oöphorectomy was performed as a *dernier ressort*.

Oöphorectomy is, under any circumstances, a most formidable operation, especially so to "a young woman aged 20". Hence it is of the utmost importance that every available means should be exhausted before the operation is contemplated. In this case, the treatment was most varied and patiently continued, but it does not appear that dilatation was either attempted or suggested. This is a common, safe, and, in the majority of cases, efficient mode of treatment in cases of "excessive menstrual discharge". I will adduce the notes of a case having many points in common with this case, illustrative of the views here advanced.

Miss B., aged 20, was tall and well developed. She first menstruated in 1868, and continued regular without pain or intermission until December 1874, when, without any apparent cause, it became excessive, and continued almost without interruption until March 10th, 1875, on which day I saw her for the first time. Her general health had become greatly reduced during the last three months. Palpitation, with difficult breathing, were at times very distressing to the patient, and alarming to her friends. A careful examination with the eyes, the ears, and the hands, revealed but little. The uterus was normal, both as to position and length of cavity; the sound moved freely round the fundus, without pain, but with a freedom favourable to the idea that the cavity was a little wider than usual. The ovaries were of normal size, and free from irritation; in fact, the examination furnished no information as to the exact cause of the hæmorrhage, or the mode of treatment best calculated to remove what was indeed only a symptom—the hæmorrhage.

The treatment adopted was, therefore, tentative—absolute rest in bed, ice constantly applied to the suprapubic region, nutritious diet without stimulants. ergot, bromide of potassium, cannabis Indica, etc. For six weeks this general form of treatment was continued, with but little, if any, real benefit. Dr. Barnes saw the patient with me on April 21st. Chloroform was administered in order that the examination should be as complete as possible. The most careful examination failed to discover the cause of the hæmorrhage, the uterus and its surroundings appearing to be healthy; nevertheless, the hæmorrhage remained. We were agreed as to the propriety of dilatation, and I at once introduced a tangle tent; the process was kept up for forty-eight hours. The uterus being fully dilated, Dr. Barnes met me again on the 23rd. Mr. Braine having put the patient well under ether, the uterine cavity was carefully explored; it was perfectly smooth and healthy. Nothing could be detected to account for the hæmorrhage, save a small warty growth, the size of a small pea, situated immediately below the opening of the left Fallopian tube. This was removed by a curet, the cavity swabbed out with tincture of iodine, and the patient put to bed. From this time, there was no more intermeddling with the uterus, neither was there any return of the hæmorrhage. The patient was well enough to leave town in a month. Menstruation came on three weeks after the operation, without pain, remained its usual time, and has continued regular ever since.

This case well illustrates the difficulties which are sometimes experienced in arriving at a correct diagnosis in cases of uterine hæmorrhage. Had not dilatation been adopted, the real cause must have remained undiscovered, and the hæmorrhage continued until oöphorectomy should come to the rescue. Looking at Mr. Tait's case by the light reflected by my own, I cannot but think that an important means of diagnosis was overlooked. Had dilatation been adopted, it is possible that the cause of the "excessive menstrual discharge" might have been discovered and perhaps removed. If so, a most formidable operation would not have been necessary, and the patient would have been privileged to enjoy the pleasure of retaining what, to "a young woman aged 20", must be the choicest treasure in life—her ovaries.—I am, sir, your faithful servant, THOMAS CHAMBERS,

Senior Physician to the Chelsea Hospital for Women, etc.

Chester Square, S.W., October 14th, 1879.

*** We could wish that Dr. Chambers had studied brevity in his communication; it is a great and highly to be appreciated quality.

PROFESSIONAL EXAMINATIONS IN THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

SIR,—Will you allow me a small space in your valuable paper to ventilate a fact which often inflicts, in an indirect manner, pecuniary loss on the parents of medical students, and in many cases an irreparable injury on the students themselves? I allude to the time which must elapse from the date of a student's commencing the study of his profession to the date at which he is admitted to the first "professional examination" for the "licence of the Royal College of Surgeons in Ireland". But few of the profession in England (and I am afraid the members of the General Medical Council, one excepted, are not numbered among them) are aware of the extraordinary fact, that a candidate for the licence of the College of Surgeons in Ireland cannot present himself for his first professional examination, until he is eligible (in point of time) for his final examination.

The following lectures are required for the first professional examination. Three courses each of lectures on Anatomy and Physiology, two courses on Chemistry, one course each on Materia Medica, Botany, and Forensic Medicine; and, for the final examination, in addition to the above, one course each of lectures on the Practice of Medicine and on Midwifery, and three courses of the Theory and Practice of Surgery.

Students who work fairly all through their time, generally pass both their examinations together, or rather with an interval of one week between them; but how many idle away two years of their studentship, and by dint of the greatest exertion manage to pass the first examination at the proper time! Up to this time, they have scarcely opened a book on surgery; now, "wonderful to relate", in the short space of three months, they read up sufficient surgery to enable them to pass their final examination. Such knowledge must be utterly unscientific and empirical. I am sure that many eminent teachers in Dublin have had such cases as the above under their observation.

By the abovementioned regulation, young students are left entirely to their own devices, and exposed to the snares and dissipations of luxurious Dublin, for three years before their parents or guardians can know, with any degree of certainty, whether they have been working or not. How many, alas, find they have not. I am sure many will agree with me, that postponing the first professional examination until the end of the third year of study is simply "putting a premium on idleness". If the first examination were held, as it is in England and Scotland, at the end of the second year, it would be of the greatest benefit to both students and parents. I am one of those who think a student should be examined "each year", and not be allowed to proceed further with his professional education until he has shown his examiners that he has attained a suitable standard of proficiency.

Trusting that this may meet the eye of some members of the General Medical Council and others interested in medical education, I am, sir, etc.,

COSMOPOLITE.

To give the comparative answers Dr. Herbert Morgan asks for would be very invidious.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.

COMMUNICATIONS, LETTERS, etc., have been received from:—

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REMARKS
ON
THE APPLICATION OF SIMPLE COLLODION TO THE MEMBRANA TYMPANI IN THE TREATMENT OF VARIOUS DISEASES OF THE EAR.*

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THE subject of the paper, as noticed in the JOURNAL of the Association, is "The Treatment of Relaxed Membrana Tympani". My experience, however, has so extended since I furnished that title to the Secretaries of the Otological Section, that a very comprehensive title would be necessary to give an adequate idea of the scope of this paper. I purpose, in fact, to deal with many of the questions of aural surgery, as, for example, the treatment of relaxed membrane; the prevention of the adhesion of the membrane to different structures within the tympanic cavity; the rupture of adhesions; the maintenance of the normal relation of the membrane to the ossicles, and of the ossicles to each other; the prevention and relief of labyrinthine pressure; the prevention of the shortening and retraction of the tensor tympani; and the mode of keeping a perforation of the tympanic membrane open for a time more or less long.

At first sight, it may seem strange that so many of the evils met with in cases of aural disease should be classed together; but I trust to show that they are closely linked together in cause, and equally so in treatment. It may, I think, be laid down as fundamental, that almost all the evils specified arise directly from a drawing in or pushing in of the membrane of the tympanum, during the course of catarrhs of the Eustachian tube and drum. The first object of treatment, therefore, should be to keep the membrane in its position, and replace it when it gets out of it. This has been practically recognised for some time; but the means employed are frequently inefficient and sometimes injurious. The inflation of the drum by Valsalva's method, by Politzer's, by the Eustachian catheter, suction on the membrane by the air-pump, and air-tight occlusion of the meatus, as recommended by Politzer, all aim at this. We all know how often the improvement on inflation is of very short duration, perhaps for a few minutes, a few hours, or a few days; and how often it is totally useless. I question whether any of us have an idea how often violent inflation brings about more or less relaxation of the membrane, and disarrangement of the delicate balance normally existing between the ossicles and the structures with which they are connected. Further, when changes have existed for some time, and the ossicles have taken up a new and faulty position, in which they have become settled, what influence can a momentary insufflation have on parts which have become the subject of structural changes of a more or less permanent character? If the membrane have been too much depressed for months or years, and the tensor tympani have become, as a consequence of the prolonged approximation of its origin and insertion, shortened and retracted, will insufflation have the slightest chance of lengthening it? Experience answers in the negative. We really require some powerful slowly acting agent, whose influence will be exerted for long periods. This we find in collodion. Applied on the membrane, it adheres tenaciously, contracts considerably, diminishes the concavity of the membrane, pulls it with the handle of the malleus outwards, increases the resistance of the membrane, and exercises a far-reaching influence on the middle and inner ear.

Whilst experimenting some time since on sound, I required fine membranes made very tense. I found it occasionally difficult to have the membranes free from wrinkles and depressions. It occurred to me to apply collodion; and I found that, by its aid, I secured perfectly smooth and tense membranes. Afterwards, reviewing the cases which came before me daily, for which aural science so far had done nothing, I thought I might at least relieve one class, viz., that in which relaxation of the membrane was a prominent sign. Surely a relaxed membrane could be tightened up, just like the lax membranes with which I had been experimenting. On my first trial of the collodion, I used it too sparingly, and the improvement which resulted did not last long. On the 2nd of May last, I tried it thoroughly in a case which had been under my care for three years, and for which I had ceased to do anything but give a placebo. As this case brings out a number of points in a striking manner, I will give a short statement of the most salient.

CASE I.—Jane H., aged 41, spinster, was under my care from time to time for three years for catarrh of the drum and its results, and treated by me according to recognised methods. With the left ear, she heard my voice (moderate tone) at a distance of three feet, but hearing varied much. The noises in her ears were of the most distressing kind. At times, the noise was like that of a thunderstorm; again like that of machinery; sometimes like the blowing of a horn. The sounds of other persons' voices were greatly confused ("entangled", as she put it). Her own voice seemed to her to have a most unnatural tone. She formerly sang in church; but since she became deaf, her own voice seemed to her so inharmonious that she was obliged to cease singing. At times she was quite bewildered; and she told me that she believed her noises would have made her mad, had she not been obliged to earn her bread. On examination of the membrane, I found a number of depressions between the upper part of the handle of the malleus and the posterior wall of the meatus. All these depressions became bulgings on inflation of the drum by Valsalva's method. I applied collodion freely. Her hearing was immediately improved, and continued steady. She came to hear my voice (moderate tone) at the distance of eighteen feet, and the noises in the ear ceased. The confusion of voices and the unnatural character of her own voice also disappeared. Now she can sing as she used to do. The depressed part became quite flat. On July 29th (that is, about three months after the application), I thought the layer of collodion was loose. I syringed, and found that the loosening was only partial, and it did not come away at all readily. The hearing remained good, and the depression had disappeared, probably owing to the long-continued bracing up. The membrane seemed too lax, however, and I put on another coat two days afterwards.

I shall only add another case out of many of a similar kind.

CASE II.—Sarah H., aged 44, a widow, came to me on July 28th. With the right ear, she could hear a moderate voice at the distance of two and a half feet. There was no noise in the ear. I found a depression behind the handle, and the incus quite close to membrane. There was a distinct flap on insufflation. The depression disappeared, showing that I had to deal with simple relaxation without adhesion. I applied collodion. On July 31st, she heard a moderately toned voice at a distance of nine feet. The membrane behind the handle was at this time flat.

And now I will endeavour to detail, step by step, the important results which have followed from my primary idea. For the sake of clearness, I will now put aside the flapping membrane, and deal with other forms of depressed membrane. We have, then, firstly, the uniformly depressed membrane, with or without adhesion, at or near the tip of the handle, the change being mainly an exaggeration of the natural concavity of the membrane; and, secondly, the irregularly depressed membrane, with adhesions. I thought that, if collodion would brace up a flapping membrane, it would surely tighten up a membrane depressed and tense, and restore the ossicles either quickly or slowly to somewhat of their normal position and relations.

Collodion does nor act at all uniformly in these cases. It has brought about the following results in my hands.

1. It has torn through an adhesion of the membrane to the promontory, leaving a perforation.
2. It has pulled the membrane and handle outwards, diminishing the concavity generally, and restoring mobility to the membrane and malleus.
3. It has demonstrated adhesions by pulling the non-adherent parts outwards, leaving a well-defined depression at the seat of adhesion.
4. It has ruptured the dermic and fibrous layers of the membrane, leaving the mucous membrane exposed.
5. It has improved the hearing in the majority of cases—in some instances remarkably.
6. It has sometimes diminished, and at other times removed, noises and other unpleasant subjective sensations.

I will now endeavour to prove what I have said by the reports of cases.

It may tear an adhesion, and leave a perforation.

CASE III.—John C., aged 35, consulted me on June 19th. He stated that he had been becoming gradually deaf for four years. With the right ear he heard at the distance of one foot a moderately loud voice; with the left at a distance of two feet. He had a constant throbbing in the ears, and always heard a noise like that of a loud storm at a distance. His ears felt plugged. His family doctor recommended him to use Valsalva's method, but it was only with the greatest trouble that he had been able to inflate the drum. I asked him to try, and I found that he did not succeed till he had blown repeatedly. By Politzer's method, I nflated the drum at once, and there was a distinct flap of the membrane.

* Read in the Subsection of Otology at the Annual Meeting of the British Medical Association in Cork, August 1879.

On observing, whilst he inflated the drum by Valsalva's method, I found the tip and handle were quite unmoved, whilst the posterior part of the membrane moved well. Suction relieved his noise temporarily. There was too great concavity of the membrane, and a white spot was noticed anterior to the tip of the handle, and a whitish reflex through the membrane from the inner wall of the tympanum. The usual treatment brought no improvement. On June 22nd, I applied a coat of collodion on the right membrane, and sent him home. On June 29th, he returned. I syringed and removed the collodion, and found that there was a round perforation at the white spot previously observed. He could blow air through it easily. I injected medicated fluids through the tympanum from the meatus twice daily, every day, except the first. On the fourth day, the perforation was closed. I applied collodion to open the perforation. On July 4th, the membrane was open again, and remained open till the 7th inclusive. I repeated fluid injections as usual, sometimes once and sometimes twice daily. No inflammation occurred. On June 3rd, I put a coat on the left membrane. On the 5th, I found a linear tear at the lower part of the membrane, and, when he inflated the drum, a bulging of a reddish colour took place. No doubt this was the mucous membrane of the tympanum which had not been ruptured. I did not complete the perforation. On July 10th, I noted that there was still a bubbling sound in the right ear on inflation, and that I could observe air-bubbles inside the tympanum. He could hear me with that ear at a distance of three feet as well as he used to do at one foot. As regards the left ear, there was no change whatever in the hearing; but the membrane and handle moved, and he experienced no trouble whatever in inflating the drum. There was no improvement whatever in the noises at any period of the treatment, except momentarily during suction.

The following is another case of rupture of the dermic and fibrous layers of both membranes, pulling these and the handles outwards.

CASE IV.—James S., aged 29, came to me on June 14th. He stated that he had been deaf for fourteen years. He heard a moderate voice at one and a half feet off the right ear, and one foot off the left. Upon insufflation, the membrane of the left ear moved, but the handle remained stationary. The membrane was too much depressed. On June 23rd, I punctured the right membrane, applied collodion peripherally to keep the puncture open, and injected a weak solution of caustic potash afterwards from day to day. I kept the puncture open for a considerable time, but I have not noted the exact number of days. I applied collodion also on the left membrane; it contracted so much that it caused a long slit through the dermic and fibrous layers. The hearing was improved in the right ear to the extent of three feet, and in the left to two feet. The mobility of the membrane and that of the handle of the malleus was restored and the concavity diminished.

CASE V.—Mary R., aged 31, was with me in February 1876, when I noticed that the membrane was much depressed, particularly anteriorly. The short process was prominent, the long process foreshortened. I saw her again on the 1st of August last. She could hear me speak close to her ear. She experienced a constant singing noise; the membrane was depressed, at the tip of the handle especially. Insufflation made no change. I could not say whether or not there was an adhesion of the membrane to the promontory. I applied collodion. When it dried, I found the handle of the malleus standing out; but in front there was a deep depression, which evidently indicated adhesion. The hearing was improved up to a distance of about four feet, but the noise remained unchanged.

CASE VI.—Mary S., aged 40, consulted me on July 25th. She heard with the left ear a moderately toned voice at a distance of four feet, and with the right at a distance of two and a half. She had experienced a singing noise as long as she could remember. Both membranes were much too concave. Air passed in slightly by Valsalva's method. By Politzer's method, the drums were inflated, and the hearing was thereby increased to a distance of seven feet, but the improvement began to diminish immediately. I found that the membranes moved when she used Valsalva's method, but still remained too concave. I applied collodion to both membranes on her first visit. On July 30th, she heard with each ear at eighteen feet distant, but did not think the noise was lessened. The improvement in the hearing continued. On August 1st, she reported that the singing had never been so slight.

The next case illustrates the improvement in hearing, with total cessation of noise, though with adhesion of the membrane to the promontory in one ear not ruptured.

CASE VII.—Eliza M., aged 67, consulted me on July 22nd. She stated that she had been deaf for nine months. With the right ear she heard my voice (moderate tone) at a distance of one and a half feet; with the left ear she heard at three feet. A noise like that from a seashell had subsisted for six months. I found the right membrane opaque and depressed. In front of the tip of the handle there was a dimple. The left membrane showed a considerable depression, affecting the whole space in front of the handle; while the handle itself was foreshortened and its short process prominent. The Eustachian tube was patent. Inflation improved the hearing distance of the right ear up to six feet. In the left ear, the hearing remained at three feet. I applied collodion. On July 24th, she heard with each ear a low voice at fourteen feet, and subsequently the hearing improved still further, and the noise disappeared. The depression of the left membrane was very considerably reduced in extent, and the handle was pulled out. I have not a note of the state of the right membrane.

The next two cases illustrate an extreme degree of collapse, localised at the posterior part of the membrane—the membrane being pushed in so as to clothe, as it were, the incus and the inner wall of the tympanic cavity.

CASE VIII.—John H., aged 25, consulted me on July 28th. The left ear had been deaf four years. He never suffered from any discharge from the ear. He was troubled with a constant singing noise. He heard my voice (moderate) at a distance of one foot and a half. There was a remarkable depression behind the handle of the malleus. The membrane was actually pushed in in such a way as to clothe the incus and articulation with the stapes. Below, it was in contact with the inner wall of the tympanum, as shown by touching with a probe. On insufflation, air passed slightly, but no change in the hearing ensued. I applied collodion freely on July 28th. On July 30th, he thought he was only a little improved. The membrane was lifted up between the incus and malleus. There was still a depression below and one behind the incus. On July 31st, he heard a moderate voice at a distance of four feet. On August 1st, the noise was less. I used the Eustachian catheter, but no change ensued.

CASE IX.—Mary P., aged 40, had been under my care in 1874. I noted at that time depressions in both membranes. She came again on my invitation on August 2nd. She stated that even when a young girl she could not hear well, but she had been pretty much as she was now for fifteen years. When she was with me five and a half years ago, I gave her acetic ether to inhale and blow into her ears; but she did not think it did her any good. Afterwards, she used some popular remedy, with negative results. She heard a noise like that of rushing waters when with me previously, but she had had none for some time. She heard my voice (moderate tone) with each ear at a distance of two feet. The left membrane showed a deep depression of the whole membrane behind the malleus. The membrane was bright posteriorly, but showed anteriorly a white patch, as if from a deposit on the inside of the membrane. The depressed part lay upon the incus, and there were two deep depressions between the incus and the posterior wall of the meatus. The right membrane behind the handle was depressed, but was not quite in contact with the incus. There was some depression also anteriorly. On insufflation, there was a flapping of each membrane. These depressions of both membranes were generally reduced, but the part of the membrane behind the incus in the left ear was unchanged. This was evidently a case of relapsed flapping membrane, with adhesion behind the incus in the left ear. I applied collodion to both membranes. The right ear heard at six feet of distance, whereas previously it could hear only at two. The greater part of the depressions of the left membrane were elevated, but there was at first no change in the hearing. I believed that I had applied too little collodion to the left membrane. I applied more just before leaving for this meeting, and have not had an opportunity of ascertaining the result definitely. [See "Addendum".]

And now, gentlemen, I come to a question which has exercised the ingenuity of aural surgeons for a considerable time: viz., how to keep a perforation of the membrane open for a longer or shorter period. You are aware that even considerable sections of the membrane heal with such facility, that artificial perforations are seldom resorted to. Healing, in fact, takes place in from one day to four or five days, and surgeons have found it inexpedient to repeat the process. I leave it to the future to determine in how far the method I have already indicated in the reports of some of my cases, and which I will now describe, may replace all former methods of intratympanic medication. If we can, as I shall endeavour to show, keep a perforation open for a considerable time, and use injections, or pump through the ear vapour, not once every few days, but once or twice daily, surely, if intratympanic medication be of any value (and I may express my conviction that there is a great future before it), we will be able to carry out treatment much more efficiently through an opening in the membrane than through the Eustachian tube. But, it may be asked, how can collodion effect this object? Its action differs in no respect from that in the case of relaxed membrane. When a section is made, and collodion applied on the membrane peripherally, the contractile action makes the margins of the wound gape; and applications renewed from time to time may keep up this gaping for a considerable period, and perhaps render the opening permanent. I put

the plan to the test in one of the worst cases under my care. The following are my notes.

CASE X.—John M., aged about 70, had been deaf for very many years, after a severe cold. He had been coming to me for some time, but I observed no change from treatment. I was obliged to shout close to the right ear to make him hear. The membrane was depressed generally, and so changed in character that not a single part of healthy structure was to be seen. I could not recognise the malleus. He was unable to inflate the drum; but, by Politzer's method, I succeeded in passing a very little air into the drum, and I found a part of the membrane, about a line in diameter, moved slightly. I perforated it, making an opening of not a line in length, and I found it was not easily made. I applied collodion peripherally, and for eleven days injected medicated fluids. Although he had such difficulty in inflating, fluids passed from the meatus through the nose in a regular stream from the very first. No improvement in hearing had taken place when I saw him last; but the Eustachian tube had become so open that he could inflate easily, and the anterior segment of the membrane moved.

In another case, I tried what collodion would do in keeping open a mere pin-hole perforation in a thickened membrane.

CASE XI.—John C., aged 73, deaf of the right ear for very many years, has been under my care for some time. I was obliged to speak close to the ear to make him hear. The membrane was rigid looking, thickened, and rather flat. I inflated the drum very imperfectly. He was troubled with a constant noise resembling an escape of steam from a loose joint. I punctured the membrane on July 21st, and injected for several days, with no improvement. I did not carry out the collodion treatment as efficiently as I might perhaps have done; but at any rate the opening was on July 28th a mere pin-point, and I thought I would give up the injection and try to keep this point open. I applied collodion on the membrane, and from day to day injected through the ear, by Politzer's method, vapour of iodine, chloroform, and acetic ether. The ether and vapour whistled through quite freely. The peculiar noise from which he had suffered so long entirely disappeared during the treatment by injection with vapours. On August 2nd (the day I left Belfast for this meeting), I found the pin-hole point still open. N.B.—On my return, two weeks afterwards, the small opening was closed, its site being indicated by a little clear depression, and a little noise had returned. It will be observed that this small opening was kept patent for at least twelve days. I trust I have given sufficient data to secure for this method of intratympanic medication at least a fair trial.

The possibility, by means of collodion, of rendering an opening permanent has been already hinted at. I have not yet met with a case in which that could be considered a desirable object, and therefore have not put it to the test. It is obvious that, for this purpose, the opening should be considerable (indeed, a circular or oval piece should, perhaps, be removed); that intratympanic injections of fluid should not be used; that the ear should be allowed to have comparative rest. If the margins can be made to gape widely enough for some time, the cut surface may cicatrise, and thus a permanent opening be secured.

I may remark, in passing, that all the methods hitherto adopted are violent methods; and, in fact, quite opposed to the dictates of our experience in other branches of surgery. Who ever heard of the margins of a wound on the skin being kept open by pressing into it a foreign body? If we cut across a cicatrix from a burn in the neck, we do not try to prevent union by pledgets of lint in the wound, but by keeping the margins widely apart by traction, exerted by keeping the shoulder down and the head to the opposite side, and so in other parts of the body. When a bougie of whalebone, or Politzer's eyelet, or any other contrivance, is put into a perforation in the membrane, irritation is kept up, the margins are kept raw, contraction takes place, and the foreign body must either be removed, or the membrane ultimately casts it off. The plan I suggest is founded on a principle totally different from anything hitherto adopted in aural surgery, viz., peripheral traction.

But, if the contractile power of collodion will do so much to remedy the evils resulting from tympanic affections, can it prevent them? May it be applied in cases in which there is catarrh of the Eustachian tube and drum? The following case bears on this point.

CASE XII.—Owen C., aged 40, consulted me on July 28th. He stated that he had been ill one month; that his left ear was deaf; that he felt stupid, and had a feeling of great weight on the left side; and that he experienced a constant noise like that of a waterfall. He heard my voice (moderate) at the distance of two feet with the left ear. The membrana tympani was vascular in parts, dull at others, and in particular depressed posteriorly. It was quite dry. He could not inflate the drum by Valsalva's method, and there was no sound heard on swallowing. The air passed in with much difficulty by Politzer's method, and I heard a bubbling sound. The hearing was improved to a distance of eight feet. There was a good deal of pharyngeal catarrh. I applied collodion to the membrane to prevent collapse and adhesion. The depressed part was rendered tense. On July 29th, though he could not inflate the drum, the feeling of weight and the noise were almost completely gone. He heard me read in a very low voice at the distance of ten feet. On insufflation, I did not detect any bubbling, but there was quite a musical sound, probably from some obstruction. On August 2nd, he heard a whisper at ten feet distance. Of course I employed other treatment, directed to the pharynx and Eustachian tube; but the case shows that collodion may be used as an auxiliary without causing any pain or inconvenience, notwithstanding a catarrh of the drum with free exudation.

I have had many other cases, more or less interesting, but I cannot further extend the paper. I may add that you must not take the cases as in any respect exceptional. The employment of collodion has come to be with me a matter of daily resort. In fact, on July 28th and 29th, I applied it in eleven cases, some of them already described, which came before me in the ordinary course of public and private practice—once in subacute catarrh; six times for regular depression; once for extreme collapse of the membrane; once to keep a perforation open for tympanic injection; twice to flapping relaxed membrane.

It now only remains for me to refer to the prevention of the retraction or shortening of the tensor tympani, and the relief of intralabyrinthine pressure. If we accept, and I think there is no ground for disputing it, that the depression of the membrane and handle of the malleus approximates the points of origin and insertion of the tensor tympani, and if the in-pushing of the handle leads to pressure of the stapes in the fenestra ovalis, then it can hardly be open to discussion that the maintenance of the normal curve of the membrane will prevent both these consequences, and the evils resulting therefrom, immediate or remote.

I, therefore, claim for collodion an extensive use. There seems to be an analogy between its action on the ear and that of atropine and iridectomy on the eye. As atropine prevents adhesions and breaks them up, and thus saves the eye from repeated attacks of iritis, may not the tightening of the tympanic membrane at the period of the attack save the ear from future danger in a similar way? As atropine and iridectomy save the optic nerve from injurious pressure, may not collodion prevent tension on the acoustic nerve by easing the stapes in the fenestra, and thus keep the nerve safe till the tympanic or Eustachian disease disappears? I am much pleased, gentlemen, to have had the opportunity of submitting my observations to the criticism of this the most important meeting of aural surgeons ever held in these kingdoms.

ADDENDUM.—Since the publication of the abstract of the foregoing paper in this JOURNAL, I have had several inquiries regarding the mode of application of the collodion. Some supplementary remarks may, therefore, be acceptable.

It is prudent to have an idea of the contractile property of the particular specimen to be used, by pouring a few drops on the back of the hand, and taking the dimensions of the patch by compasses, both before and after contraction takes place.

In case of relaxation and depression of part of the membrane, the whole of the depression and a rim surrounding should be painted. If the whole membrane should be too much depressed, then a rather free coat should be applied over, at any rate, the lower three-fourths of the membrane.

I may note that cases characterised by immediate improvement after inflation and quick relapse are almost certain to be greatly relieved at once by collodion. I commonly paint it on with a camel-hair brush. It must be done quickly when several touches are necessary. Sometimes, when the case is so bad that rupture of the membrane or of adhesions may be desired, I pour a few drops on the membrane through a speculum, and then turn the head with the ear downwards, so as to allow part to run out. In fact, if it were at all easy to apply a drop on the membrane, that plan would be preferable to painting with a brush. For two or three minutes after the application, patients complain of a burning heat, and, after contraction takes place, a feeling of constriction is experienced. A little pain is occasionally felt.

The collodion does not adhere to the walls of the meatus. After the application, it is usual to find membranous patches of collodion in the meatus, obstructing the view of the membrane more or less. These may be removed. Sometimes, however, a patch standing out may be connected firmly with the coat on the membrane. In such case it must not be removed, as traction might be exerted to an injurious extent on the membrane, and the membrane would either be ruptured or the dermic layer pulled off with the collodion.

If it should be desired to remove the collodion, it is not at all easy to do so, even after the lapse of a long time. To effect its removal, I syringe gently with warm water, having some sulphuric ether added to

it. More trust must be put in time than force—indeed the utmost gentleness must be used. I usually succeed in a few minutes.

APPENDIX.—The result in the case of Mary P., on whose membrane I applied collodion on August 2nd, is so interesting that I think it well to complete the history. After returning from Cork, I saw her on August 18th. She stated that, after the application, she had had pain in the ear; that on August 7th (that is, five days after the application), she had a slight discharge, which had since continued. On examination, I observed an irregular rupture of membrane at the postero-inferior segment, with some discharge. The opening was considerable. Air whistled through when she inflated the drum. I thought it well to inject weak solutions of iodide of potassium, carbonate of soda, and caustic potash. This I did for a week, but without improvement. I ceased the injections, and resolved to try how long I could keep the perforation open. I applied collodion on the membrane, so as to exert traction on the margins of perforation, and ceased further treatment. The ear has been perfectly dry ever since and free from pain. On September 8th, the perforation was round, and at least three-quarters of a line in diameter. For some time the hearing had not improved; but, on the date mentioned, she could hear a very moderate voice at ten feet, whereas she had formerly only heard at the distance of two feet. The important fact to be noted is that, from August 7th till September 8th, a perforation was kept open by the very simplest means.

THE PRESENCE OF FAT IN THE URINE.

BY THOMAS OLIVER, M.B.,
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ON reading a foot-note in the chapter on Chylous Urine, in Dr. Roberts's *Handbook on Urinary and Renal Diseases*, I see that, while he is fully aware of the occurrence of cases in which the fat which is present in the urine is globular and not molecular, he is unwilling (and I think rightly) to regard them as belonging to the same series of cases as those comprised under chyluria. And certainly they differ in a few respects. As the two cases I am about to report resemble a case published by Dr. Bramwell in the *Edinburgh Medical Journal* for 1858, p. 714, about which there seems to have been some doubt, I may be excused for thus bringing forward a paper to substantiate what has already been observed. In speaking of the characters of chylous urine, Dr. Roberts says: "On standing awhile, it sets spontaneously into a trembling coagulum, which, after a time, redissolves and breaks up into flaky clots. Not unfrequently, this coagulation takes place within the bladder, and occasions serious pain and difficulty in micturition. The milky appearance of chylous urine is due to the presence of a finely divided fatty or oily matter. This is thrown up as a creamy layer after the urine has stood for some hours. When chylous urine is agitated with ether, the fat is dissolved, and the secretion assumes the transparency and colour of healthy urine...Chylous urine is invariably coagulated by heat and nitric acid. The specific gravity is generally below the average. When examined microscopically, chylous urine is found to contain a variable number of granular nucleated corpuscles, like those of mucus or chyle, and generally, but not always, red blood-discs. The fatty matter almost invariably occurs in the form of excessively minute granules (resembling the molecular base of the chyle), which are not resolvable into visible globules under the highest powers of the microscope." With these characters before us, we can easily see wherein the two cases hereunder mentioned differ from those of chyluria. In the first case, there was, on one or two occasions at least, observed a gelatinous-looking coagulum occupying the centre of the glass of urine and suspended all the way through it. This spontaneous coagulation, so to speak, was not constant; nor was there any precipitate with heat and nitric acid. On the addition of nitric acid to some of the cold urine, no opalescent line was appreciable, owing to the intensity of the milky colour of the urine; and the same remark applies to heat. Heat only intensified the colour of the urine without producing any precipitate. Occasionally, after standing for a few days, a creamy layer was found to occupy the surface of the fluid. Microscopical examination revealed the presence of myriads of fat-globules of various sizes; the appearances observed being not unlike that got in a similar examination of milk. Agitation with ether, while it dissolved the fat-globules, did not remove the milky colour of the urine altogether; and the average of the specific gravity of the urine collected at different periods was higher than that of chylous urine. There was a resemblance to chyluria, however, in the course of the disorder. The presence of fat in the urine was not persistent: its presence was interrupted for days, only to reappear again; its existence was often unknown until the urine was examined; occasionally, however, it was preceded or accompanied by a general feeling of *malaise*, headache, or pain in the epigastrium. In both of the cases that fell under my observation, there were epileptic fits, and the urine which was examined after these seizures was sometimes milky, and rich in fat-globules.

CASE I.—On February 3rd, 1877, while in practice in Preston, I was called to see Caroline F., aged 27, who was said to be in a fit. When I arrived at the house, I found that the fit had passed off. She had recovered consciousness, and now complained of extreme pain in the head and of being very tired. The patient was a well-developed muscular woman, of sallow appearance. She was pitted with the marks of small-pox, and had a goîtrous swelling of the neck. The heart and lungs, on careful examination, were found to be healthy. Pulse 72. The skin was moist; the bowels costive. I asked her friends to let me have some of her urine for examination; meanwhile giving her a smart dose of compound jalap powder and a mixture of bromide of potassium and chloral.

February 4th. She felt rather better. The bowels had acted well; the tongue was clean and moist. She had passed urine freely, and without pain; but, as it was mixed with that of her friend, I did not see it. The fits had not been so severe nor so frequent. She was still languid, and complained of pain in the epigastrium and loins. She told me that she had small-pox eight years ago, when in Bolton, and that she had not enjoyed good health for the last two years. Since this last period, she had been subject to fits, of the approach of which she was sometimes aware. The pain in the head, of which she said she was seldom free, was increased. There was a peculiar feeling in her legs, which moved upwards. She uttered a scream, and fell unconscious on the ground.

February 5th. She was somewhat improved since yesterday. The fits still continued. The specimen of urine received this morning, and which was passed without difficulty, resembled milk in appearance. It was the urine first voided this morning; it was acid, of specific gravity 1014. Heat only tended to increase the opacity without producing coagulation. There was no reaction appreciable with nitric acid; for, from the opacity of the urine, no distinct line of opalescence could be made out. On allowing the urine to stand for some hours, there appeared suspended in it a gelatinous-looking coagulum of a somewhat flocculent nature at its sides. This substance, when examined microscopically, was found to consist of an enormous number of fat-globules of various sizes; the appearance of the field being not unlike that got in an examination of human milk. No tube-casts were seen. There were a few epithelial cells and mucus-corpuscles.

February 6th. She continued to improve. The urine was to-day of a light yellow colour, clear, of acid reaction, and had a specific gravity of 1018. It bore no resemblance to the milky urine of yesterday. Under the microscope were seen a few fat-globules, octohedral oxalates, mucus-corpuscles, and epithelial cells. She was ordered to take liquor ferri perchloridi dilutus.

February 7th. She had only had two fits since yesterday. She told me that she had, when living in Bolton about a year ago, an attack somewhat similar to the present, and at that time she passed milky urine. The blood examined to-day gave negative results. Urine acid, clear, specific gravity 1031.5, with a copious deposit, presenting to the naked eye the appearance of oxalates with a dark hood resting on its surface. No albumen nor sugar was present. Examined microscopically, it was found to contain caudate cells, octohedral oxalates, squamous epithelium, and fat-globules in greater abundance than in the specimen of yesterday. (Dr. Marshall kindly confirmed the presence of fat in this urine.)

February 14th. She had continued to improve until to-day, when she came to my house complaining of great pain in her head. She had been taking the iron with benefit. She was ordered croton-chloral-hydrate.

February 15th. She was, if anything, rather better to-day. She did not send any of her urine for examination, as she began to menstruate yesterday.

February 18th. The urine sent to me to-day was of a light straw colour, of specific gravity 1019; it contained a soft downy deposit not unlike mucus; no albumen nor sugar. Under the microscope, fat-globules were seen in abundance, a few crystals of uric acid; large squamous epithelial cells, many of which were studded with fatty points, while one or two contained fat-globules.

February 22nd. She had had headache to-day, but felt able for her work in the mill. Occasionally she felt sick when at her work. In reply to questions, she stated that she had never had scarlet fever nor dropsy, and had never taken cod-liver oil. She suffered at times from leucorrhœa. I again examined her carefully, and found all the organs normal.

February 23rd. The morning urine was of a very light straw colour, specific gravity 1018, with a faint mucus deposit, which was loosely sus-

pended in the fluid. It contained mucous cells and a very few fat-globules. A number of large flat epithelial cells were seen, and these were studded with fatty points.

February 25th. She stated that she passed some milky urine this morning; but, through carelessness, I was not furnished with any of it for examination.

February 26th. She had a fit in the mill this morning, and had to be taken home. She again complained of great pain in the head, chiefly the frontal region. She had been sick once or twice. The urine passed this afternoon, three or four hours after the fit, was of very pale colour, of specific gravity 1011; no albumen. Under the microscope, it was seen to contain large rounded epithelial cells studded with fatty points. A few small fat-globules were also seen floating about. Croton-chloral-hydrate was ordered.

March 1st. I had seen nothing of this woman for the last two days. She was very well to-day. She stated that the medicine relieved her headache. Ophthalmoscopic examination gave negative results. The urine passed this morning looked thick and turbid; it was acid, and had a specific gravity of 1028. Addition of ether did not altogether remove this turbidity. The urine to-day was found to contain albumen, 4 per cent. Under the microscope, myriads of fat-globules of various sizes were seen. A few squamous epithelial cells were seen, and these were studded with fatty points. Two or three octohedral oxalates were present.

March 3rd. She felt pretty well to-day. She had had slight vertigo and headache, and slight inclination to vomit. The urine was of specific gravity 1016, clear; no albumen.

March 8th. She was not so well to-day. She had had two fits, and complained very much of headache and dimness of vision. The bowels were constipated. The urine was of specific gravity 1016; no albumen. It contained a few mucous cells, octohedral oxalates, and fat-globules. The compound jalap powder and liquor ferri perchloridi were repeated.

March 11th. This morning I examined the specimen of urine which was sent to me on the 1st of March. There was a thick milky-looking scum on its surface, which, under the microscope, was seen to be composed of myriads of oil-globules, and there were also seen the ova of the fungus *mucor mucedo*. The ova were elongated, and had not the glistening look of the oil-globules.

March 13th. The urine was of specific gravity 1030, acid, of a light yellow colour, with a fawn-coloured deposit of urates. A few oil-globules were present.

March 25th. She had, since March 13th, been pretty well until to-day, when she had another fit in the mill. She looked very pale. The bowels were constipated. The urine was of specific gravity 1032; it was not examined microscopically.

July 16th. I had seen nothing of this patient for the last two months.

CASE II.—September 21st, 1877. Mrs. D., aged 37, draper, had been subject to epilepsy for the last ten or eleven years. At the age of seventeen, she had one or two attacks of *petit mal*. Her husband lived apart from her, and his intemperate habits had caused her much anxiety. Her youngest child was nearly a year old. When she was carrying him, her feet swelled very much; at, present, only the right foot was swollen. Headache was the most prominent symptom. She was sallow, pinched, and worried-looking—the latter condition was probably aggravated by the cares of business. The epileptic fits usually came on at her menstrual periods, at which time the discharge was pretty profuse as a rule. She improved for a time under the administration of any remedy; iron, quinine, bromide of potassium, and chloral had all done good. I had frequently examined her urine, and found it at times to contain albumen.

September 22nd. The urine passed yesterday morning was sent to me to-day. It was of a pale straw colour, with a specific gravity of 1025. On heating the urine, it became turbid; but this disappeared on the addition of a drop or two of acetic acid. Under the microscope, it was found to contain a large number of fat-globules of various sizes, crystals of phosphates, a few mucus-corpuscles; no albumen. Yesterday, she complained of not feeling well; she had pain in the epigastric region, and altogether felt ill and indisposed from lassitude.

September 23rd. I was only furnished with two or three teaspoonfuls of urine for examination. It contained a few small fat-globules and phosphates.

September 25th. The urine was very pale, of specific gravity 1013, acid; very little sediment. A few crystals of uric acid and one or two epithelial cells were all that could be detected under the microscope.

March 8th, 1878. This patient was still in very indifferent health. She was subject at times to epileptic fits, but was able to conduct her business.

Frequently I have detected the presence of albumen in the urine after epileptic seizures; and it was this fact that led me to an examination of the urine in these two cases. The patient Mrs. D. is, in my opinion, the subject of chronic Bright's disease (contracting form); and I base my opinion on such facts as these: a steady but progressive emaciation, almost persistent headache, her sallow tint, the occasional presence of albumen in the urine, and the tendency to menorrhagia; and other circumstances, which might be considered factors of production, are not wanting, such as extreme anxiety and worry from domestic troubles and the cares of business. If this diagnosis be correct, then it is just possible that the kidneys have reached the stage of what Dr. George Johnson calls the "granular fat kidney", in which there is a fatty degeneration of the cells in the cortex, a tendency for these fatty molecules to form globules, which, by a solution of the cell-wall, escape into the tubules and get carried away by the urine. This is the only explanation I can offer for the presence of fat in her case; and for its presence in the urine of the other I can offer no explanation. In the case of C. F., albumen was detected in only one out of the eleven samples of urine furnished for examination; and although tube-casts were earnestly sought for, they were never detected. Of the questionable relationship of the discharge of milky or fatty urine to the epileptic seizures, I can say nothing. The presence of fat in the urine may be only a coincidence. The connection of the discharge of a milky urine with the fits was a fact which had been observed by the patient herself, and which I had the opportunity of corroborating on one or two occasions.

Since writing the above, I have been informed of three similar cases, which occurred in the practice of Dr. Hope of this town. The urine was milky in all the cases, and, under the microscope, was extremely rich in fat-globules. Fat was found in the urine of a woman after parturition, and in one of the other cases it occurred at a time when the patient had been exposed to prolonged muscular exertion with a good deal of anxiety, and its voidance was followed by an extreme degree of prostration and faintness. All of his cases, too, improved under the administration of iron.

A CASE OF DIPLEGIA.*

By JAMES CUMING, M.D.,
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A NUMBER of cases of double facial paralysis, or diplegia, as the affection has been termed by Wachsmuth, are on record; but the malady is rare; and I have thought that a case of this affection which I have had an opportunity of observing with some care might interest the section.

The patient, a girl aged 17, had been employed in a factory, where she worked in a very warm room. As she found the heat disagreeable and weakening, she applied to the manager, and obtained a change to a cold room. A little time after this, she became affected with facial paralysis of the right side, with its accompanying distortion of the features. At the end of three or four days, the unpleasant twisting of the face ceased, in consequence of the paralytic condition involving also the muscles of the left side. A fortnight afterwards, she was admitted to hospital, complaining that she could not shut her eyes, and that she could not open her mouth when she laughed.

The face presented the peculiarities which have attracted the attention of all observers of this disease; a smooth expressionless aspect, which has been likened to a mask; a watery tearful appearance of the eyes, which the patient was unable to close; a partially collapsed condition of the alæ nasi, and the lips parted, the patient being unable either to close them or to open them widely. When she laughed, which she did readily enough, a strange disagreeable chuckling sound was produced, which was not in the slightest degree suggestive of merriment, and which showed not only how much of the pleasurable effect of laughter depends on facial expression, but also how much the character of laughter is modified by the lips. Sensibility was quite perfect; there was no embarrassment in mastication, except that caused by the alimentary materials getting between the cheek and the jaw, and requiring to be pushed between the jaws. The saliva escaped from the mouth when the head was bent forward. Deglutition was quite unimpaired, the appetite was good, and the general health excellent. There were no symptoms pointing to any cerebral lesions.

When the head was bent forward, on investigating the less obvious phenomena, it was found that the velum palati hung down in a more perpendicular and less arched manner than usual, and that the uvula was flaccid and moveless. The tongue could be protruded without difficulty, but not in a horizontal direction. When asked to put it far out,

* Read in the Section of Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

she always turned it downwards towards the chin; and, when an effort was made to turn the tip upwards, she could not touch the skin of the upper lip at all. The tip, indeed, could only be very slightly directed upwards, so as to reach the mucous membrane of the upper lip.

The sense of hearing seemed altogether unchanged; she experienced no undue sensitiveness to noise, and no abnormal acuteness of hearing. The voice was slightly nasal in tone; the labial consonants *p* and *b* could not be pronounced; *o* and *a* seemed to be articulated fairly enough, but, of course, without movement of the lips.

She stated that for the first day or two, everything had had a saltish taste, but that this had passed off, and that there was now nothing particular in her sense of taste. She was tested, when blindfolded, with solutions of salt, sugar, quinine, tartaric acid, aloes, and other substances of a pronounced taste; and it was found that there was no diminution or perversion of taste; on the contrary, the perception of gustatory impressions seemed very prompt and decided, rather above the average in acuteness, and certainly was keener than in several of the students who assisted in the investigation.

On examination of the electro-muscular excitability, it was found that no muscular contractions could be produced by the induced current applied directly over the muscles, and used up to a strength which was smartly painful, and a good deal in excess of what caused vigorous contractions in the forearms and on the faces of some of the assistants. Nor could contractions be produced by exciting the nerve near its emergence at the stylo-mastoid foramen. With the voltaic current, however, it was quite different; the poles of a small battery, composed of four small pairs of Stöhrer's elements, excited smart contractions when the current was slowly interrupted. Excitation of the nerve by the voltaic current had no effect whatever.

The treatment consisted in galvanisation of the muscles, and subsequently in the employment of the induced current. Blancard's pills were also given. Voluntary power gradually returned; first to the side originally affected; afterwards, and more imperfectly, to that which had been last paralysed. Excitability under the induced current did not return till some time after a certain degree of voluntary power had been regained.

REMARKS.—This case seems to raise some questions of considerable importance in relation to the pathology of the facial nerve. The involvement of the palatine muscles is generally held to indicate distinctly that the nerve is affected as high up as its geniculation. Physiologists are pretty well agreed that the connection of the facial with the innervation of the palate is made by some motor fibres which pass from the geniculate ganglion through the great superficial petrosal to the spheno-palatine ganglion, although it seems somewhat doubtful what are the exact muscles which thus receive their motor supply. When the morbid condition of the nerve reaches a point so high as this, it is usually regarded as pretty certain that the sense of taste will be in some degree impaired or rendered less prompt, in consequence of the fibres of the chorda tympani in the facial trunk suffering as regards their power of conduction.

The relations of the chorda tympani to the sense of taste have been somewhat differently explained by physiologists. Claude Bernard supposed that the paralysis of the motor fibres in this nerve led to a deficient erection of the papillæ of the tongue, and so prevented proper contact between them and the sapid substances which might be applied to them. Schiff is of opinion, however, that gustatory fibres pass along the chorda tympani in a centripetal direction, reach the trunk of the facial, and thence pass probably by the great superficial petrosal nerve to the spheno-palatine ganglion, and ultimately to the superior maxillary division of the fifth nerve. So far as this case goes, it indicates that the sense of taste is not dependent in any appreciable degree on the integrity of the chorda tympani.

Next as to the sense of hearing: Roux was the first to direct attention to this, having noticed it in himself when suffering from facial paralysis; and it was afterwards made the subject of an elaborate paper by Landouzy. It has been said that an unusual susceptibility to noises, or an abnormal power of hearing musical notes, is present in a considerable number of cases of facial paralysis. This has been variously explained: by Brown-Séquard, as the result of hyperæsthesia of the auditory nerve from paralysis of its blood-vessels, causing hyperæmia; by Longet, by paralysis of the tensor tympani, which he supposes to be supplied by a branch from the facial, allowing the membrane to enter into undue and excessive vibrations; and, more recently, by Lucae and Hitzig, who refer the phenomenon to paralysis of the stapedius muscle, and resulting overaction of the tensor tympani. Now, not only was this symptom absent as far as regards undue sensibility to loud noises in this case, but it was also absent in every case of facial paralysis that I have seen for many years; and I have carefully examined a number of cases with special reference to this question. The singular kind of susceptibility to electrical excitation by the voltaic current when the induced has no effect was first pointed out by Halli and Baierlacher, and has been called by Erb, rather unhappily, the "reaction of degeneration". It coincides in point of time with, and is probably caused by, incipient changes in the muscle. Neumann has suggested that muscles which have undergone a certain degree of pathological change lose the power of reacting to currents of very short duration, while they react more intensely to currents of longer duration. Even a strong voltaic current will not, he says, cause a reaction if its duration be only momentary. It was very remarkable how, as improvement took place, this exaggerated sensibility to the voltaic current gradually diminished; and how, even after a certain degree of power of voluntary motion had been attained, no contractions could be induced by a pretty strong electro-magnetic machine.

Finally, a point of the highest practical importance, as indicating the line which should be followed in dealing with affections of this nature, is the determination of the nature of the morbid process in such cases. Is it merely functional disturbance, or congestion, or of the nature of inflammation? The way in which the effect of a peripheral morbid impression ascends along the continuity of the nerve would seem to point to something of an inflammatory character; but we have as yet obtained no certain data from *post mortem* examination to enable us to do more than guess at this most important question.

TREATMENT OF PUERPERAL ECLAMPSIA BY CHLORAL.*

BY HUGH W. THOMAS, M.R.C.S.Eng., L.S.A., Birmingham.

THE therapeutic value of chloral-hydrate as a hypnotic has long been recognised by numerous authorities both at home and abroad. Its value as an anæsthetic, more especially in puerperal eclampsia, is none the less evident. My experience of the drug, compared with other remedies in the treatment of this disease, has hitherto been very favourable, as will be shown in the brief notes below.

CASE I.—The patient was an anæmic multipara, aged 28, in her eighth month of pregnancy. She seemed to have enjoyed excellent health up to seven days preceding her confinement. Then the extremities became œdematous, and her urine diminished in quantity. When attacked, she was suddenly seized with a convulsion lasting about three minutes, followed by others of increased intensity at short intervals. Her medical attendant gave half-drachm doses of bromide of potassium every two hours without the least effect. When I first saw the patient (about seven hours from the commencement of attack), she was writhing under an intense paroxysm accompanied with all the other phenomena peculiar to the disorder. In fact, she was hardly free from a convulsion. Owing to the injured and swollen state of the tongue, it was impossible to give anything by the mouth. Thereupon, a dose of forty grains of chloral-hydrate was administered *per rectum* in thin gruel made with milk and the yelk of an egg. In less than five minutes, she became perfectly quiet. This was repeated at intervals of half-an-hour, and thus she was kept under perfect control until her delivery two hours later.

On examination, the os and cervix uteri were found to be two-thirds dilated and dilatable, the membranes were entire, and a vertex presenting. After gradual dilatation, the membranes were ruptured, Simpson's long forceps was applied, and the child (still-born) delivered without difficulty. The placenta gave no trouble, nor was there any *post partum* hæmorrhage. There being no return of the symptoms, the injections were now discontinued, when she fell into a sound sleep. About forty-eight hours after delivery, consciousness returned, the faculties being unimpaired, although the interim was a perfect blank. The uterine contractions were not in the least interfered with by the use of the remedy. Some catheterised urine was examined, and found to contain one-third of albumen. On the fourteenth day, the patient was out of bed, and in a month went into the country as well as usual.

CASE II.—The next case was one in which eclampsia occurred, on the third day following parturition, in a plethoric multiparous patient. Here the attacks came on at intervals of one and two hours. The dose of chloral ordered was half a drachm every three hours. Suffice it to say, there was no return of the symptoms after the first dose of medicine. She was up and about on the twelfth day.

In conclusion, I would offer a few remarks on the claims which chloral has upon us for its advantages over other remedies in the treatment of the disease under consideration. According to Professor Liebreich, it is a quick anæsthetic, non-excitant, leaves no bad after-

* Abstract from a paper read before the Midland Medical Society.

effects, and interferes but slightly with the cardiac nervous power. Its advantage over chloroform must, therefore, be at once apparent; for, not only is it a quick anæsthetic, and is followed by no bad effects, but it is easily administered. By repeated doses at regular intervals, my patients were kept perfectly under control. Again, its superiority over chloroform is evident when the practitioner happens to be single-handed, instances of which are of every-day occurrence in country practices, where surgeons are few and far between. The medical attendant would find it no easy task both to give chloroform and deliver his patient under such circumstances. Chloroform is also often followed by sickness, and, with the tongue in the condition which it usually is in eclampsia, would prevent anything that might come up into the throat from being got rid of, thereby favouring asphyxia. Not only can chloral be administered singly *per rectum*, but also in combination with nourishments, such as milk, eggs, etc.; thus saving the disturbance of the patient, as well as keeping up her vitality.

In the first case, bromide of potassium was administered, but with no good result, its action, in my opinion, being too slow in this formidable disease. Opium and its alkaloids have been advocated; but, where there is renal complication, they are injurious, and of necessity contra-indicated. My first patient being anæmic, bloodletting would not have been admissible; whilst in the second case it was not required; though chloral was given in both with the happiest results.

RASHES ON THE TONGUE.

By PROSSER JAMES, M.D.,
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THE remarks made at the Pathological Society on a case of "Peculiar Circular Wandering Rash on the Tongue", as reported in the JOURNAL, deserve to be supplemented, inasmuch as no one of the speakers claims more than a casual acquaintance with the subject. Perhaps, in the individual case, its erratic course and rapidity of disappearance were more important diagnostic points than the uncertain result of the search for a fungus. I should not, however, think the case of much importance (it does not seem to me so rare or peculiar) but for the fact that few seem to have been familiar with such appearances. I do not regard them as rare on any portion of the mucous membrane of the mouth. Further, not only such cases, but a number of others, will only be understood by comparing them with similar pathological processes on the skin. In fact, as I have elsewhere pointed out, the connection between the diseases of the skin and mucous membranes is fully illustrated in the mouth and throat; and, although the tongue is perhaps less apt to take on certain forms of disease than the rest of the buccal surface, it is prone to be affected by other circumstances. Slight forms of catarrhal inflammation are common enough, but do not often necessitate medical advice, and hence they are scarcely studied. But ulceration of the tongue, lips, cheeks, pharynx, and nasal passages is more troublesome, and proceeds from various causes. The irritation of teething is credited by almost all practitioners with numerous infantile mouth-troubles. But the forms of stomatitis arising from this, and the direct influence of mechanical or chemical injury, are less likely to be misunderstood than those associated with similar processes on the skin. Thus, in the exanthemata, we may watch exactly similar processes going on simultaneously on the skin and mucous membrane; or, as in other cutaneous affections, we may see them spread from the outer surface to the mouth. The pustules of small-pox are sufficiently significant. The rash of measles spreads from one structure to the other. On the mucous membrane, the course of these eruptions is more rapid than on the skin. Erysipelas is another example. Herpes and pemphigus strikingly illustrate the same facts. In scarlatina, the condition of the tongue at an early stage is proverbial, and much relied on in diagnosis; but the disease of the throat is too deep to compare with more superficial affections. Besides these examples, scurvy, purpura, and other diseases may, as I have long taught,* be advantageously studied on both the cutaneous and mucous surfaces.

While writing on affections of the tongue, I may be allowed to add that I have met with a couple of cases of the black tongue described in the JOURNAL a few weeks since. Anyone on the look out for this affection should be particularly on his guard against the possibility of being deceived by stains caused by food, medicines, and other articles. Several cases have come before me in which stains from unexpected sources were only proved to be of this nature by the most patient and exhaustive investigation.

* *Sore-Throat: its Nature, Varieties, and Treatment; including the connection between Affections of the Throat and other Diseases.*

PRIMARY ETHER ANÆSTHESIA.

By CHARLES COPPINGER, L.R.C.S.I.,
Surgeon to the Mater Misericordiæ Hospital, Dublin.

A REPORT was published in the American journals some months ago, by Dr. J. F. Weir, on the first insensibility produced by the inhalation of ether, in which he stated that primary anæsthesia, as it is commonly called in New York, had now become fully recognised in the practice of the hospitals in that city. I am not aware that this system of employing ether has received any trial in this country, and report the following case in order to call the attention of the readers of the BRITISH MEDICAL JOURNAL to what would seem to be an important addition to our methods of producing anæsthesia during operations of short duration, such as tooth-extraction, cauterisation of lupus, etc.

R. M., aged 44, an army pensioner suffering from urethral stricture and urinary fistulæ, was admitted to the hospital March 5th, 1879. Treatment of the stricture was commenced by the usual combination of the gradual and rapid system of dilatation, and continued until a No. 7 catheter could be passed into the bladder, and until one of the perineal fistulæ had closed. Some difficulty was now experienced in further dilating the stricture; which, as it was situated in front of the triangular ligament, did not include a large portion of the canal, and had been originally produced in a healthy man by an injury from the pommel ot a saddle, we thought it a suitable case for a more active method of treatment.

The patient, who was a pallid nervous man, objected to anything in the shape of an operation without an anæsthetic. It was found that he suffered from a weak heart and a basic cardiac murmur, apparently due to his anæmia; and it was therefore decided to give a trial to the above-mentioned system of rendering the necessary procedure painless. He was accordingly placed in the recumbent position on the operating table, and Sir Henry Thompson's instrument for forcible dilatation passed into the urethra, until that portion of the apparatus, which includes the lever by which the dilating blades are separated, was situated opposite the stricture. Ether was now administered in the usual way, the patient having been first directed to hold his right hand upright in the air, while the elbow rested on the operation-table. After one minute had elapsed, the arm dropped; the ether-inhaler was at once removed, and the dilator quickly screwed out, until the strictured portion of the canal was larger than a No. 12 bougie. The instrument was then unscrewed and withdrawn, and a full-sized flexible catheter passed into the bladder. As might be expected, no after-sickness or other bad effect of the anæsthesia was complained of, but the patient assured us that he had been asleep, and had not suffered pain, adding that "he was surprised at having gone off so easily, as it took three-quarters of an hour on a former occasion to render him insensible". He was soon taught to use a catheter for himself, and in ten days left the hospital, the remaining fistula having closed.

About a fortnight after this patient's departure to the country, I was surprised to hear that he had died quite suddenly; and, from the circumstances of his death and the existence of the cardiac murmur noticed by us, we concluded that he had in all probability died of heart-disease. The case was one, therefore, as the sequel proved, in which the full administration of an anæsthetic would have been attended with special danger, and in which the use of ether or chloroform, after the ordinary method, might have added one to the sad list of fatal accidents occurring during the performance of comparatively trivial operations.

POISONING BY LINIMENTUM ACONITI: RECOVERY.

By CHARLES H. HILL, M.R.C.S.Eng., Barnsbury.

AT 11 o'clock P.M. on November 24th, I was hastily summoned to see a gentleman to whom a teaspoonful of linimentum aconiti (*B. P.*), diluted with nearly two ounces of water, had been administered by misadventure, in mistake for ordinary paregoric. The patient had some time previously been applying the liniment for torticollis, and had incautiously left the phial near a similar bottle of paregoric.

Upon my arrival, he was sitting up in bed calmly and in full possession of all his faculties, and told me the dose had been taken only about five minutes previously. He suffered no pain, and only experienced a tingling and burning in the mouth and fauces from the passage of the fluid. There was no gastric discomfort. His respiration was tranquil, but the lips and countenance appeared dusky. Pulse 96 and of good volume. There was no chilling of the surface. I immediately administered thirty grains of sulphate of zinc in half a pint of warm

water; and he quietly drank another pint of tepid water afterwards. In less than five minutes, vomiting ensued, which, being encouraged by tickling the fauces, thoroughly relieved the stomach of its contents, amid which a strong odour of aconite liniment was detected. Another emetic of zinc was taken, of the same strength as the first, followed also by a large draught of warm water. The whole was quickly and powerfully returned by the stomach, but unaccompanied with the faintest smell of the liniment. As the vomiting seemed to depress him somewhat, further drinking was discontinued, with the exception of a little brandy and water, which was not retained long. He now looked far less dusky, and the lips were regaining their natural colour. The pulse was still soft, and had risen to above 100; but this, together with a sensation of chilliness, was doubtless due to the vomiting.

In three-quarters of an hour after swallowing the poison, he first complained of its peculiar effects—experiencing a tingling in the temples, with a sense of enlargement of the whole frontal region, and with some slight disturbance of vision. The pupils were equal, but somewhat dilated. The numbness and tingling did not extend to the body or limbs, though the mouth and fauces were still dry and burning. There was also some heat at the epigastrium, with nausea, but both perhaps due to the zinc. He was cold, and the skin of the extremities felt decidedly chilly to the touch. The pulse had fallen to 81, and was soft and feeble. The bowels, moreover, were now freely moved. A glass of champagne was then taken, and kept down, whilst he was warmly covered up in bed; and at the end of another hour the effects of the poison had passed off, bodily warmth being restored, attended with a comfortable perspiration. He felt composed and inclined to sleep. At an hour later, he was dozing gently; all tingling had gone; vision was natural; pulse 75 and of good tone. He subsequently passed a quiet night, and was quite well next day.

REMARKS.—When it is considered that the amount of the poison taken was equivalent to about four hundred and eighty drops of the pharmacopœial tincture, some idea may be formed of the urgency of the case, which, in all probability, would have terminated fatally if timely vomiting had not been induced. Such being the case, the propriety of leaving poisonous liniments in the hands of our patients becomes very questionable; and the suggestion as to whether it would not be better to make their topical application ourselves, appears worthy of consideration, when the alternative may jeopardise life through carelessness or misadventure.

CLINICAL MEMORANDA.

SLOW PULSE.

VII.

I WAS called on the 13th of May last to Mr. ——, who said that he felt a shortness of breath and unable to go about much. Upon examining him, I found that the action of his heart was very irregular; his pulse weak and slow, 28 per minute. After prescribing for him, it became regular, with his pulse moderate in tone, still 28 per minute. He is seventy-one years of age, and I have seen him several times during the past six months, and have always examined his pulse, which has ranged from 28 to 30 per minute. He is well in every other respect. I have told him not to leave his home much, or stoop much, as in working in a garden; to smoke very little, and, as a stimulant, to take a little whiskey in moderation, which he does.

W. A. WANNAN, L.R.C.P.&S.E., Arbroath, N.B.

VIII.

IN many thousands of cases, both in hospital and in private practice, I have twice seen cases of slow pulse. The first case was that of a clergyman eighty-five years of age, whose pulse, in the six or eight years during which I knew him, never to my knowledge exceeded 32. He was a great reader, and had in his library a radiating fender. As he suffered from concentric hypertrophy, I cautioned his butler against leaving him long alone, lest he might fall into the fire. One Sunday, I had occasion to see a relative of his, and at the same time had an interview with him. At three the following morning, I was summoned, and found him dead in his bed, around which were standing eight servants or "friends" (as he called them), all of whom had lived with him fifty years, with the exception of the "novice", who had been there about twenty years.

In the autumn of 1872, I was called to see a gentleman aged 79, who, to use his own expression, "had never had ache or pain in his life". I found him with a pulse at 110; skin 102; tongue dry, but clean; slight friction-sound. Next day, having passed a bad night, his pulse had risen to 124; skin still 102; no augmentation of friction-sound. Three days after this, I found the pulse at 114, firm and regular. As syncope threatened upon the slightest attempt to assume the perpendicular position, he was necessarily kept recumbent, which, by the help of one of Alderman's screw-beds, we were enabled to carry out for every purpose. For months, the pulse did not exceed 17. The treatment consisted in moderate doses of iodide of ammonium and iodide of iron, with the administration every hour or two, by night and by day, of sustenance of some kind. At length, the pulse rose to 19. About this time, I had the pleasure to hold a consultation with Dr. Russell Reynolds, who found the pulse 19. The medicinal agents employed were adopted under an impression that during the early days some deposit had taken place on the membranous covering of the aorta. At length, the pulse rose gradually to 25, then 30, and at length to 42, at which time I allowed him to take gentle exercise daily, accompanied by the male attendant who had faithfully and assiduously seconded our efforts throughout. This man always had a stimulant at hand, and was enjoined never to go out of sight of a cab-stand, lest sudden exhaustion should supervene. He is still alive. In this case, as in the former, all his friends declared that they had never known his temper to be ruffled. R. GOSSET BROWN, M.R.C.P.

IX.

ON the 3rd instant, I performed ovariotomy on a woman aged 65, removing a tumour forty pounds in weight. Previously to the operation, her pulse was 46. She took the chloroform very well, and at the end of the operation the pulse was only 36. At this rate it continued for three or four days; it is now 40. The temperature has not exceeded 99.8°, and is now quite normal. The heart's sounds are quite healthy, and the beat very regular. The patient is a little woman, rather spare, and carries her three score and five years very well.

GEORGE GRANVILLE BANTOCK, M.D.

ALCOHOLIC INFLAMMATION OF THE MEDULLA OBLONGATA.

ALCOHOLIC inflammation of the medulla oblongata is usually included in the term "myelitis"; but there is no particular description of it in any hand-book of medicine which I have seen. Inflammation of the medulla (resulting sometimes in extension of the inflammation to the cerebellum, causing increased sexual desire, or to the cerebrum, producing insanity or death) is a disease caused by taking an excess of alcohol in small doses over a lengthened period of time. The principal sufferers are those of highly nervous temperament; it is seldom that the bilious or phlegmatic suffer from the disease; as, if they go to excess with alcohol, the result is usually apoplexy or inflammation of the liver.

The disease is usually characterised by dull constant pain over the region of the medulla oblongata. The patient has difficulty in getting sufficient air into the lungs to satisfy the demand. There is a feeling of *sinking* at the stomach; and, if a great quantity of alcohol have been imbibed over a lengthened period, there is stammering and occasional incoherency of speech.

The treatment principally used has been mustard poultices to the back of the neck, and supervision and stoppage of the tippling; but, as prostration is sure to follow, the physician has to watch and not let it go to a great extent, but administer a dose of brandy and tincture of gentian. By this means, the patient is allowed sufficient suffering to be a warning. His state is quickly improved, and that horrible torture is not inflicted on a nervous temperament which results from stopping the alcohol all at once. ALEX. NAIRNE, L.R.C.P.E., London.

A COIN IN THE ALIMENTARY CANAL FOR EIGHT YEARS: RECOVERY.

HAVING seen several letters in the JOURNAL upon foreign bodies in the alimentary canal, I have resolved to send a short account of a case that came under my notice about twelve months ago.

The patient swallowed a halfpenny when he was about seven years of age. He enjoyed good health for so long afterwards that his parents never attributed to that circumstance any slight illness that he may have had subsequently. He had no illness of any importance from the time of swallowing the halfpenny until he was about fifteen years of age, when he complained of pain in the epigastric region and loss of appetite. When he was being treated for dyspepsia, his father came to the surgery with a halfpenny which he had vomited, and said that he was vomiting blood. There was considerable hæmorrhage when the half-

penny was expelled, which continued for some time, but was ultimately overcome by the administration of ice and tannic acid. The coin, which is now in my possession, has a very peculiar appearance. There is a dark mark on both surfaces, about a quarter of an inch broad, which completely encircles it, as if it had been suspended by a band, and thereby been partly defended from the action of the gastric juice. At the edges, where it seems to have been unprotected, it is as thin as note-paper. The stamp on both sides can be seen, though rather indistinctly, and it bears the date 1862. I saw the patient several months afterwards, when he was enjoying good health. He was fifteen years of age when the coin was expelled; therefore, it was retained for about eight years. During that period, he was known to have vomited on more than one occasion. How was the coin kept in position? Why did it not pass through the pylorus, or be expelled when the patient vomited on previous occasions? And what prevented ulceration from being produced at an earlier period?

W. SOUTER, Hipperholme.

THERAPEUTIC MEMORANDA.

HOW TO CURE FITS OF SNEEZING.

DURING the recent rapid changes of temperature, I caught a severe cold in my head, accompanied by almost incessant sneezing. My unfortunate nose gave me no rest. The slightest impact of cold air, or passing from the outside air into a warm room, equally brought on a fit of sneezing. In vain I snuffed camphor and pulsatilla; the light catarrh still triumphed over me. At length, I resolved to see what the maintenance of an uniform temperature would do towards diminishing the irritability of my Schneiderian membrane, and accordingly I plugged my nostrils with cotton-wool. The effect was instantaneous; I sneezed no more. Again and again, I tested the efficacy of this simple remedy, always with the same result: however near I was to a sneeze, the introduction of the pledgets stopped it *sur le champ*. Nor was there any inconvenience from their presence, making them sufficiently firm not to tickle, and yet leaving them sufficiently loose to easily breathe through. This is really worth knowing; for incessant sneezing is among the greatest of smaller ills; and it seems only a rational conclusion to hope that, in this simple plan, we may have the most efficient remedy against one of the most distressing symptoms of hay-fever.

S. MESSENGER BRADLEY,
Surgeon to the Royal Infirmary, Manchester.

IRON AND DIGITALIS.

ALTHOUGH there are various forms of administration of iron and digitalis, combined in fluid form, these preparations are occasionally prescribed indiscriminately. Among these, that of the tinctures of muriate of iron and of digitalis with dilute phosphoric acid is the most rarely made use of. In this combination, the phosphoric acid acts chemically by preventing the formation of the tannate of iron, which occurs when the tinctures are administered alone; and therapeutically by introducing an acid in a pleasant form into the system, and not phosphorus, as is sometimes supposed: since the amount of phosphorus is so minute in proportion as to have little or no therapeutic effect. As an acid, it aids the astringent action of muriate of iron, and is of value in cases of gastric complication, where acids are indicated. The more common form of prescribing iron and digitalis is that of the ammonio-citrate of iron and tincture of digitalis; in which case an almost similar effect is produced on the heart- and blood-system, without the astringency of the muriatic and phosphoric acids, rendering it valuable in cases of gastric irritability. The absence of the phosphoric acid from the acid preparation causes the mixture to be unsightly and unpleasant. To remedy such defect is of great moment in the administration of medicine.

FREDERIC YOUNG LIVY, M.R.C.S.Eng.

SURGICAL MEMORANDA.

THE STAFFORDSHIRE KNOT.

I THINK Dr. Roper is quite mistaken when he says the Staffordshire knot and the clove-hitch are the same. With the latter I have been quite familiar for many years, as it was used in Edinburgh for tying men up for perineal operations. I am told that in London the same use is made of it; and anyone familiar with this form of knot must see that it is altogether different from the Staffordshire knot.

LAWSON TAIT.

REPORTS
OF
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN AND IRELAND.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF TUBERCULAR PERICARDITIS.

(Under the care of Dr. SANSOM.)

FOR the notes of the following case we are indebted to Dr. CASH READ, House-Physician.

Clara H., aged 6, was admitted on June 27th, 1879, with only slight symptoms of cough and languor. The relatives were not aware that the child was seriously ill. She had had no acute disease, save scarlatina three years ago; but had been slightly ailing for three months, and supposed to be suffering from "worms". There was no history of rheumatism. Physical examination showed an increased area of præcordial dulness; distinct pericardial friction in the neighbourhood of the manubrium sterni; as well as an area of deficient breath-sound, with some deficiency of pulmonary resonance, over the apex of the left lung. The diagnosis was pericarditis with effusion, and bronchopneumonic. The child appeared by no means ill-nourished; the subcutaneous fat was in very fair amount. The treatment consisted of inunction of ointment of unguentum hydrargyri two parts, extract of belladonna one part, into the præcordium; and a mixture of iodide of potassium and bicarbonate of potass. The physical signs of pericarditis remained marked for twenty-one days; the friction was of triple rhythm. There was no evidence of endocarditis. The sphygmograph showed the pulse to be of feeble elevation, but regular and of normal type. The cardiograph registered vibrations throughout the cardiac cycle. On July 18th, scarcely any signs of pericarditis remained; and in a few days all had passed away. There were also no noticeable symptoms, except a peculiar torpor. On August 27th, she was not so well; had a small quick pulse, short hacking cough, and dyspnœa (respirations 56). In two days there were almost complete dulness of the right chest; obscured breath-sounds, mingled with fine crepitations; and imperfect expansion. Much of this dulness soon passed off. The pleuritic effusion was absorbed, leaving patches of bronchopneumonia. On September 15th, the breathing was laboured; there were evidences of more fluid in the chest. The abdomen was enlarged. The decubitus suggested peritonitis; but there was no evidence of ascites. The torpor continued. She died suddenly on September 17th, death being preceded by convulsions. The fundus of each eye had been previously examined, with negative results, except fulness of the iris. The temperature for the first eight days was subnormal. Afterwards, there was marked evening rise to nearly 100° Fahr., till July 22nd; then a fall to about normal. From September 4th to 17th, there was nocturnal rise to 100° to 101.5°.

NECROPSY.—The lungs were studded with small tubercles. There was a caseous nodule of the size of a small orange on the right apex. Several patches of bronchopneumonic consolidation were found. About a pint and a half of serous fluid was found in the cavity of the right pleura. The pericardium was greatly thickened; the parietal layer was profusely studded with miliary tubercles; the visceral layer was smooth; the cavity contained about half an ounce of yellow fluid. The heart's surface was covered with a layer of lymph; on section, the muscle was pale and degenerated. There was no endocarditis. The valves were all competent. The liver and spleen contained tubercles. There was no fluid in the peritoneal cavity. The kidneys were healthy. Between the convolutions on the upper surface of the brain, here and there were small patches of pale exudation. There was a granular (tubercular) deposit on each side of the longitudinal fissure. A nodule of the size of a filbert was found on the surface of the right corpus striatum, involving the superficial part of its substance, and extending upwards into the lateral ventricle. This nodule was easily enucleated, and had, on section, the usual caseous characters of a tubercular growth. The ventricle contained much fluid. Grey miliary tubercles were found extensively about the Sylvian fissure.

REMARKS BY DR. SANSOM.—A case of tubercular pericarditis is sufficiently rare to make it desirable to put it on record. When the child was first brought, it was as an out-patient, and the slightness of the subjective signs was remarkable. The two points then made out were, that (*a*) there was pericarditis; (*b*) there was apical bronchopneumonia. So far for the proximate diagnosis; that of the more remote lesion was more difficult. No rheumatic signs were evident, nor any rheumatic

history; but I have seen several cases of rheumatic pericarditis without other manifestations of rheumatism. The apical bronchopneumonia was an important sign; but it was quite probable that this was a mere coincidence. Had there been any wasting of tissue, I should have strongly considered the probability of tuberculosis; but here the child was fairly plump. The obvious signs of pericarditis passed away (at the *post mortem* examination, the heart and pericardium occupied no larger a space than normal; and, though there was lymph on the heart-surface, the cavity was lined with smooth membrane, and with the weak heart there was no production of friction-sound); and it was noticeable that there was no endocarditic spoiling of the valves. This was only a very feeble argument against the rheumatic origin of the disease. The chief one was the advancing bronchopneumonia and pleuritis, together with the peculiar torpor of the child. As regards the lesions of the nervous system, these were declared by no paresis nor sign of localisation. Had the child been able to walk about, this might have been otherwise. Even until the last, I could not say with certainty that this disease was *ab initio* tubercular. That it was so, I think the necropsy abundantly proved.

REPORTS OF SOCIETIES.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

TUESDAY, NOVEMBER 11TH, 1879.

ALEXANDER ROBERTSON, M.D., President, in the Chair.

Cases of Trephining.—Dr. MACEWEN showed two patients on whom trephining had been performed. In the first case, the operation had been rendered necessary on account of a simple fracture of the right parietal bone. Effusion took place into the orbit. A discoloured irregular patch appeared on the right side of the head. Left hemiplegia and twitchings ending in general convulsions, with elevation of temperature, showed themselves about the sixth day, and lasted till the operation. The bone was trephined over the discoloured patch and a disc removed, after which the dura mater was opened, and about two ounces of blood mixed with clots escaped. A few minutes after this was done, the brain-pulsations were felt through the wound. The operation was performed antiseptically, and the wound soon healed without a bad symptom. Six months after the operation, the boy remained well. The second case was one from whom a tumour was removed from the dura mater over the left orbit. The symptoms were: contraction of the left pupil; a small tumour bulging from under the supraorbital plate of the frontal bone; a severe and persistent attack of convulsions commencing in the right side of the face, right arm, and leg, and becoming general; increase of temperature; and serious implication of pulse and respiration. Trephining was performed at a spot where a small pea-like node was found in the left frontal bone. The bone was thick and soft, and a flattened gummatous tumour of the dura mater which extended down to the supraorbital plate was removed. No bad symptoms followed the operation, and the paralysis of arm and leg has now disappeared.

Depressed Fracture of Skull.—Dr. FERGUSSON (Peebles) showed a portion of cranial bone with a depressed fracture about an inch and a half long, the result of a blow from a brick. The fracture extended through both tables, and the fragments were depressed about half an inch. —Dr. GEORGE BUCHANAN also showed a portion of bone removed from a compound depressed fracture of the frontal bone. The patient had been knocked down by a piece of wood thrown off by a circular saw, and was admitted to the hospital in a semi-conscious condition. The finger could be passed directly into the frontal sinus, where the depressed portion of bone was felt. This was removed, and showed on its inner surface more than an inch of the first part of the longitudinal sinus. Cerebral matter in shreds appeared in the wound. No complication occurred throughout the case, and in two months the patient was dismissed quite well.

Chemical Composition of the Dark Bands of Muscle.—Dr. NEWMAN showed specimens and drawings illustrative of the chief points advanced in his recent paper on this subject in the *Journal of Anatomy and Physiology* (vol. xiii, p. 549). After pointing out the microscopic appearances of muscle in its different conditions—1. Shortened and at rest; 2. Stretched and contracted; 3. Expanded and at rest; and 4. Shortened and contracted—the following points were discussed. 1. The absence of transverse striation during perfect rest; its gradual appearance as a broad dark transverse bar with a double contour afterwards becoming narrow, the breadth being in an inverse ratio to the amount of contraction; also that during a state of rest the whole fibre appears doubly refractive, and that only when contraction has taken place the alternating stripes possess the property of single refraction. 2. The diminution of the longitudinal as associated with increase in the transverse measurement of muscle without any loss of volume. 3. The absence of longitudinal striation in a state of rest, and its appearance during contraction of the muscle. 4. The appearance of the thin dark lines or basal membranes in relaxed muscle and in muscle that is stretched and contracted, and their absence when the muscle is shortened and contracted. Microscopic specimens were shown illustrative of the composition of the broad dark bands (anisotropic material). It was demonstrated that, by the addition of certain re-agents such as acetic acid (0.5 per cent.), etc., a considerable number of the fibres hydrochloric acid solution (0.1 per cent.), soda solution (0.1 per cent.), are so altered that the fibrillæ and transverse striation are no longer to be seen. When these changes have taken place, there appear minute spheroidal highly refractive bodies, which at first occupy the position of the broad dark bands. These small masses were further shown to be composed of fatty matter. This combined fat was stated to amount to 0.523 per cent. of the weight of the muscle, whereas the fat separable by the direct action of ether only amounts to 0.115 per cent.

Uterus with Fœtus in situ.—Dr. DOUGALL showed the uterus of a woman who had died in the sixth month of gestation from cerebral hæmorrhage. The uterus and its contents were quite healthy.

Vesical Calculus.—Dr. CLARKE showed a phosphate of lime calculus containing in its interior five separate nuclei of blood-clot.

Aneurism of Common Femoral Artery.—Dr. GEORGE BUCHANAN showed a large diffuse femoral aneurism, with the ligatured portion of the external iliac artery. The patient was a male aged 43, and had only noticed the tumour three weeks before admission to the hospital. The tumour occupied the whole of Scarpa's triangle and bulged over Poupart's ligament. The external iliac artery was tied in the upper third of its course with carbolised catgut, which had been specially hardened in chromic acid. The operation was performed with antiseptic precautions, and the wound was healed in six days. Two days after the operation, a slight pulsation was perceptible in the sac, and in a few days it became quite distinct. The tumour, however, continued much smaller and firmer to the touch than before the operation. A month after the operation, the sac suddenly burst into the thigh, causing immense swelling of the limb, so that the patient sank and died in three days from exhaustion. On *post mortem* examination, it was found that the opening in the artery communicating with the aneurism was in its posterior wall, above the origin of the profunda. The catgut ligature was entire, and the knot apparently quite tight, but a probe could be passed through the artery within the ligature. Dr. Buchanan did not think that the knot of the ligature had slipped, but rather that its pressure had caused absorption of the tissue of the inner arterial coats.

PATHOLOGICAL SOCIETY OF DUBLIN.

SATURDAY, DECEMBER 6TH, 1879.

EDWARD H. BENNETT, M.D., President, in the Chair.

Multiple Pyæmic Abscesses of Liver and Right Lung.—Dr. WALTER G. SMITH exhibited the viscera of a woman aged 45, who was admitted into the Adelaide Hospital October 1879, suffering from fever, extreme prostration, and jaundice. She was a strongly built woman, of excellent general health, and her first symptoms of illness dated from the beginning of last August, when she was seized with severe gnawing pain in the right shoulder, knee, and leg. She never had pain in the left leg. She had not undergone any operation, and had received no injury. A month before admission, dyspnœa came on, and increased in severity, but she had no rigors, and never sweated profusely. The only physical signs in the chest were rhonchus and sibilus over the right side. There was moderate jaundice, pyrexia, pulse 150, liver dulness not sensibly altered. Purpuric spots were scattered over the body; she became delirious, sank rapidly, and died four days after admission. A *post mortem* examination was made twenty-four hours after death. The heart was small, extremely soft, resembling the condition found in fatal cases of typhus. There were hæmorrhagic spots on the endocardium. Atheroma was present in the aorta, on the under-surface of the mitral valve, round the coronary orifices, and in the floors of the sinuses of Valsalva, but not on the free edges of the sigmoid valves. The left lung was congested, but there was no consolidation nor adhesions. The upper lobe of the right lung was consolidated, friable, and broke down in freeing it from its adhesions. On section, it presented large badly defined infarctions, and in places a greenish marbled appearance, and exuded a yellow puriform fluid. The minute vessels were plugged with black thrombi. The lower lobe of the lung was congested and œdematous. There was

no liquid effusion in either pleural sac. There was no ascitic fluid nor sign of peritonitis. The liver was enlarged, soft and friable. Its surface was buff yellow, mottled with innumerable hæmorrhagic spots and yellow patches. The cut surface presented numerous red consolidations, most of them softened, and exuding a brownish sanious fluid. There was no ulcer in the stomach, neither pyle-phlebitis, nor gall-stones.

Cirrhosis of Kidneys: Hypertrophy of Heart: Hydrothorax.—Dr. J. W. MOORE presented the heart, lungs, kidneys, and part of the liver of a hodman aged 19, who had died in the Meath Hospital after a long illness. There was extensive granular degeneration of both kidneys, although no history of gout, saturnine poisoning, or alcoholic intemperance was forthcoming. The heart was much hypertrophied, weighing fifteen ounces and a half free of clots. Its left ventricle was also dilated. There was some dilatation of the mitral valve, but no trace of endocarditis; a systolic mitral murmur had been audible during life. Double hydrothorax existed. He had been tapped some weeks before his death, when sixty-six ounces of serum of low specific gravity (1010) were removed by aspiration from the right pleura. The liver presented a good example of the nutmeg liver. There were pulmonary apoplexies and softening hæmorrhagic infarction in various parts of both lungs.

SURGICAL SOCIETY OF IRELAND.

FRIDAY, NOVEMBER 21ST, 1879.

E. D. MAPOTHER, M.D., President, in the Chair.

Shock: Its Nature, Duration, and Mode of Treatment.—Dr. MAPOTHER, after a brief retrospect of the work done by the Society during the past session, proceeded to consider this subject. The most marked physical change caused by shock was, he said, contraction of the arterioles. Blows over the stomach would retard the pulse for days without change of temperature. Shock paralysed the dilator nerves. Tobacco and other drugs killed by interfering with the pulmonary circulation, not by weakening the heart. He then considered the relative power of enduring shock of the Saxon and Celtic races. Statistics showed that the English bore big operations better than the Irish, but that secondary complications were more likely to arise amongst the former. The German and French statistics showed the death-rate in ovariotomy to be high amongst the more nervous Celts. In like manner, the "sweating sickness" acted differently on races in the most remarkable way.

Sclerotomy.—Mr. SWANZY read a paper on this subject, in which he discussed the relative merits of sclerotomy and iridectomy in glaucoma, and detailed the line of reasoning followed by Dr. de Wecker of Paris, which led him to suggest sclerotomy. Mr. Swanzy had performed the operation only five times himself; but in all these cases the result was more satisfactory than that which he had obtained by iridectomy. All these were cases of simple chronic glaucoma, without pain, the patients merely complaining of dimness of sight, and the tension of the globe being increased; and such were the cases for which he thought the operation especially advantageous. He laid stress on the accurate performance of the operation as taught by Dr. de Wecker, and thought that much of the discredit which it had gained was due to that not being done, or to its employment in acute or otherwise unsuitable cases, in which he believed the older operation to be the best. He never performed sclerotomy where the iris did not act well to eserine, nor where the attack was attended with pain.—Mr. STOREY had performed sclerotomy in glaucoma seven times, in two of which iridectomy was afterwards performed; out of eleven sclerotomies performed at St. Mark's Ophthalmic Hospital, only four were recorded as having any improvement after the operation, except a temporary one.—Dr. FITZGERALD, Dr. JACOB, and Mr. BENSON also took part in the discussion.

Successful Trephining of the Cranium.—Mr. WM. THOMSON related a case of fracture of the skull occurring in a girl aged 12, who fell on her head, and was taken up unconscious, but soon recovered consciousness, which, however, did not last very long, being followed by convulsions and hemiplegia. As there was no depression, the diagnosis was "pressure from effused blood", and the trephine was used. The dura mater seemed tense and bluish, pointing to subdural hæmorrhage. Two hours after the operation, the urgent symptoms were gone, and paralysis gone; the child was bright and cheerful, and the recovery progressed without a bad symptom. In three weeks she left her bed, and in four weeks left the hospital well. He discussed the question as to treatment in cases of unilateral convulsions—expectant or operative. In this case, he considered the operation was imperative, as the symptoms pointed to extravasation.—Drs. STOKER, WHEELER, and ORMSBY took part in the discussion which followed.

METROPOLITAN COUNTIES BRANCH: SOUTH LONDON DISTRICT.

WEDNESDAY, OCTOBER 22ND, 1879.

S. O. HABERSHON, M.D., President-Elect, in the Chair.

On the Employment of Double Extension in Cases of Disease and Injury of the Spine and Pelvic Joints.—Mr. JOHN WOOD read a paper on this subject. The benefits of the application of extension in diseases of the joints were: 1. Absolute rest, whereby the muscles were prevented from acting; 2. Removal of pressure on the surfaces of the joints; 3. Prevention of displacement by muscular action; 4. Removal of tension, and diminution of irritation of the nerves. He had long treated disease of the hip by Gurdon Buck's plan of the stirrup, applied by adhesive plaster, counter-extension being obtained by raising the foot of the patient's bed so as to bring into play the centre of gravity of the trunk. But he had found the one-sided action of the extending force to cause or increase the obliquity of the pelvis, and to produce unequal action on the muscles of the spine. He, therefore, used double extension by applying weights to both limbs; and found that the patient was made more comfortable, and that even greater weights could be borne than by the other method. By keeping the pelvis horizontal, the tendencies of the limb to be abducted and adducted were constantly checked and regulated. The point of extension might be shifted from time to time from the ankle or foot to the calf or knee. Mr. Wood had also used double extension with good result in cases of disease of the sacro-iliac joint. He believed also that in cases of disease of the upper lumbar or lower dorsal vertebræ he had obtained considerable benefit by double extension, combined with aspiration of the abscesses which frequently formed. He had also treated a case of fracture of the lower lumbar vertebræ by double extension.—Mr. NOBLE SMITH had for some years been treating cases by this method. When resident at St. Mary's Hospital, he had carefully examined the *post mortem* appearances in four or five cases which ended fatally. In examining the seat of fracture in the spinal cases, he found that the upper vertebra pressed forward on the spinal cord, and thought it only reasonable to suppose that, by double extension carefully applied, this might be prevented. He asked if any sore or sloughing had occurred in the course of treatment.—Mr. GOLDING-BIRD mentioned a case which had recently been in Guy's Hospital under Mr. Durham. He thought Mr. Wood only claimed for its treatment that it gave physiological rest, which could be equally well secured by the use of Sayre's jacket, and with, he thought, equally good results.—Mr. WOOD, in reply, said there had been no sore or sloughing. Sayre's jacket did not answer well in some cases of fractured spine, especially low down. It was likely to get wet and lead to the formation of bed-sores. Nor did he think it useful for extending in such cases, the hold on the pelvis not being sufficient. He did not propose double extension in place of Sayre's jacket, but for cases where it was not applicable.

Pneumonia of the Apex.—Dr. F. T. ROBERTS read a paper on pneumonia of the apex. He said that, while the existence of apical pneumonia was admitted in books and by practitioners, it was only by practical experience in the observation of a great number of cases of disease of the chest that he had learned the importance of this affection. His first object was to claim for it more distinct recognition as an acute or subacute affection, which, if not diagnosed at an early period, was likely to lead to serious, and often irreparable, mischief. The disease had been met with in his experience under the following circumstances: 1. As the result of direct injury from fracture of the upper ribs; 2. From extension of inflammation from the lower to the upper lobe; 3. Secondary to phthisical disease previously affecting the apex of the lung; 4. In connection with pleuritic effusion, and, perhaps, with other conditions causing condensation of the lung-tissue; 5. In consequence of hæmorrhage into the upper part of the lung; 6. As a primary or idiopathic affection, in most cases obviously due to cold. Having discussed these various classes of cases, the practical lessons as regards diagnosis were next insisted on; in any febrile case not clear in its nature to remember apical pneumonia, and to neglect no pulmonary symptoms, however slight. As to treatment, he did not believe in any definite routine treatment for pneumonia, but preferred leaving the cure of morbid conditions to nature, if she seemed to be doing her work satisfactorily. He recommended cessation from labour, rest in bed, effervescent medicines, or those to check cough, quinine, and counter-irritation by means of small blisters or iodine.—The CHAIRMAN (Dr. HABERSHON) said the paper reminded him of an observation Dr. Addison used to make thirty years ago: "Never give a decided opinion in cases of apical pneumonia." He supposed many such cases occurred as had been described by Dr. Roberts, and he particularly referred to a case of severe hæmoptysis caused by an injury received while swimming, which was supposed to proceed from phthisis, and condemned as hopeless, but

recovered. These cases were very different from those originating in tubercular disease.—Dr. F. TAYLOR said Dr. Roberts had given a very complete account of apical pneumonia; but, with regard to the fourth class of cases, in which it was associated with pleuritic effusion, he asked what physical signs were to be depended on for diagnosis from those cases in which pleuritic effusion caused compression of the lung. He had met with the disease more frequently in children than in adults, and thought measles might be a cause of this.—Dr. GOODHART agreed that the affection was more common in children. He thought this might be accounted for by the lung becoming more frequently emphysematous in children, and pleurisy being more common. He agreed in the difficulty of diagnosis felt by Dr. Taylor.—Dr. ROBERTS, in reply, said one point he wished to impress was, that many of these cases came to him as out-patients. He had not met with the disease in children so frequently as the last two speakers had.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

FRIDAY, NOVEMBER 7TH, 1879.

T. P. TEALE, F.R.C.S., President, in the Chair.

Excision of Wrist-joint.—Dr. LAWSON showed a patient whose wrist had been excised by Lister's method three years ago. The movements of pronation, supination, and extension were very good; flexion was not perfect.

Congenital Phimosis.—Dr. SLESSER related two cases of congenital phimosis. In one of them, a man aged 46, who was married and had two children, there existed a tight phimosis and severe pain during micturition. At the operation, seven calculi, weighing altogether two hundred and sixty-two grains, were found lodged in the dilated urethra of the glans penis. The calculi had not yet been analysed.

Disease of the Hip-joint and Sayre's Bandage.—Dr. IVOR MURRAY read a paper on this subject. A lady, aged 18, having a scrofulous family history, had inflammation in the hip-joint and great pain. She had been treated, before Dr. Murray saw her, with Sayre's splint, but without any benefit. She had greatly emaciated. She was placed with the sound leg on a stool, while the diseased leg hung down, and plaster-of-Paris was applied over the pelvis and down to the knee. The pain ceased in a few days, and the only inconvenience felt by the patient was the inability to sit in the ordinary posture. In ten months, she could bear weight on the leg, and in a year afterwards was quite well.—The PRESIDENT and Mr. W. H. BROWN supported this plan of treatment by the relation of similar cases.

A New Method of Dealing with the Urethra after Amputation of the Penis.—Mr. WHEELHOUSE read a paper on this subject. The method had been described (from a foreign source) in the BRITISH MEDICAL JOURNAL some time ago, and he had applied it with great success in several cases in which it had been necessary to remove as much of the penis as possible. A vertical incision was made through the skin of the pubes, and was carried round both sides of the root of the penis into the raphé of the scrotum. The penis being drawn forward, a twitch was placed upon it as far back as possible and tightened. The organ was next removed and the vessels were secured. The patient was then placed in lithotomy position, the perinæum laid open in the centre, and the urethra (into which a sound had been passed) was dissected from its connections for an inch or more, and was then turned down into the perinæum and brought out through the wound in it. The under surface of the urethra was next laid open for half an inch, and its margins were stitched to the edges of the perineal wound at a little distance in front of the anus. A soft Jaques' catheter was passed (and kept in for a few days). The wounds were stitched up, and when healed no trace of penis could be found. The inguinal glands were removed if diseased; and it was a question whether it might not be better to remove the testes in any case, diseased or not.

Case of Saltatory Spasm Treated with Conium.—Dr. E. H. JACOB read notes of this case. A young man (who had formerly been in the Leeds Infirmary under the care of Dr. Eddison for the same disorder, and had been then relieved by large doses, four to six drachms, of succus conii) came under Dr. Jacob's care at the dispensary with a return of the complaint. At intervals, one leg would begin to quiver; then the other leg would do so; the startings increasing in energy until the patient involuntarily leaped from the ground six or eight inches. The tincture of conium in half-ounce and ounce doses was found useless. Succus conii in half-ounce doses three times daily stopped the paroxysms immediately. The cause of the disease was possibly a blow on the spine. The startings sometimes occurred during sleep.—In the discussion, the opinion was generally expressed that preparations of conium varied greatly in strength, even the succus conii being frequently quite inert.

REVIEWS AND NOTICES.

CYCLOPÆDIA OF THE PRACTICE OF MEDICINE. Edited by Dr. H. VON ZIEMSSEN, Professor of Clinical Medicine in Munich, Bavaria. Vol. XVII. General Anomalies of Nutrition, and Poisons. Translation. Edited by ALBERT H. BUCK, M.D., New York. London: Sampson Low and Co.

THIRD NOTICE.

THE article on Vegetable Poisons by Professor von Boeck of Munich occupies nearly three hundred pages. No particular arrangement or classification is adopted. The subjects follow each other in an irregular manner, *i.e.*, without reference to their physiological, pathological, or botanical characters. The alkaloids form the basis of the article, the effects of seeds, leaves, and roots, from which the alkaloid are extracted, being only casually mentioned.

Each alkaloid is dealt with in a systematic manner. The author first gives a general description of it and its properties; he then passes successively to its etiology and dose, symptomatology and course, diagnosis, prognosis, treatment, changes which the substance undergoes in the system, and the application of chemical and physiological tests for its detection.

In reference to the diagnosis of Atropine poisoning, we find the following practical remarks. "It is well known to toxicologists that mydriasis, or dilatation of the pupils, is one of the earliest symptoms of this form of poisoning, and it is also one of the latest to disappear. One of the most distinctive symptoms, according to von Boeck, is dilatation of the pupils, which, even with minimum doses (according to Donders, the one-hundred-and-thirty-thousandth part of a grain = 0.00000046 *gramme*) lasts for several hours. When it is dropped into the eye only, the one pupil is dilated, whereas, in general cases of poisoning by atropine, both eyes are almost always equally affected. If somewhat larger quantities are introduced, the pupils are dilated to the maximum, remain motionless, no longer react to light, and thus a number of other symptoms are developed; for instance, a variety of disturbances in the power of seeing, utter incapability of focalising the eye, prismatic vision, double vision, occasional micropsia, and complete amaurosis. Mydriasis, with its consequences, sets in quite constantly, and may last a very long time. Gubler states that in one case it lasted fourteen days; at any rate, it is the symptom of atropine poisoning which is the last to disappear; indeed, it has been observed to last as long as three or four weeks. The supposed amaurosis of many observers is only apparent, and is the result of the loss of the power of focalising" (p. 668).

"Atropine kills by paralysing the heart in the first place; but perhaps, also, in some cases by exhaustion of the respiratory centres" (p. 671).

The author adopts the view of Schroff, that atropine and hyoscyamine are essentially identical in their action. Hellmann has proved that the products of decomposition of both alkaloids are similar in their action, and that hyoscyamic acid is as inactive as tropaic. He has also found that hyoscyamine, like atropine, paralyses the extremities of the vagus nerve, retards respiration, etc. (p. 689).

Poisoning by Solanine, Dr. von Boeck tells us, is not uncommon; but he admits that no cases of poisoning by the pure alkaloid are recorded. A girl aged 14 died from eating green potato-apples, which contain solanine. Unripe, sprouting, or diseased potatoes are noxious from the same cause, producing vomiting, purging, and other symptoms resembling an attack of cholera (p. 690).

The diagnosis of Physostigmine poisoning is very difficult, if there be no history of the case to help us. It must rest upon the existence of great general loss of power, together with contracted pupils, and an undisturbed sensorium. In such a case, it is hard to decide between Calabar-poisoning and poisoning by curare or by conium. The myotic or contracted condition of the pupils affords the greatest assistance. There are no satisfactory chemical tests for this alkaloid, which is also known under the names of eserine and calabarine. It may be separated from organic substances by means of benzine. As thus obtained, it causes decided contraction of the pupil in rabbits and guinea-pigs when only the seven-thousandth part of a grain is placed on the conjunctiva.

The primary symptoms produced by Colchicine affect the gastro-intestinal mucous membrane, and comprehend ordinary gastro-enteritis, which is in itself sufficient to account for a number of the symptoms "by the acute and considerable drain of fluid". There are severe pains

in the bowels, of the nature of colic, accompanied with vomiting and diarrhœa, intense thirst, and violent burning in the throat, œsophagus, and stomach. To these must be added collapse, cyanosis, a low temperature, and ischuria. The secondary symptoms concern chiefly the heart, muscles, and spinal marrow. Schroff found colchicine to be a powerful cardiac poison, and that it caused death by cardiac paralysis. Other authorities trace death to gastro-enteritis. Vomiting and diarrhœa follow also upon subcutaneous injection (p. 737).

From the history of symptoms, von Boeck properly points out the great difficulty of diagnosis. Gastro-enteritic symptoms, followed by collapse without loss of consciousness, are common to arsenic as well as to acute gastro-intestinal catarrh, and they may be also confounded with endemic or Asiatic cholera. There is great reason to believe that, in this country, cases of criminal poisoning by colchicine have been mistaken for disease, and certified as gastro-enteritis.

The appearances in the dead body are slight; the blood is usually thick, of a dark cherry-red colour, and but little coagulated. Dark red spots have been found in the œsophagus and stomach, and small ecchymoses in the latter (p. 738).

Santonine poisoning has of late acquired some importance from the accidents which have occurred to children, in cases where it has been employed as a febrifuge in excessive doses. These cases have been more frequent in Germany than in England.

Dr. Grimm refers to the death of a child, aged 4½ years, from six doses of nine-tenths of a grain (5½ grains). Snijders describes two cases of poisoning (not fatal) from santonine lozenges. The first was that of a child who had taken six grains; the second that of an adult from a dose of four grains of santonine. Violent vomiting and convulsions were the principal symptoms. The actual poisonous dose cannot be defined, but two-and-a-quarter grains have sufficed to cause symptoms of poisoning, while only large doses have usually proved fatal. The German *Pharmacopœia* fixes for a maximum medicinal dose one grain and a half, and the quantity given in one day should not exceed seven-and-a-half grains (p. 883).

The most remarkable symptom in this form of poisoning is the production of colour-vision. Objects appear of a yellow colour, even so soon as twenty-five minutes after a dose of five grains. This symptom seldom lasts more than twenty-four hours, and is sometimes intermittent. This impression of colour is sometimes the only observable symptom of the poison. Another attendant symptom is, that the urine is increased in quantity, and is coloured yellow. Rose regards yellow vision as a symptom of santonine narcosis, equally with the headache, sleepiness, hallucinations, etc. He made experiments with the spectrum on persons poisoned by santonine. The violet portion appeared at first colourless and then black, so that there is a distinct violet blindness in santonine poisoning. The violet rays are extinguished by the yellow vision. An examination of the urine is important for fixing the diagnosis. It appears of a dark saffron colour when it has an acid reaction, becoming crimson on the addition of caustic potash. If the urine be alkaline, it has a crimson colour. This is the only test for the presence of this substance. There are no chemical methods at present known of separating santonine from organic substances. The action of light upon the crystals is to turn them yellow (p. 890).

Fifty pages are devoted to Nicotine and Strychnine. Under the former, the author gives a full account of the effects produced by habitual smoking. The remarks on strychnine form a complete essay, dealing with the subject chiefly in its physiological and pathological aspects, but not presenting anything new. Chronic poisoning from medicinal doses may be sometimes mistaken for apoplexy, as in the case of a physician who had taken strychnine during five months as a remedy for paraplegia, without perceiving any results from it, when suddenly, at a meal, he fell over on his back, his eyes and his features became convulsed, the upper part of his arm arched, and his hands clenched. There was deep stertorous breathing, the pulse was full and slow, and the sensorium remained unaffected. Bleeding alleviated the symptoms, but a fresh attack shortly afterwards terminated fatally (p. 792). The temperature of the body may supply a means for diagnosis in ordinary tetanus. "In this disease," (apoplexy) "the temperature rises to 105.8°, and even higher, whereas in strychnine poisoning, especially in animals, the temperature is lowered considerably" (p. 793). The excretion of the poison by the urine is a slow process. It is also excreted through the saliva. The author shows that the physiological or frog test is liable to mislead the inquirer. There are many substances besides strychnine which produce tetanus in the frog, and, unless these be carefully excluded, an erroneous opinion may be formed. Thus, picrotoxin, nitro-glycerine, brucine, and even caffein, produce tetanus in this animal.

The chemical reactions from Curarine may lead to this alkaloid being mistaken for strychnine. Thus, concentrated sulphuric acid and potassium-bichromate bring out, as in strychnine, a beautiful blue colour, which passes into violet, and later on into cherry-red; but the transition is slower in curarine than in strychnine. While concentrated sulphuric acid alone imparts a red colour to solutions containing curarine, it has no effect on strychnine. The physiological test for curarine is more valuable. When injected subcutaneously into a frog or rabbit, symptoms of paralysis of the muscular apparatus set in, proving fatal to the rabbit, whereas the frog generally recovers (p. 841).

The author devotes a large space to the section on Morphine and its associated alkaloids. We find nothing here calling for special notice excepting the statement, that Dragendorff found morphine in the blood of a cat after only twenty-five minutes, and in the human blood six and a half hours, after death from poisoning. The author objects to the molybdic acid test, which produces a beautiful violet colour with morphine, even to the thirteen-thousandth of a grain, on the ground that it acts in a similar manner on papaverine, salicine, populine, and phloridzine, a result hitherto not noticed by toxicologists. It is a strange omission, that nothing is said about the detection of meconic acid, which is found only in opium, and is, therefore, highly characteristic of its presence (p. 881).

This article on poisons is brought to a conclusion by sections on Ergot and Mushrooms. They are full of valuable information to the medical practitioner, but our space will not allow us to make further quotations.

Dr. Ziemssen has shown good judgment in placing the article on Poisons in his *Cyclopœdia* in the hands of three such men as Boehm, Naunyn, and von Boeck. Each has done justice to the part assigned to him, and we look upon their conjoint work as representing the most complete modern views of Poisons and Poisoning.

THE LOCALISATION OF CEREBRAL DISEASE; being the Gulstonian Lectures of the Royal College of Physicians for 1878. By DAVID FERRIER, M.D., F.R.S. London: Smith, Elder, and Co.

THIS work, like its predecessor by the same author, constitutes one of the most important researches of the present day. They both deal with the solution of that difficult and complex problem which has hitherto baffled all the efforts of physiologists accurately to determine; namely, the functions of the brain. Undismayed by the apparent hopelessness of the task, by the failures of the most erudite psychologists, and by the magnitude of the undertaking, Dr. FERRIER has for some years devoted himself to this inquiry, and his experiments and observations have been conducted in so precise and scientific a manner as to give rise to conclusions of the highest value and importance. The presen research into cerebral localisation has been carried on in that way which is most likely to lead to fruitful results in any investigation; namely, a patient and systematic experimental inquiry into physiological action on the lower animals, and a collection of observations on the effects of injury and disease in man.

In his work entitled *The Functions of the Brain*, Dr. Ferrier gives the results of his physiological researches, and these are such as serve greatly to revolutionise our former conceptions on the subject. The cortex of the cerebral hemispheres, which has hitherto been considered to be of uniform function throughout its whole extent, is here maintained to originate a variety of sensory and motor phenomena. Certain portions of its surface are asserted to be purely motor; others are entirely sensory; some are associated with special sense, some apparently with intellectual states, and some with organic life. This localisation of function has been for the most part arrived at from experiments on the lower animals of the following nature. The surface of the brain having been exposed in different situations, certain ascertained points are irritated, and thereby definite results are obtained. These same parts are then destroyed, and as a consequence the functions previously excited are found to be paralysed. From this it is concluded with reason that, if irritation of a given area develop or increase a special action, and it alone, and if destruction or removal of the same obliterate it, the said locality must have close relation to, if it be not actually the seat of, the phenomena in question. The surface of the brain is thus mapped out into a series of regions, each possessing motor, sensory, or other functions. These may be further divided into departments of a more special character, as centres regulating the movements and sensations to different parts of the body. Further subdivisions may even be made, and the portions of the cortex which

originate voluntary motion to special muscles and sensation to particular organs can be indicated.

These varied cerebral centres having thus been determined by direct experiment on the brains of animals, the work before us is an attempt to confirm these physiological researches by observations on the effects of disease or injury in the human subject. The following is a brief sketch of some of the more important conclusions.

The Frontal Lobes.—It has been ascertained in animals, and more especially in the monkey, that irritation or destruction of the prefrontal region is followed by no special effects of sensation or motion. The character and behaviour of the animal, however, are altered, and it becomes dull and apathetic, with loss of attention and intelligent observation. Although the function of this portion of the brain is not yet fully determined, the author is evidently inclined to conclude that the frontal lobes are probably the seat of the intellectual faculties. Numerous cases are brought forward, and some are described in detail, of injury and disease of this region in man, without sensory or motor paralysis. The most remarkable of these is the "American crowbar" case, where a rod of iron an inch and a quarter in diameter passed through one of the anterior lobes of the brain, the patient living twelve years afterwards. The only symptoms thus induced were alteration and impairment of the intellectual faculties.

The Motor Centres.—Experiments on monkeys indicate the motor centres as being seated in the bases of the three frontal convolutions: the ascending frontal, ascending parietal, superior parietal, and paracentral lobules. Stimulation of these regions gives rise to movements on the opposite side of the body, and their destruction induces complete motor paralysis. Numerous cases are cited to show that, when there is disease of the whole of these portions of the cerebral cortex in man, the same results ensue, and complete hemiplegia is then induced without any modification of sensation. If spasm subsequently take place, it is due to secondary sclerosis of the motor tracts. The same phenomena follow lesions of the central ovale as occur in affections of corresponding portions of the cortex cerebri. The motor regions may be further subdivided; and physiological experiment has shown that irritation and destruction of certain definite limited areas of the surface of the brain cause spasm and paralysis of special localities. For example, in monkeys, at the base of the first frontal, and extending into the second frontal convolution, there is an area the irritation of which causes elevation of the eyelids, dilatation of the pupils, conjugate deviation of the eyes, and turning of the head to the opposite side. Several cases are cited from different authors in which similar symptoms occurred in the human subject as a result of disease, and, although usually followed by other complications, indicated that the lesion probably affected this region in the first instance; and, in one case of necropsy, disease was actually found in this situation. In the monkey, a portion of the motor area governs the movements of the leg; and even this may be further subdivided into certain localities influencing special movements of the limb. In this animal, stimulation of different parts of the superior parietal lobule, and the upper extremity of the ascending frontal and ascending parietal convolutions, gives rise to varied movements of the leg; and destruction of the same situations causes corresponding paralysis. Here, again, a number of instructive cases have been collected, which point out that the leg-centres in man nearly correspond to those in the monkey, as injuries and destruction of the same regions cause crural paralysis.

The centres of the movements of the arm and hand in animals have been found to cover a large space, as might be expected from their importance. These are situated in the posterior part of the superior frontal, in the upper and middle part of the ascending frontal, and in the larger portion of the ascending parietal convolutions; and different points in this somewhat extended region, as in the case of the leg, govern special movements of the limb. A number of clinical cases demonstrate that the same organs perform the same functions in man, and corresponding paralysis shows destruction of different portions of the cortex of this region.

The centre of the facial movements is situated in the ascending frontal convolution, posterior to the inferior frontal lobule; and, when this area is diseased in man, there is paralysis of the muscles of the lower portion of the face; but cases of lesion limited to this region are rare. As the crural, brachial, and facial centres are in close juxtaposition to one another, as might be expected, the same disorganisation may cause paralysis of the leg and arm, the arm and face, or of all of them together.

The oro-lingual centre is situated at the lower portion of the ascending frontal convolution, opposite the posterior border of the inferior frontal lobule; and destruction of this region causes paralysis of the muscles of articulation. These centres, however, have a bilateral action; and, if one side only be injured, the paralysis is incomplete and temporary. In addition to this objective symptom, there is a subjective one; namely, aphasia, or the loss of memory for words. This last is usually, though not always, associated with disease on the left side. A remarkable case is instanced, of a boy who was seized with aphasia and paralysis of the muscles of articulation, indicating, probably, disease on the left side. He recovered, and was afterwards afflicted with a lesion of this region on the opposite side. This was followed by permanent motor paralysis and complete aphasia. An attempt has been made to explain the frequent association of aphasia with disease on the left side by the fact that embolism of the middle cerebral artery is less common on the right side. But embolism is not the only lesion which causes this affection; and, taking all forms of disease into account, we find that the right island of Reil is as frequently disorganised as the left, and yet that the lession is rarely followed by aphasia.

Not only does destruction of the motor centres in the cortex cerebri paralyse the movements which they originate, but stimulation of similar areas gives rise to corresponding spasms or convulsions. Clinical medicine furnishes us with examples of irritative lesions causing spasms and convulsions of limbs or particular groups of muscles.

The Sensory Centres.—These are to be sought for in the occipital and parieto-temporal lobes. It has been definitely ascertained that section or disease of the posterior third of the internal capsule is followed by anæsthesia of the opposite side of the body. This result ensues, not from destruction of sensory centres, but obviously from a solution of continuity in the paths of centripetal impressions to the cortex. That sensory, like motor fibres, are distributed to localised areas on the surface of the brain is more than probable, although it has not yet been demonstrated.

When the occipital lobes of monkeys are irritated or destroyed, no appreciable sensory or motor disturbance takes place. The animals, however, usually refuse to eat, and rapidly succumb. The conclusion derived from this and other observations is, that the occipital lobes are specially related to visceral sensibility; but the function of this portion of the brain is not yet thoroughly understood. A number of clinical cases are cited, of disease in one or both occipital lobes without sensory or motor symptoms. In short, lesions of this region are usually latent; but, as our organic feelings are our chief incentives to action, it is highly probable that affections of the occipital lobes will cause profound mental disturbance.

The parieto-temporal region is that portion of the cortex cerebri situated between the motor area and the occipital lobes. It includes the supramarginal lobule and angular gyrus, the superior, middle, and inferior sphenoidal convolutions, the occipito-temporal convolution, the uncinate gyrus, and the hippocampus major. This region is the centre of ordinary sensation to the opposite side of the body, as well as of the special senses. Experiments on monkeys have shown that the angular gyrus is the centre of sight, as destruction of this area on one side causes temporary blindness of the opposite eye; and on both sides, permanent blindness of both eyes. The superior temporo-sphenoidal convolution appears to be the centre of hearing; the subicular region, of the sense of smell; and lesion of the neighbouring region affects taste on the opposite side of the tongue. Destruction of the hippocampus and uncinate gyrus causes impairment or abolition of tactile sensation on the opposite side of the body. Although localised areas can thus be determined in animals, in disease of the human brain the lesion is rarely limited to the region in question. Several cases, are, however, brought forward, where degeneration of the centres of special sense existed on one side without record of loss of function. The author believes this is due to want of correct observation, rather than to the fact that in this particular all analogy should cease between the brains of the monkey and man; and he points out that no case can be instanced where there was disease on both sides without complete loss of function.

The above sketch of Dr. Ferrier's conclusions can give no idea of the laborious and extensive series of experiments and researches undertaken by that observer, and all credit is due to him for the scientific and accurate spirit which animates the entire inquiry. The vast importance of the subject, and the complete revolution of previously conceived opinions which must be created if the views be confirmed, can only be fully realised by those who carefully study the details in the original works. With the exception of the illogical assertions of the phrenologists, the investigations of Ferrier, Fritsch, Hitzig, and Charcot and his able school of followers, during the last few years, are the first really scientific attempts to localise the functions of the brain; hence the subject is yet comparatively in its infancy. Doubtless much still requires to be worked out; and what has been done must be confirmed, as these eminent observers themselves admit. Still by their labours we have now a sufficient body of evidence before us, to convince even the most sceptical that localisation of the cerebral function must be accepted as a fundamental doctrine; but to what extent it remains with future researches to determine.

BRITISH MEDICAL ASSOCIATION:
SUBSCRIPTIONS FOR 1879.

SUBSCRIPTIONS to the Association for 1879 became due on January 1st. Members of Branches are requested to pay the same to their respective Secretaries. Members of the Association not belonging to Branches, are requested to forward their remittances to Mr. FRANCIS FOWKE, General Secretary, 161, Strand, London. Post Office Orders should be made payable at the West Central District Office, High Holborn.

The British Medical Journal.

SATURDAY, DECEMBER 27TH, 1879.

THE OFFICE OF REGISTRAR-GENERAL.

MAJOR GRAHAM has resigned the appointment of Registrar-General, which he has held and administered with successful energy for more than thirty-seven years. Appointed in 1842, through the interest of his brother, the late Sir James Graham, Bart., when civil registration was in its infancy, he has contributed not a little to its progress and success by his capacity for organisation, and for the control of about three thousand local registration-offices scattered throughout England and Wales. Since 1842, various changes in the law regulating registration have from time to time been carried out, which have combined to make the registration system of to-day very superior to that which was in operation when Major Graham assumed office. He had the good fortune, on his appointment, to find Dr. William Farr in charge of the statistical department of the office. Dr. Farr's statistical work in connection with the General Register Office—which, perhaps more than the labour of any other single worker, has tended to initiate and to stimulate national sanitary progress—has been so fully appreciated by the public, that there is no need to dwell upon it here. The Registrar-General himself has most liberally acknowledged, in the concluding sentences of his last annual report, his obligations to Dr. Farr, who has earned a world-wide reputation for the weekly, quarterly, and annual statistics published under the authority of the Registrar-General. The exceptional statistical abilities of Dr. Farr have for many years so identified his name with the General Register Office, that a large portion of the public, and frequently the press, have concluded that he was Registrar-General. This misconception, while it was a proof of the public appreciation of Dr. Farr's valuable services to sanitary and statistical science, involved no real disparagement of the services of Major Graham. The public knows little of the duties of Registrar-General, except those which appertain to public health and vital statistics. Major Graham has, however, for the past thirty-seven years, exercised a constant and efficient personal control over the machinery by which the marriage, birth, and death registers are called into existence, and from which Dr. Farr has evolved the vital statistics which have served as a model for such statistics in all parts of the civilised world.

In recording our deserved tribute to the value of Major Graham's long service as Registrar-General, we would willingly pass unnoticed the offensive tone which he has, in his reports, at times assumed towards the medical profession. This would have been the easier, had he not been sufficiently ill-advised to reprint and issue, during the past few months, to his three thousand registration-officers, a summary of some remarks which he submitted to the consideration of the Royal Sanitary Commission in July 1869. Those reprinted remarks only remind us unpleasantly of Major Graham's constant opposition and attempts to ridicule the registration of diseases, the registration of still-births, and the appointment of medical officers to assist coroners by primarily investigating all causes of death not certified by registered medical practitioners. No useful purpose would now be served by resenting the studied tone of disparagement which throughout those remarks he chose to assume towards the medical profession, or his ill-disguised sympathy for bone-setters, herbalists, and other quacks. Since these remarks were written, a new Registration Act has come into operation, which, among other changes, has made it compulsory upon medical practitioners to furnish medical certificates of the causes of death of their patients. Civil registration has steadily improved; and we wish that Major Graham would have allowed us to forget his prejudiced opposition to further registration reforms, which he was determined to leave to his successor, who, in 1869, he prognosticated would be "superior to him in ability".

It is announced that Sir Brydges Henniker, Bart., has been appointed to succeed Major Graham as Registrar-General. Beyond having served for a year or two as private secretary to Mr. Sclater-Booth, President of the Local Government Board, we are unable to discover any special claim or qualification for the appointment which he has had interest enough to obtain. The new Registrar-General may possess special fitness for the post; but when such an appointment as that of Registrar-General is filled up through private or political interest, as in the present case, doubt as to the result of the selection is with difficulty repressed. If the appointment of a Local Government Board official signify the subordination of the General Register Office to the position of a mere department of the Local Government Board, which is still governed by its Poor-law element, we cannot look with favour on the impending change. There can be no question that the General Register Office should form a component part of a national Public Health Department; but the Local Government Board, although charged with important public health duties, is still in spirit the Poor-law Board, and, as such, is unfitted to organise and control public health administration. Under present circumstances, therefore, we do not hail with satisfaction the prospective emasculation of the General Register Office at the hands of a nominee of the Local Government Board.

There is one other aspect of the impending changes in the Registrar-General's Department which cannot be passed over. It is well known that Dr. William Farr, who has served as Superintendent of the Statistical Department almost since the foundation of the office, was a candidate for the vacancy caused by the retirement of Major Graham. The Government best knows the grounds on which they set aside the claims of Dr. Farr, based upon so eminent a public service, in favour of the private secretary of one of the Ministry, whose qualifications for the post are at any rate unknown. Such misuse of patronage affords a discouraging commentary upon our system of party government, and paralyses the zeal and energy of the permanent Civil Service of the country. We are not surprised to hear that Dr. Farr, under the influence of his disappointment at not obtaining an appointment, for which his distinguished services appeared to give him the strongest claim, has placed his resignation in the hands of the Lords of the Treasury. It may, we trust, be hoped that the Government, which failed to recognise his claim to the appointment of Registrar-General, will signify their approval of his services by liberal interpretation of his claims for pension, even if they afford no other mark of their appreciation of his invaluable and original work in vital statistics. Under the new Registrar-General, and deprived of the services of Dr. Farr, the future of the General Register Office is not free from anxiety. The effect of its past administration has been one of continued usefulness and important assistance to sanitation. There is no reason why its sphere of usefulness should not be enlarged; let us, at any rate, hope that it will not be abridged.

THE NURSING AT GUY'S HOSPITAL.

ABOUT two months ago, the Treasurer of Guy's Hospital thought it desirable to appoint a new matron, whose principles involved "a new system of nursing"; this he unfortunately did without having previously consulted the medical staff. This isolated action on his part is much to be regretted, and has ended in a disruption and disorganisation of the nursing in the hospital. The new matron brought with her a system to which she has endeavoured to bend the previously existing arrangements. The result has been the resignation or dismissal of some of the oldest and most efficient sisters, as well as the loss of many of

the best trained and most competent nurses of the hospital; some of whom have spent the chief part of their lives in the service of the institution.

The new rules for nursing have been enforced without an effort having been made to find out whether or not they were practicable, or whether or not they would be disapproved of by the medical staff. Consequently, nurses who had been trained in special wards, and thus had the necessary special knowledge, were changed in rotation into other wards, where they had fresh duties to perform, of which they were ignorant, and which they had to begin to learn. This plan left the special wards, so treated, deprived of nurses able to do the necessary special work required of them. The injury thus suffered by the patients is manifest. Another rule is being enforced, which is as unnecessary as it is thoughtless and cruel. The matron has decided that those patients who are not confined to their beds throughout the day shall rise and dress themselves at five o'clock in the morning. Such treatment must in most cases retard, and in not a few absolutely prevent, the recovery of the patient. It was hoped for some time by the medical staff that this matter would be settled in a satisfactory manner, without becoming a matter for public discussion. They remonstrated in vain with the Treasurer. He replied by summoning a meeting of Governors, at which he took the chair, and at which a vote of confidence in him was passed. This meeting was composed of five Governors. The representatives of the staff were thus ignored. A question involving not only the satisfactory and peaceable working of such a large and important institution as Guy's Hospital, but the well-being of the thousands of patients who go there for medical relief, cannot be settled in such an arbitrary manner, and by so small a meeting, in a manner opposed to the opinions and experience of the medical staff.

The position of the Treasurer of Guy's Hospital is, to a certain extent, autocratic and despotic. It can, however, only remain despotic so long as the despotism is an intelligent one and conducted upon principles of constitutional compromise. If it be found that the present mode of administrating the hospital results in a dead lock, it becomes a matter for public investigation. Neither the profession nor the public can allow a charity, which is almost a national one, to be injured in its beneficent progress. Unless the present confusion can be satisfactorily set straight, it may be necessary that the subject of the organisation of the governing body of the hospital be inquired into by the Charity Commissioners.

The *Guy's Hospital Gazette* has set forth some of the disadvantages of the new system which it is being sought to force upon the hospital. The Treasurer has thereupon intimated to the Editors that no complaints could in future be allowed to appear in the *Gazette*. This arbitrary proceeding is tantamount to a confession on his part that his action regarding the nursing does not bear public investigation and discussion. It is to be hoped that more moderate counsels will prevail, and that the recommendations of the staff will be listened to before it is too late to avoid a more public scandal.

FACTORY LEGISLATION.

CORRESPONDENTS assure us that the present amended Factory Act, which has been in force from the 1st of January this year, does not work satisfactorily; and we, therefore, propose to make a few remarks upon it. The clause making compulsory the production of copies of birth-registers is found objectionable. The surgeon cannot certify for any persons, under sixteen years of age, who do not produce copies of their birth-registers when they are to be obtained. This has caused endless trouble and inconvenience. Although the Act has been in operation eleven months, the same difficulty exists now as at the commencement.

The factory employers justly complain, saying: "You know these children are quite fit to work the hours we require, and you will not pass them because they will not comply with the demand of the registrar to pay from two shillings and sixpence to three shillings and sixpence for a copy of the register of birth, which he is entitled to charge, being over fourteen years of age." Some of the employers have said: "You have several times refused to pass some that have produced birth-registers, because you did not consider them strong enough; now, if you have the power to refuse when the conditions are complied with, we think you ought to have the power to dispense with the register when you find the children physically strong enough to work the hours we require." All the factory surgeon can say is, that such is the law, and we wish that those who made it had to carry it out.

The surgeon has the power to refuse giving a surgical certificate for all persons under sixteen years of age, if they be suffering from any infectious diseases of the head or body generally, which renders them unfit or incapable of working the factory hours; but no discretion is left to him as to their physical capacity. It is, however, well known to all medical men that some children are much stronger at fourteen than others at sixteen.

The sixpenny fees settled by the Act are a grievance of which medical men may justly complain. There are about one thousand surgeons engaged in factory work, whose duty it is to visit factories periodically or specially, as required, for the purpose of examining and certifying children and young persons as to their freedom from disease and bodily infirmity which would render them unfit for working the time allowed by the Factory Act. They are also required to report upon accidents caused by machinery. In the performance of these duties, they are not assisted by the inspectors to the extent they ought to be. The surgeon resides within his district, and is brought into almost daily communication with the managers and overlookers, and is consequently continually appealed to for information which ought to be given by the inspectors; but, as the latter generally reside at some distance, and do not visit the factories more than three or four times a year, and in many districts less, it is thus apparent that the medical man is called upon to do, not only surgical but inspectorial duty, and for this important work he receives the munificent sum of sixpence for each certificate, if given at his residence. The system of grouping five certificates together, including a visit within one mile, for the fee of two shillings and sixpence, is an encouragement to keep the children at work before receiving the certificate longer than allowed by the Act. The value of the services rendered by the medical men was acknowledged by the Royal Commissioners, who were appointed to obtain evidence with a view to the consolidation of the previous Acts. In their report, it is stated: "That the certifying surgeons, by their scientific knowledge and intelligence, have largely contributed to the fair acceptance which these Acts are now obtaining among all classes they affect." They also testify to the ample evidence which came to their notice of the interest taken in the important share of their work in the administration of the Acts. In the face of ample evidence thus given of the value of the surgeon's work, the paltry fee of sixpence for each certificate is a niggardly economy which will not tend to keep up the surgeon's interest in his duties.

ENTERIC FEVER IN INDIA.

II.

IN the later parts of the report by Surgeon-General Ker Innes, to which we referred in last week's JOURNAL, the questions of age and recent arrival in India are discussed; and the accuracy of Bryden's doctrine, that both are important factors in increasing the susceptibility of our young soldiers to this disease, is duly insisted on and supported by statistics. The author then turns to the question, whether "any measures can be adopted in India for obviating or diminishing the annual losses from *enteric fever* among this class of men". This, of course, can only be answered by a reference to causation. "If the enteric fever of this country be a specific fever, depending upon a specific poison; and assuming, what is certainly required to sustain the theory of a continuous transmission of the disease, that the poison, or *materies morbi*, is capable of retaining its vitality or activity for long periods of time outside the body, and that the appearance and disappearance of the disease (with widely separated intervals of time) in a given locality where it has once become established, may consequently be accounted for without the introduction of any fresh

case; or, if it be essentially a filth fever, and originate spontaneously from pythogenic causes; then we can, on the first assumption, limit the spread of the infection; and, on that of the second, we should be able, by well-directed efforts, to secure its extinction as far as military cantonments are concerned." The possibility of the disease being maintained and spread by infection is then considered. Can it be accounted for by importation, or one or other of the following channels—contaminating of air, water, milk, or other beverages; soiled linen in connection with washing arrangements; a common latrine; conservancy arrangements; the extension of the disease from the natives, or from something connected with their habits? All that can be reasonably said on each of the above possible causes is carefully considered. The result arrived at is that, in the opinion of the author of this report, medical officers have utterly failed in India to trace out the intimate connection of this disease with filth-causes or specific infection, with which, according to European authorities, it is invariably associated. Such failure does not convince us that genuine filth typhoid does not exist in India. The evidence in this report is, to our mind, conclusive that the enteric fever of India is, in all essential particulars, the same as that of Europe; and it is difficult to believe that this filth factor, which is so powerful in this country, should not operate in India, however difficult it may be to prove it. We have, in our notice of Dr. Gordon's report, shown that, however perfectly filth may be excluded from modern barracks in India, and from the water-supply, it is impossible to expect that soldiers who suffer from this disease, and who freely frequent places not so guarded, and drink water and other beverages not under the control of the sanitary authorities, have not been exposed to filth causes. The author of this report candidly admits as much; for, in the twenty-seventh paragraph, he thus expresses himself: "While, however, I am very sceptical as to the applicability or adequacy of the causes assigned by European authorities to account for all, or anything like all, the facts in this country, I would, on the other hand, guard myself against being supposed to deny their existence. On the contrary, there is no doubt that enteric fever is an infectious disease, capable of spreading in a community under certain circumstances, and of adhering to, and forming part of, the medical history of a corps for a long time; and that many cases are traceable to a common cause, such as contaminated water or organic-laden air." We entirely concur in this opinion, for the reasons given above. It is not our business to reconcile it with the confident statement before given, viz., the failure to trace out the intimate connection of the disease with filth causes or specific infection.

Here we must pause; we cannot do so without once more thanking the author, or authors, of this report, which we consider a valuable contribution to military medical and sanitary science.

A NEW trial has been ordered in the Hampstead Hospital case, the defendants to pay the costs of the first action.

PROFESSOR ERB of Heidelberg has received a call as Professor in the Policlinik in the University of Leipzig; and Professor Czerny of Heidelberg has been invited to become Professor of Surgery in Prague.

DR. ADAMKIEWICZ, assistant in the Clinic for Nervous Diseases in the Charité Hospital, Berlin, has been appointed Ordinary Professor of General and Experimental Pathology in the University of Cracow.

MR. CHURCH reported to the Chemical Society, at its meeting of November 20th, the second part of researches from which he deduces that white foliage does not possess the power, even in sunshine, of decomposing the carbonic acid in the air.

AT the meeting of the Liverpool Medical Students' Debating Society, held on Friday, the 19th instant, under the presidency of Dr. Carter, Mr. Taplin read a paper on "The Army Medical Service". The majority of the members present voted in favour of Mr. Taplin's motion: "That the Army Medical Warrant (1879) is equitable, just, and likely in every way to prove beneficial to the service."

IN one of the hospitals at Berne, fifty patients suffering from severe frostbite were treated last week.

THE case of the death of Whitwell, who is alleged to have had fatal pneumonia induced by ill-treatment in Pentonville prison, will again call public attention to the health-arrangements of that prison.

DR. LETTS, formerly assistant to Professor Crum Brown in Edinburgh University, and latterly Professor of Chemistry in Bristol, has been appointed to the Professorship of Chemistry in Queen's College, Belfast, *vice* Dr. Thomas Andrews, resigned.

A PUBLIC meeting held at Eastbourne, having decided to erect a local hospital in memory of the Princess Alice, it is announced that £2,000 has already been subscribed for the purpose, leaving a like sum yet to be raised.

MEASLES is very prevalent at Bolton. There have been within a month two hundred and ninety-four cases, forty-four of which have ended fatally. The Medical Officer of Health has advised the closing of the schools.

THE managers of the Royal Institution have awarded the Actonian Prize of £105 to Mr. G. S. Boulger, F.L.S., F.G.S., for an essay on "The Structure and Functions of the Retina in all Classes of Animals, viewed in Relation with the Theory of Evolution".

DEPUTY SURGEON-GENERAL JOHN ANDREW WOOLFRYES, M.D., C.B., the Principal Medical Officer of the British forces during the Zulu war, has been gazetted Commander of the Order of St. Michael and St. George.

OWING to the ravages of fever in the Karnal, Gurgaon, Rohtah, Delhi, and Hissar districts of the Punjab, the officiating sanitary commissioner, Dr. Adam Taylor, has been ordered to proceed to these places with the view of ascertaining the cause of the epidemic.

ON the 11th instant, a new cottage hospital for Evesham and its neighbourhood was opened with much ceremony. The building has been built at a cost of £1,131, and affords accommodation for eight patients in four wards, two for either sex, together with operating-room, mortuary, and the usual offices.

THE Court of Appeal has dismissed the appeal of the London and South-Western Railway Company against the verdict by which a jury had awarded £16,000 damages to Dr. Phillips, a physician who had sustained injuries upon the company's line, which had incapacitated him from the exercise of his profession.

M. CAZENEUVE reports to the Académie des Sciences concerning the influence of phosphorus on the urinary secretion. Experiments on the dog and the cat show that phosphorus, given in toxic doses, causes increase of urea, phosphoric acid, sulphuric acid, the total nitrogen, and iron. The author disagrees with the view of certain physiologists who regard the liver as the principal organ formative of urea.

AT the Brackley (near Banbury) petty sessions, Mrs. Rhoda Bishop of Culworth House, the widow of a surgeon, was committed for trial on the charge of receiving into her house two lunatics without being licensed to do so under the Lunacy Regulations Act. She was admitted to bail. The prosecution was instituted by the Lunacy Commissioners.

THE death of Mr. James Long of Liverpool is announced. Mr. Long had attained his seventieth year, and had for thirty years lectured on anatomy and surgery in the Liverpool Royal Infirmary School of Medicine. He also acted for many years as one of the honorary secretaries of the Royal Infirmary. Mr. Long was highly esteemed among his professional brethren; and had contributed much, up to a late period, to the medical journals. We shall publish an obituary notice in an early number.

A PAPER with the curious title of the *Rag-Baby* is forwarded to us from Philadelphia, printed with green ink on white paper. We are distinctly of opinion that printing in green on white paper is a very great improvement over black upon white. It is probably more expensive and troublesome than black; but it is undoubtedly much more agreeable to the eyes; and though at first sight a little strange, as being an unaccustomed effect, it is, on the whole, not unattractive.

AT the last meeting of the Linnæan Society, Mr. Holmes exhibited, for the first time in England, the leaves, flowers, and portion of the trunk of the tree (*Andira araroba*) yielding the so-called Goa powder. This vegetable secretion appears to destroy and replace the woody tissue of the heart-wood. The source of the powder was long enveloped in mystery, but, from its containing chrysophanic acid, it was believed to be the product of a fungus. Recently, it has been found that the cane grows in Bahia, is sent to Lisbon, thence exported to the Portuguese colonies in the East, where it is used as a specific for ringworm.

DR. BROWN-SÉQUARD has laid before the Académie des Sciences some recent experimental researches on "a new property of the nervous system". Certain parts of the nervous system, he says, when under irritation, cause suddenly, or nearly so, a notable increase of the motor or sensitive properties of other parts of the system. Thus, transverse section of a lateral half of the base of the brain increases the motor properties of the parts of this centre before the section, while the opposite is produced on the opposite side; the same with section of the sciatic nerve, or a lateral half of the dorsal or lumbar cord.

NOWELL *v.* WILLIAMS.

IN the Common Pleas Division, on Saturday, an application was made on behalf of Dr. Nowell, who recently brought an action to recover damages from Mr. Williams, his brother-in-law, for alleged false imprisonment in a lunatic asylum, on which we commented at the time, for a rule calling upon Mr. Williams to show cause why there should not be a new trial. The application was made upon various grounds. In giving judgment, Mr. Justice Lindley said the opinion of the court was that the verdict was not against the evidence; but they held that a letter written to the defendant, and which had been admitted as evidence, should have been kept out. The rule was therefore granted on the ground of improper reception of evidence.

THE REGISTRATION OF INFECTIOUS DISEASE IN SWITZERLAND.

THE Board of Health of the Canton of Zürich have just taken an important step with regard to the prevention of infectious diseases. They have ordered that every case of such diseases, however slight, is to be reported to them; and for this purpose they have furnished every medical man with books provided with counterfoils. Sanitary commissions, instituted with this object, will be obliged to send instructions to the medical men when the cases are considered serious, and will prescribe the means of disinfection, the isolation of the sick, and other precautionary measures. The results of the information sent by the practitioners will be published every month, under the direction of the Board of Health,

THE LATE EXAMINATION IN THE MEDICAL DEPARTMENT OF THE ARMY.

SEVENTY-FOUR candidates presented themselves before the London examiners. When we consider the brief interval between the publication of the warrant and the examination, the number of candidates must be considered satisfactory, and good evidence that the new terms are regarded in the schools with favour. Of the above, sixty-five candidates were selected by the examiners; but, as seven more came up to the minimum standard, they were accepted by the authorities, evidently on account of the pressing need for army medical officers in all quarters. Judging from the marks gained in the London examination, we augur well of the qualifications of the majority of the successful candidates; Mr. Barker, who heads the list, has scored 2,590 marks out of 3,100, which is the limit for the compulsory examination, and Messrs. Keogh and Clark are not far behind him, the former with 2,525, and the latter with 2,330 marks. Mr. Clark is, we understand, a son of Dr. Andrew Clark. Eighteen of the candidates have gained over 2,000 marks, and many others fall little short of the same respectable standard.

FOR PIGS OR MEN?

IT would be very interesting, the Editor of the *Analyst* thinks, if some of the millers would tell us if alum is ordinarily mixed with pigs' food. Of course, public analysts have no concern with the matter directly, but when samples of "flour fourths" are said to be intended for the food of pigs, and not men, the question naturally arises, "In what way can the alum do good to the pigs?" It has never been publicly stated that swine showed any preference for bread artificially whitened.

THE HEALTH OF QUEEN MARGHERITA.

EVERYONE who has seen the fair and amiable Queen of Italy must take an interest in her. She is the idol of the nation, and, by her tact, courtesy, and affability, does much to ensure the popularity of the House of Savoy, and to break down the barriers which still separate the "Neri", or adherents of the Vatican, from the Court at the Quirinal. All parties alike regret her illness. She left Rome in the beginning of July in perfect health, but exposure to the night air at the Lido in Venice during the summer brought on a slight ague, the intermittent attacks continuing even after her arrival at Monza. She improved rapidly after going to Bordighera, having had no further ague-fits there; and now it is satisfactory to learn from Professor Baccelli, who was sent from Rome to see her, that all that remains is weakness and anæmia, with liability to slight hysterical attacks. She would return to Rome at once, were it not thought more prudent for her to avoid the fatigues of the necessary receptions and entertainments of this time of the year. There is no truth in the report that the Queen is *enceinte*. It arose from the fact of Professor di Martino of Naples, a well-known obstetrician, having been summoned to Bordighera to take medical charge of her Majesty during the absence of the ordinary physician in attendance, Dr. Rossi.

AUTO-EXPERIMENT.

OF the devotion of the late veteran M. Michel Chevallier to the cause of scientific inquiry, an interesting anecdote is related from the early part of his career. A case of poisoning was to be tried at Paris, in which acetate of morphia had been used, and Chevallier, who had sold the salt to the murderer, was summoned as a witness. Anxious to have the full nature of this hitherto untried poison well established, and being limited as to time, he immediately undertook a thorough investigation of its toxic effects on his own system, and succeeded so well that at the trial he was able to give a detailed description of the symptoms attending the use of the drug in question.

PAYING PATIENTS IN ST. THOMAS'S HOSPITAL.

WE hear that a scheme has been submitted to the Charity Commissioners by the authorities at St. Thomas's Hospital, which contemplates the admission of "paying patients" to occupy the wards now vacant in that hospital under two arrangements. The first part of the scheme includes the establishment of "paying wards" on the home hospital system, in a part of the hospital which will be set aside for that purpose. They will have separate medical administration and a medical officer in charge, who will be paid out of the funds supplied by the payments of the patients. Any patients admitted to the wards will have the option of calling in consultation any medical man whom he pleases as his own visiting attendant, and he will arrange separately with such medical attendant as to fees, as though living in his own chambers. Another part of the scheme contemplates admission at lower rates to the ordinary wards of patients, who will be scattered throughout the wards, and who will make payment on a scale calculated only to pay the cost of maintenance. In this way, it is intended that the whole of the available beds at St. Thomas's Hospital shall be utilised. This scheme, although possibly open to criticism in some of the latter parts, is a palpable improvement

on that at first suggested, and includes many of the modifications which we pointed out as necessary in order to make it in any way practicable.

A NEW HOSPITAL.

THE sum of twenty-four thousand pounds has recently come into the possession of the little town of Halesworth, in Suffolk, for the purpose of building a hospital. This sum was left by a Mr. Patrick Steed, who came to Halesworth in 1824, and established there a large business as a maltster. By his will, the money was to be applied for founding a hospital after the decease of his wife, who died in 1876. A difficulty having arisen owing to the construction of the will, the amount has only lately been received; but the inhabitants have already had a meeting on the subject, and an admirable site has been procured at a trifling expense.

HOSPITAL SATURDAY.

THIS movement, so far as the metropolis is concerned, has never attained great success. Relatively to the other English towns, the amounts raised in London have been insignificant and unsatisfactory. If all the managers of the London hospitals were canvassed, we believe it would be found that there is a widespread feeling that Hospital Saturday has proved a failure. This opinion will be strengthened by the circular which has just been issued by the Council. In it they display much ignorance of the mode of management which prevails universally at the London hospitals. They declare, in this circular, that the Council are entitled to all the privileges accorded to other subscribers. This sentence is loosely worded; and it simply amounts to the assertion that that Council are entitled to nominate a governor to each institution which receives a grant. Many of the questions issued by the Council are regarded as unnecessary, inquisitorial, and prying; and, altogether, the hospital managers would not be sorry to see the movement dropped. This feeling is heightened by the knowledge that many of the patients to whom the Council give tickets are unfit objects of charity. It is notorious that the working-classes themselves regard the movement with anything but favour; and the small success hitherto attained seems to warrant the conclusion that Hospital Saturday in London could well be dispensed with.

A NEW CONVALESCENT HOME.

THE Teignmouth Infirmary was established in 1848, and at that time it was the only medical institution available for the towns of Dawlish, Newton, and Teignmouth. At each of the two former towns, however, cottage hospitals have been successfully established, and in consequence the income and the work of this institution have been seriously reduced. Under these circumstances, the managers have availed themselves of an opportunity which may not recur, and have sold the present infirmary buildings to the Great Western Railway Company. They have further decided to change the institution from an acute to a convalescent hospital. This decision is a wise one, as more convalescent homes are greatly needed. We commend the new scheme to the sympathy and support of those who take an interest in medical charities.

THE GASTRIC GLANDS OF MAMMALS.

MR. LANGLEY, in a recent contribution to the *Proceedings of the Royal Society*, reports that in the glands of the fundus of the stomach of all mammals investigated, viz., dog, cat, rat, and rabbit, the chief cells are, in rest, crowded with conspicuous granules; the border cells are either without conspicuous granules or are finely granular. During digestion, the granules in the chief cells diminish. The stomach of the rabbit has certain structural peculiarities; the principal of these is that a large portion of the greater curvature contains glands, in which the chief cells are not coarsely granular. The glands of the greater curvature contain scarcely more pepsin than the glands of the smaller curvature and pylorus. But in the smaller curvature and pylorus there are few, if any, border cells; whilst there are many in the greater curvature. Hence the border cells are not directly connected with the formation of pepsin. The glands of the fundus contain a very much larger amount of pepsin than the glands of the greater curvature; that is, where there are coarsely granular chief cells there is a large amount of ferment. Further, during digestion, the fundus-glands contain less ferment than in hunger—a fact observed first by Grützner—and it is during digestion that the chief cells have fewest granules. Hence, the conspicuous granules in the chief cells are directly connected with the formation of ferment. Since in passing from the fundus to the greater curvature we meet all stages of granularity in the chief cells, and since the chief cells of the greater curvature do not differ in any essential point from the pyloric gland-cells, he concludes with Heidenhain that the pyloric gland-cells and the chief cells of the fundus are fundamentally the same. He considers, however, the chief cells of the fundus to be a highly differentiated form of the pyloric gland-cells, a form more especially designed for the production of pepsin, and probably other solids of the gastric secretion.

A MUCH-NEEDED REFORM.

THE Council of the Hospital Sunday Fund, in setting apart one per cent. of the amount annually placed at their disposal, to enable them to give surgical instruments and appliances to deserving people, have taken a wise course. The regulations under which these appliances will be distributed are highly to be commended. Any minister of religion who makes application for a patient in writing to the Secretary of the Fund will receive a proper form of recommendation, which can then be taken to any of the participating hospitals or dispensaries. When the patient presents this recommendation to the institution he has selected, a member of the medical staff examines the case, and orders the necessary instrument, which he afterwards sees properly fitted. The surgeon then directs the patient where he can get the appliance he needs. As soon as he has obtained it, and it has been fitted to the satisfaction of the medical officer who has seen the case, an invoice, bearing the hospital stamp, is forwarded to the Secretary of the Fund, who in due course pays the instrument-maker. By this simple method, an incalculable amount of good has been already done, and all the abuses incidental to the system in force at the various surgical aid and truss societies are avoided. This new system benefits the patients who are really deserving, it simplifies the work of the medical staff of the hospitals, and materially aids the managers, who are by its means able to reduce the sum they were formerly compelled to spend upon surgical appliances. Mr. Henry N. Custance, the Secretary of the Fund, deserves great praise for the simplicity and completeness of the new system, which is sure to accomplish much good to all concerned.

MEDICAL HEROISM.

A CORRESPONDENT of the *Times of India* says that fever is raging in Kattywar, and adds: "The senior medical officer is sticking to his work with a devotion that commands admiration, seeing that he, too, is suffering from the plague of fever, and has to rise from his bed constantly to attend to the wants of suffering humanity. The province is fever stricken, and has been so for the past three years."

THE PROFESSION IN CAPE COLONY.

GLOWING accounts have been circulated in the daily press of the prospects of medical men going out to Cape Colony. In order to prevent any disappointment to gentlemen who may be induced to try their fortunes there, we publish a plain unvarnished statement of facts from a reliable correspondent. He writes:

Medical men are rushing out here in large numbers; and, from the sparse population, it is quite impossible they can all obtain remunerative practices, while the disadvantages of living are very great. The only compensating influence is the climate, which brought me here, and my family; but, as to society, there is simply none. Living is high, and house-rents enormously so. The Boers are a disagreeable set, and their language is something indescribable. They are very ignorant, and expect their medical man to divine their complaints by simply looking at them—feeling their pulse, examining their tongue—and they simply withhold any information that would throw light on their disease; and this is their favourite mode of proving a skilful physician; if he be wide of the mark in guessing, then he is set down as of no use. Then they are

prejudiced against Englishmen and the English Government. In short, taking all the disadvantages into account, I do not think the remuneration greater than the average practice at home. Quacks are to be found everywhere, going from farm to farm, and I have reason to believe extract more money from the Boers than the legitimate practitioner. The distances to be travelled are very great, and the sleeping accommodation not of the most comfortable or agreeable kind. The food may be plentiful and wholesome, but it certainly is far from tempting in appearance. In short, I would not advise anyone to come out here.

An article in the *Graaff Reinet Advertiser* also warns young medical men from leaving England for Cape Colony with exaggerated ideas of stepping into easy and lucrative practice at once, whilst, as a matter of fact, the medical profession is now pretty well represented in the colony. When the Transvaal becomes more settled, and the country is brought thoroughly under British rule and administration, there may be a good field for medical men; but at present, as far as Cape Colony is concerned, the representatives of the healing art are numerous enough, and many of them are only making a living.

THE PRINCESS ALICE MEMORIAL IN DARMSTADT.

THE form which it has been decided that the English memorial to the late Princess Alice shall take is the endowment of the Hospital and School for Nurses in Darmstadt, which Her late Royal Highness founded, and in which up to the time of her lamented death, she took a great and practical interest. Indeed, the loss of the support which the late Grand Duchess gave to this institution would have seriously imperilled its efficiency, but for the aid which the trustees of the English Memorial Fund are enabled to permanently guarantee to it. The surplus, after the endowment of the hospital, will be given towards the maintenance of other kindred institutions in which the Princess was personally interested. The following inscription will be placed on the hospital in Darmstadt: "This Hospital and School for Nurses, founded by Her Royal Highness the Grand Duchess of Hesse, Princess Alice of Great Britain and Ireland, has been endowed for ever as a memorial of Her Royal Highness, by those in Great Britain and Ireland, India, and the Colonies who reverenced her pure and noble character and her life of loving self-sacrifice. Si monumentum requiris circumspice. Obiit December 14, 1878."

METROPOLITAN HOSPITAL SUNDAY FUND.

THE annual general meeting of the supporters of this fund was held, at the Mansion House, on December 18th—Sir Rutherford Alcock, in the unavoidable absence of the Lord Mayor, presiding. The Chairman said that the Council had every reason to be satisfied with the result of this year's collection, it being larger than that of last year, notwithstanding the prevailing commercial depression. It was, therefore, evident that the interest which the public took in the fund was broadening and deepening; and it was further gratifying that the distribution of the funds had given general satisfaction. On the motion of the Rev. Dr. Kennedy, seconded by Mr. O. E. Coope, M.P., it was resolved: "That the laws of the constitution which have been in force during the past year be continued;" and the 13th of June was fixed for the next collection on behalf of the fund. The amount realised by the collection this year was £26,501, as compared with £24,904 last year. A discussion took place as to the propriety or otherwise of admitting the Royal Hospital for Incurables to the benefits of the fund, and the question was referred to the Council for consideration.

THE STATE OF MEMPHIS.

YELLOW fever is now conquered by the winter cold for the time at Memphis, and the citizens are returning. We are glad to read that, at the conference of the Sanitary Commission of the National Board of Health, the city authorities, and the committee appointed by the citizens' mass-meeting, David P. Hadden, representing the citizens' committee, pledged strict compliance on the part of the people in all suggestions advanced by the committee for the improved condition of the city. A new survey of the city is to be made. All our British experience is in favour of radical measures of local sanitation; destruction of all the sources and foci of contagion, for thorough disinfection is almost impossible under any circumstances, and complete purification of the soil, air, and water; effective canalisation, and complete removal of excreta; with an effective sanitary organisation for the immediate notification of disease, and means of ready and complete isolation. Our experience of quarantine, and our observation of its working everywhere, point it out as the most insufficient and untrustworthy of precautions; although at given times and places it becomes inevitable. But it proves nearly always a desperate resource and a broken reed.

THE "DREADNOUGHT" HOSPITAL.

THE coloured illustration in the Christmas number of the *Graphic*, by J. C. Dollman, in which the seamen of all nations are represented descending the staircase to the Christmas dinner in Greenwich Hospital, is an interesting study. In the foreground, a native of Cashmere is leading an aged pensioner; and, behind them, is a naval reserve man, with his arm in a sling, who has under his charge a *Warspite* boy, suffering from ophthalmia. Still further in the rear, are representatives of America, Portugal, France, Germany, Sweden, Russia, Italy, and Spain. Still higher up the staircase, we notice natives of China, the East and West Indies, South America, Brazil, Japan, and many other countries. All the faces are true to life, and were either sketched by the artist or taken from photographs. We understand that Mr. Dollman is painting a large picture on this subject for the next Royal Academy. In no other place can the lover of anthropology more readily study the distinctions of race; and anyone who is interested in the subject had better pay Mr. Burdett a visit at the hospital at one o'clock on Christmas Day, when the annual dinner will take place as usual. It is to be hoped that this hospital, which is one of the few entirely free hospitals of the country, will receive a due proportion of the Christmas donations of the charitable. We know of no more deserving institution.

THE MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON.

MR. WILLIAM JOHNSON SMITH, Hunterian prizeman, has discharged the duties of Port Medical Officer for many months, during the late Dr. Harry Leach's illness. As *locum tenens*, he has won golden opinions from all with whom he has been brought into contact; and, should he become a candidate, his success should not, and probably will not, be a matter of uncertainty. Mr. Johnson Smith has for ten years acted as one of the medical officers of the *Dreadnought;* and his knowledge of seamen, and of the duties of Port Medical Officer, are considerable. It appears, however, that, until the salary is fixed, no steps will be taken to fill up the vacancy; and, meanwhile, Mr. Smith will continue to act as Port Medical Officer. So important a post should not be inadequately paid; and we venture to hope the Corporation of London will not offer less than £600, with the prospect of an increase to at least £800. Such a sum is the smallest amount that can be justly given if regard be had to the remuneration of other medical officers of health throughout the country. Dr. H. Campbell Pope, who obtained the gold medal in hygiene of the London University, is a highly qualified candidate, and will, no doubt, receive much support if Mr. Smith elect not to contest the appointment. To the candidates for the office must also be added the name of Mr. Browning, the Medical Officer of Health for Rotherhithe, who has, by many excellent papers and by reports of unusual value, shown high qualifications for such an appointment.

ELECTRIC PHENOMENA OF THE TISSUES.

AT a recent meeting of the Physical Society, Dr. Shettle of Reading read a paper on the influence of heat upon certain forms of induction-coils, considered more especially in relation to the inductive power which the blood exercises on the various structures of the body. The author found that, when a copper and a zinc wire were insulated from each other by parchment-paper and paraffined silk, and wound in close proximity to each other, an induced current was indicated on a galvanometer whose terminals were connected to the neighbouring ends of the zinc and copper wires respectively, the other ends being left free. When the latter were connected across, the deflection was *nil*. On raising the temperature of the two wires by causing hot water to flow

inside the coil into which they were wound, the deflection was largely increased. These experiments led Dr. Shettle to imagine there is a similar action in the animal body. The heart is made up of nerves and muscular fibres winding spirally, and some of these wind round each other so as to form a spiral cord round which the blood-capillaries also wind. Dr. Shettle compares these nerve and muscle bundles to the coils of zinc and copper wire in his experiments, and infers that electric currents may be induced in them as in the wires. The flow of the warm magnetic blood would also tend to produce currents in them. Dr. Shettle further drew attention to the fact that animals live and move in a magnetic field, and that electricity must be generated in them by their movements internal and external.

SECTION OF THE CILIARY NERVES.

THE origin of sympathetic ophthalmia is still a matter of discussion; it is, however, generally referred to the irritation of the ciliary nerves, and not to that of the optic nerve. According to the *Journal de Médecine et de Chirurgie Pratiques* for December 1879, M. Abadie has consequently come to the conclusion that by destroying by section the influence of these nerves, he would arrive at the same result as by enucleation of the eyeball. He has obtained this result in a good many cases. The section of the ciliary nerves did not modify the state of the eyes when the cornea was transparent; in the other cases, the patient tolerated the presence of an artificial eye, and sympathetic ophthalmia has thus been arrested.

SCARLATINA AT DERBY.

DURING the last eighteen months, scarlatina has been very prevalent at Derby. The outbreak commenced early in the third quarter of 1878, and at the termination of that quarter 33 deaths had been registered from it. Its virulence continued, and by the 31st December the number had increased to 61. During the first quarter of the present year, 63 more deaths from it occurred; in the second quarter, 71; and in the third quarter, 52. Thus, in five quarters, no fewer than 247 persons have died from this disease. In one of his reports on the subject, the medical officer of health ascribes the mortality to 1. The ignorance and indifference exhibited by people in going to and from the infected houses, and allowing their children to do the same; 2. The allowing of persons during the convalescent, but infectious, stage to go about the streets, or to school, or to play; 3. The ignorance on the part of those in care of the sick as to the means to be adopted with regard to infected clothing, bedding, etc.; 4. The overcrowding of houses by one family; 5. The fact that many of the sufferers are children whose parents object to allow them to go to hospital; and, finally, 6. The absence of knowledge as to the existence of such cases until a death occurs. Now, whilst some of these causes of prevalence cannot be overcome until people can be educated to a sense of the danger they are incurring to themselves and their neighbours, there are others that can be dealt with under the provisions of the existing laws on the subject; and we cannot doubt but that, if these laws had been put in force with adequate stringency at Derby, such a distressing record of scarlatina fatality would not have been presented. Especially are we surprised at the little effort that seems to have been made to secure isolation of patients. The Corporation have an infectious hospital, to which cases might have been removed; but this was in such a state that the medical officer of health felt that, before he could propose its opening to the Town Council, the wooden walls of the building should be lined, so as to keep out the wind and the cold, for "it would not be safe to locate patients in it who were afflicted with such severe maladies as scarlet fever." It is true that certain arrangements were made by which some patients were treated at the Derbyshire Infirmary; but that the outbreak should be allowed to attain such enormous dimensions without some really active steps being taken to secure isolation, is to us inexplicable. There would seem, moreover, extra reasons why the infectious hospital for the district should be thoroughly efficient and in readiness, since Derby has not only taken powers to itself under Section 93 of its Improvement Act of last session to require the notification to its medical officer of every case of infectious disease in the district, but has also taken powers similar to those of the Jarrow Town Council (see page 471 of the present volume), which can only be carried out with thorough efficiency when the Corporation fever-hospital is in complete working order.

THE CASE OF BADER VERSUS GORDON.

IN reference to this case, which we noticed in the JOURNAL of December 13th, we have received the following note from Mr. Bader.

"In June 1875, Mr. Gordon, aged 25, a barrister, consulted me for cataract in the left eye. He being myopic, I was doubtful as to the condition of the retina. At an interval of a week, he was examined twice. There was only cataract; I therefore explained to him that, to improve sight, the cataract would have to be removed. Mr. Gordon expressly wished not to be detained from business; he had the treatment by extraction, and that by absorption, explained to him; he selected the latter, on my assurance that he would not be confined to his bed. He clearly understood that, to render absorption more safe, there should be two operations: first, iridectomy; then the needle-operation. The appointments for these operations were made beforehand with Mr. Gordon. Why I should explain to a patient the mechanical details of an iridectomy, especially if he is to have an anæsthetic, I cannot see, in spite of the rider of the jury. Is it kind or wise to depress the patient's mind by such descriptions, and then to give an anæsthetic? Both operations went on well. After the needle-operation, Mr. Gordon called once, and then only reappeared in 1878. I again advised the treatment of the cataract; and, he discontinuing attendance, I sent him a bill for work done in 1875. Then Mr. Gordon refused payment, accusing me of malapraxis. Annoyed by this, I brought the action. To keep my name out of the papers, I was advised by an old friend to withdraw my claim; and, by appointment, saw Mr. Gordon at his chambers, and made the proposition. When Mr. Gordon insisted upon my paying his costs, which his solicitor put at £100, later reducing them to £60, I declared that the case should go on.—Mr. Gordon, from 1875 to 1879, was never detained from business; and, by the removal of the cataract, especially the iridectomy having been done so long ago, can have useful sight restored whenever he pleases. As to the advisability of removing cataract from one eye in young persons, the other eye being sound, Mr. Bowman, Donders, and von Gräfe advise it especially in young persons. Mr. Critchett says no; but, in his evidence, states that, quite lately, 'he had done the operation for two ladies'. If, for appearance sake, Mr. Critchett thinks himself justified to operate, how much more was I right in recommending the operation to a young barrister for the improvement of sight. Mr. Critchett, in his evidence, states that I never did any work for him, or saw patients for him. After the trial, to enlighten Lord Coleridge on this point, I produced testimonials, given to me about eighteen years ago, in which Mr. Critchett, in very flattering terms, expresses his satisfaction at my attendance on his patients at Moorfields, whenever he went for a vacation. I much regret the animus shown by Mr. Critchett, though his kind disposition towards me of years long gone by will always be a pleasant recollection."

We have to add, after reading this note, that our observation expressed agreement with the rider of the jury and the observation of the judge; and we are still of opinion that, before operating on a case where binocular vision still exists, the patient should be amply warned of the risks of operation; and we consider that, if thus amply warned, Mr. Gordon might not have undergone iridectomy under chloroform at the surgeon's house, afterwards going home alone, and undertaking next day a journey by rail.

VERTIGO A TYMPANO LÆSO.

OUR Paris Correspondent writes: Dr. Bonnafont, has recently addressed a note to the Académie des Sciences on the different forms of vertigo and nervous phenomena due to inflammation of the tympanic membrane and middle ear. He described a certain number of pathological conditions of the tympanum which produce nervous phenomena, which Flourens and von Goltz attributed exclusively to the semicircular canals. Flourens taught that, according as these canals are totally or partially divided, the animal submitted to operation turns to the right or to the left, or preserves its equilibrium, but appears to be seized with vertigo. According to von Goltz, the semicircular canals are the principal organs of the sense of equilibrium of the head. Dr. Bonnafont observed a great number of analogous phenomena, but which were determined by inflammation of the membrana tympani and of the middle ear, com-

pression of this membrane from without inwards by hardened wax, polypi of the auditory canal or by accumulation of mucus in the drum of the ear, causing a pressure on it from within outwards, communicating at the stapes, and from thence to the entire apparatus of the internal ear. All the patients suffered from vertigo, titubations, and sometimes even vomiting. None of them experienced the movement of rotation, but often want of equilibrium.

CLINICAL SOCIETY OF LONDON.

THE last two meetings of the Clinical Society have been chiefly devoted to the question of excision of the hip-joint. At the meeting of November 28th, Mr. Tyson of Folkestone read particulars of an interesting case of traumatic aneurism of the scalp, the result of a blow produced by a stray shot from a gun. Mr. Croft next exhibited a little girl, aged four years, whose two hip-joints he had excised for symmetrical disease, at an interval of three weeks, some five or six months beforehand. A full report of this case appeared in last week's BRITISH MEDICAL JOURNAL. In the course of the discussion, Mr. Croft mentioned that he had now done the operation in forty-five cases; and Mr. Parker observed that, in five of eight cases excised by himself, he had found sequestra of dead bone in the joint. Such experience being unprecedented in the practice of the other surgeons present, Mr. Parker was requested to furnish notes of his cases; and Mr. Croft was further desired to give particulars of all his cases to the Society at a subsequent date. This he accordingly did with praiseworthy readiness at the last meeting, and Mr. Parker also read notes of his interesting cases. We are unable this week, through pressure on space, to report the proceedings; but may mention that records of the forty-five cases had been laboriously arranged by Mr. Croft in tabular form for ready reference, whilst twelve of his patients had been brought from all parts of the country for inspection by members. Most of the operations had been done antiseptically, and showed excellent results. He gave the indications for the operation, and especially insisted on the value of excision at a comparatively early stage of hip-joint disease. The meeting was prolonged for three-quarters of an hour; and at its termination Mr. Croft satisfied the surgeons still present that four of his patients could stand steadily and firmly on the leg operated upon eight, seven, four, and two years ago respectively. Messrs. Holmes, Hulke, Lister, Morrant Baker, John Wood, Mac Cormac, and Howse took part in the debate which followed; and the President appointed Messrs. Hulke, Holmes, Bryant, Croft, and Howard Marsh as a Committee to investigate and report to the Society on the whole subject under discussion. Mr. Croft, in his reply, drew particular attention to the specimens of bone excised which were brought to the meeting for inspection, and which showed that the disease of the joint in all the instances had been far advanced before recourse had been had to the operation. He also insisted on the importance to the patient's subsequent progress of preserving the great trochanter.

CHOLERA IN BRITISH BURMAH.

THE population of British Burmah, as given in the Sanitary Commissioner's Report for 1878, is 2,952,296, showing an increase of 17,315 over that of the preceding year. The birth-rate was 19.9 per 1,000, as compared with 21.08 in 1877; and the death-rate was 17.37, as compared with 17.44 in the previous year. The registration of vital statistics was, on the whole, slightly less efficient than it was in 1877; and, as pointed out by the Sanitary Commissioner, the statistics of both years are evidently very far from correct. The total number of deaths from cholera was 6,759, or 2.28 per 1,000 of the population. The number in the previous year was 7,276. Out of 14,559 villages from which returns were received, 189 were affected by cholera. A serious epidemic occurred at Akyab in the month of May. It seems to have been imported by a native of Chittagong, who had left Rangoon, where the disease was very prevalent, on the 21st April, and reached Akyab on the 24th, dying there the same day. The next death occurred in the same house on the 6th May; there were four deaths in houses close by on the 7th June; and from that time the disease increased in force until, up to the 6th June, 61 persons residing in the neighbourhood of the house in which the first death occurred had died of the disease. It spread from thence all over the town, and caused, up to the 31st July, the deaths of 235 males and 49 females, as well as 10 deaths in August. The disproportion between the number of males and females who died was because the disease was almost entirely confined to the floating population, natives of Chittagong and India, who are, as a rule, unmarried males. They are very filthy in their personal habits, and are most careless as to the purity of the sources whence they derive their supplies of drinking-water. The Sanitary Commissioner saw them coming from a cholera-infected quarter (where dejecta must have been plentiful on the ground), and walk into the tanks to fill their water-vessels. It is not, therefore, to be wondered at that they suffered terribly from the disease. Epidemics also occurred in the Kyouk-hypoo and Moulmein Gaols; and in the months of June and July there was a serious outbreak at Konityua and other stations on the Irrawaddy Valley Railway. In the district of Rangoon, there were 694 deaths from cholera during the year, 144 occurring in June, and 416 in July. It principally affected natives of India; and its prevalence amongst them was caused by overcrowding, dirt, and impure water. Small-pox caused 1,406 deaths, or .47 per 1,000 of the population. Out of 14,459 villages from which returns were received, small-pox occurred in 28 only. To fevers were attributed 28,821 deaths, or more than 56 per cent. of the total number, as compared with 26,601 in the previous year. The number of deaths from bowel-complaints was 4,640, as compared with 6,879 in 1877. The subject of sanitation seems to have received considerable attention during the year in relation to both towns and villages; and at Rangoon and Prome the municipal commissioners devoted especial attention to the matter. A series of simple suggestions on village sanitation, drawn up by the Sanitary Commissioner, has been translated into the vernacular, and 10,000 copies have been distributed amongst the rural population. Moreover, the desirability of introducing simple sanitary teaching in the schools of the province has been brought to the notice of the Director of Public Instruction.

THE HOSPITALS OF MADRAS.

THE Report for 1877 of the Surgeon-General of the Indian Medical Department, on the Administration of the Civil Hospitals and Dispensaries of the Madras Presidency, has only been recently published. From it we learn that, on December 31st of that year, there were 165 hospitals and dispensaries in operation, eleven new dispensaries having been opened and one closed in the course of the year. The chief obstacle to the extension of medical relief in the provinces is the paucity of medical subordinates; and, although the means of medical education have been increased, they appear to be still quite inadequate to furnish the number of medical agents required to meet the urgent wants of the Presidency. From most districts there are recurring demands for new dispensaries which cannot be opened, simply because there are no subordinates to take charge of them. The suffering and sickness of the late famine crisis brought home to the poorer classes the great value of medical aid; and it may therefore be expected that, as the country is restored to its wonted prosperity, the demands for new dispensaries will greatly increase. The total number of available beds in the existing institutions is 1,872 for males, and 1,207 for females. Due attention seems, in most instances, to have been given to the repair and conservancy of the buildings. The total number treated in the presidency during the year was 82,820 in-patients, and 882,239 out-patients, or a total of 965,059 cases as against 820,595 and 754,348 in the two preceding years. The most remarkable feature in the figures for 1877 is the great increase of in-patients, the number being more than double that of the admissions of in-patients in 1876, and very nearly three times that of those admitted in 1875. This is no doubt a result of the famine, as its victims were beyond the resources of out-door relief. The daily average number of in-patients was 3,819, against 1,792 in the preceding year. The death-rate amongst in-patients was 199.14, and, amongst out-patients, 0.77 per 1,000. The privations of famine account for the enormous mortality.

The scarcity of both food and water over large tracts of the Presidency had a most disastrous effect on the health of the people; and, although actual starvation was only seen in certain districts, the health of the poorer classes in other localities was seriously affected by the dearness of all kinds of provisions. The young, the infirm, and the old suffered most, but many strong adults also fell victims to the combined effects of starvation and disease; and over large areas of the country, the health of the survivors has been permanently impaired. Amongst the population of the famine districts, bowel-complaints were especially common and fatal; and these, together with fevers, small-pox, cholera, dropsy, and other fatal forms of disease, completed a death-roll which in magnitude has no parallel in the annals of the Presidency. Of the cases treated, 1,679 were of small-pox, whereof 634 died; 132,152 (354 fatal) of malarial fevers; 21,800 in-patients, and 15,870 out-patients (4,122 fatal), of cholera; 38,010 (2,918 fatal) of dysentery; 41,576 (3,016 fatal) of diarrhœa; 15,847 of syphilitic complaints (47 fatal); 2,664 cases of labour (93 fatal); 56,893 of skin-diseases; and 81,892 of ulcer. The number of surgical operations on in-patients was 4,432, and, on out-patients, 20,151. Of these, 1,950 were major, and 22,633 minor, operations.

SCOTLAND.

HEALTH OF THE EIGHT PRINCIPAL SCOTCH TOWNS.

ACCORDING to the Registrar-General's report for November, there were registered in the eight large Scotch towns 3,182 births, of which 1,625 were males and 1,557 females; of these, 7.9 per cent. were illegitimate. There were 1,833 deaths registered, of which 938 were males and 895 females. It is pointed out that this is the smallest number of deaths in any November for twenty-four years, and is 880 under the average of the same month for the last ten years. The death-rates were per 1,000 as follow: Leith and Greenock 15, Dundee 16, Edinburgh 17, Glasgow and Paisley 18, Perth and Aberdeen 19. Forty-one per cent. of the deaths were of children under five years of age; Perth being lowest with 27 per cent., and Leith highest with 56 per cent. Zymotic diseases caused 274 deaths, or 14.9 per cent. Of 40 deaths from fever, 13 were returned as typhus, 26 as enteric, and 1 as simple continued fever. Whooping-cough caused 3.3 per cent. of the deaths all over, the Aberdeen rate being as high as 8 per cent. After whooping-cough, scarlet fever was the most fatal, and measles the least fatal, of the zymotics. There were 92 deaths from apoplexy and paralysis, 114 from cardiac diseases, and 57 from premature birth debility. Phthisis pulmonalis caused 213 deaths, or 11.6 per cent.; other inflammatory affections of the respiratory organs, 421 deaths, or 23 per cent. Four individuals were over ninety years of age, two of each sex, one of whom was ninety-eight. The mean barometric pressure was greater by 0.394 inch, the mean temperature greater by 0.4°, the wind-pressure greater by 0.67 lb., and the mean humidity less by 5, than during the same month in the preceding twenty-two years. The highest mean temperature was at Glasgow, the lowest at Edinburgh.

THE GLASGOW WESTERN INFIRMARY SAMARITAN SOCIETY.

THE annual meeting of the above Society, which is in connection with the Glasgow Western Infirmary, was held on the 15th instant. This Society, among other objects, provides clothing and surgical appliances for necessitous patients leaving the infirmary, gives temporary relief to their families, seeks to obtain employment for the cured, and sends convalescents to the different sea-side homes. From the report, it appears that the number of cases relieved during the past year amounted to 501, while nearly 300 convalescent patients had been sent to the different sea-side homes. The report was adopted; and, on the motion of Professor Gairdner, a hearty vote of thanks was passed to all those connected with the carrying on of the work of the Society.

IRELAND.

COUNTY MONAGHAN FEVER HOSPITAL.

THE election for a medical officer to the County Fever Hospital, in the vacancy caused by the resignation of Dr. Ross, took place on the 3rd instant, and caused considerable interest as to the probable result. Before the polling took place, the validity of certain votes was under consideration; and it was contended that, by the 47th Section of the Act of George III, everyone who subscribed a guinea at least a year before the election was entitled to vote. On the other hand, it was urged that no person had a right to vote who was not an annual subscriber of not less than a guinea, and had paid his last subscription a clear year before the election; and this view of the matter was ruled as the correct meaning of the Act by the Chairman, Lord Rossmore. There were two candidates, Dr. Woods of Monaghan and Dr. Hall, the former gentleman being successful by a majority of seven votes.

SURGEON-MAJOR REYNOLDS, V.C., LL.D.

AT the winter commencements of the University of Dublin, held on Wednesday week, the degree of *Doctor in Utroque Jure* (*honoris causâ*) was conferred, amidst much acclamation, on Surgeon-Major Reynolds. He was introduced to the Pro-Vice-Chancellor by the Public Orator, Professor Webb, in an eulogistic Latin speech. At the conclusion of the commencements, by permission of the Provost of Trinity College, a presentation of a revolver and case was made to Surgeon-Major Reynolds, in the Examination Hall. The chair was taken by the Rev. Professor Jellett, Senior Lecturer. The Rev. Dr. Haughton made a speech eulogising Dr. Reynolds for the noble conduct he had displayed in the defence of Rorke's Drift. He said that he was sure that, notwithstanding the numerous honours Dr. Reynolds had so deservedly received—the chief of which, in his (Dr. Haughton's) opinion, was the Gold Medal of the British Medical Association—Dr. Reynolds would prize the humble gift which he now, on the part of the subscribers, would request the Senior Lecturer to present to that gallant non-combatant officer. Dr. Jellett, in the course of an eloquent speech, spoke of the pleasure the University felt in bestowing the highest honour in its power on Surgeon-Major Reynolds, one of its own pupils; and said that, in rewarding merit of any kind, it should be remembered that not only the recipient, but the University itself, was honoured by its bestowal. Surgeon-Major Reynolds, having expressed his acknowledgments, said he was always proud to have belonged to Trinity College, Dublin; and hoped that, if any of his hearers entered the Army Medical Department, they would, if the opportunity arose, preserve the honour of the University of Dublin, as he had endeavoured to do. At the conclusion of his speech, Dr. Reynolds was carried out of the hall and across the quadrangle on the shoulders of the students, to whom he was subsequently obliged to address a few words on the new Army Medical Warrant, before being permitted to enter the Fellows' Room. The following inscriptions, the first from the pen of Mr. Tyrrell, Professor of Latin in the University, and the second by Professor Brady, are engraved on the ivory handle of the revolver.

"Iacobo Henrico Reynolds ob virtutem tantam ad Vada Rorkii Zuluviorum a. d. XI Kal Feb. MDCCCLXXIX praestitam condiscipuli amicique alii SS. Trin. iuxta Dubl. versantes hoc donum tantulum—χάλκεα χρυσείων—reddimus."

"Martis habens laeva deatraque Machaonis arma
Eripuit vitas hoste deditque suis."

The case bore the following.

"Presented to Surgeon-Major James Henry Reynolds, V.C., LL.D., by his fellow-students and other friends in Trinity College, Dublin, at the Winter Commencements, 17th December, 1879, when the Degree of LL.D. (*honoris causâ*) was conferred upon him by the University of Dublin."

In the evening, Dr. Reynolds was entertained at dinner in the Commons Hall.

ANIMAL VACCINATION.

REPORT OF CONFERENCE HELD ON THURSDAY, DECEMBER 18TH, BY THE PARLIAMENTARY BILLS COMMITTEE, TO CONSIDER DR. CAMERON'S BILL FOR ANIMAL VACCINATION.

Speeches of the Chairman, Dr. Warlomont, Dr. Ballard, Dr. Carpenter, Mr. Ceely, Professor Simonds, Dr. Crisp.

THE adjourned meeting on Animal Vaccination was held at the rooms of the Medical Society of London, Chandos Street, on Thursday, December 18th, at 4 P.M. The Chair was occupied by Mr. Ernest Hart, Chairman of the Parliamentary Bills Committee; and among those present were Dr. Cameron, M.P., Dr. Alfred Carpenter, Dr. Robert Cory (of the Local Government Board), Dr. E. Ballard (of the Local Government Board), Professor J. B. Simonds, Dr. Hinckes Bird, Dr. Bridges (of the Local Government Board), Dr. Drysdale, Dr. George Henry, Dr. Collins, Mr. E. R. Denton, Mr. Ceely (Aylesbury), Dr. G. Wyld, Dr. E. Crisp, Dr. D. Nicolson, Mr. H. Lee, Dr. J. H. Gramshaw (Gravesend), Dr. Symes Thompson, Dr. Bowles (Folkestone), Mr. G. D. Brown (Ealing).

The CHAIRMAN stated that since the last meeting he had received numerous letters agreeing with animal vaccination, and he laid before the meeting a reply by Dr. Warlomont of Brussels to the speech made on the last occasion by Dr. Stevens of the Local Government Board. Information had also reached him of the existence of a flourishing animal vaccination service at New York, the Board of Health of which city maintained a farm in New Jersey for this purpose. He had also learnt, through Dr. Pietra Santa, of the existence of private animal vaccine establishments in Spain—at Barcelona, Vittoria, Alava, Seville, Valencia, and Havannah. It appeared that in 1874 Dr. Lanoix himself inoculated with his lymph a calf at the veterinary school at Madrid; and that the general centre of vaccination in the State, instituted in the capital in 1875 at the instance of the Royal Academy of Medicine, had as its aim the cultivation, preservation, and distribution of both kinds of lymph, humanised and animal. As regarded Russia, Dr. E. T. Wilson of Cheltenham had kindly drawn attention to an article in the seventh volume of the *St. George's Hospital Reports* (1872-74), in which particulars were given, from his own personal observation, of the successful working of the St. Petersburg animal vaccination station. Adverting to the conclusions arrived at by Dr. Seaton in 1869, Dr. Wilson stated that, as regarded the first difficulty of transmitting from calf to calf without interruption, it had been overcome at St. Petersburg, where the lymph had at the time of his visit been transmitted from calf to calf for the previous five years. At St. Petersburg, by taking the lymph with great care at the fifth and sixth days of eruption, the failures from calf-lymph had been reduced from 12 to 2 per cent. The St. Petersburg experience was the same as that at other places as to the keeping of the calf-lymph; but some lymph which Dr. Wilson brought over with no special care succeeded in the hands of a public vaccinator and produced well-developed vesicles. With regard to the number of vaccinations that could be performed with the lymph from a single calf, Dr. Frobelius, the superintendent of the St. Petersburg station, mentioned having made one hundred insertions, all successful, from five vesicles; and it was not uncommon to find from sixty to one hundred and twenty vesicles on a single heifer. Calf-vaccine was started at the Foundling Hospital of St. Petersburg in 1868, and had continued side by side with Jennerian lymph up to the present time. A heifer-calf, from two to four months old, was taken every fourth day; the abdomen was cleanly shaved on a table specially adapted for the operation, and from sixty to one hundred and twenty insertions were made in regular rows of from ten to fifteen pricks a-piece. A light bandage was then applied, and the calf rejoined its companions in a clean and well-ventilated stable. On the fourth day, the vesicles were ready. The lymph, however, was better on the fifth day, and none should be taken upon the seventh. It was pressed from the vesicle by means of a small tenaculum; and Dr. Wilson was assured that the effects were equally satisfactory, whether the vaccination was performed in the summer or in the winter. This information he (Mr. Hart) had thought it right to lay before the meeting. Among the letters he had received was one from Dr. J. S. Bristowe, President of the Society of Medical Officers of Health, who said: "While fully believing in the efficacy of arm-to-arm vaccination, and that the vaccine virus has lost none of its original virtues by repeated transmission from man to man, I am entirely satisfied, from the evidence which has been adduced, that vaccination direct from the heifer, properly prepared, is as certain, as efficacious, and at least as free from danger, as vaccination direct from the arm". Mr. Simon, of whom it was said at the previous meeting that, if he had continued in office as the medical adviser of the Government, he would have been prepared to recommend the use of the system, had written to say: "It is a fact that, before leaving office, I had been very desirous to make experimental study of the system of animal vaccination, in order to see whether we could practically get over the serious disadvantages which in 1870 prevented me from approving it; but whether I could wish to introduce the system for any of our national uses, would have been an entirely open question with me till I had gained the fuller knowledge which I thought necessary." Dr. Braidwood of Birkenhead, who was entitled to be heard on this question, said: "The example set me by such pioneers of medical science as Sir Thomas Watson and Mr. Ceely of Aylesbury seems the best under the circumstances; and I would, therefore, merely express thus my entire concurrence with your efforts to establish animal vaccination in this country."

The paper by Dr. WARLOMONT, in reply to Dr. Stevens, was then laid before the meeting. It was as follows.

I regret exceedingly that I shall not be able to be present at the adjourned discussion on the subject, whether it be expedient for the English Government to introduce animal vaccination officially into that country. I purposely state this question with precision, because it appeared to me to have been ill understood by the speakers who followed me at the meeting at which, thanks to you, sir, I was receive l with so cordial a welcome, for which I desire to thank my kind hearers.

I had, indeed, no thought of raising then all the questions relating to vaccination; such, for example, as that of vaccino-syphilis; that of the degeneration of lymph, human or other, by the lapse of time; the question, in short, which has given rise to so much and such lengthened discussion, of the transformation, still admitted by men of ability, if hotly contested by others, of the virus of small-pox into vaccine virus by the simple transmission of the former through the system of the cow. These are all points which, in order to clear the path, we may provisionally disregard; they will come up for discussion later on. I should then have had much pleasure in attending the meeting on the 18th, before the same assembly, in order to try to bring it back to the consideration of those fundamental principles which I have already laid down to them, and which seem to me to have been too much lost sight of.

One speaker only appeared to me to have kept to the true direction for the debate. His speech, full of spirit, wit, and appropriateness, in which he in very truth took "the bull by the horns", reopened the great line of thought, which we should do well, I think, to follow more closely if any good is to come out of the inquiry upon this burning question, to which public attention, not only in England, but throughout the whole world, is directed.

Ought the Government to introduce animal vaccination officially into England? Dr. Stevens, Government Inspector of Vaccination, speaking, however, only for himself, examined the question in a very logical manner, and treated it from an elevated point of view. He commenced by establishing—what we had not contested—that lymph has not degenerated; the complete protection, said he, which vaccination actually affords, in a considerable proportion of cases, is sufficiently proved by the subjects who have been submitted to it. Is it necessary, therefore, in view of an improvement, which is as yet not clearly made out, to substitute a new practice, which has not been proved efficacious, for a practice which is fully satisfactory? This was his argument.

It would be easy to reply to this gentleman that, if he wait for these proofs to come to him, he will wait a long time, if he do not obtain personal experience (on which alone he is resolved to base his opinion) of the new method. And, if he do not do this, ought he not to take into consideration the experience of others? Now, the proof of the efficaciousness of animal vaccination needs no longer to be established.

I know that the speaker is not convinced, and that he takes refuge in the maxim, "Better is the enemy of well"; but nothing is more annoying than this dictum thus applied. So long as vaccination shall not have annihilated small-pox, it has not done all that it ought or can do; and we are very far from this. The epidemics of small-pox which follow each other almost uninterruptedly prove to us that the better is certainly still to be searched for as regards prophylaxis.

Dr. Stevens is too enlightened a man, too capable and too conscientious an administrator, to wish to remain under whatsoever circumstances in the beaten track; and nevertheless, unconsciously perhaps, he desires not to forsake the high road. But he seems to forget—and he will pardon my saying so—that there is in every language a word to express this constancy to the track of the past; viz., routine. Dr. Stevens, let me say at once, is not a man to whom such a term would be appropriate. It is, then, necessary that he should seek with us that

"better" which he still refuses to recognise, and which certainly animal vaccination is capable of affording him.

Dr. Stevens does not admit that the public should be allowed to make its choice as to the kind of lymph it should demand from the State. The latter, he says, ought to choose the best guardian of its children, and not offer it any other. It would not be possible to express a better sentiment; but in this matter other things must also be considered. If we had to make our choice, it would not take long to make it: the calf would immediately be found everywhere as the only admissible vaccinifer. Why, then, do we maintain vaccination from arm to arm? Because it is more practical, and is necessary to help us to tide over the period of transition in which we find ourselves at present. Vaccination, as a general rule, ought always to be done in preference with lymph taken directly and immediately, living and warm, from the selected vaccinifer. Now, we are still very far from the time when in each town, village, and hamlet, a vaccinated calf can be placed at the disposal of the vaccinator or of the public. Up to this moment, the infant must fill the place of the calf; but, be it said, as a makeshift only. We desire, indeed, to declare that if we have, in all our writings, demanded the maintenance of vaccination from arm to arm, it is simply because we cannot yet do without it. In proportion as the new method extends, the old one will gradually be extinguished.

If, then, we take our stand from the point of view chosen by Dr. Stevens, and have to choose one or the other lymph to recommend to the public, to the exclusion of the one rejected, we shall have to face the difficulties of application and to count their cost. These difficulties compel us to give in. I would suggest, then, to Dr. Stevens and to the department in which he so worthily occupies a distinguished position, the Belgian system, respecting which I propose to say a few words, necessary to a right understanding of the subject.

The State Vaccine Institute of Belgium has specially for its object the cultivation of lymph on the calf, and its distribution gratis, as seed, to all the practitioners of the country as frequently as they need it to renew their stock. To allow the annual renewal of this stock by strengthening it from the animal which seems the most fit for the purpose, and in keeping up without break this seed at the disposal of practitioners, is the special function of the Institute. It does not then, as might be thought, furnish vaccine matter for as many vaccinations as there are subjects to vaccinate, but only the seed for the purpose of preventing interruption of the service.

As to the public, the State does not furnish it gratuitously with animal lymph, though it may choose to prefer it; but the Director is authorised to furnish it on payment of a fee fixed by the decree constituting the institution. For this fee, every person who is well off, desiring to have original lymph, whether for the performance of vaccinations or of revaccinations in his family, can procure it. But the State has nothing to do with the details; that is the business of the Direction. It is the same with regard to vaccination from arm to arm; the State has no concern with it. To carry out effectually such a practice, it would be necessary to have as many institutions as there are populous centres. It would be necessary to go into matters of detail which only concern municipalities.

All that the State does in this direction, and these are the limits of its action, is to authorise the Director of the Institute to admit to vaccination at his establishment all the subjects who have a preference for calf-lymph: the poor are admitted gratuitously. This is all the State can do. Beyond the Brussels district, the poor must content themselves with the lymph cultivated by the vaccinators, who renew it every season; and the well-to-do with the same lymph, or with preserved animal lymph obtained from the Institute. This system is far from being perfect, since the poor cannot have their choice. It must not, however, be forgotten that in Belgium, vaccination not being compulsory, the State has fewer duties towards the public in this respect than in countries where compulsion is the law. Here there is an absolute moral obligation, which Belgium would not disregard if vaccination were compulsory. Its first duty, and it would not seek to evade it, would then be to put a supply of animal lymph gratuitously, and in a supplementary manner, at the disposal of practitioners of whom the poor demanded it.

Thus established, the institution could immediately commence operations in Great Britain, and be of immense service. London would be the first station, and some other great centres would be provided with stations in their turn. The London establishment would be the central institution: it would never allow its stock to fail, and would be always ready to renew or to help provincial establishments, which, for the sake of economy or other reasons, might from time to time suspend their working.

We differ, then, as will be seen, from the opinion expressed by Dr. Stevens. According to him, the public must not have any option between the two lymphs; but we hasten to say that this option would not occasion any inconvenience, since, according to our view, both lymphs, properly cultivated, are equally efficacious. In leaving the option to the public, and in giving to every one the means of carrying out his choice, we shall be doing wrong neither to the individual, nor the State, nor to public opinion. The latter, on the contrary, will be satisfied in a manner which has long been desired and waited for.

I beg my honourable opponent not to persist in his opposition. No one respects it more than I do, no one understands better than I what it costs an official charged with a grave responsibility to lay a rash hand—and it is so for him—on an organisation which gives him comparatively excellent guarantees; but no one is more assured than I am of the truth of the precept which I love to recall to mind, that in such a matter not to advance is to recede.

Dr. BALLARD said that, if there were lurking in the mind of anybody present, consequent on some things which he had read, some sort of suspicion that the department of the Government which was charged with the control of public vaccination in the country was actuated by any feeling of prejudice against the system of animal vaccination, his presence that day, as a representative of the Local Government Board, by direction of the President, might be taken as in some way doing away with that suspicion. Other Inspectors of the Board were more experienced than he was in the public arrangements of the country, and could speak much more forcibly and with more effect than he could. Nevertheless, when it was suggested to him that he should be present as the representative of the Board, he hesitated to accept the charge on two grounds: first, because he was much more apt at working than at talking, and next because he thought that possibly his views on the subject might be in advance of those of the Board; hence, at his request, his friend Dr. Cory, Chief Inspector of the National Vaccine Establishment, was associated with him. He hoped that this conference would hear something from that gentleman before the evening was closed. In the first place, it appeared to him that something should be said about the grounds on which the demand made in the proposed Bill of Dr. Cameron was founded. One of these grounds was the alleged deterioration of the humanised vaccine as now propagated. This, however, was withdrawn by Dr. Cameron at the last meeting.

Dr. CAMERON said he did not withdraw it, but left it for the purpose of being criticised.

Dr. BALLARD said he took the liberty of criticising some of the arguments Dr. Cameron used in support of his view. Dr. Cameron held, on various grounds, that the humanised vaccine lymph had deteriorated. He (Dr. Ballard) did not think he should have been very much disposed to say anything about this, had not Dr. Cameron given his reasons in letters to the *Times*; and, although the inference he drew might be good, his reasons were not equally good. He said it was all very well to describe the last severe epidemic of small-pox as exceptional, but during the twenty-two years in which there had been compulsory vaccination it ought to have made some impression; and he also said that statistics showed either that the protective virtues of the lymph were mythical, or that there was something radically wrong in our national system of vaccination. The epidemic of 1871-72 was exceptional; but there was a reason for that which Dr. Cameron did not seem to have taken into account. The epidemic arose in one of the worst vaccinated districts in France, and its ferocity was exceptional, and it spread in France, Germany, all Europe, England, and America, and it carried with it wherever it went its intensely ferocious character. For this reason, the epidemic was excessively fatal. He had before him tables, constructed for him in the Registrar-General's Office, showing really that the mortality from small-pox had, during the vaccination period in this country, been gradually and steadily lessening, with the exception of the particular epidemic period of 1871-2. Between 1838 and 1842, the mean annual death-rate from small-pox per million was 571. From 1847 to 1849 it was 303. In the next five years—1850 to 1854—when compulsory vaccination was the law, the mortality was 274; in the next five years it was 198; in the next five, 190; and in the next five years, during which the Vaccination Acts were amended, it was 145. In the next five years came the epidemic of 1871 and 1872, and then the mortality rose to 445; but in the next four the mean annual death-rate from small-pox had fallen lower than it had been before, viz., to 97, and yet during 1877 there was a recrudence of small-pox. There had been a gradual and steady diminution of small-pox mortality; and if they were not to say they were to judge by total death-rate, but to take the mortality as it had occurred in recently vaccinated persons—say, children under five years of age, what was found in the non-epidemic years? Why, an improvement in the protection of children. From 1853 to 1856, the mean annual death-rate from small-pox in children under five years of age was 653 per million. Between 1860 and 1870, omitting the epidemic years, the mortality was 419 per million of infants under five years of age. From 1873 to 1876 it fell to 182. That did

not look very much like deterioration of vaccination. He did not say that vaccine in the humanised propagation was all that it ought to be or all that it might be over the kingdom, or that there was not a deterioration of the lymph in places. He knew there was, and that in the hands of some medical men vaccine did deteriorate; but that was in the hands of careless men. He had seen vaccine propagated which, on the eighth day, had produced vesicles having a broad areola, and he had seen it propagated where the areola had been declared on the seventh day. That ought not to be. There was a way in which the lymph might be deteriorated, apart altogether from any inherent character that might deteriorate it. The Local Government Board had for some time taken care to improve the vaccine of the country, not in quantity only, but in quality, and to stimulate the local vaccinators to better work by instituting a system of rewards. But sometimes in poor neighbourhoods among the labouring population, if he found a public vaccinator thoroughly well vaccinating and producing good large marks and scars, he saw in a number of instances some practitioner rising up and saying to the mothers: "There is not the slightest use in having your children punished in this way; take your child down to my surgery." Well, the child was taken down, and one prick was put upon the arm, and the mother was told that that was sufficient. It was sufficient, no doubt, for registration. He said, "Shame on such men!" he could hardly think of them without indignation. Every tyro knew the results of inquiries on that subject made by Mr. Marson some years ago, which had been confirmed in the hospitals round about London. Every student had been told the results of Mr. Marson's inquiries. There were two ways in which diminished protection might occur. It might occur locally, but that had nothing to do with what Dr. Cameron referred to in his letter. Dr. Cameron fell foul of their revered old friend Mr. Ceely, who, he was happy to say, was present to defend himself, and was quite capable of doing so. He (Dr. Ballard) objected to the term in this letter "small-pox lymph" when speaking of the lymph, he was going to say, created by Mr. Ceely. He thought that term ought not to be used, and he also thought that Dr. Cameron himself would be disposed to withdraw it. He said the vesicles were undistinguishable from the genuine article. Well, if not, he should be disposed to say they were the genuine article. He would take the liberty of leaving Dr. Cameron in the hands of Mr. Ceely and his esteemed colleague and friend Dr. Cory, whose book should be in the hands of every man who wanted to know anything on the subject. The next subject he had to refer to was the chance of syphilis being communicated. He did not think he need say much about that; he had already said all that was necessary. But, after all, the risk of syphilis in humanised lymph was infinitesimal, and might almost be put out of the question. It had been supposed that the introduction of the system of animal vaccination would induce parents to have their children vaccinated who declined to have them vaccinated now. What did that mean? It would appear to be based on this notion, that the deficient completeness of vaccination in this country was due to some really reasonable objection that people had to vaccination. He did not think anything of the kind. After all, the last returns brought the unaccounted for in vaccination among children born in this country to about 4½ per cent.; and what was the reason? Those 4½ per cent. were not vaccinated, not because the parents objected to vaccination, but through accidental circumstances—through neglect. The time for vaccination came round, and perhaps the weather was wet, or the mother was engaged in a day's washing, or she had to cook her husband's dinner, and in that way the time passed by, and then, perhaps, they removed to another place. In some places, no doubt, there were objections to vaccination; but this was only in places like Cheltenham, where there were agitators on the subject. He did not believe that, if human vaccination was entirely superseded by animal vaccination, they would get a single anti-vaccinator to have a child vaccinated. He was not there in any way to apologise for the Medical Department, for that department, even in the matter of animal vaccination, had no shortcomings to confess; but, on the other hand, he claimed for the department public gratitude for what they had done, and, he might add, public gratitude for what they had not done. Think what the state of things was now. Think of this—1838, 1839, 1840, 1841, and 1842, which were not particularly epidemic years, but small-pox then carried away 571 per million of the population. In 1871, 1872, 1873, and 1874, two of which were epidemic years, and ferocious epidemic years, the mortality from small-pox was 445, actually less than it was during the first five years of the registration period in this country. Was not there in that matter to be grateful to the Government for? In 1840, the first Vaccination Act was passed. In 1853 was the time of the first Compulsory Vaccination Act. In 1867, that Vaccination Act was amended, and it was not till 1871 that the arrangement we had now in force was perfected. It had taken all that time, and the Government of the country had been working to perfect the system, and the objects which the Government had in view had been, and it intended to have them in view—first of all, completeness of vaccination, as near as possible, to have every child in the country vaccinated; secondly, efficiency, that every child vaccinated should be vaccinated thoroughly; and, thirdly, that every child should be vaccinated safely. Completeness, efficiency, and safety were the three objects. Had not these objects to a very great degree been attained? First of all, as to completeness; he did not think there was very much to complain of in 4½ per cent. escaping vaccination; and he felt that number would be diminished. As regarded efficiency, it was his experience that efficiency was improving even during the time he had been inspector. He could see a great difference in his districts, and he could say that the character and quality of the vaccination was improving all the way through as to safety; and, with the exception of that unfortunate occurrence which they all knew of, he was not aware of a single case of syphilis having been communicated through vaccination. Dr. Stevens had never met with it; and he (Dr. Ballard) had never met with it at all. He believed humanised lymph was practically safe.

A gentleman asked whether the 4½ per cent. unvaccinated meant that percentage of births.

Dr. BALLARD said it did. He did not know whether every one present understood what the arrangements of the Local Government Board were for the attainment of its objects, but he wished it to be known that there was a system of looking after the children. Every child was registered, and was never lost sight of until it was vaccinated, unless the parents had submitted to the legal penalties for non-vaccination. In one of his letters, Dr. Cameron said the children were vaccinated only at intervals of six months, in England. In sparse populations, vaccinations only took place twice a year; but, in rural districts sufficiently populous, once in three months. In town districts, where there were eight or ten vaccinees, it was done weekly. The National Vaccine Establishment did not supply all the lymph which was in use in the country. Every public vaccinator was supposed to keep up his own supply, and was supposed to know the child from whom he got it. He was responsible, and was made responsible; but the National Vaccine Establishment would supplement the supply where a man lost it. Nevertheless, the department expected every public vaccinator to keep up his own supply. He (Dr. Ballard) had brought with him some of the papers which contained instructions for public vaccinators; and, if anyone had not read them, it would be just as well that he should, because it appeared that no precaution could be suggested which was not contained in those instructions. Further than that, those instructions were not only given, but the following them was enforced. He was sorry to say that, on several occasions, he had been the means of public vaccinators being requested to retire from the office they held, because they had not followed their instructions sufficiently to come up to the requirements of the Board. Public vaccinators must do their work properly and efficiently, or they must give up their office. For the reasons he had given, he repeated that the Local Government Board had no shortcomings to confess. As to animal vaccination, he wished it to be understood that Government was not in the same position as those who composed the present meeting, for it had serious responsibilities. Before it could accept or adopt any other method of vaccination than that which was now adopted, it must be satisfied that equally good results would follow from its use. It must first be satisfied on the scientific aspects of the case; next as to the administrative practicability of the adoption of animal vaccination. The first question it asked, for instance, was whether the adoption of vaccination in the heifer would give equal or greater protection, or greater permanence, than the humanised vaccination now in use. On that point, the Government at present was not satisfied. Dr. Seaton's inquiry was some years ago reported in the Fourth Report of the new series of the medical officer of the Local Government Board; but, last year, Dr. Seaton was again on the continent, and the results of his inquiry there were not so satisfactory as to lead the Government to think that equal or greater protection would be given by animal as by humanised vaccination lymph. He made inquiries at Amsterdam, the Hague, Rotterdam, and Berlin. He would mention some of these results obtained with fresh calf-lymph. At Amsterdam, complete success at all insertions was obtained in only 34 per cent. of the children vaccinated; at Rotterdam, it was 54 per cent.; and at Berlin, 21 per cent. At Surrey Chapel station, where fresh arm-to-arm vaccination was employed, the success was 97.8 per cent. It could scarcely be said then that animal vaccination, as far as knowledge had come to the Government office, was so satisfactory as arm-to-arm vaccination practised by an experienced operator like Dr. Cory. Then, as to complete failure, at the Hague, it occurred in 2.2 per cent.; at Rotterdam, the percentage of failures was not stated; but, at Berlin, they were 7.1 per cent. At

Surrey Chapel, out of 1,000 children vaccinated with human lymphs the complete failures were simply none. As to insertion success, the calculation of what was attained at Amsterdam was 700 or fewer vesicles out of 1,000 insertions with animal lymph. At Rotterdam, the number was not stated. At Berlin, it was 678. But, at Surrey Chapel, with humanised lymph, it was 978. It was remarkable that the numbers 678 at Berlin, and 700 at Amsterdam, were so much alike; it did not appear as if any imperfection arose from the mode of operation. The success, therefore, as far as the knowledge of the department went of animal vaccination did not appear to be so good as to warrant them to recommend a preference for it over humanised vaccination. Administratively, were certain difficulties in practice in establishing animal vaccination in the first instance. Moreover, they wanted to know more about the preservability of the lymph. Dr. Warlomont had said something about it, and he thoroughly welcomed Dr. Warlomont's speech. Then came the general question, the practicability of the proposals of Dr. Cameron's Bill, one of which was really to give parents an option with respect to animal or humanised lymph. That, he was afraid, would be found very difficult in practice to carry out. The Board considered that such an optional arrangement was quite inapplicable under the circumstances of our population. It might do very well for such a place as Belgium; but think of the population of England, Wales, Scotland, and Ireland—how many heifers, and experienced vaccinators by the new method would be necessary to meet the option of such a population? He thought the meeting would see the difficulties which crowded round the Government with such a proposal. The Board had no objection to animal vaccination in itself, or to vaccinators employing animal lymph. It might be had in England. Only within the last day or two, a colleague of his said a vaccinator had used animal lymph; and, at West Bromwich, a friend of his had done the same. So far from the Board having any objection, they were very glad those vaccinators had improved their stock. No objection was raised, or likely to be raised. What the Board objected to was being required at once, and before it had sufficiently matured its arrangements, to adopt a system of animal vaccination. For several years, it had been working at, and inquiring into, the subject. Dr. Seaton, several years ago, went on to the continent for the purpose, and made a report which was unfavourable. He went again; and, at the present time, Dr. Klein was engaged in a series of inquiries to settle, if possible, the relation between cow-pox and small-pox, which was in dispute. The Board was patiently and steadily continuing its inquiries; and he could not see what more could at present be wanted. It seemed to him to be perfectly unreasonable to expect that the Board, with its responsibilities, should be forced, as it were, into a line of action which it was not yet prepared to take. The efforts of the Board were to do the very best it possibly could to improve the vaccination of the country; and, if animal vaccination were the best method for obtaining that result, he had not a question in his mind that animal vaccination would, if practicable, be adopted by the Board. He was not saying the Board would do it, but that it was so anxious to do the best it could, that the public might depend upon it it would adopt what was best. One word for his chief. Dr. Seaton being ill, he felt bound to say a word on his behalf. Judging from certain statements which had appeared in print, and especially from the terms in which he had been alluded to, an impression had gone abroad that Dr. Seaton was bigoted. Of all people in the world, he really thought that Dr. Seaton was as free from bigotry or anything like it as anyone could be. He was the prime mover in the work of vaccination in this country; he had done more than any man in this country to promote the completeness of vaccination; and a debt of gratitude was due to him, and had yet to be paid to him, for it. Very much more would no doubt have been done if he had not been taken ill. Things had been standing where the public might have expected them to be moving; but he did not think that was to be put down to the failure of Dr. Seaton, who was not prejudiced, but had a complete honesty of purpose; and following, as he did, the most cautious administrator that was to be found—Mr. Simon—he thought Dr. Seaton had acted wisely in not pushing on anything in the line of experiment in connection with the public service of the country.

Dr. ALFRED CARPENTER (Croydon), said that it was quite evident to him that, if Dr. Ballard were not in the trammels of office, he would himself be promoting the measure they had met to discuss. The few observations which fell from him towards the end of his very interesting speech satisfied him (Dr. Carpenter) that, at any rate, he had strong feelings in favour of the course that the conveners of the meeting had thought proper to take. He (Dr. Carpenter) was about to mention a circumstance which occurred to him in early life, which convinced him that it was possible there could be deterioration of lymph. The circumstance could not perhaps arise now, under the more perfect knowledge we had; but it did arise then, and he had very little doubt it would help to increase the mortality from small-pox. When he was a young man, there was an epidemic of small-pox, and a great call for vaccination, both of adults and children. The adults had been previously vaccinated, and, when revaccinated, they had very fine arms, from which he took vaccine lymph and used it extensively. Two years afterwards, there was again an epidemic of small-pox in the same district; and several of those persons whom he had vaccinated with the lymph taken from the revaccinated adults had small-pox. They were not protected by that lymph as they were by the lymph taken from children. It was possible that, at the present time, a large number of adults were under the impression that they had been vaccinated with satisfactory lymph when they were not protected at all. Under the department superintended by Dr. Ballard and Dr. Stevens, adult lymph should not be taken; but he believed it was taken, because occasionally vaccinated adults had very fine arms. He never could understand why there should be deterioration, until he looked more particularly into the character of the matters which produced this disease, and then he could see an explanation. The disease was of a vegetable origin, and the germs (as Professor Cornwell had published to the world) were liable to have a sort of hybrid production. When hybrids became crossed, as they saw in France, they were not protected in the same way as the pure lymph which was taken from the cow. He was satisfied that it was necessary occasionally to have the lymph from the animal taken afresh, so that they might go back to the old stock and keep it among the people. That vaccination would never be protective against small-pox was self-evident, because small-pox would not protect entirely. The very worst case of small-pox he ever saw was in a man who, twenty years before, had had a severe attack, and at the time of his second seizure was pitted extensively. He died of small-pox in a very few days. We should never be able to remove it entirely; but, by going to the cow and having the lymph from the fountain-head, they were much more likely to keep up the protective influence that Jenner saw vaccination had. The question of communicating syphilis by vaccination would be brought into this discussion. It had happened to him to see once a case where syphilis had arisen in a vaccinated arm; but the origin of that case was very clear. The nurse with whom the child had been sleeping had syphilis; and there could be no shadow of doubt that the syphilitic matter had gone from the nurse into the arm of the child after the vesicle had risen, and there was an abrasion. That was manifest; and it was the only case in his long experience and connection with vaccination that he had seen, where there had been the remotest possibility of anything like syphilitic infection being present; and it was an unfortunate thing that this subject had been mooted, because from this meeting it would be spread broadcast that medical men had the opinion that it was possible to take syphilitic matter from a child born of syphilitic parents and vaccinated to another by means of lymph. He did not believe it possible, or that any one could bring forward a single proof of such a thing. There would be no evidence to show such a possibility. There was no more reason for shutting the door against vaccination on that account, than for closing a druggist's shop in the country because, by possibility, the dispenser might mix some poison with the medicine he was dispensing. He thought it a great mistake that that had been introduced, because there were a number of persons, of honest good intention, who were under the impression that they might receive infection by vaccination. He knew of several who would have their children vaccinated with lymph taken from the cow, and those persons should have the power to exercise an option. There was one thing he would like to see introduced into Dr. Cameron's Bill, that, when a person was brought before a magistrate for refusing to have his child vaccinated, instead of being condemned in a fine and costs, the magistrate should have the power to order the child to be taken out and vaccinated. Fines were a mistake. If the individual sent to the public vaccinator insisted on having vaccine from the cow, he would have the power to insist upon it if Dr. Cameron's Bill became law.

Mr. CEELY said they would not be able to annihilate small-pox, and he defied any one to show that he had claimed such a result. From the experience he had had, no such thing could or ever would happen. He had no prejudice in favour of the lymph. His object was to ascertain a pathological fact: whether it was true, or likely to be true, that variola and vaccine had any affinity? His opinion was that vaccine, in the spontaneous disease of man, was modified by the cow. He had proved it, and Mr. Badcock had done it more frequently than any man in this kingdom. Animal vaccination was now in operation at Brighton. They had produced first from one cow. The operations that had failed in Lyons had been simply the insertion of small-pox matter by Dr. Chauveau into a little pouch. It had been taken out again unaltered, and transferred into the arms of children. He must say that the manner in which he and others had been spoken of as propagating disease was perfectly ridiculous. If he had time, he could show the

natural disease of the cow and the disease created by his and others' operations; but he was afraid it would take too much time. With regard to animal vaccine, he was in favour of it for this reason, that he thought it was an advantage now to recur to the natural disease of the cow. He liked to see good arms, and, when the lymph was not satisfactory to him, he liked to have recourse to the cow. When arms were not so good as he desired, he preferred to do them again. Very few people asked him for the animal lymph, but they were mostly private persons. In his district, they could not now find cases of natural cow-pox, but, forty years ago, dairies were full of it. He was very fond of animal lymph, because it gave such good results. He thought, when a vaccinator could not select his humanised lymph, or found it in any way failing in perfect results, he ought to have recourse to the cow. He did not think he and other like advocates were chargeable with disseminating small-pox among the people by taking the inoculated lymph from the cow.

Dr. DRYSDALE inquired how often Mr. Ceely had vaccinated the cow with the pox.

Mr. CEELY said twice only; once by dry means and once by liquid.

Dr. CAMERON asked how often Dr. Badcock thought it necessary to pass it through the cow.

Dr. CEELY replied that once was enough.

Mr. CEELY said that he did not approve animal vaccination as an exclusive system. It was impossible. He liked to see good arms; and, when he found good arms, he took the lymph from them.

The CHAIRMAN; You like a supply of animal lymph to produce stock for subsequent arm-to-arm vaccination.

Mr. CEELY: Yes; it should be kept up by all means for that purpose, and be always at hand.

The CHAIRMAN said he was sure the meeting would have heard with great interest an explanation of Mr. Ceely's beautiful drawings; but Mr. Ceely had evidently felt, as he himself had felt, that they had better be discussed on a future occasion.

Dr. CORY, said the death-rate from small-pox was much greater after bad vaccination than after good. After good vaccination, it was almost infinitesimal. If by having animal vaccination they were running the danger of a larger death-rate, they should be very cautious before adopting it. Facts and experiments were, therefore, needed. Dr. Ballard said there were two things not mentioned in the epidemic statistics. The proportion of attacks in ordinary epidemics of small-pox among the unvaccinated was 35 per cent.; but the proportional deaths in the great epidemic was 77, which showed the virulence of the epidemic. In vaccinated people in hospitals, it was only 6 per cent. Another thing also to be noted was, that with that epidemic the deaths occurred in people over 15, which included people who had been vaccinated prior to the vaccination laws being improved. As to deterioration of lymph, he had been vaccinating three or four years at Surrey Chapel, and he had seen no deterioration whatever. Besides that, the lymph had been used there since 1866; it had been passed through every week, child by child; and the characters, as far as one could judge, were precisely now what they were then. He did not think, where they had a sufficient number of cases to select from, that they got any deterioration, however many arms it passed through, if they selected their cases well. Dr. Carpenter mentioned one of the proofs of deterioration of lymph, which he (Dr. Cory) did not think to the point; for they knew the spurious results which were not from vaccine vesicles at all, but from secondary lymph, where there was a hard crust—places produced by irritation from the matter put in. Mr. Ceely had been asked why it was more easy to propogate calf-lymph by inoculation from calf to calf than to inoculate the cow with the small-pox matter. There was a reason, probably, for that. When they took the lymph from small-pox cases, it was taken from the general eruption on the body, and not from the mother-vesicle.

Professor SIMONDS said he might first observe that, in entering the room, it did not occur to him that he should be called upon to make any observations. Having been asked to do so by the Chairman, however, he should be glad to contribute his opinion on the subject. The first question he would ask with reference to this matter was, What was the origin of cow-pox? All who were acquainted with the subject were well aware that there were some erroneous views originally held by Jenner with respect to the conveyance of that particular disease from one animal to another—from the horse to the cow; and it was in consequence of that conveyance that the cow became affected with a disease that he called cow-pox. In the present day, perhaps, it was unnecessary for him to say that among veterinary surgeons, who were acquainted with the lower animals, that opinion had always been negatived. He was of opinion that Jenner saw the disease of the animal, and that it was of a repetitive nature, which, by his own observations, he was well aware, did not possess any particular quality. Jenner saw variolous diseases in the cow, one only of which was of the genuine kind. To his (Professor Simonds's) mind, it had always been a question of doubt as to whether the cow herself was to be regarded as the animal only liable to her own variola. He was not there to say she was not; but he was there to say that, after an experience of something like forty years, frequently as he had seen eruptive diseases in the skin of the cow, he had never been able to recognise any of these as variola. He was, therefore, inclined to think that the cows which Jenner originally saw were cows not with generated disease, as it were simply *sui generis*, but that they had become accidentally infected with small-pox matter in consequence of the great prevalence of small-pox at that particular time. If they looked to what was then being done, they would see that inoculation was practised throughout the length and breadth of the land, and that Jenner week by week inoculated children to protect them against natural small-pox. They saw then the prevalence of small-pox in the country, and they knew full well that small-pox inoculation was practised, and there came a great diffusion of disease and greater malignancy. Then, again, they looked to Jenner's own statements, that it was not one particular dairy or two dairies that were affected, but many cows in that district. The disease was easily communicated from one to another, and from the cows to the human subject. In this way they were dealing with a disease which was continuous; but they had not seen such cases lately or at all. They had looked for the disease year by year, and had failed to detect a natural small-pox. Therefore, he was of opinion that it was a kind of accidental conveyance from the human subject to the cow, the cow being susceptible of it when the exposure to small-pox variola was so great; and, that being so, they saw, to a certain extent, how they had succeeded since then by the inoculation of the cow with small-pox matter. Mr. Ceely and Mr. Badcock had told them that there was new lymph introduced which had one origin—the origin by inoculation of the cow with small-pox matter; and if these gentlemen of experience could detect no difference between the lymph which was introduced by Jenner and this lymph, he thought they now saw identically the two things. Then they came to the peculiarities of variola in other animals, which led to a question whether they had a genuine variola in the cow and doubtful in other animals. He could best answer that question by saying that, with the exception of the sheep, he knew of no other animal that was affected with variola. There was an equine variola which was produced from the cow, but he had never seen variola in the horse. He knew it had been stated of late that cases of that disease had occurred in France, but all he said was that our observations had been extensive and minute, and they had seen nothing approaching to it in a horse or a dog, or any other animal except the sheep. Variolous eruption he had seen in the sheep. The peculiarity with regard to the eruption in the sheep was so marked that he thought Mr. Ceely would remember that, as far back as 1847, when small-pox was prevalent for three or four years, the late Dr. Gregory of the Small-pox Hospital saw at the Veterinary Hospital some sheep that were affected. In his mind's eye, he could see Mr. Ceely now examining it, and he said, "If ever I saw small-pox in my life, I see it there". Mr. Ceely would bear him out now, that, as to the period of incubation of the disease in the sheep and the manner in which the inoculation of the sheep comported itself, it agreed exactly with the disease of small-pox out of the human subject. With reference to the probability of the disease being one which was communicated accidentally to the cow, and that the cow had no variola of her own, some few years ago, he had the opportunity of speaking with Mr. Simon; and, in talking the matter over with him, he asked him if it were not strange, if the cow were the subject of a variolous disease herself, they never saw anything of it in the male, and never heard of bull-pox? How were they to account for a variolous disease which only affected one of the sexes? They would be hooted down in the streets if they were to talk of bulls and steers being affected. No; it was nothing but the poor unfortunate cow alone. With respect to animal vaccination, it appeared to him that they could only use lymph of that kind to supplement the current lymph of the day; and he quite agreed with the remarks of Dr. Ballard that, if the Government saw its way to that lymph being obtained with full facility, they would be the first to introduce it. It might be that there had been some such cases occurring in the cow, which had been referred to, which were called natural cases, and that they were conveyed to the calf, and that the lymph was being used in that way. He was, however, strongly inclined to think that they would find there was inoculation of the bovine animals with small-pox matter. With regard to the susceptibility of bovine animals to infection with small-pox matter, there was a grave difficulty in producing the disease at the present time by simple inoculation. Although Mr. Mason and himself inoculated many cows, they did not succeed at all. Mr. Ceely succeeded two or three times. Mr. Badcock succeeded

several times, but he had had something like one hundred cows to inoculate, and he did it with six or seven punctures each. Nevertheless, he only succeeded five times, which showed the insusceptibility of the cow to take that disease. But one case was quite sufficient to show how it was communicated by one to the other. If they were to look to these things more closely than they had, they would see the series of calf-lymph had precisely the same origin and the same qualities as that of Jenner; and there were a great many practical difficulties in the way of carrying this new proposition out, for supplying lymph for the protection of the country against small-pox. He believed there would be no more protection than at present. He repudiated altogether the idea of syphilis being carried from one individual to another by lymph which was used. There might not be sufficient care in selection. Dr. Carpenter had alluded to lymph being taken from revaccinated persons, and had explained that it had failed because a spurious disease was communicated, the person not being so susceptible at that time. It was an important question; and if he could in any way promote the objects of this conference, of getting a supply of lymph from the calf, he should be exceedingly happy to do so. At the same time, his view was that they would not succeed in obtaining better lymph in many respects than that which was now current; but if it were only a means to supplement the present supply, and to meet an emergency like an epidemic of small-pox, that would be something to attain.

Dr. CRISP moved the adjournment of the debate. Those who advocated the system of animal vaccination knew nothing about it. They were special pleaders. He had conclusious to disprove what the Chairman had written in the report printed in the BRITISH MEDICAL JOURNAL; and on that account he was anxious that the discussion should be deferred, as he had much to say about the calf and its purity. They were told they must come to the calf for protection—the poor and humble calf. Now, they knew that the calf was anything but humble, for he would give a man a kick, and laugh at him afterwards. It was perfect nonsense and conceit. He would be glad if the meeting would give others an opportunity of exposing some of the errors which men in high authority had endeavoured to propagate.

Mr. BAKER said so much had been learned during the last two meetings, that there was evidently a great deal more to learn. He seconded the proposal for adjournment.

Dr. CAMERON said, with reference to Mr. Simonds' observation as to the origin of cow-pox and of small-pox, that gentleman seemed to have overlooked the experiments made by the Lyons Commission, which operated on a very large number of cows in two or three Government establishments. They would have fallen into precisely the same error as Mr. Simonds, had it not been for a mere accident. In the course of their experiments, they inoculated some animals with small-pox and they got no results. The animals were put aside, and, in the course of further experiments, they did it with vaccine matter. They had observed on one of these animals a slight eruption. They gave M. Chauveau information, and he did it to others and got some eruption. Taking the lymph contained in the pouches, he inoculated human beings and cows, and he found in human beings a vesicle in no wise different from the vaccine vesicle. Then Mr. Badcock said, how could it be said it was not the true thing? If they read Chauveau's book, they would know more about it. Chauveau vaccinated back from this vesicle to the cow, and he got the papule. He then got a vaccine eruption, which was a totally different thing. In that way, they had a very simple means of testing to what extent there was variola. Let them go to the innocent cow and revaccinate her, and say in what percentage they got a vaccine eruption and a variolous eruption. Professor McCall, having occasion to make experiments of that sort, said he got no results during a prevalence, which looked as if that matter was variolous matter. He did not want to dogmatise, but to know the fact. Dr. Ballard had told them what the Local Government Board had done; but, notwithstanding they seemed to have done everything, they had not reduced the death-rate of small-pox. The death-rate had not diminished in anything like the proportion of the vaccinations. The death-rate in cases of small-pox occurring in vaccinated persons was a point to which attention had not been directed. He found by Mr. Simon's book that in the original days the deaths were *nil*. Coming down to the first statistics, from 1830 to 1840, the death-rate was only one per cent. in vaccinated persons. Dr. Ballard, while denying the possibility of deterioration of vaccine lymph which had been transmitted in an unnatural soil for so many years, supported the opposite proposition of increased inactivity in small-pox matter occurring in an unvaccinated population; and, as he remarked, it was fed on blood. The small-pox epidemic of 1872 originated in a badly drained district, and fed on blood. It came on and was extremely fatal. On what ground could he support the extreme activity of small-pox where it was fed on blood and where it was fed on water? Dr. Ballard had told them he recommended public vaccinators to improve their stock of lymph from the animal. A very curious example occurred in Glasgow. A vaccinator there, getting a point of animal lymph, used it and improved his stock. He had no theory on the matter; but he had since got a fresh supply, there being some little hitch in the pedigree of the cases previously. There was a passage in Dr. Seaton's report as to the failures of animal lymph, but Dr. Seaton directly contradicted the reports of the persons engaged. He said that in Amsterdam there were ten punctures made. Did it not stand to reason that there would be some failures? The French Academy went into the matter, and they came to the conclusion that animal vaccine was not in the least behind the humanised vaccine. The commission reported that, taking the proportion of vesicles and punctures, the success of animal lymph was fully equal to that of humanised lymph. Dr. Warlomont's report claimed for the calf a higher percentage of success than was got in this country. If they looked at the Berlin report, it claimed success in every case with animal lymph. He did not say which of the results was right and which wrong, but he quite agreed with Dr. Seaton's report on the subject. It was all very well to say Dr. Seaton was not prejudiced: he did not wish to say he was, but he made equally positive assertions opposed to those for animal vaccination in the report of 1868, and these would be proved to be fallacious. Every one of Dr. Seaton's arguments would be overruled and shown to be incorrect; and the result of the matter was, that now he objected to calf-vaccination. In consequence of the great number of non-successes, the vaccinators after ten years claimed perfect equality in the matter of success; and, so far as security was concerned, they claimed in many cases a great deal more. The deterioration of humanised lymph was one of the reasons which induced the Belgian Government to institute calf-lymph. On the strength of six months' transmission and retransmission alternately between the calf and the human subject, the opinion of the Belgian Government was arrived at, and a commission was instituted. He expressed regret if he had said anything with regard to variolous lymph which had given offence to Mr. Ceely. No one could have had less intention of wishing to depreciate Mr. Ceely's labours in advance of the science of vaccination. With respect to Dr. Seaton's book, they must remember that it was possible to look at a subject from two sides.

The meeting was then adjourned till next Wednesday, at 4 o'clock, at the same place.

OUR TROOPS IN CABUL.

OUR correspondent at Cabul writes: Every exertion is being made by the authorities to provide shelter in the cantonment of Shahpur from the severe weather which is rapidly approaching. With the exception of the sick of the Divisional Field Hospital and some of the native sick, the troops are still in tents; and, as the nights are cold, with thick ice on any water about camp, the ink in the bottles in the tents being also frozen, it is time all should be under cover.

On November 11th, there was a moderate fall of snow, preceded by a dust-storm and a bitterly cold wind, giving us a taste of what we may expect. The mornings up to this have been simply perfection, and the day-time warm and genial; the thermometer in the shade rising to 65°, 70°, and 75°, which, to those liable to ague, is very trying, the difference of temperature between day and night being so great. Shahpur cantonment is a long range of one-storey mud buildings, forming three sides of an oblong, the fourth side being enclosed by the hills of Bemarie. These mud buildings form a running line of one mile and three-quarters, intersected at certain intervals by large gateways, with numerous rooms at either side which have been detailed for the regimental and staff officers. The rooms for the soldiers are protected on one side (the inside) by a wide verandah; on the outside, or that facing Cabul, by a wide ditch and thick wall. The rooms measure 15 feet wide, 20 feet high, and vary from 15 to 90 feet long, with good fireplaces, doors, and glazed windows; the latter constructed since taking over the buildings. The whole of the Europeans will be thus accommodated, and some native troops. At the base of the Bemarie hills, inside the enclosure, the 5th Ghoorkhas and 23rd Pioneers, whose duty it is to defend these hills, are constructing mud huts, and are making rapid progress towards completion.

The houses in Bala Hissa are rapidly being dismantled of timber, doors, windows, and everything likely to be useful in the construction of barracks and huts, and, when we have taken all we require, there will be very little left intact of the Ameer's palace or other buildings, where treachery and villany of all descriptions have been concocted. A more filthy den than the Bala Hissa cannot well be imagined—rooms literally full of human excreta, apparently collections of years; no attempt whatever at sanitation. It is fortunate, therefore, that it has not been occupied by our troops, where disease must have arisen by the very stirring up of such pollution.

At Shahpur, the water-supply at first appeared a great difficulty, as it came from the Cabul river, which passes through part of the city; but some excellent springs and wells have been discovered, and every care is observed in their preservation by walls being built round them and the establishment of "water-police". The sanitary arrangements of the cantonment are strictly observed; latrines outside for day use, and inside for night, on the dry-earth system. The Divisional Field Hospital is working most satisfactorily, and the sick are to be shifted into a portion of the barracks almost immediately, where the wards and offices have been constructed, plastered, and lime-washed with remarkable rapidity. This is one great point with Sir Frederick Roberts—first care of the sick and wounded, for whom he grants anything in reason recommended by his Principal Medical Officer.

Our communications with Peshawar are now open. Generals Gough and McPherson having shaken hands a few days ago, our letters from England reach us in one month, which is, to say the least of it, quick despatch. Though well supplied with all the necessaries of life, still a few of the luxuries will not be unacceptable; and, now that the road is open, we are in hopes of being able to obtain specially warm clothing, liquor, tobacco, and other articles. Mittens, Balaklava caps, socks, gloves, and such-like, would be most acceptable, to say nothing of Cardigan jackets. A convoy of sick and wounded left for Peshawar on the 14th November, among the number being Surgeon Duncan of the 23rd Pioneers, who was severely wounded in the chest at the action of Char-Asia on the 6th of October.

Since the last campaign in Afghanistan, so recently terminated, Surgeon-General Innes, Principal Medical Officer British Forces, has induced the Indian Government to make several concessions, which will be of great benefit to the sick and wounded and the service in general, as well as the comfort of medical officers.

The sick-carriage has been placed at the disposal and directly under the orders of the Principal Medical Officer.

The position of the Divisional Field Hospital, or section of it, on the line of march, is to be in the immediate rear of the column, in advance of all baggage.

One non-commissioned officer of Native Army per hundred dooliebearers, placed under the charge of the European transport-sergeant, is to superintend the sick transport and relieve medical officers of the physical labour and worry they experienced during the late campaign. This is a most important concession, and one for which all concerned will be grateful.

An allowance of thirty rupees *per mensem* has been granted to surgeons not entitled to charges for the keep of a horse, and twelve rupees *per mensem* to medical subordinates for the keep of a pony. How this grant has been refused so long is surprising, considering that, in a climate like this, medical officers and subordinates could not be expected to do their duty after a long march, when their hard work really begins, in looking after the sick.

A sanitary officer and secretary in one has been granted the Principal Medical Officer of each Division, which will allow the administrative officer time to consult with the officer commanding, answer the numerous personal questions from executive officers, and consider the many applications for supplies, etc.; heretofore, the Principal Medical Officer has had no assistance, and his labours never ceased.

Surgeon-Major R. Lewer, 9th Lancers, has been appointed Secretary to Deputy Surgeon-General Porter, Principal Medical Officer Cabul Field Force.

THE WAR IN ZULULAND.

The Transvaal Force.—Utrecht.—The Natal Sores.—Lessons from the Zulu Campaign.

SINCE I wrote last, the forts along the line of communication to Ulundi from the frontier have been abandoned; the sick and wounded they contained being sent to the base hospital at Ladysmith. Latterly, there has been an increase of sickness amongst the troops, consequent on the reaction after the excitement of the campaign, and on the advent of wet weather. There are a considerable number of invalids still for England, and the arrival of the transports is eagerly awaited. The Boers are still threatening; and it is deemed necessary to keep a military force in the Transvaal for a year or two.

The Transvaal force consists of three infantry regiments, one battery of artillery, one regiment of cavalry, and one company of engineers. The 94th and artillery are now marching, under Colonel Baker Russell, against Sekukuni. The field hospital with this force is in charge of Surgeon-Major Hector, whilst Surgeon Wallace has charge of the 94th. There is also a civil surgeon for duty with the artillery. Surgeon-Major Johnstone is senior medical officer at Prætoria. At Standerton, a small station on the main road to, and one hundred and twenty miles from, Prætoria, a field hospital is established for the troops there, consisting of the head-quarters and right wing of the 21st Regiment, one troop of cavalry, and a half battery of artillery. Surgeon-Major P. Smith is in charge, with Surgeon-Major Townshend for the 21st Regiment, and Surgeon Bushe for the artillery. This latter force will move to Prætoria immediately. At Wakkerstroom, seventy miles from Standerton down country, and on the main road to Sydenburg, a large camp is pitched for the King's Dragoon Guards, 80th Regiment, the left wing of the 21st Regiment, a half-battery of Royal Artillery, and one company of Royal Engineers, with Surgeon-Major Stafford as senior medical officer, Surgeon-Major N. Jennings, and two civil surgeons, Glanville and Boomer, for duty with the regiments. At Utrecht, which, being still unhealthy, is to be abolished as a station for troops, Surgeon-Major Comerford is in charge; and at Newcastle, still lower down the road, is Surgeon-Major Skene. This enumeration, with Surgeon-Major Cahir as senior medical officer of the whole, comprises all the surgeons employed with the Transvaal field force. A Stafford house surgeon is with Colonel Villiers near Luneburg.

Utrecht, although situated more than two thousand feet above the sea, in the midst of the mountains, is an unhealthy spot. It is placed on a slope, at the bottom of which is a quagmire three miles long; both slope and quagmire being surrounded on three sides by a continuous chain of hills. It is, of course, a Dutch settlement, and the Dutch here have no knowledge of, or regard for, sanitation. There are some beautiful sites close to the number of straggling huts called Utrecht, and near the fine Buffalo River in the open, which would have answered for a settlement. The result is that Utrecht will be abandoned. Newcastle is a prosperous town, and very healthy. The camp at Wakkerstroom is pitched on rising ground, two miles from the "town", but there is a marsh intervening. The camp, however, is placed to windward of the marsh, and no baneful influence is experienced. Standerton consists of about one dozen of houses occupied, as is the case with the other villages described, by storekeepers, with supplies for the Dutch farmers around. Each village has a small post-office; a residence for a "Landrôst", or local magistrate. There are also a few other houses occupied by contractors, the local doctor, and the missionaries; these, with one or two so-called hotels, comprise the entire place. But there is not a doctor for every village, although the Dutch farmers and their families are constantly ailing; and enterprising speculators taking caravans of patent and other medicines through the country, often realise one thousand per cent. of their original outlay. The Natal sore is of frequent occurrence, and is by no means confined to Natal. It occurs from poverty of the blood, and usually selects the extremities for its appearance. It has been known to attack the nose. It begins as a spot like a flea-bite, followed by a pimple, which bursts, and leaves a sore that becomes a corroding ulcer, extending from the centre, and amenable to no known local treatment, until the tone of the general health is so improved as to exert its influence on the sore. It is in reality a kind of plague-spot, without being contagious. It attacks every age alike, and is often seen as large as a crown-piece, surrounded by a reddish areola, gradually fading. When healing, it scabs over simultaneously, and, when the scab is detached, it is healed. Sometimes when the general health is slow to recover, the scab which has formed will remain adherent for a time, thus threatening a reopening of the sore from a failure of the vital powers to complete the healing process. Quinine is, of course, a most valuable remedy, conjoined with the administration of soups and wine. A wound or a mere scratch will degenerate into a Natal sore when the physical condition of body predisposes to such an issue; but, as may be expected, these latter forms are never so chronic as the idiopathic sores.

The Zulu campaign being now finished, the failings exhibited may be discussed. There is no doubt that, at the outset of the campaign, the *personnel* of the hospitals was insufficient for the number of troops despatched to the colony. It is stated that this was owing to there not really being enough men of the Army Hospital Corps to send out. If so, the blame rests with the military, and not the medical authorities at home; for it is well known that a proposed and necessary increase of the corps last year was negatived by the military executive. In the field force regulations by Lord Chelmsford, it is laid down that regiments are to supply extra orderlies, thereby carrying us back to the effete mixed system, so opposed to all order and efficiency. The number of orderlies, one to every ten sick or wounded, might be sufficient in the abstract; but, in the case of a large field hospital, it is not so. There are the water-carts to be looked after, the custody of the patients' arms and kits, the rations to be drawn from the commissariat, the sanitary arrangements to be supervised, the washing to be done, the superintendence of the sick transport, the numerous clerical duties, the cooking for the hospital, the discipline of the men, and various other duties which are quite distinct from the actual attendance on, and ministrations to, the sick and

wounded, which those unacquainted with the routine of a large hospital in the field—military officers, for instance—could never understand. It is hoped that the scale of orderlies for field hospitals in future campaigns will be increased to ensure unity of medical attendance, and the avoidance of introducing amongst the Army Hospital Corps the usually ineffective set of worthless men for hospital duties usually sent from almost every line regiment as a matter of course.

The arrangements connected with the transport of the sick, and for the medical stores in the field, were made by the military authorities, and showed, as in many former instances, want of regard for the comfort of the sick and for the medical supplies. The ambulances were at first almost grudgingly given, and the animals could be taken at will by the transport department, provided they were not actually in use. The result was that, on every possible occasion, whenever transport oxen were wanted, the hospital ones were taken; and, when these were required again, the reply was, "There are none available for you". The drivers of the hospital transport were servants of the transport department; and this latter always declined either paying them, or, indeed, having anything to do with them, except remove their oxen from hospital employ, and themselves, also, whenever possible. The truth is, that the campaign suffered from a want of brains to guide it. The inspecting general of lines and communications was comfortably settled at Maritzburg, never once moving up the line, as Colonel Collen did in Ashantee so effectively and regularly, to observe irregularities and investigate complaints. There were certainly assistant adjutants-general from engineer and other corps, raw hands to such duties as were entrusted to them. Whilst hundreds of oxen were starving and dying along the line, the military authorities were haggling at Maritzburg with conductors about rates of pay and other trifles—mere trifles under the then circumstances. What could it signify whether a conductor of wagons was paid ten shillings or twelve shillings a day for a few months, if by his presence up country he could save hundreds of oxen from neglect and starvation? It seemed that, at Maritzburg especially, the case of the square peg and the round hole was fully exemplified. There is scarcely a doubt that the purely military officer is totally unfit, from his training, for the purely administrative departments. The transport officers, nearly all combatant, commenced by suspecting the natives, and breaking faith with them as regards pay and period of engagement. All colonists will agree that no system could have been worse. Hundreds of transport-drivers have deserted, solely and purely because the transport officers were too lazy to draw out pay-lists for the men long in arrears. It was impossible not to feel surprise at such carelessness, and at hearing afterwards other and quasi-clever but unjust reasons, assigned for not paying the transport-drivers, which, together with the neglect of the transport animals from a deficiency of conductors and drivers, was the chief cause of the delay and of the enormous cost of the war to the taxpayers at home, who should be made acquainted with the facts. Of course the medical transport shared the consequences of such inefficiency, but only in a minor way, as Surgeon-General Dr. Woolfryes most ably coped with the difficulties; and the result is that not a single complaint has been made to the authorities of any instance of neglect of the sick belonging to the second division of Wood's column. Let the first, or the inactive column, answer for itself.

The ordnance department, in so far as it should have furnished supplies to maintain full equipment for hospitals, was a failure. A great number of young officials represented it, and they were manifestly young to their duties. On the other hand, the commissariat department was very successful, and was of great assistance in providing for the wants of the sick and wounded. The medical supplies, medicines, instruments, etc., sent out from Whitehall Yard were abundant, and reflect great credit on the medical authorities there. Indeed, the recently acquired liberty of action by the medical department in these matters will go a long way to bring the department into a condition of complete efficiency and usefulness to the army, in spite of the vain efforts to reintroduce the regimental system. The crown of the edifice now so laboriously constructed by our esteemed, able, and persevering chief will be his obtainment of the principle of selection for the administrative appointments, a failure in which is the only danger that threatens the department, and so far it does.

DUNMOW RURAL DISTRICT.—The death-rate of this district during 1878 was satisfactorily low (14.6 per 1,000). Of the total number of 288 deaths, 143, or as nearly as possible a half, were in persons aged sixty years and upwards. Zymotic diseases caused 23 deaths, 5 of these being from enteric fever, which is hardly reassuring. Ordinary sanitary work appears to be well carried out in the district, and the particulars given of a detailed survey show that it is well looked after. The water-supply of many of the villages requires improvement, however, and the dilapidated state of some of the cottages should receive early attention.

SPECIAL CORRESPONDENCE.

LIVERPOOL.

[FROM OUR OWN CORRESPONDENT.]

Infirmary for Children.—Medical Instruction.—Clinical Teaching at the Royal Infirmary.—Death under Chloroform.

WITH regard to hospital appointments, there has latterly been a dearth of change; but there is now a vacancy at the Infirmary for Children, owing to the resignation of Dr. Alfred Stephens, senior physcian and founder of the institution. The well-merited promotion of Dr. James Armstrong, senior assistant medical officer, at the coming election, is practically assured, as no one contests his claims.

At the Medical Institution, the fortnightly meetings have been replete with interest since the reopening early in October. A well-selected series of cases and pathological specimens of unusual importance, with a long discussion on the "causes and prevention of puerperal mortality", have engaged the attention of members; while at the meeting on Thursday, December 4th, Mr. Rawdon, Surgeon to the Infirmary for Children, presented some cases of cleft palate and hare-lip which had been closed most admirably and successfully by himself, and were briefly but ably referred to in a paper detailing the process which he has adopted (chiefly from the directions of Mr. Thomas Smith), and in which he has acquired a leading experience in Liverpool.

In the matter of ethics and politics, an attempt has been made at the Medical Institution to secure the support of that body in favour of provident dispensaries. That attempt has failed, as the Institution very properly withholds the *ægis* of its protection or official countenance from schemes among which there may at any time be found organisations of unquestionable philanthropy and well-earned professional remuneration side by side with business ventures characterised by moral obliquity no less than by enterprise. The institution equally abstains from condemnation, which, while deservedly aimed at questionable undertakings, may improperly depreciate those of unsullied repute. It is obvious that the said "aloofness" is the only judicial and judicious course.

At the Royal Infirmary, the clinical teaching is being pursued with great energy and success. During the past summer, the lecturers were Dr. Glynn (on Clinical Medicine and the Principles and Rudiments of Physical Diagnosis and of Therapeutics) and Mr. Reginald Harrison (who chose for his topic some of the diseases of the Urinary Tract), who met their classes weekly in the operating-theatre, and whose discourses were attended with great punctuality not only by the students, but by practitioners in the town. During the three months now drawing to a close, the weekly lectures have been conducted by Dr. Davidson (on Clinical Medicine) and by Mr. W. Mitchell Banks (on Clinical Surgery). The latter gentleman has followed the method of collecting every Wednesday a series of cases illustrating diagnosis and treatment both in major and in minor surgery; cases in progress, such as Listerian dressings, performed before the class; and every now and then a major operation, with an account of the case before and its probable future.

At the surgical clinical lecture on Wednesday, December 3rd, during the removal of a small piece of bone, a man died under chloroform. He had previously had this anæsthetic, and borne it well; while he had before that had ether, and submitted to it but badly—in fact, so badly and with the onset of such struggling and asphyxia as to lead to a preference for chloroform in the present instance. Almost invariably, however, ether is employed at the Royal Infirmary, chloroform being but rarely substituted, except for reasons such as prevailed in the present case. This unfortunate event was the subject of an inquest on Saturday, December 6th, at which Mr. Clarke Aspinall, the borough coroner, presided, and at which the undoubtedly inevitable nature of the event was duly recognised and recorded by the jury. It is many years since a similar accident occurred at the Liverpool Royal Infirmary.

ASSOCIATION INTELLIGENCE.

COMMITTEE OF COUNCIL: NOTICE OF MEETING.

A MEETING of the Committee of Council will be held at the offices of the Association, 161A, Strand, London, on Wednesday, the 14th day of January next, at 2 o'clock in the afternoon.

FRANCIS FOWKE, *General Secretary.*

161A, Strand, London, December 19th, 1879.

STAFFORDSHIRE BRANCH: ANNUAL MEETING.

THE sixth annual meeting of this Branch was held on Thursday, October 30th, 1879, at the George Hotel, Walsall; twenty-three members being present.

Dr. Millington, in the absence of the President, introduced the President-elect, Dr. J. H. TYLECOTE, who then took the chair.

Vote of Thanks.—Dr. TOTHERICK proposed that the best thanks of this meeting be given to the retiring President, Mr. F. E. Weston, for his services during the past year. This was seconded by Mr. FOLKER, and carried unanimously.

New Members.—The following gentlemen were elected members of the Branch: Mr. W. Wilson, Birmingham; Dr. James Gordon, Walsall; Dr. Carter, Birmingham; Mr. B. H. Herbert, Uttoxeter; Mr. H. Langley Webb, Cheadle.

President's Address.—The President delivered an address "On the Geographical Distribution of Disease".

Dr. MILLINGTON proposed that a cordial vote of thanks be given to Dr. Tylecote for the admirable and instructive address which he had just read. It was carried with applause.

Report of Council.—Mr. VINCENT JACKSON read the annual report, as follows.

"Your Council has to report that during the year which has passed three ordinary meetings of the Staffordshire Branch have been held. At Stoke, *éclat* was given to the meeting by the reading of valuable papers, and the exhibition of Dr. Bigelow's instruments for crushing and removing, by one operation, stone from the bladder; also by an exhibit of very valuable surgical and other instruments. At Stafford, a discussion upon the general question of Branch representatives in the Committee of Council resulted in the following resolution being unanimously passed: 'That this meeting is of opinion that it is expedient that representatives of Branches in the Committee of Council should afford due information to their Branches of the proceedings of the Committee of Council, and that it is injurious to the Association at large that the minutes of the Committee of Council furnished to each member should be directed to be held as private and confidential.' To this important resolution, no reply has been received from the Committee of Council. At Wolverhampton, the meeting, which will always be regarded as an historical one, and to which the members of the Shropshire and Mid-Wales Branch had been invited to attend, was commemorative of the gift of the Bell Medical Library and a sum of one thousand pounds, the interest of which is to be yearly expended in the purchase of valuable medical and surgical books of reference for the use of the medical profession of the town and district. The demonstration of the application of the plaster-of-Paris jacket, and of Cocking's poroplastic corset, by Dr. T. J. Walker of Peterborough and Mr. Coxeter, surgical instrument maker, of London, was valuable and much appreciated. Your Council consider that the combined meetings of Branches—two or more—is a movement which should be encouraged, for whilst it must add much to their stability, usefulness, and popularity, it must also tend to awaken a renewal of personal energy, and to excite a spirit of healthy rivalry. It is satisfactory to your Council to observe that this plan has lately been adopted by other Branches.

"The names of the contributors to the work of the year are the following: Mr. J. Alcock, Mr. Reginald Harrison (Liverpool), Mr. J. Hartill, Mr. R. Garner, Dr. Joseph Hunt, Mr. Spanton, Mr. Wolfenden, Mr. L. Tait, Dr. Fernie, Mr. Folker, Dr. Millington, Mr. Vincent Jackson, Dr. Walker (Peterborough), and Mr. Coxeter (London); and the thanks of your Council are accorded to these gentlemen.

"The number of members is one hundred and twenty-four, eleven new ones having joined since the last annual gathering. The prosperity of the Branch is unabated, and from a financial, professional, and scientific point of view it is a credit to the Association and the county."

The adoption of the report was moved by Dr. JOSEPH HUNT, seconded by Mr. G. SHARP, and carried.

Mr. LAWSON TAIT proposed, and Mr. FOLKER seconded, that the attention of the Committee of Council of the Association be respectfully drawn to the resolution referred to in the report, and which was unanimously passed at the ordinary meeting of the Branch held at Stafford last February, and to which no answer has been received.

Financial Statement.—Mr. J. G. U. WEST read the statement of accounts for the past year, which showed a balance of £13 5s. 6d.

Next Annual Meeting.—Mr. GRAY proposed that the next annual meeting be held at Stoke. This was seconded by Dr. G. LOWE, and agreed to.

Election of Officers for 1879-80.—The following were elected. *President-elect:* W. H. Folker, Esq. *Vice-Presidents*: J. T. Arlidge, M.D.; E. F. Weston, Esq. *Honorary Secretaries:* Vincent Jackson, Esq.; J. G. U. West, Esq. *Council:* Henry Day, M.D.; E. Fernie, M.D.; J. Gailey, M.D.; F. J. Gray, Esq.; J. T. Hartill, Esq.; Joseph Hunt, M.D.; H. H. Morgan, Esq.; C. Orton, Esq.; G. G. Sharp, Esq.; J. Y. Totherick, M.D.; J. W. Wolfenden, Esq.; J. K. Wynne, Esq. *Representatives in the Council of the Association:* J. Alcock, Esq.; H. Day, M.D.; W. H. Folker, Esq.; W. G. Lowe, M.D.; W. Millington, M.D.; D. H. Monckton, M.D.; W. D. Spanton, Esq.; Moses Taylor, Esq.

Invitations to Annual Dinners.—Dr. TOTHERICK proposed: "That when the funds of the Branch will allow, the President, with the approval of the Council, shall be empowered to invite the chief magistrate and any other prominent individuals residing in the town where the annual meeting is to be held, to the dinner." This was seconded by Mr. J. HARTILL, and carried unanimously.

Votes of Thanks were passed to the secretaries and auditor.

Dinner.—The members dined together at the close of the meeting.

SOUTH OF IRELAND BRANCH: ANNUAL MEETING.

THE fourth annual meeting of this Branch was held at the Royal Cork Institute on Saturday, November 8th, at 4 P.M.

President.—The chair was taken by the President, Dr. EAMES, who delivered an address, and then vacated the chair in favour of Dr. D. B. O'FLYNN, who has been appointed President for the ensuing year.

Vote of Thanks.—A warm vote of thanks, proposed by Dr. O'Connor, President of the British Medical Association, seconded by Dr. O'Reilly of Lismore, and carried unanimously, was tendered to Dr. Eames for his dignified conduct in the chair during the past year.

The Annual Report of Council was read.

Meetings of the Branch.—It was resolved that the meetings of the Branch be held monthly instead of quarterly as heretofore.

New Members.—Seven new members were proposed.

Election of Officers.—The following were elected. *President:* D. B. O'Flynn, M.D. *President-elect:* N. J. Hobart, M.D. *Vice-Presidents:* R. O'Reilly, L.K.Q.C.P., Lismore; J. A. Eames, M.D. *Council:* Ringrose Atkins, M.D.; R. Burke, M.D.; H. Corby, M.D.; W. J. Cummins, M.D.; J. G. Curtis, L.R.C.P.Ed.; D. Donovan, M.D.; J. A. Eames, M.D.; N. Grattan, L.R.C.P.Ed.; C. A. Harvey, M.D.; J. R. Hayes, M.D.; N. J. Hobart, M.D.; H. M. Jones, M.D.; A. O'Connor, M.D.; R. O'Reilly, L.K.Q.C.P.; J. O'N. Sisk, M.D.

METROPOLITAN COUNTIES BRANCH: EAST LONDON AND SOUTH ESSEX DISTRICT.

A MEETING of this District was held at the Bow and Bromley Institute on November 20th; MARK LONG, M.D., in the Chair.

Communications.—The following communications were made.

1. A Case of Perforation of Bowel and Wall of the Body by a Spike of Grass. The patient, a boy, was exhibited by Mr. R. H. S. CARPENTER. On September 1st, 1879, he had been amusing himself putting ears of grass into his mouth, when all at once one slipped down. Five or six days afterwards, he complained of pain in the left side, and of inability to raise his left arm to a horizontal position. The pain continued; and on September 14th there was found, between the ninth and tenth ribs on the left side, near the angles, an abscess with the stem-end of the ear of grass just protruding. It was extracted the same evening, fourteen days after having been swallowed. There had been no constitutional disturbance.

2. Mr. R. W. PARKER gave a brief description of the Treatment of Spinal Disease by Plaster-of-Paris, and then put up two cases, one a case of cervical disease requiring the use of the jury-mast.

3. Dr. H. G. ORLEBAR read a paper on the Treatment of Phthisis, the discussion of which was postponed till next meeting.

CORRESPONDENCE.

"ESSAYS WANTED."

SIR,—In your last issue appears a paragraph stating that no essays have been sent in either for the College Triennial Prize or the Jacksonian Prize of the Royal College of Surgeons, and that no award of the former has been made for twenty years.

A partial explanation of this deficiency of candidates is given by the fact, that the College allows no persons except its own members to compete for these prizes. Opinions may differ as to whether the system of prize-essays is that best calculated to elicit good scientific work; but it cannot surely be doubted that the chance of getting good work is greater in proportion as the area of competition is enlarged. One instance is better than any amount of speculation. I know most intimately a member of the medical profession who was very desirous a few years ago of competing for one of these prizes, but was prevented by not possessing the qualification of membership. His essay may not have turned out to be of much account, but would have prevented the unsatisfactory announcement of "*no candidates*". This individual does not desire to be named, but signs himself merely

NOT A MEMBER OF THE COLLEGE OF SURGEONS.

December 20th, 1879.

*** We have reason to know that the writer was a most highly accomplished investigator, and the essay likely to have been valuable.

STATISTICS OF THE GLASGOW INFIRMARY.

SIR,—In your issue of the 13th current, reference is made to some alleged statistics from Glasgow, on which please excuse a remark or two. In the first place, it looks not well that such are accepted from a layman, whose ignorance of such matters has already been exposed before the Managers of the Royal Infirmary, and especially when a more mature and accurate account could easily be obtained from the surgeons. Secondly, the figures given are based on a false statement; viz., that "each surgeon had one day in succession, in which he received every patient that came for admission on that day, so that there could be no selection"; and which said layman knows not to be correct. And, thirdly, the numbers given refer to cases, nine-tenths of which had no antiseptic of any kind used in their treatment, as they did not admit of the use of such—a fact which will be at once admitted even by those who aver that they adopt the antiseptic system; and nearly all the burns under all the surgeons are treated by carbolic acid and oil. Very lately, a fair comparison was demanded of the managers, case against case of a similar kind; but it has not yet been accorded. If the so-called "antiseptic system" requires such bolstering, it rests, as I believe it does, on a very frail foundation. More may be said on this subject soon.—I am yours faithfully, JAMES MORTON, M.D.

Glasgow, December 15th, 1879.

*** In giving the figures at the International Congress at Amsterdam, Mr. McEwen, the President of the Glasgow Infirmary, mentioned that they had been drawn out by the Medical Superintendent and submitted to the surgeons of the Infirmary.

GUY'S HOSPITAL.

SIR,—I have read with much surprise the letter signed by a "Member of the Staff", relative to the nursing question at Guy's Hospital. The Lady Superintendent, whom the "Member of the Staff" calls "*Matron*", is Miss Burt, who has held a similar position in the Leicester Infirmary for the last five years, and whose leaving was much regretted by those who knew her, and by all the members of the staff. Miss Burt thoroughly reformed the system of nursing at Leicester, with the approval and co-operation of the staff. The plan of having a *lady* in each large ward establishes an admirable tone throughout the hospital; and, inasmuch as the patients are nursed with the utmost care and devotion, the staff, instead of "protesting" against it as at Guy's Hospital, were most grateful to Miss Burt for introducing such valuable reforms. On her leaving a few months ago, over £100 was subscribed by friends of the Infirmary, amongst whom was included every member of the medical and surgical staff, as a testimonial to her energy, skill, and administrative power in establishing a system of nursing in the Leicester Infirmary equal to any in the kingdom. This system is, I believe, in all its main features identical with that which has been so successfully carried out for many years at King's College Hospital. Under this plan, the staff of the Leicester Infirmary has lost no power or influence, and I do not think such an idea has ever crossed the mind of any of its members.

The staff at Guy's Hospital may be assured that Miss Burt will work with the single aim of conducing to the comfort and well-being of the patients, and the general improvement of the condition of the wards.—I am, sir, yours faithfully,

C. H. MARRIOTT, M.D.Lond., F.R.C.S. (by Exam.),
Surgeon to the Leicester Infirmary.

Welford Place, Leicester, December 15th, 1879.

THE VICTORIA CROSS.

SIR,—I find that at the Glasgow and Aberdeen Medical Graduates' annual dinner, when responding, on the spur of the moment, for the Army, I fell into the error of naming, as the hero of my narration, Dr. Sylvester, instead of Dr. Hale of the same division (Light). Dr. Sylvester very properly corrects me, and I leave it, with his letter to me, in your hands, to judge whether further correction is necessary as regards the very kind notice you take of the dinner in last week's JOURNAL. I express my regret that my error should thus give you trouble.—I am, sir, yours truly, THOMAS LIGERTWOOD.

Royal Hospital, Chelsea, S.W., December 16th, 1879.

Copy of Letter from Dr. Sylvester.

7, Bessborough Gardens, Pimlico, Saturday, December 13th, 1879.

Dear Dr. Ligertwood,—I have read your speech at the dinner of the Aberdeen and Glasgow University Club, reported in to-day's number of the BRITISH MEDICAL JOURNAL, and your reference to me and how I won the Victoria Cross. I am quite sure you did not intentionally exaggerate; but you have unwittingly made me a hero indeed, and an actor in an episode which, however, never transpired. It is true that, on the final assault on the Redan, I was in the advanced trenches, assisting the wounded to the best of my powers under a heavy fire; and afterwards, when our troops were beaten back, at the request of Sergeant Shields, V.C., I accompanied him to the open to give surgical aid to the adjutant of our regiment, the 23rd Royal Welsh Fusiliers, who was lying mortally wounded in a spot somewhat sheltered from the grape and roundshot with which the enemy were plentifully dosing us after our compulsory retirement. But the romantic story you related, how I personally withstood the whole Russian force in my efforts to protect him, is, I can assure you, fictitious. Perhaps you were thinking at the time of the assistant-surgeon of the 7th Fusiliers, whose name I have unhappily forgotten, but who was the first medical officer upon whom the Cross was conferred. He indeed did rally the men of his regiment, who, on some sudden onslaught of the Russians—a night surprise—were retiring precipitately. Drawing his sword, he rallied them, led them to the encounter, and drove the enemy from the entrenchment.

I think it would be well if the mistake you fell into were corrected, even though my reputation for conspicuous gallantry is somewhat dimmed.—Believe me, dear Dr. Ligertwood, yours sincerely,

HENRY T. SYLVESTER.

THE IDENTITY OF COW-POX AND SMALL-POX.

SIR,—At the vaccination conference on the 6th instant, objections were made by numerous speakers to the theory which has up till recently received very general acceptance in this country; viz., that cow-pox is a product of the same virus as produces small-pox in man. So far as I am aware, this opposition to one of Jenner's fundamental doctrines is based almost exclusively upon the results of the experiments of M. Chauveau of Lyons, whose arguments have been so ably combated by Dr. Seaton in the thirtieth section of his famous *Handbook of Vaccination*. Into the merits of the controversy I do not propose to enter, except to say that the Government, in repeating Mr. Ceely's and Mr. Badcock's experiments in inoculating cows with the matter of small-pox, would appear to regard the question as still an open one. I should wish, however, as this matter will probably come up for further discussion at the adjourned conference, to rescue from its present obscurity a fact which appears to me to be a very strong argument in favour of cow-pox being actually, as Jenner himself styled it, the variolæ vaccina.

In the year 1840, eight milch cows and two sturks were turned to graze during the daytime in a meadow at Oakley, in the Vale of Aylesbury, in which the clothes and bedding of a person who had died of malignant variola had previously been exposed almost constantly night and day for a week, and in which they were still always exposed at night, and not always removed in the morning before the readmission of the animals. On one occasion, at least, the cows were observed in the midst of the bed-flock, licking it up. Within twelve or fourteen

days of their admission to the meadow, five of the milch cows and one sturk exhibited simultaneously, or almost simultaneously, well-marked cow-pox. It was most clearly ascertained that the animals, which belonged to the place and had not been brought in from elsewhere, were in good health at the time of their admission to the meadow; and that there was no vaccine disease at the time anywhere in the vale. Mr. Ceely, who records the case in vol. x of the *Transactions of the Provincial Medical and Surgical Association* (p. 211-225), argues at some length in favour of cow-pox being induced in these animals by *variolous effluvia;* and the period of attack evidently corresponds entirely with what might be anticipated if this were the common cause of the outbreak. The case is certainly a very striking and peculiar one, and this must be my excuse for drawing the attention of your readers to it.—I am, etc.,

December 6th, 1879. FRITHIOF.

THE CANAL BOATS ACT, 1877.

SIR,—A year has now nearly elapsed since the above-named Act came into force over all the country. Perhaps the experience of an official whose duty during this period included the supervision of four hundred and ninety-two canal boats may not be uninteresting to your readers. I find that I have succeeded in effecting registration in only two instances; and I believe my metropolitan *confrères* have been scarcely, if at all, more fortunate. Certainly many of the larger boat-owners are willing and anxious to comply with the law; but their efforts are usually thwarted by the reluctance of the boatmen themselves to have registration effected, since their children are at once brought under the ken and domination of the School Board. Furthermore, the Act is admirably adapted for facilitating the escape of any offender against it. Suppose, for instance, I find a boat either uncertificated, unsanitary from any cause, or otherwise not complying with the Act, I have no power to detain it while I can procure a summons; and it "vanishes away and is no more seen" before the summons can be served. Then the regulations of the Local Government Board permit a choice of registration authority; and many boats that I know of have not yet made up their minds which to choose, nor will they while they have any children on board. At present, the Act is entirely a failure, and must be so until the hands of those administering it are strengthened by further legislative enactments.—I am yours obediently,

BENJAMIN BROWNING, R.N., S.Sc. Cert. Edinburgh,
Medical Officer of Health to the Vestry of Rotherhithe.

December 1879.

HOSPITAL ABUSE.

SIR,—The Secretaries of the Bradford Medico-Ethical Society would feel obliged to those of your readers who are well versed in the administrative department of any general or special hospital, and who will be kind enough to inform them whether they can suggest any check in the giving of medical or surgical relief to those who are able to pay for private medical or surgical advice. The abuse of charities in this way is recognised throughout the kingdom, and we are anxious to hear of any remedy whereby this great abuse may be minimised.—We remain yours faithfully,

JOHN ARTHUR,
JOHN DUNLOP, } *Hon. Secs.*

Bradford Medico-Ethical Society, 35, Manor Row,
Bradford, December 15th, 1879.

A QUACK DOCTOR AND HIS PATIENTS.—On December 2nd, at the Halifax Borough Court, Joseph Carney of Prussia Street, Lady Lane, Leeds, *alias* "Professor Joseph", was committed for trial on three charges of obtaining money by false pretences. In the first case, he had called at the house of Thomas Sutcliffe, Halifax, and undertaken to cure the daughter of blindness. He had the physic with him, which he said was 7s. 6d. per ounce, and made up two bottles of medicine, for which he received £3. He wrote his address as "Professor Joseph, residence, Botanic Dispensary, Knott Mill, Manchester". Detective Harland went over to Manchester, but could find no such person or place. He also inquired into the truth of four testimonials, all said to have been given by Halifax people who had been cured of ailments, but could find none of the persons mentioned. Mr. George Jarmain, the borough analyst, proved that one medicine, to be used as eye vapour, consisted of aloes and chalk in solution; and the other, for internal application, of aloes alone. In other cases, the prisoner had supplied similar medicines to cure a "catch" in the throat and deafness. In one instance, he gave an address at Bradford, but Detective Harland found no such address. One witness had paid the prisoner £3 18s., and another 30s. Mr. Jarmain said the aloes mixture cost 1½d. a pint, and the chalk 1d. an ounce. Prisoner was admitted to bail.

PUBLIC HEALTH
AND
POOR-LAW MEDICAL SERVICES.

TYPHOID FEVER AND POLLUTED WATER.

ANOTHER epidemic, and that of the most serious proportions, must now be added to the long list of outbreaks of enteric fever due to polluted water. The town of Swansea, which has since 1873 and 1874 been comparatively very free from fever of a fatal type, suddenly began, in August and September last, to have, instead of one death a month, a fatal case of fever nearly every day, the number being in August thirty-one, and in September twenty-seven. Early in August, the officer of health received information from several practitioners of a great number of cases of fever in their practice; and at a meeting of medical men, held on the 18th August, 352 cases were reported, 314 of which had come under treatment during the previous fortnight. During the several weeks of August, 96, 183, 179, and 79 cases came under observation in the town; and during September, 54 more occurred. Adding 50 more cases for omitted returns, it appears that a total of no fewer than about 460 cases occurred in the borough during August and September, 63 of these being fatal. Of the fatal cases, 34 occurred in males and 29 in females, at the following ages: between one and five years, 7; five to fifteen, 16; fifteen to twenty-five, 25; twenty-five to sixty, 15.

As to the causation of the epidemic, there seems little doubt that the water-supply was the means of propagating the disease, though Mr. Davies is admirably cautious in dealing with the question. It appears, however, that the disease was almost entirely limited to the urban sanitary district, the rural district being nearly free from it; and those districts in the borough which were outside the area of water-supply were similarly exempt. Mr. Davies was unable to obtain any actual proof of specific contamination of the water; but it appears that the reservoir which at that time supplied the town with water in its natural state (unfiltered) was partly fed by a stream in very unwholesome relations with an ill-kept farm. The rainfall during the two months preceding the outbreak was very heavy; from June 11th to July 9th, 12.06 inches, and from July 9th to August 6th, 9.77 inches, of rain having fallen, the amount in the week ended August 6th being as much as 2.8 inches. On Saturday, August 2nd, a thunderstorm of great severity broke over the town, and was accompanied by a heavy fall of rain, amounting to 0.35 inch, which must have fallen in a few hours. Mr. Davies says that his visit to the gathering-ground of the reservoir on August 21st convinced him that there were conditions at the farm above spoken of, which rendered the pollution of the stream quite possible, and even probable, with the heavy rainfall which the district had experienced. There was no sickness of any kind at this farm at the time of Mr. Davies' visit, but the admission that there had been cases of fever at the house four months previously, coupled with the entire neglect of sanitary precautions, brings prominently forward the possibilities of specific pollution of the stream. Further than this, Mr. Davies has not been able to carry the investigation, which is much to be regretted, as it would have been eminently desirable to have the reasons of this very large epidemic thoroughly cleared up. But looking to the short duration of the outbreak, to the fact that it could not be connected either with the sewerage or the milk-supply, and to its diffusion all over the borough, there can be no sort of doubt that the water-supply was the cause of the mischief.

The same heavy rainfall seems to have had the effect of commencing an outbreak of typhoid fever at Alcester, in Warwickshire. On the evening of Sunday, August 17th, portions of the town were inundated by a flood so severe that the water rose to a considerable height on the ground floor of numerous dwellings, and completely covered several wells and privy ashpits. Part of the houses in the town are supplied with water by a company, and in not a single instance where it was satisfactorily shown that the company's water had been regularly used, did a case of typhoid fever occur; but amongst the houses still supplied by the shallow and polluted subsoil wells of the town (no doubt additionally polluted during the inundation by the washings of foul matters from privy-middens), eleven cases broke out during the last fortnight of August; the disease assuming extended proportions during the last week of that month. These cases were distributed all over the town, and were not confined to any special locality. Having regard to these acts, Mr. Fosbroke, the medical officer of health, in conjunction with the medical practitioners of Alcester, is led to the conclusion (which, indeed, seems irresistible) that the polluted condition of the wells mainly caused the outbreak, and that the floods assisted in disseminating the disease. In his report on the Evesham Urban Sanitary District for last quarter,

moreover, Mr. Fosbroke says that typhoid fever has assumed serious proportions in the borough during the past few months. From the beginning of the year to October 14th, thirty-six cases of that disease had occurred, three of which had proved fatal. The outbreak commenced about the end of June, attained its greatest height towards the end of July, and since then has gradually subsided. During the months of June, July, and August, Mr. Fosbroke registered no fewer than 15.85 inches of rain, and it is not, therefore, surprising that additional organic matter should find its way into the already polluted wells which form the water-supply of the borough. Mr. Fosbroke has little doubt, after careful examination of the circumstances of the case, that the source of the evil is to be sought in this polluted water; and in one locality there was particular evidence that such was the case.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

ABERDEEN.—The annual report of Dr. Ogston for 1878 consists exclusively of statistics, with comments upon them; and it is not, therefore, possible to say much about it. The general death-rate for the year was 22.4, that from zymotic diseases 4.5, and that of infants under five years of age 8.9, per 1,000. Of the zymotic diseases, whooping-cough was most frequent and fatal in May and June, scarlatina in February and October, diphtheria in November, croup in December, diarrhœa in August, typhus in March, and enteric fever in February. The deaths from these several diseases in the order named were 123, 64, 44, 23, 60, 38, and 30. During the year, a total of 988 cases of infectious disease were reported to the sanitary staff by the medical officers of public medical institutions and private practitioners.

BERKSHIRE.—The combined district in Berkshire, under the supervision of Dr. Woodforde, is a very large one—too large almost for any medical officer of health of less exceptional activity than Dr. Woodforde. Its area is 375,534 acres (nearly 600 square miles) and its population 137,650. Dr. Woodforde's reports have always been of an interesting kind, and to his last he prefaces a valuable summary of the results to the public health of sanitary improvement, as tested by the mortality returns of the five years during which he has been in office. Comparing these statistics with those for the previous ten years, the actual number of deaths from all causes is found to have remained nearly stationary, notwithstanding the large estimated increase in population, and in zymotic diseases generally the diminution in the mortality has been rather more than a sixth; while in continued (mainly "enteric") fever, the decrease is considerably over 50 per cent. Equally distinct (though not to the same extent) is the diminution in the fatality of phthisis, the mean yearly deaths from which, estimated according to the increase in population, have fallen by a sixth during the period under review. On the other hand, the deaths from diphtheria and diarrhœa have remained at nearly the same rate as before; while there has been a distinct increase in the mortality from lung-diseases, due mainly to the prevalence of acute inflammatory affections of these organs, in the years 1875 and 1878. An equally distinct lessening is, moreover, shown in the mean yearly number of deaths at each age up to sixty-five for the five years period, and it is not until old age is attained that there is any increase of mortality. Further, even during the year 1878, in which the deaths were much above the average in childhood and after maturity, those occurring between fifteen and forty-five were fewer by a fifth than in the period from sixty to seventy. In the five years embraced in the review, the mean yearly death-rate from all causes has fallen from 19.2 to 18 per 1,000 living; the rate for zymotic diseases has decreased from 2.44 to 1.42 per 1,000, the percentage proportion borne by deaths in this class to the total mortality being barely 10.0 in the second, as compared with 12.7 in the former period. This improvement is, however, unequally divided among the various districts included in the combination: in urban areas, the evil effects of bad sanitary surroundings being intensified by the aggregation of dwellings and population to a degree that does not obtain in the scattered cottages of the rural districts. These comparative statistics are amongst the most useful evidences of sanitary progress, as they show, to a far higher degree than those for a single year can do, the improving effects of drainage, pure water-supply, and the removal of nuisances. Coming more particularly to the statistics of 1878, which are dealt with at the end of the report in a series of elaborate tables, we find that, during the year, a total of 2,536 deaths were registered, giving a mean death-rate of 17.8 per 1,000, the rates varying in the different districts, from 14.8 in the rural district of Easthampstead, to 22.3 in the urban district of Wallingford. Altogether, 381 deaths occurred from Class 1 or zymotic diseases, 12 of these being from small-pox, 23 from measles, 66 from scarlatina, 27 from diphtheria, 60 from whooping-cough, 28 from enteric fever, and 81 from diarrhœa. A great many outbreaks of small-pox are reported, the infection having in the majority of instances been imported from London. Through Dr. Woodforde's prompt action, however, these outbreaks were nearly all nipped in the bud, and everything was done in the absence of hospital accommodation to check the spread of the disease. Scarlatina was epidemic during the year at Abingdon, and in several villages there were severe local outbreaks. Much of the enteric fever seems to have have been due to polluted water; and, in some interesting cases recorded by Dr. Woodforde, no previous history of infection could be made out. The diphtheria chiefly occurred in places that were damp, and where the air was stagnant through the close proximity of trees to the houses. Sanitary works of the larger kind seem to be progressing slowly in the district, but the ordinary work of nuisance repression is being steadily and actively carried out. Dr. Woodforde may fairly be congratulated upon the amount of work already accomplished in his district, and upon the quality of his reports, which are at once practical and interesting.

BIRMINGHAM.—There is no lack of reports on the sanitary condition and progress of Birmingham. Every quarter, Dr. Hill issues a full account of the sanitary history of the borough during that period, with numerous appended tables; and in addition, he publishes an equally full annual report, which, besides other features of interest, contains numerous finely lithographed disease-maps. It is impossible to give within reasonable limits a full abstract of a report which concerns a district of nearly 400,000 persons, and we must therefore content ourselves with noticing some of its more prominent features. During 1878, a total of 15,964 births was registered, equal to a rate of 41.67, against 42.39 in 1877, and 39.38 in the ten years 1868-77. The deaths amounted to 9,962, or a rate of 25.2 per 1,000, as compared with rates of 24.8, 26.8, 26.3, 22.4, and 23.9 in the years 1873 to 1877. This rise is the result of an epidemic of scarlet fever, which raged in the borough during the whole year, but more particularly in the fourth quarter, and to the prolonged severity of the weather in November and December. The deaths of children under one year numbered 28.6 per cent. of the total deaths, and were 17.0 per cent. of the registered births. Zymotic diseases caused 2,421 deaths, or 25.1 per cent. of the total deaths. This is 845 more than the number for 1877, and 471 more than the average number for the five years 1873-7. Scarlatina was the most fatal of the zymotics, causing as many as 995 deaths, against 237 in 1877. The disease reached the height of its quinquennial epidemic wave in the fourth quarter, and during the present year it has died out. Dr. Hill attributes a large part of the increased mortality from this disease to the association of children in much larger numbers than formerly at private, national, and board schools. Diarrhœa proved fatal in 680 instances, 69 per cent. of the deaths occurring in infants under one year of age and 90.6 per cent. in children under five. Whooping-cough, which comes next in order of fatality, caused 455 deaths; and fever 147, 2 of which were certified as typhus, 119 as typhoid, and 26 as simple continued fever. Diphtheria was credited with a much larger number of deaths than in 1877 (83 against 52); whilst measles, on the contrary, has largely diminished in fatality, it being accountable for only 54 deaths, against 309 in 1877. During the year, the Borough Hospital continued to be extremely useful. It received 424 cases of scarlatina and 29 cases of small-pox, 17 of the latter being vaccinated and 12 unvaccinated. It is very satisfactory to find that the public are beginning to appreciate better the advantages offered by the hospital. The number of cases admitted in 1878 is larger than in any year since its establishment, not excepting 1875, when the severe epidemic of small-pox was ragiag. The disinfecting station has also been much more used than formerly, 6,976 articles being disinfected at about £210. During the year, sanitary work was pushed on with activity. Nearly 500 polluted wells were closed, 3½ miles of sewers were constructed, 5,992 pans were introduced, and 12,377 notices were issued for the abatement of nuisances.

CARDIFF.—Dr. Paine's report is long and interesting, dealing in a very thorough fashion with the sanitary requirements of the borough. The drainage of the central and western divisions is reported as satisfactory, but that of the east requires immediate attention. The water-supply is also an urgent question, many of the wells being irretrievably polluted, and the waterwork's supply being inadequate, and some of it suspicious. During the year 1878, 2,795 births and 1,468 deaths were registered, equal to rates of 35.3 and 18.5 per 1,000. The latter is the lowest rate recorded in any year since the formation of the district. The infantile mortality contrasts very favourably with that of the average of the kingdom, the deaths under one year being 14.9 per cent. of the births. Zymotic diseases caused 254 deaths, the average for the last three years being 296. The percentage of zymotic to total deaths was 13.4, and the zymotic death-rate was 2.5, as against 4.4 in the large towns, Whooping-cough and diarrhœa were the diseases that were

most fatal during the year, causing 70 and 73 deaths respectively. Of late years, phthisis has sensibly declined; and Dr. Paine attributes this to the improved system of drainage of the lower part of the town, and the great extension of building on the northern side, which has a subsoil of light porous gravel. The duties devolving upon the Medical Officer, with regard to the port of Cardiff, are of no light kind, but they seem to have been discharged with commendable diligence and promptitude.

BISHOP'S STORTFORD RURAL DISTRICT.—In this district, house-to-house inspections were begun by Dr. Ogle in 1876, the second of such inspections being carried on during 1878. There can be no doubt that these surveys are productive of good; but it must be very disheartening to find that nuisances, swept away in the course of one inspection, are found in full vigour at the next. The sanitary action of this authority seems indeed, from the report, to be of a very hand-to-mouth character; and the natural consequence is an abnormal amount of preventable disease. During 1878, 251 deaths were registered in the district, equal to a rate of 15.9 per 100. Of this number, 2 occurred from small-pox and 2 from scarlet fever, which was extremely prevalent at Broughing. Typhoid caused 5 deaths, three of which were in one village; and diphtheria, which has been very prevalent in parts of the district since 1875, 3 deaths. Whooping-cough caused 17 deaths, and was extraordinarily prevalent in various parts of the district, especially at Sawbridgeworth. A hospital and disinfecting apparatus seem to be much required for the district.

THE APPOINTMENT OF DEPUTY POOR-LAW MEDICAL OFFICERS.

SIR,—In your impression of this day, I notice a statement regarding the action of Mr. Bell Sedgwick, Vice-Chairman of the Marylebone Board of Guardians, and myself, in connection with deputies of medical officers. It is painful for me to remark that the author has perverted facts. Mr. Sedgwick and myself are the weekly official visitors of the public dispensaries connected with the Marylebone guardians, and responsible for the attendance of the medical officers in their duties to the General Board. We considered it advisable that any deputy appointed by a medical officer should be introduced to us, solely for personal acquaintance, on our official inspection, in the absence of the paid officer. What degradation could be in this I am at a loss to understand. For myself, I think almost all the medical officers of our north and south dispensaries, if asked, would be unanimous in stating, that I always acceded to their wishes, and was ever ready to support them as a professional brother should.—Yours truly,

J. MCGRIGOR CROFT, M.D., M.R.C.P.,
late Staff-Surgeon Her Majesty's Royal Army, Guardian and Vestryman of Marylebone.

Mandarin Villa, St. John's Wood, November 15th, 1879.

*** We commented on the action of Mr. Sedgwick and Dr. Croft in consequence of reading the report of the proceedings of the Board of Guardians, which appeared in the *Marylebone Mercury*. Dr. Croft's letter has not induced us to modify the views we then expressed in the slightest degree, so feeble an excuse aggravates the grievance.

MAGISTERIAL DEFINITION OF INSANITY.

SIR,—As it is just probable that my *confrères* of the Poor-law Medical Service may have (in their performance of their duties) to encounter a similar *désagrément*, I trust that, in their interest, and in that of the insane poor, you will insert the following in your next issue.

On October 14th, there was admitted into the insane ward of the Westminster Workhouse a young Pole, named John Sobieski. He had been found wandering at large by the police of the C Division, and came in with a certificate from the acting police-surgeon that he was of unsound mind. I saw him on the 15th, and found that he was very excited, at times incoherent, and had several delusions, the dominating one being that he was the Lord Jesus, etc. The next day, I filled in the usual certificate. On the following day, he was visited by Dr. Edmonds, who, in his certificate, contented himself with writing as follows: "He tells me he is the Lord Jesus." In addition to this, he put in the statement made by the ward attendant and others. Dr. Edmonds, as I understand, went with Sobieski to the police office in Great Marlborough Street. On his appearance before Mr. Newton, that magistrate proceeded to examine the lunatic; and after some conversation, decided not to countersign the certificate, as in his (Mr. Newton's) judgment, Sobieski was not insane; and that, too, in spite of his attention being called to the fact that Sobieski asserted that he was the Lord Jesus, Mr. Newton stating that, in his opinion, such delusion was no proof of insanity. Sobieski was, on this decision, brought back to the workhouse. At the end of a week or so, as he had become quieter, I directed that, under observation, he should be set to work. A few days afterwards, I again found Sobieski in the insane ward, he having become violently excited. After this, I saw him daily for several days, and never had reason to doubt the correctness of my original opinion. At last his conduct became such, that I was compelled to take action; and, on the 18th ultimo, I added to my original certificate the following: "He now believes that there is a person under his bed, and that God has said he is to go out to-day; is at times guilty of insubordination and violence." Dr. Edmonds saw him on the 19th, and gave a similar account of his condition. He also accompanied him again, when Sobieski for the second time went before Mr. Newton, who, as on the former occasion, declined to sanction his removal, asserting that, in his opinion, Sobieski was of sound mind. The acting relieving officer then remarked that the medical officer would have to discharge the man; to which Mr. Newton replied, "If he does so, I shall write to the Local Government Board and complain of him". Two or three days later, I was informed that Mr. Newton had sent for the master of the workhouse, and had asked him what had been done with Sobieski. The master replied that he was still in the insane ward; whereupon the magistrate said, "Why do you not discharge him?" to which the master replied, "I cannot do that, as our doctor says that he is insane". He then left. These facts having been brought to my knowledge, I sent to the Local Government Board an account of the proceedings, and did not hesitate to express my opinion as to Mr. Newton's conduct. In due course I received a reply, intimating that the Board had referred the matter to the Commissioners in Lunacy. On the 3rd instant, two commissioners, Messrs. Nairne and Bagot, visited the House, and examined Sobieski. They promptly decided that he must be removed without delay.

It will be thus seen that a religious melancholic, with marked suicidal tendencies, has been kept (all but a few days) for nearly two months in one room, in which imbeciles, patients with delirium tremens, and others have been placed; and the prospect of recovery has been retarded simply because the magistrate, from an entire misconception of his duty, has thought fit to set up his own judgment against the opinion of the divisional surgeon, my own, and Dr. Edmonds; and, as it will be seen, against those of the Lunacy Commissioners; for, without their interference, he might have remained there for an indefinite time. Surely, where stipendiary magistrates demand the production of two certificates, they should be content and act upon them.—I am, sir, yours obediently,

JOSEPH ROGERS.

Dean Street, Soho, December 6th, 1879.

CERTIFYING OF PAUPER LUNATICS.

SIR,—I should feel much obliged if you could enlighten me upon the following point. Is it necessary or usual for the relieving officer to introduce the parish medical officer in all cases of insanity previously to their removal to the county asylum? For instance, in a case where the friends of the patient have applied to the relieving officer to effect the removal to the asylum, should he call upon the regular medical attendant (if so desired by the relatives of the patient) or upon the parish medical officer, to sign the necessary certificate of insanity? It appears to me that, if the Board of Guardians give instructions that their medical officer is to be sent in to examine cases of insanity without any intimation of his visit to the medical man attending the case, and against the express wish of all those connected with the patient, they are calling upon him to perform duties repugnant to his feelings as a gentleman, and quite contrary to the rules of courtesy and professional etiquette.—I am, sir, yours faithfully,

ENQUIRER.

*** If a medical officer be required by an order to visit a person resident in his district, whom he finds to be of unsound mind, or if without such order it come to his knowledge that a lunatic likely to become chargeable to the rates is resident therein, it is his duty to apprise the relieving officer thereof, who thereupon is required to give notice to a justice or to a magistrate, who directs that such lunatic should be brought before him, etc. It rests wholly with the justice or magistrate who should be the medical gentleman or gentlemen who should be called to advise him as to the supposed lunatic's state of mind, and to fill in the certificates. Boards of Guardians assume to have the power to appoint the medical gentleman who should examine lunatics, but such assumption is contrary to the statute, which expressly ordains that the power is vested solely in the justice or magistrate. All fees paid by Boards of Guardians to their medical officers or others for certifying for pauper lunatics would be surcharged upon them, if the attention of the auditor was drawn thereto, as the approval of the justice or magistrate of the amount, etc., is necessary to make such payments legal. We would advise our correspondent to acquaint the justice or magistrate of his district with the illegal assumption of authority by the Board of Guardians.

MILITARY AND NAVAL MEDICAL SERVICES.

ARMY MEDICAL SERVICE.—The following candidates were successful for appointments as Surgeons in Her Majesty's British Medical Service, at the competitive examination held in London, on December 8th, 1879.

	Marks.		Marks.
1. F. R. Baxter	2590	34. R. D. Donaldson	1750
2. A. H. Keogh	2525	35. H. L. E. White	1745
3. C. B. Hill	2420	36. C. M. Johnston	1740
4. J. R. A. Clark	2330	37. J. L. Hall	1705
5. H. E. B. Flannagan	2295	38. A. H. Burlton	1700
6. H. J. Michael	2230	39. E. North	1695
7. T. Dorman	2215	40. G. F. Poynder	1695
8. A. W. G. Inman	2185	41. J. K. Sherman Bigg	1675
9. T. M. Corker	2180	42. G. F. A. Smythe	1665
10. E. H. Myles	2145	43. H. L. Battersby	1655
11. G. S. Robinson	2125	44. A. Hewitt	1645
12. F. B. Moffitt	2115	45. E. Landon	1640
13. C. A. Webb	2075	46. P. Mulvaney	1635
14. J. G. S. Lewis	2065	47. J. E. Nicholson	1635
15. H. Martin	2050	48. T. W. Beale	1625
16. A. E. J. Croly	2010	49. F. E. C. Hood	1625
17. R. O. Cusack	2010	50. W. O. Wolsley	1610
18. E. F. Smith	2010	51. T. F. McNeece	1605
19. W. A. Cowen	2000	52. R. V. Smith	1590
20. R. H. Forman	1995	53. B. T. McCreery	1580
21. S. J. Flood	1965	54. A. P. O'Connor	1575
22. D. S. Williams	1955	55. A. McM. Bolster	1570
23. G. W. Robinson	1940	56. D. Wardrop	1545
24. N. Cameron	1920	57. G. T. Goggin	1520
25. J. Watson	1910	58. H. G. Christian	1485
26. O. Todd	1905	59. J. M. Jones	1470
27. A. O. Geoghagan	1876	60. F. M. Baker	1405
28. C. R. Egan	1810	61. C. Williamson	1460
29. J. D. Day	1805	62. R. Oliver	1415
30. W. R. Henderson	1805	63. A. Asbury	1400
31. R. T. Cumming	1800	64. P. M. Carleton	1375
32. A. M. Kavanagh	1795	65. F. R. Maclean	1305
33. J. H. Harwood	1765		

The following gentlemen, having obtained the qualifying number of marks, have also been accepted.

56. H. L. Cox
67. J. P. Carmody
68. R. W. Barnes
69. T. P. Walsh
70. G. H. K. McO'Callaghan
71. P. H. Fox
72. H. A. Wall

MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted as Licentiates on December 22nd, 1879.

Adams, Alexander Peers, Greenholme, Kingston Hill.
Bates, Henry Leslie, Streatham Common, S.W.
Bond, Charles John, 30, Albert Street, N.W.
Branson, Cecil Lugard Smyth, 30, Tavistock Road, W.
Crew, William Thomas, 11, Falmouth Road, S.E.
Dimmock, Henry Peers, 13, Moore Street, S.W.
Ensor, Theodore Francis, Milborne Port.
Faulkner, Joseph, 36, Darnley Road, E.
Jones, Charles Montagu Handfield, 49, Green Street, W.
Lathbury, Charles John, Breaston, Derby
Lewis, Christopher John, 16, Park Place Villas, W.
Lewis, George Stephens, Guy's Hospital, S.E.
Lovell, Robert Haynes, St. Mary's Hospital, W.
Mort, Herbert Brownlow, Southport.
Rich, Evelyn Arthur, Winchester.
Townsend, Knowlson, 18, Broughton Place, Edinburgh.
Warrburton, Arthur, Betley.

The following candidate, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College.

McKee, Gerard Macklin Eccles, 2, Overstone Road, W.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the science and practice of medicine, and received certificates to practise, on Thursday, December 18th, 1879.

Cooke, John William Cross, Hockesly Priory, Colchester
Griffin, Henry Frederick, Banbury, Oxon
Loveridge, Arthur William, Hammersmith
McDonagh, James Samuel, 211, Hampstead Road, N.W.
Morris, William Albert, Caerleon, Monmouthshire
Underhill, George, Tipton Green, Staffordshire
Wood, Charles, High Street, Uttoxeter

The following gentlemen also on the same day passed their primary professional examination.

Camp, Charles Frederick, Guy's Hospital
Honman, Andrew, Charing Cross Hospital
Roberts, Thomas, London Hospital
Villanueva, Francis Horton, Charing Cross Hospital

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examinations for the Licences in Medicine and Midwifery of the College, held on Monday, Tuesday, Wednesday, and Thursday, December 8th, 9th, 10th, and 11th, 1879, the following were the successful candidates.

For the Licence to Practise Medicine.—Hugh Harris and William Robert Minchin Young.

For the Licences to Practise Medicine and Midwifery.—Richard Winter Barney, Edward Frederick Sheehy Barry, Edmund Berry, James Joseph Harding, Charles Henry Hartt, Edmund Poole Howell Henn, Thomas Jackson, Michael Keelan, Eliza Foster MacDonogh, and Francis John O'Reilly.

MEDICAL VACANCIES.

Particulars of those marked with an asterisk will be found in the advertisement columns.

THE following vacancies are announced:—

ARDWICK AND ANCOATS DISPENSARY AND HOSPITAL, Manchester—Junior House-Surgeon. Salary, £100 to £120, with apartments and attendance. Duties commence January 1st, 1880.

BEDFORD GENERAL INFIRMARY—Resident Surgeon. Salary, £100 per annum, with board and lodging. Applications on or before January 8th.

*BROMPTON PROVIDENT DISPENSARY—Medical Officer. Applications, with testimonials, to the Secretary, on or before January 3rd.

BURY DISPENSARY—House-Surgeon. Salary, £120 per annum, with furnished apartments, fuel, and lighting. Applications on or before the 27th instant.

*CHARING CROSS HOSPITAL—Surgical Registrar. Applications on or before January 3rd.

HOSPITAL FOR SICK CHILDREN, Manchester—Senior and Junior Resident Medical Officers. Salary, £100 and £80 per annum, with board and residence. Applications on or before December 31st.

MIDDLESEX HOSPITAL—Assistant to the Ophthalmic Surgeon. Applications, with testimonials, on or before January 3rd, 1880.

NAGHAN UNION—Medical Officer for Scotstown Dispensary District. Salary, £120 per annum as Medical Officer, with £15 per annum as Medical Officer of Health, exclusive of Registration and Vaccination Fees. Election on the 30th instant.

OUGHTERARD UNION—Medical Officer for Lettermore Dispensary District. Salary, £100 per annum, £10 yearly for boat hire, £12 per annum as Medical Officer of Health, with Registration and Vaccination Fees. Election on the 31st instant.

*ST. BARTHOLOMEW'S HOSPITAL—Assistant-Surgeon. Applications not later than January 8th, 1880.

SEAMEN'S HOSPITAL SOCIETY—Visiting Physician. Applications on or before January 7th, 1880.

*UNIVERSITY COLLEGE, London—Professorship of Medical Jurisprudence. Applications on or before January 7th.

*WORCESTER GENERAL INFIRMARY—Third Physician. Applications, with testimonials, not later than January 14th.

MEDICAL APPOINTMENTS.

Names marked with an asterisk are those of Members of the Association.

HARDWICKE, E. H., Esq., appointed a Factory Surgeon for the Birmingham District.

LENDON, Alfred, M.R.C.S., appointed House-Surgeon to the Bristol Royal Infirmary, *vice* G. H. Lilley, M.D., resigned.

O'BRIEN, Russell, M.B., appointed Medical Officer to the St. Saviour's Place Dispensary and Friendly Societies' Medical Association, York.

*SLOAN, Samuel, M.D., appointed Physician-Accoucheur to the Glasgow Maternity Hospital, *vice* R. D. Tannahill, M.D., resigned.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths, is 3s. 6d., which should be forwarded in stamps with the announcements.

BIRTH.

MACDONALD.—On the 21st instant, at Dumfries, the wife of A. D. MacDonald, M.D., of a son.

THE METEOROLOGICAL SOCIETY.—The usual monthly meeting of this Society was held at the Institution of Civil Engineers; Mr. C. Greaves, President, in the chair. A paper on a Sand-Storm at Aden, July 16th, 1878, was read by Lieutenant Herbert H. Russell (8th Regiment); one on a new form of Hygrometer, by Mr. G. Dines. This is a modification of the hygrometer which was first described at the British Association meeting in 1872. The outside dimensions of the instrument, inclusive of the wood-casing, are about ten inches in length, three inches in breadth, and two inches in depth. The upper part consists of a vessel of thin metal, six inches long, two inches and a half broad, and one inch and a quarter deep. Beneath this, and detached from it, but connected by a pipe, is a small chamber, two inches and a quarter long and one inch and a quarter deep from back to front, standing about half an inch more forward than the vessel above, and with a piece of thin black glass in front. Inside this chamber, parallel to the front, is a division which separates it into two parts. This division does not extend quite to the top of the chamber, and is slightly turned over towards the front, so as to allow water to pass over it, and to induce the latter to flow more directly to the centre of the front of the chamber. The upper vessel is connected with the bottom and back part of this chamber by a small pipe, with a tap to it, which is turned from the outside. The front of the chamber has a pipe attached to the bottom, passing upward in an inclined direction, and terminating at the outside in a small lip or spout. A thermometer, with the bulb inside and over the front of the chamber, passes through an India-rubber collar at the top of it, and is protected by a groove sunk in the face of the wooden case. The action of the instrument is as follows. Water, of a lower temperature than the dew-point, is poured in the upper vessel, and, on the tap being turned, flows into the back of the small chamber, and thence, passing over the top of the middle division, flows downwards, cooling in its passage the thermometer and black glass, and eventually escapes by the small spout on the right side of the instrument. As soon as dew appears on the glass, the flow of the water is stopped beyond by means of the tap, and the temperature is read off by the thermometer. When ether is used, it is poured into the small spout, passes down the inclined pipe, and remains in the front part of the chamber. A piece of metal tube, ground so as to fit tightly the inclined pipe, and with an aspirator attached, is then inserted, and the dew-point is ascertained in the same way as by Regnault's hygrometer. A paper on the Diurnal Range of Atmospheric Pressure was read by Mr. R. Strachan. The author had compiled a table of constants, from thirty places in varous parts of the globe, which support Sir John Herschel's remark that "the diurnal oscillation of the barometer is a phenomenon which invariably makes its appearance in every part of the world where the alternation of day and night exists; and that, within the Arctic Circle, the diurnal dies out, or rather merges in, the annual oscillation". A note on a curious fracture of a Solar Radiation Thermometer was read by Mr. G. M. Whipple. Mr. R. H. Scott, F.R.S., exhibited and described a new form of Sunshine Recorder, which is to be used during the coming year at a considerable number of stations distributed over England.

OPERATION DAYS AT THE HOSPITALS.

MONDAY.....Metropolitan Free, 2 P.M.—St. Mark's, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Royal Orthopædic, 2 P.M.

TUESDAY.....Guy's, 1.30 P.M.—Westminster, 2 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—West London, 3 P.M.—National Orthopædic, 2 P.M.—St. Mark's, 9 A.M.—Cancer Hospital, Brompton, 3 P.M.

WEDNESDAY..St. Bartholomew's, 1.30 P.M.—St. Mary's, 1.30 P.M.—Middlesex, 1 P.M.—University College, 2 P.M.—King's College, 1.30 P.M.—London, 2 P.M.— Royal London Ophthalmic, 11 A.M.—Great Northern, 2 P.M.—Samaritan Free Hospital for Women and Children, 2.30 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—St. Peter's, 2 P.M.

THURSDAY....St. George's, 1 P.M.—Central London Ophthalmic, 1 P.M.—Charing Cross, 2 P.M.—Royal London Ophthalmic, 11 P.M.—Hospital for Diseases of the Throat, 2 P.M.—Royal Westminster Ophthalmic, 1.30 P.M.—Hospital for Women, 2 P.M.—London, 2 P.M.

FRIDAY.....Royal Westminster Ophthalmic, 1.30 P.M.—Royal London Ophthalmic, 11 A.M.—Central London Ophthalmic, 2 P.M.—Royal South London Ophthalmic, 2 P.M.—Guy's, 1.30 P.M.—St. Thomas's (Ophthalmic Department), 2 P.M.—East London Hospital for Children, 2 P.M.

SATURDAY....St. Bartholomew's, 1.30 P.M.—King's College, 1 P.M.—Royal London Ophthalmic, 11 A.M.—Royal Westminster Ophthalmic, 1.30 P.M.—St. Thomas's, 1.30 P.M.—Royal Free, 9 A.M. and 2 P.M.—London, 2 P.M.

HOURS OF ATTENDANCE AT THE LONDON HOSPITALS.

CHARING CROSS.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; Skin, M. Th.; Dental, M. W. F., 9.30.

GUY'S.—Medical and Surgical, daily, exc. Tu., 1.30; Obstetric, M. W. F., 1.30; Eye, M. Th., 1.30; Tu. F., 12.30; Ear, Tu. F., 12.30; Skin, Tu., 12.30; Dental, Tu. Th. F., 12.

KING'S COLLEGE.—Medical, daily, 2; Surgical, daily, 1.30; Obstetric, Tu. Th. S., 2; o.p., M. W. F., 12.30; Eye, M. Th. S., 1; Ear, Th., 2; Skin, Th.; Throat, Th., 3; Dental, Tu. F. 10.

LONDON.—Medical, daily exc. S., 2; Surgical, daily, 1.30 and 2; Obstetric, M. Th., 1.30; o.p., W. S., 1.30; Eye, W. S., 9; Ear, S., 9.30; Skin, W. 9; Dental, Tu, 9.

MIDDLESEX.—Medical and Surgical, daily, 1; Obstetric, Tu. F., 1.30; o.p., W. S., 1.30: Eye, W. S., 8.30; Ear and Throat, Tu., 9; Skin, F., 4; Dental, daily, 9.

ST. BARTHOLOMEW'S.—Medical and Surgical, daily, 1.30; Obstetric, M. Th. S., 2; o.p., W. S., 9; Eye, Tu. W. Th. S., 2; Ear, M., 2.30; Skin, F., 1.30: Larynx, W., 11.30; Orthopædic, F., 12.30; Dental, F., 9.

ST. GEORGE'S.—Medical and Surgical, M. Tu. F. S., 1; Obstetric, Tu. S., 1; o.p., Th., 2; Eye, W. S., 2; Ear, Tu., 2; Skin, Th., 1; Throat, M., 2; Orthopædic, W., 2; Dental, Tu. S., 9; Th., 1.

ST. MARY'S.—Medical and Surgical, daily, 1.15; Obstetric, Tu. F., 9.30; o.p., Tu. F., 1.30; Eye, M. Th., 1.30; Ear, W. S., 2; Skin, Th., 1.30; Throat, W. S., 12.30; Dental, W. S., 9.30.

ST. THOMAS'S.—Medical and Surgical, daily, except Sat., 2; Obstetric, M. Th., 2; o.p., W. F., 12.30; Eye, M. Th., 2; o.p., daily except Sat., 1.30; Ear, Tu., 12.30; Skin, Th., 12.30; Throat, Tu., 12.30; Children, S., 12.30; Dental, Tu. F., 10.

UNIVERSITY COLLEGE.—Medical and Surgical, daily, 1 to 2; Obstetric, M. Tu. Th. F., 1.30; Eye, M. W. F., 2; Ear, S., 1.30; Skin, Tu., 1.30; S., 9; Throat, Th., 2.30; Dental, W., 10.3.

WESTMINSTER.—Medical and Surgical, daily, 1.30; Obstetric, Tu. F., 3; Eye, M. Th., 2.30; Ear, Tu. F., 9; Skin, Th., 1; Dental, W. S., 9.15.

LETTERS, NOTES, AND ANSWERS TO CORRESPONDENTS.

COMMUNICATIONS respecting editorial matters should be addressed to the Editor, 161, Strand, W.C., London; those concerning business matters, non-delivery of the JOURNAL, etc., should be addressed to the General Manager, at the Office, 161, Strand, W.C., London.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL, are requested to communicate beforehand with the General Secretary and Manager, 161, Strand, W.C.

CORRESPONDENTS not answered, are requested to look to the Notices to Correspondents of the following week.

PUBLIC HEALTH DEPARTMENT.—We shall be much obliged to Medical Officers of Health if they will, on forwarding their Annual and other Reports, favour us with *Duplicate Copies*.

CORRESPONDENTS who wish notice to be taken of their communications, should authenticate them with their names—of course not necessarily for publication.

WE CANNOT UNDERTAKE TO RETURN MANUSCRIPTS NOT USED.

SAYRE'S APPARATUS TO THE SPINE.

SIR,—At the Samaritan Hospital for Women and Children, I constantly apply Sayre's plaster-of-Paris bandages in the recumbent position. I have the patient's legs and buttocks placed upon one table, the head and neck on another, a space being left between for the trunk. One nurse makes extension by the legs, another by the arms. In this position, the plaster-of-Paris bandages can be applied quite as readily and as effectually as when the patient is suspended, and with less terror to the patient.—Yours truly,

A. WYNN WILLIAMS, M.D.

DR. DIAMOND (Nuthill).—The certificate you quote is valueless, and ought to have no weight against you. He must be a bold man who, on being called to a case such as you describe, will undertake to say that no diphtheria has been present within fourteen days.

CORRESPONDENTS are particularly requested by the Editor to observe that communications relating to advertisements, changes of address, and other business matters, should be addressed to Mr. FRANCIS FOWKE, General Secretary and Manager, at the Journal Office, 161, Strand, London, and not to the Editor.

A TOUCHING APPEAL.

SIR,—Dr. Heywood Smith has kindly inserted in your valuable paper an appeal on my behalf. May I ask you to peruse the following statement, and then, perhaps, you will kindly use your great influence for me? I am seventy-four years of age, and for some years have suffered from disease of the bladder and cancer. I was last year for four months in St. George's Hospital, and was operated on by Mr. Pollock, who removed the penis; but the abscesses still continue to discharge, and my strength is gradually giving way. I am quite unable to do anything in my profession from the prostration of system, and have not done so for some years. All my means are gone, and I am really almost destitute; and where I am staying I shall be obliged to leave, from inability to pay the poor people (it is a small place, where the proprietor breeds poultry). I knew them some years ago. Do, sir, I entreat of you, interest yourself for an old fellow medical. I can refer you to Mr. Pollock, Dr. Heywood Smith, Dr. Cooper Rose of Hampstead, and Dr. Cooper of Hampstead. These gentlemen well know what my sufferings are. You will, I am sure, excuse the liberty I am taking; but my great age and severe sufferings compel me to thus address you, and entreat your kind response to my painful application.—I remain, dear sir, yours respectfully,

FRANCIS B. DALTON, M.R.C.S.E., 1831; L.A.C., 1829.

Weston Turville, near Tring, December 18th, 1879.

*** Any subscriptions forwarded to the editor or to the JOURNAL office will be acknowledged in these columns and applied for Mr. Dalton's benefit.

SIR,—As the result of your kind insertion of my letter, I have received about £27 for poor Mr. Dalton, some of which I have forwarded to him, and with some I have enabled his wife to purchase stock for the shop, and Mr. Dalton has approved of the way I have laid out the money. A little more would still be very acceptable, to enable them to pay their way. I have acknowledged the receipt of each donation as it has come in, with the exception of one (anonymously) from Southampton.—Yours faithfully,

HEYWOOD SMITH.

Portugal Street, W., December 22nd, 1879.

A CASE OF HYDROPHOBIA.

SIR,—A young man, aged 25, died near here of hydrophobia on December 11th. He was bitten very slightly on both lips by a mad dog on the 3rd of January last. He did nothing to the wounds in the way of cauterisation, and suffered from no symptoms of the disease until the morning of December 8th, when he found a great difficulty in swallowing his tea at breakfast. That night his breathing became oppressed—so much so, that his friends thought he would be suffocated. The next day he seemed a little easier, but complained of a feeling of constriction about the throat, and of a difficulty in swallowing. Now and again he said he saw cats and dogs about the room. On the 10th, he could not swallow at all, and was quite delirious; on the 11th, he could swallow a little, but was pulseless, and gradually became weaker, and died quietly that afternoon.—Yours faithfully,

Frampton-on-Severn, Gloucester, Dec. 15th, 1879. R. E. BURGES, M.D.

ON THE TREATMENT OF LATERAL CURVATURE OF THE SPINE.

SIR,—I shall feel much obliged if you will kindly allow me space for the insertion of some remarks which I the other evening made at the Medical Society of London.

"In very mild cases of lordosis, I am perfectly of opinion that suitable gymnastic exercises, together with cold bathing and frictions, are generally sufficient; but, in the severer forms of rotary lateral curvature, the spine being spirally twisted like a corkscrew, extension is necessary in order to untwist it; having accomplished which, the cuirass should be applied in order to permanently secure thus much gained. Then, by daily gentle suspension, the straightening process is continued, the cuirass preventing its relapsing into its original condition; and so soon as it no longer forms a firm support, another must be applied, and so on till the cure is effected.

"The ordinary spinal appliances, having a pelvic band, and lateral supports with arm-crutches, and pads to press upon the cuirass laterally, I object to, for the following reasons: 1. The pelvic band very frequently excoriates the patient, besides feeling otherwise uncomfortable. 2. The lateral supports are useless as a means of extension, for the reason that the scapula, having no bony attachments to the spine, the shoulders may be pushed up to the ears without any extension of the spinal column; and the arm-crutches, from pressure upon the brachial plexus and blood-vessels, produce a disagreeable numbness, tingling, and swelling in the fingers, arms, and hands. Lastly, the lateral pads are incapable of straightening out the spinal curves. Suppose we take a piece of straight steel spring, and place it perpendicularly, with a sufficient weight on the top to cause it to curve in one direction, then a force acting against this horizontally, without first of all extending it or removing the weight, can only substitute a curve in the opposite direction, for the already existing one.

"With regard to the poroplastic jacket, heat and moisture are used to soften it for the purpose of adjustment, and, therefore, while worn, especially in the summer, the heat and perspiration from the body causes it to soften and give way to the deformity. From practical experience, I therefore give preference to the plaster-of-Paris cuirass for all forms of spinal curvature, if properly applied, no further exercise beyond daily extension being necessary."—Truly yours,

GEORGE CHARLES COLES.

20, Great Coram Street, Russell Square, W.C.

TEMPERAMENTS.

SIR,—Would any of your correspondents kindly inform me in what book I could gain information respecting different temperaments? I believe Professor Laycock has written on the subject, but I do not know in what work or publication to seek for it. Any assistance would confer a favour on yours truly, G. H.

A SUGGESTION.

WE desire to call the attention of those of our members who enjoyed the hospitality of the Irish people at the recent meeting at Cork, that the Duchess of Marlborough has appealed to the English people in the columns of the *Times* for donations for the relief of the starving poor in Ireland.

NOTICE TO ADVERTISERS. — Advertisements for insertion in the BRITISH MEDICAL JOURNAL should be forwarded direct to the Publishing Office, 161, Strand, London, addressed to Mr. FOWKE, not later than *Thursday*, Twelve o'clock.

DR. FOTHERGILL ON "SOCIAL PARIAHS" OF THE MEDICAL PROFESSION.

SIR,—I should like to say a few words in reply to Dr. Fothergill's article in your issue of the 6th instant. I may be pardoned for venturing to dispute his conclusions on the subject when I state I am an American myself, and that, like Dr. Fothergill, circumstances compelled me to be a village doctor for four years. During that time I had the pleasure and honour of knowing every one within six miles of my surgery. After eighteen months of single life, I married. My wife was an entire stranger to every one, and was neither by birth nor wealth entitled to any extra attention from our neighbours. Without one exception, every one called on us after my marriage, and during the time we remained there we were constantly asked out to dinners, balls, etc. In not one single instance were we "patronised": on the contrary, we were always made to feel that we were equally and cordially received by all we met. Dr. Fothergill's articles impute a great want of true manliness to the English country people, and I am only too glad to give my experience as against his. I, too, have some knowledge of professional life in America, and I certainly do not think that a medical man holds a higher social status there than here. I could name at least a dozen of my fellow-countrymen who came to England at or about the same time I did, and who are so well satisfied with their position, that, like myself, they have settled here. My patients, in the country practice I held, comprised all classes of society, and by one and all were we treated with perfect equality and courtesy. We had among our friends many clergymen of position and independent means, and from none did we receive anything but kindness. Of course, every medical man has trials and difficulties, but I contend they are not one degree more in England than in America.

Apologising for my letter, I may say I have written it more from a sense of what is due to English county and country families than from any idea that village doctors need defending as to their social position. If a doctor (village or town) is a competent man and a gentleman, he has nothing to fear.—I am, sir, faithfully yours,

GEO. H. H. DEWOLFE, M.D.Canada, M.B.Edin.

Wolfville, Totley, near Sheffield, December 16th, 1879.

SIR,—Dr. Fothergill's caricature, in an American paper, of the British country practitioner and wife, has been so well answered in your columns, that only the exceptional circumstances which have afforded me an unusually good opportunity of knowing the truth can be my excuse for trespassing on your space. An intimate personal acquaintance for nearly ten years with American life, during which time I enjoyed the hospitality of both town and country medical friends, enables me to state that, notwithstanding the presumed republican social equality of all classes in the United States, the position the average medical man holds there is not equal to that which he occupies in Britain. The principal reason for this is, that as there is no medical registration, it is difficult, unless from personal knowledge, to tell whether an American doctor is a legitimate physician or a pure quack. Even without Dr. Fothergill's candid confession, it was patent to any one who had ever spent any time in America, that he had never been there, and knew nothing of the actual social status of the American practitioner. As with us, a good man there is welcome everywhere, his profession procuring for him additional consideration.

By birth a Scotchman, and having the good fortune to have an Irish wife, I am thoroughly conversant with the estimation in which the profession is held both in Ireland and Scotland. There is no country in the world where our profession stands higher, socially, than in Ireland. Unless ostracised by personal disqualifications, the Irish practitioner has the *entrée* of the best society. In Scotland, the profession is held in much esteem, though not so highly honoured as in the "sister isle". Of Wales I cannot speak from personal knowledge. In England, I have had the privilege of being a village practitioner for three years, and a London practitioner for five years. In both positions my experience has been the opposite of that indicated by Dr. Fothergill. In the country, though I had to do with five rectors or vicars, and though I was constantly opposing their prejudices and habits, there was no attempt at "bullying" me; and my wife and myself gave considerable offence because we felt that the conscientious discharge of professional duties would not warrant frequent absences at dinner parties and other social gatherings miles away from our house in a village which was the centre of a district in which I was the sole resident practitioner.

But there is some truth in Dr. Fothergill's description of the English medical position. In Ireland and Scotland, a doctor is esteemed for his profession; in England, he is esteemed for his individual qualities. The reason is obvious. The personal misconduct of many practitioners, the keeping of shops for the retail of pennyworths of castor-oil and "sweeties" by others, and the giving of advice with a supply of medicine for fourpence by graduates in medicine and surgery, so combine to lower and degrade the medical profession in England proper, that it is to me a matter of astonishment any social respect is paid to any of us.—Your obedient servant,

London, December 20th, 1879. NORMAN KERR, M.D.

*** We have received so overwhelming a mass of protests against Dr. Fothergill's late letter in our columns, that it is impossible to publish more than a few, and these of the more moderately worded epistles. This little escapade must not be taken too seriously. No doubt Dr. Fothergill only meant to strongly emphasise some particular type which had struck his attention, and in doing so yielded to the temptation of over-drawing the picture and generalising it. We have felt the injustice as strongly as any of our correspondents, but it would not be kind or fair to Dr. Fothergill to treat this as more than a lapse of the pen and a temporary error of judgment.

A NOVEL METHOD FOR ARRESTING EPISTAXIS.

SIR,—Perhaps the following may interest some of your readers. I was called to see a patient about five miles' distance, no particulars having been given by the messenger. On my arrival, I found it was a severe case of epistaxis, which had been going on in spite of the usual domestic remedies, such as cold water cloths, etc., from 8 A.M. until my visit at 11 A.M. The loss of blood had been so excessive as to produce faintness, sickness, and other usual symptoms. Not knowing the nature of the case, I had come quite unprepared, but gave him a drachm of the fluid extract of ergot I had with me, and repeated the application of vinegar-and-water cloths to the forehead and nose, combined with elevation of the upper extremities, but without effect. I then attempted to plug the posterior nares with the assistance of a male elastic catheter, but its introduction produced such violent retching that I had to desist. I was now at a loss what to do, until the catheter suggested a means of applying the only available styptic, vinegar and water. Having removed the clots which filled up the nasal cavity, and passed the catheter well up the nostril, and having no syringe at hand, I filled my mouth with the mixture of vinegar and water, and thus injected it. At first this made the patient retch, but after one or two injections, I had the satisfaction of finding this procedure (unpleasant though it was to me) quite successful, the hæmorrhage soon ceasing, and not returning.

This case shows, among other things, the awkward position in which a country practitioner is frequently placed, owing to deficient particulars given by messengers.

—I remain, dear sir, yours truly, C. CLARK BURMAN, L.R.C.P.S.Ed.

Bamburgh, November 13th, 1879.

FOREIGN DEGREES.

SIR,—I have this day received from Jena a letter, of which the following is a correct translation.

"Jena, November 9th, 1879. Honoured Sir,—Against the perfectly unjustifiable attacks to which our Faculty is exposed with respect to the granting of doctors' degrees in England, I beg respectfully to inform you that your statement, that our Faculty does not grant the degree of Doctor without examination, is strictly in conformity with the truth, as is clearly set forth by the enclosed copy of the rules. At the same time, I beg emphatically to state that these rules for the doctoral examinations have been in force since the year 1862, so that, since that year, no degrees *in absentiâ* have been awarded here at Jena. The diploma without date shown by Mr. Carpenter is, therefore, very old. The fact that Dr. E. E. Schmid is mentioned therein as Proctor, and Dr. Keiler as Dean, has enabled me to fix the time more approximately when the diploma was given. It would be in the summer half of 1860. Kieser died in 1862, and the enclosed Examination Rules date from that time. I hope, honoured sir, that full satisfaction will be rendered to you and to our insulted Faculty, and beg respectfully you will have the above statement of facts published, and remain, with the highest esteem, yours truly, Professor Dr. G. SCHWALBE, Dean of the Medical Faculty of University, Jena. To H. J. Hardwicke, M.D., etc., Honorary Secretary of the Foreign Graduates' Association of Great Britain."

Enclosed with this letter were the regulations of the Faculty of Medicine, of which the following is a correct translation.

"The conditions to be fulfilled by the candidate for the medical examination are as follows: 1. Certificates to be given as to the extent of medical studies (at least six terms), and the period of time which has elapsed since their completion. 2. Satisfactory testimonials as to character from the neighbouring head office of police. 3. A written essay upon any subject of medical science (in German or Latin). The same composition to be handed in, which is afterwards printed in the form of a dissertation. 4. Matriculation into this University. This is done when the candidate himself makes his appearance. 5. Payment of examination and promotion fees to the amount of 141 thalers must be made. In case the examination is not passed, the promotion fees and 52 thalers are returned. The examination will only be held in the German language. It comprises all branches of Medicine, viz., Anatomy, Physiology, General Pathology, Pathological Anatomy, Special Pathology, Therapeutics, Surgery, and Midwifery. No examination takes place in the holidays. The Faculty holds examinations from November 1st until March 15th, and from May 1st until August 15th. When the examination is passed, the student has to give in his dissertation, the subject of which he chose for himself. The Faculty examines the work to see if it is fit for publication. A dispensation from the Latin or German Disputation (or defence of thesis) may be granted when the examination is very satisfactorily passed. After the essay is printed, and also when the public disputation is over, the making out of the diploma takes place. The degree of Doctor will only be conferred in this Faculty of the University of Jena upon fulfilment of the abovenamed conditions. Dr. G. SCHWALBE, Dean of the Medical Faculty, University of Jena, November 9th, 1879."

I think, after reading the above letter, Mr. Carpenter must come to the conclusion that he is bound in honour to name the date of the diploma he published as having been conferred, without examination, by the University of Jena. Either the diploma was granted before the year 1862, or else it is a forgery, and should in neither case be produced in support of the aspersions he has endeavoured to cast on continental degrees. All that foreign graduates ask for is fair play, and I think the public must admit that, so far, they have not received it. If it could once be clearly shown that any continental university granted degrees, in the present day, without insisting upon good and searching examinations being first of all passed, then, I feel convinced, no body of men would more willingly raise their voices in condemnation of such an abuse, than the foreign graduates of Great Britain. But such has not been shown. On the contrary, all the accusations which have been levelled against continental universities have been at once and most satisfactorily met and refuted by foreign graduates, and yet this ungenerous and unfair persecution is persisted in. I am just now occupied with the publication of a book entitled *Medical Education and Practice in all Countries of the World*, in which I shall be able to show to the profession that, with the exception of some of the republics in America, there is not one single country in the world where an university degree in medicine, or any other such diploma, can be obtained, without passing searching examinations, as regularly conducted as are those of our own universities. One word in reply to the letter of "M.R.C.S. and L.S.A." This anonymous correspondent, who seeks to bring discredit upon all foreign degrees, no matter how, when, or where obtained, and who is either ashamed or afraid to append his proper signature to his letter, informs us that he negotiated with certain parties in England, about three years since, for the purchase of some foreign degrees. As is usual with these anonymous writers, "M.R.C.S. and L.S.A." carefully omits to mention from what country these diplomas were brought to England for sale. He knows perfectly well that there was not a single degree offered to him for sale belonging to an university of the old world, unless it was, like the Jena degree brought forward by Mr. Carpenter, of ancient date. Let "M.R.C.S. and L.S.A." deny this if he can. I should recommend him also, when he next makes such assertions, to be more explicit with respect to places and dates, and to append his own signature to his letter, as he seems quite to forget that such vague insinuations are likely to impugn the honour and integrity of most honourable institutions.—I remain, sir, yours faithfully,

Sheffield, November 15th, 1879. HERBERT JUNIUS HARDWICKE, M.D.

SIR,—In my letter of the 8th, I neglected to say that, in 1870-71-72, I had a lon correspondence with agents who were advertising in various papers, professing to procure degrees from foreign universities. They all, at the first, professed to be able to procure any degree from the continent, but when pressed to name the university, they all fell back on America, and candidly admitted that a German or Belgian degree could not be procured without an examination on the spot. They were all unanimous in naming Philadelphia as the Americans' university. On receipt of the money, the diploma would be sent. I had the opportunity of seeing one of these diplomas, and it certainly was elaborate; the stars and stripes, and the eagle, and the cap of liberty, were all there. This had been granted to a dissenting

minister who had been a druggist, and he had paid, I believe, £20 for it. In the list of ministers of the denomination to which he belongs, the letters M.D. are placed after his name.

Shortly after this, the correspondence between the American Consul in London and the University was published, and the charter cancelled. These degrees can still be procured from an agent in Jersey, who has a large stock by him. If continental degrees had been for sale, as some infer, these men would have had them, as one of them was a graduate of a German university which afterwards struck him off their roll.—Yours, etc.,

W. EASBY, M.D.

March, Cambs., November 17th, 1879.

SIR,—Under Mr. R. H. S. Carpenter's auspices, the question of foreign degrees seems to be drifting into a discussion concerning honorary diplomas generally. Mr. Carpenter attacks the London and Edinburgh Colleges of Surgeons for conferring their Fellowship as an honorary distinction. Mr. Carpenter appears to forget, or be ignorant of the fact, that such Fellowships are given only to those already possessing a registrable surgical qualification. I think that a Fellowship is a distinction which may well be bestowed by election, and not only necessarily after examination; it is not given to unqualified persons, thereby enabling them to get on the *Register*, but is granted only as a higher surgical distinction to those known to be worthy of it. It seems to me that a distinction may be drawn between diplomas through which a man gets on the *Register*, and which certainly should be granted only after searching examination, and honorary distinctions and degrees, as Fellowships and foreign M.D.s (genuine), conferred on those already possessing registrable qualifications.

With regard to foreign degrees, it would be interesting to learn from what Universities the diplomas purported to come, which were offered to "M.R.C.S. and L.S.A." at from £3 to £13 each. Mr. Nelson Hardy, who seems, according to Mr. Carpenter, to have made some remarks on the Edinburgh College of Surgeons for "selling" its Fellowships, is, according to the *Medical Directory*, himself one of the purchasers of the distinction. I suppose he considered it of value, or why did he purchase it? I cannot but think the sooner all this profitless correspondence is discontinued, and the pages of the JOURNAL given up to more valuable matter, the better.—Yours, etc.,

F.R.C.S.EDIN.

MEDICAL ETIQUETTE.

MR. JOSEPH WELSH has clearly, according to his own showing, acted in defiance of the plainest rules of medical etiquette. Such rules must not be set aside because of personal differences: indeed, where the relations between two medical men are strained, there is the more need to be careful in matters of etiquette. Dr. Davis appears to have shown unnecessary zeal in pointing out to the guardians that Mr. E. S. Lane had no registrable medical qualification; but this was no reason why Mr. Welsh (Mr. Lane's senior partner) should act as he did, and furnishes no excuse for his conduct.

SIR,—In reply to Dr. Blackie's letter in the BRITISH MEDICAL JOURNAL of last Saturday, headed "Medical Etiquette", I beg to state that I much regret having caused him any annoyance in seeing and reporting on his patient without having previously consulted him in the matter. I certainly presumed on the very friendly terms which had previously existed between us, and consequently did not hesitate to ask—*not insist*—the patient to remove the dressing and show me the wound, when I found it was impossible for me to form an opinion without doing so. I am glad to apologise for any want of courtesy which, in his judgment or in that of others, may have been in the transaction.—Believe me, yours faithfully,

Thrapstone, December 15th, 1876. WM. H. MASTERS.

ELECTRICITY IN CANCER.

DR. ANDREW ALLISON writes to the *Yorkshire Post* the following extraordinary letter.

"SIR,—As the following case is one of public interest, I beg to draw the attention of your readers to the effects of lightning upon cancer, and as I am not aware that the records of the healing art furnish a parallel case, I venture to solicit its insertion in your excellent journal. Many years ago, I heard the late Dr. Golding Bird say that electrical sparks drawn from a cancerous structure were the only means of cure which he could endorse. In confirmation of this theory, I beg to submit an instance of the therapeutical freaks of atmospheric electricity in cancer. Some years ago, I attended a farm labourer for cancer of the lip, who was about to undergo an operation for its removal. In the meantime he undertook a day's ploughing, when he was struck down by lightning, and taken home in a state of insensibility. Both of the horses were killed, and the wooden beam of the plough reduced to fragments. My patient emitted a strong odour of ozone, indicating great condensation of the adherent oxygen. A healing process was set up in the lip soon after the accident. The cancer gradually lessened, and in a few weeks every trace of the disease disappeared, and for years he enjoyed complete freedom from his former sufferings, thus leaving the inference unaffected that the electricity secured for my patient an extension of life, and many years' relief from the usual consequences of cancer. In my opinion, frictional electricity is one of the most reliable agents we possess in the cure of cancer. In proof of the cancerous character of my old patient's lip, I may state that his granddaughter, now residing at Driffield, lately became the subject of a cancerous tumour over the larynx, which, assisted by Dr. Eames, I removed successfully, and under special after-treatment the cure seems to be satisfactory. I shall not venture to give any theory of the specific action of electricity in carcinoma, as I shall reserve that phase of the subject for one of our medical periodicals, destined for professional use.—I am, etc.,

A. ALLISON, M.D.

"Bridlington, November 25th, 1879."

Dr. Allison appears, from the *Medical Directory*, to be a practitioner possessing the M.D. of St. Andrew's, as well as the diploma of the Apothecaries' Society, London, and the Faculty of Physicians and Surgeons of Glasgow. It is, therefore, incomprehensible that he should have thought fit to address this surprising communication to a daily paper. If Dr. Allison really means to say that he thinks he heard the late Dr. Golding Bird say that "electrical sparks drawn from a cancerous structure were the only means of cure which he could endorse", we can only say that this is a statement which we find it impossible to believe as representing the actual opinion of Dr. Golding Bird, and can only assume that Dr. Allison is labouring under a misapprehension of a very serious kind. Nothing in Dr. Golding Bird's works or acts, or in his known good sense, could justify so absurd a statement. Further, if Dr. Allison has any reason whatever for believing in what he calls a theory of the specific action of electricity in carcinoma, he should certainly produce definite facts accurately stated; and it is much to be regretted that he should discredit his belief by first announcing it in a provincial newspaper instead of submitting it to the trained judgment of the members of his profession, who alone, and not the general public, are capable of forming a reasonable decision on the opinions which he puts forth.

NOTICES of Births, Marriages, Deaths, and Appointments, intended for insertion in the BRITISH MEDICAL JOURNAL, should arrive at the Office not later than 10 A.M. on Thursday.

UNIVERSITY DEGREES.

SIR,—To see, as one has done lately, a contrast drawn between the M.D. of London and that of Edinburgh, is supremely ludicrous, and it might be readily proved that the average M.R.C.S. England is, in regard to every professional test, quite its equal. When we come to the social comparison, I think Englishmen may be thankful that they are not blessed with the prefix Dr.

I am practising in a county far north, where M.D.s luxuriate, and the universal question is, how do these men pass? how is it that their social qualifications are *nil?* With us, as a rule, they rank with the middle class tradesmen of the district, and are born and marry amongst them, and certainly derive all their ethics from the same quarter. Hence M.D.s consider a shilling fee ample compensation for a visit and advice (I may remark by the way that my veterinary surgeon is not satisfied with less than one shilling and sixpence). Their education has in most cases, I find, been acquired at the various village grammar schools. And yet these men, returning from Edinburgh and Glasgow, flourishing on M.D., are actually permitted to consider themselves graduates of an university, and by the country's laws take precedence of us. It is a gross injustice. We should resent it collectively as Englishmen, and, as only a matter of right, should insist upon a national conjoint scheme, which would at least place them upon a guaranteed professional equality with us.—I am, etc.,

M.R.C.S.

*** We publish this epistle, which might be supposed to be humorous, because of its evident seriousness, and the pregnant lessons to be drawn from it, of an exactly opposite kind to those intended.

WE are indebted to correspondents for the following periodicals, containing news, reports, and other matters of medical interest:—The Western Morning News; The Glasgow Herald; The Manchester Guardian; The Yorkshire Post; The Leeds Mercury; The Cork Constitution; The Coventry Herald: The British Guiana Royal Gazette; The Ceylon Observer; The Wigan Observer; The Peterborough and Huntingdonshire Standard; The Sussex Daily News; The Liverpool Mercury; The Banffshire Journal; The Newport and Market Drayton Advertiser; The North Wales Guardian; The Sheffield Daily Telegraph; The Wexford Independent; etc.

*** **We shall be greatly obliged if correspondents forwarding newspapers will kindly mark the passages to which it is desired to direct attention.**

COMMUNICATIONS, LETTERS, etc., have been received from:—

Dr. W. Rutherford, Edinburgh; Dr. Kinkead, Galway; Dr. George Johnson, London; Dr. Waters, Liverpool; Dr. Finny, Dublin; Mr. Lowndes, Liverpool; Dr. Lombe Atthill, Dublin; Dr. W. Fairlie Clarke, Southborough; Mr. Davies, Clun; Dr. A. Wiltshire, London; Mr. W. D. Hemming, Bournemouth; Dr. W. Walter, Manchester; Mr. H. Greenway, Plymouth; Dr. R. Farquharson, London; Dr. F. Bond, Gloucester; Dr. Pitt, Norwich; Dr. Oliver, Newcastle-upon-Tyne; Dr. Allbutt, Leeds; Dr. Eben Watson, Glasgow; Dr. Tilt, London; The Secretary of Apothecaries' Hall; Dr. J. W. Moore, Dublin; Dr. James Russell, Birmingham; Mr. S. M. Bradley, Manchester; Dr. W. C. Lake, Teignmouth; Dr. J. H. Simpson, Rugby; Mr. B. Hunton, London; Dr. E. Ballard, London; Messrs. Letts and Co., London; Dr. C. E. Underhill, Edinburgh; The Registrar-General of England; Mr. S. B. Coates, Belfast; Messrs. Arnold and Sons, London; Dr. Ligertwood, Chelsea; Dr. C. Marriott, Leicester; The Registrar-General of Ireland; Mr. G. Eastes, London; Dr. Smith, London; Dr. N. Kerr, London; Dr. G. Lamson, Bournemouth; Mr. A. H. Hudson, London; Mr. S. Osborn, London; Dr. A. Samelson, Manchester; Mr. Lawson Tait, Birmingham; Dr. Hay, Alloa; Mr. W. Donovan, Leicester; Dr. M. M. Bradley, Jarrow-on-Tyne; Dr. J. W. Burman, Richmond; Mr. H. Maclean, Red Hill; Mr. H. S. Gaye, Newton Abbott; Dr. G. Dabbs, Shanklin; Mr. C. E. Greenwood, Blackheath; Dr. F. Payne, London; Mr. A. Hall, London; Mr. G. Bury, Whetstone; Dr. Heywood Smith, London; Dr. Rabagliati, Bradford; Dr. W. Strange, Worcester; Dr. Parsons, Bristol; Dr. Diamond, Tunbridge Wells; Dr. Worthington, Sidcup; Dr. Robert Perry, Glasgow; Mr. J. R. Long, Manchester; Mr. F. W. Lowndes, Liverpool; Mr. F. Kneebone, Bedford; Dr. J. Meredith, Birmingham; Mrs. T. Colbourne, Weston-Super-Mare; Mr. F. Benger, Manchester; Dr. K. N. Macdonald, Cupar Fife; Dr. J. Rogers, London; Our Dublin Correspondent; etc.

BOOKS, ETC., RECEIVED.

How to use a Galvanic Battery in Medicine and Surgery. A Discourse delivered before the Hunterian Society. By Herbert Tibbits, M.D., F.R.C.P.E. Second Edition. Revised, and Incorporating Three Lectures upon Electro-Therapeutics. London: J. and A. Churchill. 1879.

The Pathology and Treatment of Venereal Diseases. By Freeman J. Bumstead, M.D., LL.D. Fourth Edition, Revised and Enlarged, and great part rewritten by the author and by Robert W. Taylor, A.M., M.D. With One Hundred and Thirty-eight Woodcuts. London: Henry Kimpton. Philadelphia: Henry C. Lea. 1879.

The Lay of the Bell (Das Lied von der Glocke) and other Ballads by Schiller. Translated into English Metre by Andrew Wood, M.D., LL.D., F.R.S.E. Edinburgh: William P. Nimmo and Co. 1879.

The Art of Perfumery, and the Methods of obtaining the Odours of Plants. By G. W. S. Piesse, F.C.S. London: Longmans and Co. 1879.

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